

PALGRAVE STUDIES
IN DEMOCRACY,
INNOVATION, AND
ENTREPRENEURSHIP
FOR GROWTH

GLOBAL QUALITY OF DEMOCRACY AS INNOVATION ENABLER

Measuring Democracy
for Success

David F. J. Campbell



Palgrave Studies in Democracy, Innovation,
and Entrepreneurship for Growth

Series Editor

Elias G. Carayannis
The George Washington University
Washington, DC, USA

The central theme of this series is to explore why some areas grow and others stagnate, and to measure the effects and implications in a trans-disciplinary context that takes both historical evolution and geographical location into account. In other words, when, how and why does the nature and dynamics of a political regime inform and shape the drivers of growth and especially innovation and entrepreneurship? In this socio-economic and socio-technical context, how could we best achieve growth, financially and environmentally?

This series aims to address such issues as:

- How does technological advance occur, and what are the strategic processes and institutions involved?
- How are new businesses created? To what extent is intellectual property protected?
- Which cultural characteristics serve to promote or impede innovation? In what ways is wealth distributed or concentrated?

These are among the key questions framing policy and strategic decision-making at firm, industry, national, and regional levels.

A primary feature of the series is to consider the dynamics of innovation and entrepreneurship in the context of globalization, with particular respect to emerging markets, such as China, India, Russia, and Latin America. (For example, what are the implications of China's rapid transition from providing low-cost manufacturing and services to becoming an innovation powerhouse? How do the perspectives of history and geography explain this phenomenon?)

Contributions from researchers in a wide variety of fields will connect and relate the relationships and inter-dependencies among (1) Innovation, (2) Political Regime, and (3) Economic and Social Development. We will consider whether innovation is demonstrated differently across sectors (e.g., health, education, technology) and disciplines (e.g., social sciences, physical sciences), with an emphasis on discovering emerging patterns, factors, triggers, catalysts, and accelerators to innovation, and their impact on future research, practice, and policy.

This series will delve into what are the sustainable and sufficient growth mechanisms for the foreseeable future for developed, knowledge-based economies and societies (such as the EU and the US) in the context of multiple, concurrent and inter-connected "tipping-point" effects with short (MENA) as well as long (China, India) term effects from a geo-strategic, geo-economic, geo-political and geo-technological set of perspectives.

This conceptualization lies at the heart of the series, and offers to explore the correlation between democracy, innovation and growth.

More information about this series at
<http://www.palgrave.com/gp/series/14635>

David F. J. Campbell

Global Quality of Democracy as Innovation Enabler

Measuring Democracy for Success

palgrave
macmillan

David F. J. Campbell
Department for Continuing Education
Research and Educational Management,
Center for Educational Management and
Higher Education Development
Danube University Krems
Krems an der Donau, Austria

and
University of Applied Arts Vienna
Vienna, Austria

and

Department of Political Science
University of Vienna
Vienna, Austria

and
Faculty for Interdisciplinary Studies (iff),
Department of Science Communication
and Higher Education Research (WIHO)
Alpen-Adria-Universität Klagenfurt
Vienna, Austria

Palgrave Studies in Democracy, Innovation, and Entrepreneurship for Growth
ISBN 978-3-319-72528-4 ISBN 978-3-319-72529-1 (eBook)
<https://doi.org/10.1007/978-3-319-72529-1>

Library of Congress Control Number: 2018949047

© The Editor(s) (if applicable) and The Author(s) 2019

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Cover illustration: agsandrew/iStock/Getty

This Palgrave Macmillan imprint is published by the registered company Springer Nature
Switzerland AG

The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Power tends to corrupt, and absolute power corrupts absolutely. Great men are almost always bad men.

*John Emerich Edward Dalberg Acton,
first Baron Acton (1834–1902)*

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.

Popularly attributed to Margaret Mead (1910–1978)

*On résiste à l'invasion des armées;
on ne résiste pas à l'invasion des idées:*

One resists the invasion of armies; one does not resist the invasion of ideas.

*No army can stop an idea whose time has come.
Victor Hugo (1802–1885), in Histoire d'un Crime
(The History of a Crime), 1877*

This work I dedicate to:
Stéphanie;
Natalie, Paul, Fatih, Hannah;
Patricia, Benjamin, Paul, Christoph;
Regina and George;
Guylaine et Maurice;
ΗΛΙΑΣ, ΘΕΟΔΩΡΑ, ΓΕΩΡΓΙΟΣ, ANNA.

This work I dedicate to:
Gertrude, my beloved grandmother, who was born in Vienna in 1918.
During all the dark years of Nazi dictatorship, my grandmother lived
in a small village in the Austrian Province of Niederösterreich
(Lower Austria), and she lived a long life. She passed away in peace
in 2000. For me, my grandmother was one of the Greatest Persons,
intellectually and emotionally. She always was with me. She always
will be with me ...

Preface

What is democracy? This certainly represents a complex question, to which different (very different) answers seem (and are) possible. We should state that there exists a pluralism of theories, concepts and models with overlapping, but also competing understandings of democracy. *Perhaps the concept of democracy already by itself implies that there is a pluralism of concepts, in fact puts forward even a demand for this. Political pluralism within democracy is being mirrored by a pluralism in the conceptual self-reflexivity of democracy about democracy.* In addition, democracy is not static. Therefore, also: *How does democracy evolve?*

We could assert that there may be an implicit (not necessarily explicit) tendency within several of our concepts and models (also theories) of democracy to actually to refer to already “established” democracies of the economically further developed countries, and by this to focus on industrialized countries or advanced economies in context of the OECD, concentrating analysis on North America, Europe, Japan, Australia, and New Zealand. *But democracy also is a global phenomenon, and there are indications that democracy increasingly manifests itself as a global process.* Therefore, democracy is just as valid in the non-OECD countries, in the developing countries and emerging

economies. Therefore: *How does democracy evolve in global context?* Democracy, of course, also is permanently challenged. In the OECD countries, democracy faces the problem of stagnation, or even set-backs. In the non-OECD countries, there is a contest between democracies, semi-democracies and non-democracies, which systems are more successful in achieving development and sustainable development. *Quality of Democracy as a concept emphasizes these evolving aspects and evolving character of democracy, by stating that there can be different degrees or levels in the accomplishment of democracy, and that these are fluid and can change over time. Furthermore, the question arises, to which extent quality of democracy also associates with knowledge democracy and “democracy as innovation enabler”?*

The work and analysis, which is presented in the following sections, is being carried by the following motivation and interest:

1. *Comparison:* Comparisons are not the only possibility, for creating insight and information for further model building and theory design. Comparisons, however, are a very powerful and useful approach in political science (Peters 1998; Whitehead 1998). For our work, the comparison of the different countries represented the one practical way of driving further analysis. Democracy, here, is being analyzed in terms of “country-based democracies”.¹
2. *Global comparison and empirical measurement:* The one major interest was to engage in a truly global analysis, and by this explicitly not to limit the analysis of democracy to the OECD or industrialized countries and advanced economies, but to extend analysis to the non-OECD and developing countries, as well as to emerging economies. In principle, our analysis wanted to address the “whole world,” and was constrained only by empirical data availability. Particularly we were interested in comparing developments in the OECD and non-OECD countries. Not all countries in the world are democracies.

¹For example, later in the text, when we talk about European democracy, this represents an aggregation of the different individual European country-based democracies, and does not refer specifically to the system of governance of the supranational institutions of the EU. This logic of aggregation also applies to the terms of “EU15” and “EU28” (when not otherwise indicated).

Therefore, to pursue such a global perspective, it was necessary to extend the scope of analysis from democracies to all countries (democracies, semi-democracies and non-democracies), by this being in a position of being capable of comparing developments in democracies and non-democracies. The outcome should be an empirical measurement of democracy (and non-democracy) in global context.

3. *Quality of democracy and the quintuple-dimensional structure of democracy*: A global empirical comparison of democracies (democracies and non-democracies) must be grounded on a conceptual model or framework of analysis. The decision here was taken to refer democracy and quality of democracy (or the absence of democracy) to the following five basic dimensions (basic conceptual dimensions): freedom, equality, control, sustainable development and self-organization (political self-organization). Freedom and equality represent two key dimensions for democracy. Freedom and equality also qualify as two already conventionally and traditionally established dimensions in our thinking about democracy. However, in our analysis a particular focus and emphasis was placed on the (“new”) dimensions of sustainable development and self-organization (here approached through political swings and government/opposition cycles). The assertion would be that sustainable development and self-organization have a certain innovative momentum for influencing our theories, models and the way how we conceptualize democracy and quality of democracy. A further proposition is that it would be difficult to understand or to assess democracy in global context (and by this extending the narrow perspective of only looking at the economically advanced OECD countries) when ignoring features and aspects of sustainable development. Of course, it remains to be tested and to be seen, whether or not sustainable development and self-organization (political self-organization) can establish themselves in the realm of theories of democracy to which we conventionally refer to. By applying this quintuple-dimensional structure of democracy and quality of democracy, it was also demonstrated that a comparative multidimensional index-building of quality of democracy in a global format and context already is possible with the currently existing data (at least in a contemporary time frame).

4. *Quality of Democracy and Knowledge Democracy, “Democracy as Innovation Enabler”*: There are certain assumptions that the progress of democracy and quality of democracy may also associate with “*knowledge democracy*”. In a knowledge democracy, a particular emphasis is being placed on knowledge and innovation, and knowledge and innovation are being regarded there as key drivers for development and further progress, by this converting and transforming economy, society and democracy into knowledge economy, knowledge society and knowledge democracy. In such a context, within such scenarios, there also can be expectations about “*democracy as innovation enabler*.”
5. *Explorative analysis and the “Why Question”*: Our analysis approached new terrain, particularly in empirical terms, because we were interested in systematically measuring and mapping democracies (and non-democracies) worldwide in reference to a quintuple-dimensional structuring of democracy and by placing an emphasis on the dimensions of freedom, equality, sustainable development and self-organization. We tested our conceptual framework of analysis empirically in full extent. Still, the character of our empirical research is more “explorative” in character. Therefore, our empirical research was not hypothesis-guided or hypothesis-based. However, in the conclusion we engaged in the process of hypothesis formulation to which could be referred to (in future research) as possible analytical reference points for further research on democracy and the global development of democracy. *Empirically we concentrated on demonstrating, which empirical processes associate with each other and to offer a whole spectrum of propositions as potential explanations, but also inviting different, by this also conflicting views and view points*. In fact, we were interested in highlighting ambiguities, puzzling empirical effects and trade-offs, where these, according to our analysis, existed. *So there are no easy answers in reference to the processes, how democracy evolves in global context*. It may be asserted that there are three types of questions for investigation in political science research: the “How Question”; the “What Question” (What is the content or substance?); and the “Why Question,” which refers to cause-and-effect relations, a causal reasoning and causality in more general (What

is the reason?). Our analysis clearly addresses the how-questions. However, at the same time we were cautious to ask too directly the why-questions. Two factors came here into play: (1) a general belief that the “explorative” character of our empirical research would make it difficult to employ always a straightforward causal reasoning; (2) our interest was more to fully demonstrate the whole spectrum of empirical ambiguities and puzzling effects, thus having the impression that too much of a causal reasoning would narrow down the options of offered propositions for explanation. However, were appropriate (appropriate in our opinion), we also explicitly addressed the “Why Question.”² (So we did not exclude the “Why Question”.)

Our conceptualizing of democracy and quality of democracy was set in contrast to an empirical measuring of democracy in world-wide context. For that purpose we developed an empirical macro-model that refers to 160 countries (and territories) in the time period of 2002–2016. These 160 countries represent more than 99% of the whole world population. The country sample included democracies and non-democracies (or democracies, semi-democracies and non-democracies). The empirical propositions that we developed for quality of democracy and democratic development were based and framed within that specific framework for analysis. Of course, there always remain chances that empirical developments and trends after 2016 may point into directions different when compared with trends during the period 2002–2016.³

All together, the analysis being presented here represents a work that lasted almost for ten years, beginning in the summer of 2010, focusing on the month of August as the first phase of data collection. The book manuscript is based on the “Habilitation” text (Venia Docendi manuscript) *“Conceptualizing and Measuring the Quality of Democracy*

²For example, in Chapter 6 we discuss several factors that drive and encourage government/opposition cycles (political swings) in democracies. It can be said (as a proposition) that government/opposition cycles and political swings are essential for democracies and their quality. Our specific discussion there can be interpreted in a way to actually reflect on the “Why Question”.

³We started our time series in 2002, because Freedom House (2013a) launched to release “aggregate scores” for political rights and civil liberties only as of the calendar year 2002.

in Global Comparison. Freedom, Equality, Sustainable Development, and Political Self-Organization (Political Swings, Government/Opposition Cycles) in 151 Countries (Democracies, Semi-Democracies and Non-Democracies), 2002–2008” (Campbell 2013), which I had handed in at the University of Vienna on September 12, 2013. The Habilitation Committee was led by Professor Sieglinde Rosenberger (University of Vienna) and co-lead by Ludger Helms (University of Innsbruck). The three reviewers were Professor Brigitte Geißel (Goethe-University Frankfurt), Professor Barbara Prainsack (formerly King’s College London, now University of Vienna) and Professor Dieter Segert (University of Vienna). On May 15, 2014, the Habilitation Committee came together, and decided unanimously to grant to me the status of a *Venia Docendi* for Comparative Political Science at the University of Vienna. I want to thank all the members to the Habilitation Committee and the reviewers for their valuable input and comments and feedback that they had provided to me!

In the aftermath of this habilitation process and for the purpose of the book publication with Palgrave Macmillan now, the original “Habilitation” text was overworked by me, and, perhaps most importantly, the original time series of 2002–2008 was extended (and by this more than doubled) to 2002–2016. In addition, a greater emphasis has been placed on knowledge and innovation, also the theme of “*Democracy as Innovation Enabler.*” In that context I also want to thank Professor Elias Carayannis (George Washington University) for his advice and guidance. Would the focus of this book and research only have been on the OECD countries, then results could have been achieved faster. The inclusion of the non-OECD countries implied considerably greater analytical efforts. The inclusion of the non-OECD countries, however, was thought to be necessary to set up more focused propositions for further discussions on: *How do democracy and quality of democracy evolve in global context? Is “Democracy an Innovation Enabler”?* The global perspective was time-consuming. But the global perspective was also the one finally so interesting aspect.

Finally, in the form of a personal note, I would like to add, that in the world of literature, that I was (am) impressed by the following three pieces of text and work, which I thought were (are) very interesting:

Alice in Wonderland (by Lewis Carroll, 1865), *Das Parfüm/The Perfume* (by Patrick Süskind, 1985), and *Der Kauz/The Codger* (by Simon Guerel, 2017).

Vienna and Bad Vöslau, Austria
Washington, DC, USA
Champigné, France
July 2018

David F. J. Campbell
dfjcampbell.research@gmail.com

Acknowledgements

I want to thank Professor Elias G. Carayannis (George Washington University and Athens), for all the Intellectual Vigor and Academic Excitement, which we had in recent years, and which shall never end in the coming years still lying ahead of us.

I want to thank Professor Sieglinde K. Rosenberger (University of Vienna, Department of Political Science) for the many challenging discussions that we had on politics, political science and quality of democracy. These discussions provided most useful references and help for developing the logic of argumentation further. Rosenberger had the lead of my Habilitation Committee with the University of Vienna, for this I am most thankful to her.

I want to thank Professor Wolfgang C. Müller (University of Vienna, Department of Government), who had supervised in the past my dissertation, for which he had provided helpful support and kind feedback. Without this dissertational experience, I would not have arrived here.

I want to thank Professor Ludger Helms (University of Innsbruck, Department of Political Science) for the many exciting debates and the intellectual exchange that we had, which had broadened and expanded my views on politics and the arts.

I want to thank Thorsten Barth, Gerald Bast, Guy Ben-Ari, Peter Biegelbauer, Gerhard Blasche, Günther Burkert, Elias Carayannis, Tung Tung Chan, Amelie Drexler, Igor Dubina, Birgit Eigelsreiter, Alexandra Fabrykowska, Robert Fragnito, Alexandra Frank, Georg Hanschitz, Regina Jankowitsch, Matthias Keppel, Bernhard Kernegger, Samar Kobald, Christine and Walter Kreiner, Florian Kreiner, Chang-Yool Lee, Ruth Mateus-Berr, Birgit Mitterlehner, Derya Öcal, Ivan Pantelić, Attila Pausits, Thomas Pfeffer, Klaus Poier, Barbara Prainsack, Katharina and Gregor Puschnig, Walter Rohn, Anja Seipenbusch-Hufschmied, Kajetan Stransky-Can, David Wineroither and Qiaoshan Ye, with whom I have shared so many Great Times in Great Complexity.

Poem on Democracy

Gedicht über Demokratie

(written by David F. J. Campbell in German)

was ist
demokratie?

es ist die
wahrheit
der vielen wahrheiten.

es ist die
wahrheit,
die möglich ist,
weil sie verlangt,
dass verschiedene
und zueinander
widersprüchliche
wahrheiten
nebeneinander
bestehen.

es ist der
pluralismus im
vielen licht,
das in den
schatten tropft,
und die nacht
heller blühen
lässt.

der schatten
des lichts und
das licht
des schattens,
und es gibt
keine
wahrheit
außerhalb
des pluralismus:
frage folgt
auf antwort,
fragen folgt
auf frage.
auf licht
folgt neues
licht
am blühenden tag.

ΠΟΙΗΜΑ ΓΙΑ ΤΗΝ ΔΗΜΟΚΡΑΤΙΑ
(translated into Greek by Elias G. Carayannis)

ΤΙ ΕΙΝΑΙ Η
ΔΗΜΟΚΡΑΤΙΑ?

ΕΙΝΑΙ Η
ΑΛΗΘΕΙΑ
ΤΩΝ ΑΛΗΘΕΙΩΝ.

ΕΙΝΑΙ Η ΑΛΗΘΕΙΑ ΠΟΥ ΕΙΝΑΙ ΕΦΙΚΤΗ ΓΙΑΤΙ ΑΠΑΙΤΕΙ
ΔΙΑΦΟΡΕΤΙΚΕΣ ΚΑΙ ΣΥΓΚΡΟΥΟΜΕΝΕΣ ΑΛΗΘΕΙΕΣ
ΝΑ ΣΤΗΝΥΠΑΡΧΟΥΝ ΑΡΜΟΝΙΚΑ ΜΑΖΙ.

ΕΙΝΑΙ Η ΠΟΙΚΙΛΟΤΗΤΑ ΣΕ ΑΠΛΕΤΟ ΦΩΣ,
ΠΟΥ ΑΚΟΥΓΕΤΑΙ ΣΑΝ ΣΤΑΓΟΝΑ ΝΕΡΟΥ ΣΤΟΥΣ
ΣΚΙΕΡΟΥΣ ΤΟΠΟΥΣ ΚΑΙ ΚΑΝΕΙ ΤΗΝ ΝΥΧΤΑ ΝΑ
ΛΑΜΠΕΙ ΠΙΟ ΛΑΜΠΡΗ.

Ο ΙΣΚΙΟΣ ΤΟΥ ΦΩΤΟΣ ΚΑΙ ΤΟ ΦΩΣ ΤΟΥ ΣΚΟΤΑΔΙΟΥ,
ΚΑΙ ΔΕΝ ΥΠΑΡΧΕΙ ΑΛΛΗ ΑΛΗΘΕΙΑ ΑΠΟ ΤΗΝ
ΠΟΙΚΙΛΟΤΗΤΑ – Η ΕΡΩΤΗΣΗ ΑΚΟΛΟΥΘΕΙ ΤΗΝ
ΑΠΑΝΤΗΣΗ ΚΑΙ ΟΙ ΕΡΩΤΗΣΕΙΣ ΑΚΟΛΟΥΘΟΥΝ
ΤΙΣ ΕΡΩΤΗΣΕΙΣ ΚΑΘΩΣ ΚΑΙ ΤΟ ΦΩΣ ΑΚΟΛΟΥΘΕΙ
ΚΑΙΝΟΥΡΓΙΟ ΦΩΣ ΤΗΝ ΗΜΕΡΑ ΠΟΥ ΞΗΜΕΡΩΝΕΙ.

Poem on Democracy

(translated into English by Gerhard W. E. Blasche)

what is democracy?

the truth it is
of the many truths

the truth it is,
made possible,
because it demands
different and opposing truths
to stand side by side

it is pluralism
immersed in light
the rays of which
gently penetrate the shade
and make the night bloom
brighter still

the shadow of light
the light of shade

and there is no truth beyond
(pluralism):

question follows answer
question follows question

light is followed
by new light
on the blooming day

Poem on Democracy

(translated into English by David F. J. Campbell and George S. Campbell)

what is
democracy?

it is the
truth
of the many truths.

it is the
truth
that is possible,
because it requires
that different
and to each other
contradictory
truths
exist
next to each other.

it is the
pluralism in
the many light
that drips
into the shade
and lets the night
blossom
lighter in light.

the shade
of light and
the light
of shade,
and there is
no
truth
outside
of pluralism:
question follows
answer,
questions follow
in questioning.
after light
follows new
light
on the blossoming day.

Poème sur la Démocratie

(translated into French by Birgit Eigelsreiter)

qu'est-ce que la
démocratie?

elle, est la
vérité
de nombreuses vérités.

elle, est la
vérité
qui peut exister,
puisqu'elle se construit
des vérités
distinctes et
divergentes
en exigeant
qu'elles
coexistent.

elle est le pluralisme
d'une lucidité;
qui envahit
l'obscurité,
tout en
éclaircissant
les ténèbres
nocturnes.

l'ombre
de la lumière
et la lumière
de l'ombre;
il n'existe
aucune
vérité
en dehors
du pluralisme:
réponse
suivie par question
questionner –
ce qui suit
une question
en plein jour,
une nouvelle lumière
succède
à la lumière.

Поэма о демократии

(translated into Russian by Alexandra Fabrykowska)

что такое
демократия?

это
истина
многих правд.

это
истина,
разрешающая,
требующая,
что различные
и любые
несообразные
правды
вместе
существуют.

Это
плюрализм в
множестве огней,
падающих каплями
в полумрак
и разрешающих ночи
цвети
ярче света.

мрачность
вспышки и,
светлость
тьма
нет
другой
правды
кроме
плюрализма:
вопрос следует
за ответом,
вопросы непрерывны
в вопрошании.
за светом
приходит новый
свет
в цветущий день.

שיר על דמוקרטיה
(translated into Hebrew by Guy Ben-Ari)

מהי
דמוקרטיה?

היא
האמת
של כל האמיתות.

היא
האמת
המתאפשרת
מפני שהיא דורשת,
שאמיתות
שונות
ומנוגדות
יתקיימו
זו לצד זו.

היא
הרב-גונית
שבאור
המטפטפת אל הצל
ומאפשרת
ללילה
לפרוח באור חזק יותר

הצל
שבאור
והאור
שבצל,
ואין
אמת
מעבר
לרב-גונית:
שאלה
בעקבות תשובה
שאלות
בעקבות שאלה
אור חדש

בעקבות
 אור
 ביום הבהיר

قصيدة عن الديمقراطية
 (translated into Arabic by Samar Kobald)

ما هي
 الديمقراطية؟

إنها
 حقيقة
 الحقائق العديدة.

إنها
 حقيقة
 الممكنة
 لأنها تطالب،
 تعيش
 حقائق
 مختلفة
 ومتناقضة.

إنها
 التعددية في
 العديد من الضوء
 الذي يقطر
 في الظلال،
 ويجعل الليل
 أكثر إشراقاً.

الظل
 من الضوء و
 الضوء
 ،من الظل
 وهناك
 لا
 حقيقة
 خارج

التعددية:
السؤال يتبع
الجواب،
وطرح الأسئلة.
على ضوء
يأتي ضوء
جديد
في يوم مشرق.

Demokrasi 'nin Şiiri

(translated into Turkish by Derya Öcal)

Nedir
Demokrasi?
O
Gerçektir
Birçok gerçeklerin
O
Gerçektir
Mümkün olan
Çünkü talep ettiği
Farklı
Ve birbirine karşı
Muhalif
Gerçeklerin
Yanyana
Olması
O
Çoğunluktur
Birçok ışıklar içinde
Gölgeye damlayıp
Geceyi
Daha parlak
Açtıran
Isığın

Gölgesi ve
Gölgenin
Işığı
Ve gerçek yok
Çoğunluk dışında
Soru
Cevabı izler
Sormak ise
Soruyu
Işık ardından
Yeni ışık gelir
Açan günde

Poem on Democracy

(translated into Chinese by Amelie Drexler and Qiaoshan Ye)

什么是
民主？

民主是
众多真理背后的
终极真理

之所以称它为终极真理，
是因为它能够容许各种不同的，
互相矛盾的真理共同存在

它是一个闪烁着
不同光芒的多种真相的
凝聚体
这些光芒滴进阴影里
照亮了黑夜，
并让黑夜开出了花朵

光芒的影子
阴影的光亮
真相不可能只有一个
而是诸多个

一个答案后面还会冒出新的问题
新的问题还会引发更多的质疑
就像一束光芒
在一个鲜花怒放的白天
折射出更多的光芒

Poem on Democracy

(translated into Chinese by Tung Tung Chan)

什么是
民主？

她是
真相中
的真相。

她是
有可能实现的
真相
因为她根植于
互不相同
互相矛盾
却又
互相依存的
真相。

她是
多元主义
是许多光
渗透在
阴影处
好让黑夜
绽放
柔柔地发光

影
的光和
光
的影，

在
多元主义
以外
没有
真相：
问题紧随
答案，
问题紧随
置疑。
光后
又追随新的
光
照亮绽放的天明
一首关于民主的诗

Contents

| | | |
|----------|--|-----------|
| 1 | Introduction: How to Conceptualize Democracy, Quality of Democracy in Global Comparison and Democracy as Innovation Enabler | 1 |
| 1.1 | The Research Questions | 2 |
| 1.2 | Conceptualization of Democracy and Quality of Democracy: The Basic Quintuple-Dimensional Structure of Democracy | 12 |
| 1.3 | Conceptual Research Design and Methodic Framework of Analysis | 38 |
| 1.4 | Preview of Coming Sections and Chapters of Analysis | 50 |
| 1.5 | Resume: How Innovative Is the Here Presented Approach of Conceptualizing and Measuring Democracy and Quality of Democracy in Global Comparison and of Democracy as Innovation Enabler? | 52 |
| | References | 62 |
| 2 | The Empirical Macro-Model: How to Measure Democracy and the Quality of Democracy in Global Comparison | 75 |
| 2.1 | Country Sample and Total Sample of 160 Countries | 75 |

| | | |
|----------|--|-----|
| 2.2 | Method and Methodology of the Applied Framework of Analysis | 80 |
| 2.3 | Possible Empirical Definition of Democracies, Semi-democracies and Non-democracies | 88 |
| 2.4 | Identification of Countries and Country Groups for the Comparative Analysis of Freedom, Equality, Sustainable Development, and Self-Organization (Political Self-Organization) | 90 |
| | References | 110 |
| 3 | Comparative Empirical Analysis of the OECD Countries: Freedom, Equality and Sustainable Development in the OECD Countries (2002–2016) | 115 |
| | References | 148 |
| 4 | Comparative Empirical Analysis of the Non-OECD Countries: Freedom, Equality and Sustainable Development in the Non-OECD Countries (2002–2016) | 151 |
| | References | 196 |
| 5 | Comparative Empirical Analysis of Global Trends of the OECD and Non-OECD Countries and of the Whole World: Freedom, Equality and Sustainable Development in the World (2002–2016) | 199 |
| | References | 225 |
| 6 | The Basic Dimension (Basic Conceptual Dimension) of Self-Organization (Political Self-Organization): Government/Opposition Cycles and Political Swings (Political Left/Right Swings), Peaceful Person Change of Head of Government and Peaceful Party Change of Head of Government in Global Comparison (2002–2016 and 1990–2017) | 227 |
| | References | 278 |

| | |
|--|-----|
| 7 Conclusion: Summary and Formulation of Hypotheses for Further Research on Democracy, Quality of Democracy in Global Comparison and Democracy as Innovation Enabler | 281 |
| 7.1 Conclusion: Summary of Comparison of Countries and Country Groups Over the Dimensions of Freedom and Equality (2002–2016) | 283 |
| 7.2 Outlook: Formulation of Hypotheses for Further Research on Democracy and Quality of Democracy in Global Comparison | 312 |
| 7.3 Resume of the Conclusion | 340 |
| References | 344 |
| Appendix to the Conceptualization and Measurement of Democracy and Quality of Democracy in Global Comparison/Indicators and Dimensions | 351 |
| Appendix A.1 Documentation of the Complete Country Sample: 160 Countries (Years 2002–2016) | 353 |
| Appendix A.2 Documentation of the Indicators: Transformed Scores (Rescaled to 0–100) of the 160 Countries (years 2002–2016) | 355 |
| Appendix A.3 Overview and Summary: Documentation of the Transformed (Rescaled) Indicators and Aggregated Dimensions (Subdimensions) for Identified Countries and Country Groups (Years 2002–2016) | 471 |
| References | 481 |
| Index | 501 |

Acronyms

| | |
|-----------------|---|
| AIDS | Acquired Immune Deficiency Syndrome |
| BREXIT | British Referendum to exit the EU (held on June 23, 2016) |
| BRIC | Brazil, Russia, India and China |
| CIA | Central Intelligence Agency |
| CO2 Em low | CO2 Emissions (by tendency decreasing) |
| Cs | Countries |
| DEVELOP non-pol | Non-Political Sustainable Development |
| ECO Free | Economic Freedom |
| Edu Tert | Tertiary Education |
| EQUAL GEN | Gender Equality |
| EQUAL INC | Income Equality |
| EU | European Union |
| FREE ECO | Economic Freedom |
| FREE POL | Political Freedom |
| FYR | Former Yugoslav Republic |
| GDP | Gross Domestic Product |
| GDP p Cap | GDP per Capita |
| GEN Equal | Gender Equality |
| GNI | Gross National Income |
| HDI | Human Development Index (UNDP) |

| | |
|------------------|--|
| HDI-r | Human Development Index “re-engineered” or “re-designed” |
| HDI re-des | Human Development Index “re-engineered” or “re-designed” |
| IDEA | International Institute for Democracy and Electoral Assistance |
| IMF | International Monetary Fund |
| INC Equal | Income Equality |
| LA | Latin America |
| Life Exp | Life Expectancy |
| LLL | Lifelong Learning |
| MIPLEX | Migrant Integration Policy Index |
| MIT | Massachusetts Institute of Technology |
| NIC | Newly Industrialized Country |
| NICs | Newly Industrialized Countries |
| NIE | Newly Industrialized Economy |
| NIEs | Newly Industrialized Economies |
| NON-POL | Non-political |
| Nord | Nordic |
| Nordic Cs | Nordic Countries |
| OECD | Organization for Economic Co-Operation and Development |
| PDR | People’s Democratic Republic |
| POL Free | Political Freedom |
| PPP | Purchasing Power Parity |
| QoD | Quality of Democracy |
| RB | República Bolivariana |
| REP | Republic |
| SD | Sustainable Development |
| SD comprehensive | Comprehensive Sustainable Development |
| SD non-pol | Non-Political Sustainable Development |
| SIPRI | Stockholm International Peace Research Institute |
| Tech Diff | Technology Diffusion |
| Tert Educ | Tertiary Education |
| UK | United Kingdom |
| UNDP | United Nations Development Program |
| US | United States (of America) |
| USA | United States of America |

| | |
|-----|---|
| WDI | World Development Indicators (World Bank) |
| WEF | World Economic Forum |
| WID | World Inequality Database |
| WMO | World Meteorological Organization |
| WRs | Welfare Regimes |

List of Figures

| | | |
|----------|--|----|
| Fig. 1.1 | Measurement of democracy and of quality of democracy (types of measurement) (<i>Source</i> Author's own conceptualization) | 6 |
| Fig. 1.2 | Measurement of democracy and of quality of democracy (types of measurement) (<i>Source</i> Author's own conceptualization) | 7 |
| Fig. 1.3 | Conceptualization of democracy and different stages of empirical analysis (<i>Source</i> Author's own conceptualization) | 9 |
| Fig. 1.4 | Possible evolution of democracy in different stages (conceptual stages) or in different ideal-typical categories (simplified model) (<i>Source</i> Author's own conceptualization) | 19 |
| Fig. 1.5 | Minimalist versus maximalist concepts and theories of democracy and quality of democracy (<i>Source</i> Campbell 2008, p. 22) | 27 |
| Fig. 1.6 | Minimalist versus maximalist concepts and theories of democracy and quality of democracy in context of multilevel governance (architectures) (<i>Source</i> Author's own conceptualization and visualization based on Fig. 1.5 and Campbell (2008, p. 22), Carayannis and Campbell (2010, p. 62), and Carayannis et al. (2012, p. 4)) | 28 |

| | | |
|-----------|---|----|
| Fig. 1.7 | The basic quintuple-dimensional structure of democracy and the quality of democracy (<i>Source</i> Author's own conceptualization and visualization based on Campbell (2008, p. 32; 2012, p. 296) and Campbell and Carayannis (2013b) and for the dimension of "control" based on Lauth (2004, pp. 32–101)) | 33 |
| Fig. 1.8 | A possible matrix structure of basic dimensions of democracy and quality of democracy and architectures of input, throughput and output (outcome) (<i>Source</i> Author's own conceptualization and visualization based on Campbell (2008, p. 32; 2012, p. 296) and Campbell and Carayannis (2013b) and for the dimension of "control" based on Lauth (2004, pp. 32–101) (see also Fig. 1.7 in the introduction)) | 37 |
| Fig. 1.9 | The abstract design structure of dimensions, subdimensions and assigned indicators (<i>Source</i> Author's own conceptualization and visualization) | 39 |
| Fig. 1.10 | Dimensions, subdimensions and assigned indicators of the conceptual research design and methodic framework of analysis (<i>Source</i> Author's own design. <i>Notes a</i> "Gini Index" and "Gini Coefficient" are two different names for the same measure; WDI = World Development Indicators (released by World Bank). b WDI = World Development Indicators (released by World Bank); Depending on the analytical design, the government-opposition-cycles (political swings) may also the aligned to the dimension of control) | 40 |
| Fig. 1.11 | The quadruple and quintuple helix innovation systems (<i>Source</i> Author's own conceptualization based on Carayannis and Campbell (2014, p. 15), and adapted from Carayannis and Campbell (2009, p. 207). See also Etzkowitz and Leydesdorff (2000)) | 61 |
| Fig. 2.1 | World population in billions (2002–2016) (<i>Source</i> World Development Indicators WDI (World Bank 2018)) | 77 |
| Fig. 2.2 | Different country groups as a % of world population (2002–2016). World 122 = all countries with no complete data missings in the model | 78 |

| | | |
|----------|---|-----|
| Fig. 2.3 | Different country groups as a % of world population (2002–2016). World 122 = all countries with no complete data missings in the model | 79 |
| Fig. 2.4 | Dimensions, subdimensions and assigned indicators of the conceptual research design and methodic framework of analysis: the different weight measures (<i>Source</i> Author's own design. <i>Notes a</i> "Gini Index" and "Gini Coefficient" are two different names for the same measure; WDI = World Development Indicators (released by World Bank). <i>b</i> WDI = World Development Indicators (issued by World Bank); Depending on the analytical design, the government-opposition-cycles (political swings) may also be aligned to the dimension of control) | 81 |
| Fig. 3.1 | Political freedom in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 116 |
| Fig. 3.2 | Economic freedom in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 117 |
| Fig. 3.3 | Income equality in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 118 |
| Fig. 3.4 | Gender Equality in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 119 |
| Fig. 3.5 | Human development (HDI re-designed) in the OECD and OECD countries (2002–2016): Nordic countries, US, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 120 |

- Fig. 3.6 Sustainable development (non-political) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (*Source* Author’s own calculation and visualization) 121
- Fig. 3.7 Sustainable development (non-political and political) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (*Source* Author’s own calculation and visualization) 122
- Fig. 3.8 Life expectancy (sustainable development) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (*Source* Author’s own calculation and visualization) 123
- Fig. 3.9 Tertiary education (“SUSTAINABLE DEVELOPMENT”) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28, and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (*Source* Author’s own calculation and visualization) 124
- Fig. 3.10 GDP per capita (SUSTAINABLE DEVELOPMENT) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28, and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (*Source* Author’s own calculation and visualization) 125
- Fig. 3.11 (Lower) CO₂ emissions (SUSTAINABLE DEVELOPMENT) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28, and Japan. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (*Source* Author’s own calculation and visualization) 126
- Fig. 4.1 Political Freedom in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical)

| | | |
|----------|--|-----|
| | minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 152 |
| Fig. 4.2 | Economic Freedom in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 153 |
| Fig. 4.3 | Economic Freedom in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 153 |
| Fig. 4.4 | Income Equality in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 154 |
| Fig. 4.5 | Gender Equality in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 154 |
| Fig. 4.6 | Human Development (HDI redesigned) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 156 |
| Fig. 4.7 | Sustainable Development (non-political) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 156 |
| Fig. 4.8 | Sustainable Development (non-political and political) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation and visualization) | 157 |

| | | |
|-----------|--|-----|
| Fig. 4.9 | Life expectancy (Sustainable Development) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation and visualization) | 157 |
| Fig. 4.10 | Tertiary education (“Sustainable Development”) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation and visualization) | 158 |
| Fig. 4.11 | GDP per capita (Sustainable Development) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation and visualization) | 158 |
| Fig. 4.12 | (Lower) CO ₂ emissions (Sustainable Development) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation and visualization) | 159 |
| Fig. 5.1 | Comparison of the OECD (OECD35) with the world (world122) across dimensions and indicators (2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation and visualization) | 201 |
| Fig. 5.2 | Comparison of the OECD (OECD35) with the world (world 110) across dimensions and indicators (2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation and visualization) | 202 |
| Fig. 5.3 | Development of the world (world122) across dimensions and indicators (2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation and visualization) | 203 |

| | | |
|----------|---|-----|
| Fig. 5.4 | Comparison of score values (levels) for the world (world 122) for the early 2000s and late 2010s (2002 and 2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 204 |
| Fig. 5.5 | Growth rates of score values (levels) for the world (world 122) for the 2000s and 2010s by comparing 2002 and 2016 (<i>Source</i> Author's own calculation) | 205 |
| Fig. 5.6 | Comparison of score values (levels) for the OECD (OECD35) and the world (world 122) for late 2010s (2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 210 |
| Fig. 5.7 | Comparison of distance (gap) of score values (levels) for the OECD (OECD35) ahead of the world (world 122) for the early 2000s and late 2010s (2002 and 2016) (<i>Source</i> Author's own calculation) | 211 |
| Fig. 5.8 | Growth rates of score values (levels) for the OECD (OECD35) and the world (world 122) for the 2000s and 2010s by comparing 2002 and 2016 (sorted by OECD) (<i>Source</i> Author's own calculation) | 212 |
| Fig. 5.9 | Growth rates of score values (levels) for the OECD (OECD35) and the world (world 122) for the 2000s and 2010s by comparing 2002 and 2016 (sorted by world) (<i>Source</i> Author's own calculation) | 213 |
| Fig. 6.1 | Political swings, political left/right swings (<i>Source</i> Author's own conceptualization and visualization) | 228 |
| Fig. 6.2 | The conceptual overlapping of government/opposition cycles and political (left/right) swings (<i>Source</i> Author's own conceptualization and visualization) | 229 |
| Fig. 6.3 | Average frequency of person change and party change of head of government based on a ranking of countries (151 countries) in reference to political freedom (for the fifteen-year period 2002–2016) (<i>Source</i> Author's own calculations and visualization based on Table 6.5) | 274 |
| Fig. 7.1 | Average means for the score values of the United States and the EU (EU15) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: | |

| | | |
|----------|--|-----|
| | 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 289 |
| Fig. 7.2 | Average means for the score values of the United States and the EU (EU15) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 290 |
| Fig. 7.3 | Average means for the score values of the United States and the EU (EU15 and EU28) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 292 |
| Fig. 7.4 | Average means for the score values of the United States and Nordic Countries for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 295 |
| Fig. 7.5 | Average means for the score values of the OECD (OECD35) and the world (world 122) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 296 |
| Fig. 7.6 | Average means for the score values of the OECD, Nordic Countries, U.S., and the world (world 122) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 299 |
| Fig. 7.7 | Average means for the score values of the OECD, Nordic Countries, U.S., and the world (world 122) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 300 |
| Fig. 7.8 | Average means for the score values of Latin America and Asia (Asia 15) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author's own calculation) | 305 |

| | | |
|-----------|---|-----|
| Fig. 7.9 | Average means for the score values of China and India for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation) | 308 |
| Fig. 7.10 | Average means for the score values of China, India and Russia for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (<i>Source</i> Author’s own calculation) | 310 |
| Fig. 7.11 | The Quadruple and Quintuple Helix innovation systems in relation to society, economy, democracy and social ecology (<i>Source</i> Author’s own conceptualization based on Carayannis and Campbell [2014, p. 15], Carayannis et al. [2012, p. 4], and adapted from Carayannis and Campbell [2009, p. 207]. See also Etzkowitz and Leydesdorff [2000]) | 343 |

List of Tables

| | | |
|-----------|--|-----|
| Table 6.1 | Head of government (de facto head of government) of 151 countries in mid-2018 (as of April 30, 2018) | 244 |
| Table 6.2 | Peaceful person change of head of government (de facto head of government): number of years with at least one peaceful person change (per year), 1990–2017 | 251 |
| Table 6.3 | Peaceful party change of head of government (de facto head of government): number of years with at least one peaceful party change (per year), 1990–2017 | 257 |
| Table 6.4 | Comparison of political freedom (dimension) with person change and party change of head of government (de facto head of government): countries ranked by average (mean) of political freedom (2002–2016) | 266 |
| Table 6.5 | Average frequency of person change and party change of head of government (de facto head of government) based on a ranking of countries in reference to political freedom (for the years 2002–2016) | 273 |
| Table 6.6 | Correlation of “political freedom” with “person change of head of government” and “party change of head of government” | 276 |



1

Introduction: How to Conceptualize Democracy, Quality of Democracy in Global Comparison and Democracy as Innovation Enabler

The introduction introduces into our analysis and presents an overview and synopsis of the analytical work that will follow in the coming chapters and sections. The introduction is organized into five sections. In the first section, the research questions are being addressed and discussed. In the second section, the conceptualization of democracy and quality of democracy are presented that drive our endeavor of a global comparison of democracies and their qualities. We introduce the *basic quintuple-dimensional structure of democracy* as conceptual (and theoretical) basis that underlies our analysis. Section three develops and explains in greater detail our conceptual research design and the methodic framework of analysis that we apply in reference to the research questions. In section four, a short preview on the coming sections and chapters of the analysis is summarized for purposes of orientation and guidance. The final section (section five) again engages in a short resume of reflection of our whole research endeavor.

1.1 The Research Questions

The research questions of the analysis here focus on: *How to conceptualize and to measure democracy and the quality of democracy in global comparison?* The outcome will be the *conceptualizing and measuring of quality of democracy* in a worldwide format and context. This also will be tested for the proposition (hypothesis) of “*democracy as innovation enabler*” (which also represents a complementary research question for the analysis).

These research questions are being approached by a specific conceptual research design and methodic (methodology based) framework of analysis. Indeed, there is not only one concept or one measurement of democracy, but in fact a pluralism of *concepts* and of *measurement approaches* would have to be stated that already exist and coexist (see, for example, Campbell 2008; Campbell and Barth 2009; Campbell et al. 2013c; Freedom House 2013a; Schmidt 2010, pp. 370–398). Concepts relate to theory or theories of democracy. Theories sometimes have the connotation of macrotheories, interested in and trying to offer broader-ranged explanations. Theories of democracies attempt to frame and to describe democracies systematically. In a worst-case scenario, theories would represent a more static analytical architecture, so this feeds and interferes with the challenge of preserving the momentum of a flexible learning for democracies. Preferably, we will speak of concepts, not so much theories of democracy. *By using with emphasis this terminology of “concepts” of democracy, and not of theories of democracies, the open and learning character of this whole inquiry here should be underscored.* But of course, the *concept of concepts* overlaps in substance with the *concept of theories*, between which analytical bridges can be designed, built and interlinked.¹

The analysis here is being carried by the further conviction that there is and operates an interaction between concepts and theories of

¹When employing the phrase of *concepts and theories of democracy and democracies*, the author wants to demonstrate his inclination that the “boundaries” between concepts and theories of democracy should be regarded to be volatile, flexible and fleeting.

democracy, on the one hand, and measurement of democracy, on the other (see Campbell 2012, p. 294). So, without measurement, it is difficult to envision how concepts and theories of democracy can be developed further. The same is also true for looking on democracy from the reverse perspective. So that democracy measurement can consolidate the empirical results and outcomes, these have to be either projected on concepts and theories of democracies, and/or these results are used for designing concepts and theories of democracy. Without democracy measurement, the further evolution of concepts and theories of democracies is blocked or at least constrained. But without concepts and theories of democracy, democracy measurement may not result in creating an overall picture of democracy and the changes of democracy, but may only produce quantities of empirical noise. Of course, it appears to rational and well-reasoned, trying to tie together and coupling systematically attempts of democracy measurement with concepts and theories of democracy. However, there is also the impression that this tying together is not being systematically enough attempted. Analytical approaches are often biased to the one or other side of the spectrum of possibilities here. A positive counter-example would be the work of Guillermo O'Donnell (2004a, b), in which a detailed and rich development of theory of democracy, with a focus on quality of democracy, is being combined with practical consequences of democracy measurement. O'Donnell relates and compares human rights with human development, and in case of human development refers directly to the Human Development Index (HDI) that is being issued annually by the United Nations Development Program (see, for example, UNDP 2011). The HDI represents a compilation of detailed empirical statistics and indicators, more or less for all member states to the United Nations, and is thus global in reach. In his theoretical thinking, O'Donnell indicates how his theory of quality of democracy possibly cross-links to empirical and data-based models of development, by this offering, how progress and advancement (but also decrease) of democracy (quality of democracy) may be measure. Guillermo O'Donnell is also inclined to see and to refer to the global picture of the democracy, the whole world of democracy, and patterns and trends of change and alteration.

There are nuances of differences in the meaning of measurement of democracy. In the following, we want to portray these nuances twofold:

1. *The (direct) measurement of democracy and the quality of democracy: Measurement of democracy can directly address the generation of empirical data and indicators*, be it that these data exist “out there” (for example, surveys about the satisfaction with the polity with politics), or (and/or) that they are being produced in the context of an expert peer review process (for example, in the case of Freedom House,² when experts provide freedom ratings for “political rights” and “civil liberties” for countries and territories world-wide, which are then being transformed to numerical scale). These would represent approaches to democracy measurement in a more direct understanding.
2. *The “democratic audit” of democracy and the quality of democracy: A more indirect approach of democracy measurement is being represented by a so-called democratic audit (democracy audit) (for example, see IDEA 2008).³ David Beetham (1994, p. 25) defines a democratic audit in the following way: “First, it is necessary to explain the idea of a ‘democratic audit’ itself. This is the simple but ambitious project of assessing the state of democracy in a single country. Like other Western countries, the UK calls itself a democracy and claims to provide a model for others to follow. Yet how democratic is it actually?” Here, there is an association of linking democratic audits to the evaluation of a democracy and its quality of democracy. Democratic audits focus more on an assessment or evaluation of democracy and of the quality of democracy, not limited to aspects of democracy measurement, but instead promoting an advocacy of democracy. At the end of a democratic audit process and procedure, also recommendations should be developed and set up for discussion, how a democracy and the quality of democracy could be improved. In epistemic terms, a*

²Visit Freedom House at: <http://www.freedomhouse.org/>.

³The official wording here is “democratic audit”. We assert (or at least propose) that a democratic audit also could be re-phrased or re-worded (interpreted) as a *democracy audit*.

democratic audit may also arrive at offering suggestions, which new empirical indicators of democracy measurement would be important and should therefore be introduced and generated in the future. In that respect, a democratic audit (in contrast to academic research or academic analysis) represents also “evaluative processes” (Cullell 2004, p. 101). *Paraphrased in own words, a democratic audit resembles (can resemble) more a bottom-up inductive approach and procedure (assessment and evaluation), exploring the landscape of a democracy. An “analysis of democracy,” on the other hand, resembles more a top-down and deductive approach and procedure, perhaps grounded in established theory, and involving conceptual premises as point-of-departure, also requiring a methodic framework of analysis for conducting the analysis. Democratic audit stands more for bottom-up and inductive, and democratic analysis for top-down and deductive (to set up and propose here a contrasting conceptual profile).* Of course, there can be interesting conceptual and methodic overlaps and mixes of democratic audit and democratic analysis, allowing for hybrid combinations of both (see Figs. 1.1 and 1.2, with graphical differences depending on the assessment of amount of overlap between democratic audit and democratic analysis). David Beetham prepared conceptually the idea of democratic audits and engaged in early groundwork for the later systematic application of democratic audits. In his seminal work *Defining and Measuring Democracy*, David Beetham (1994) relates democratic audits also to indices of democracy and the general notions of defining and measuring democracy (which represents also the title of his book in 1994). Beetham (1994, p. 30) uses the metaphor of the “democratic pyramid,” which brings together the following *key principles* as a conceptual basis for democratic audits: “free and fair elections”; “civil and political rights”; “a democratic society”; and “open and accountable government” (see also Beetham 2004).⁴

⁴In reference to these key principles, David Beetham (1994, p. 34) adds and comments: “It would be both remarkable and disturbing, if there were no convergence over the criteria for ‘free and fair elections’ or ‘civil and political rights’, where there exist the most clearly established international standards. Even here, however, our insistence on the democratic principles of political equality takes us beyond the very minimal acknowledgment of universal suffrage typical of most other indices, to which we add such criteria as: equal value for each vote, equal opportunity to

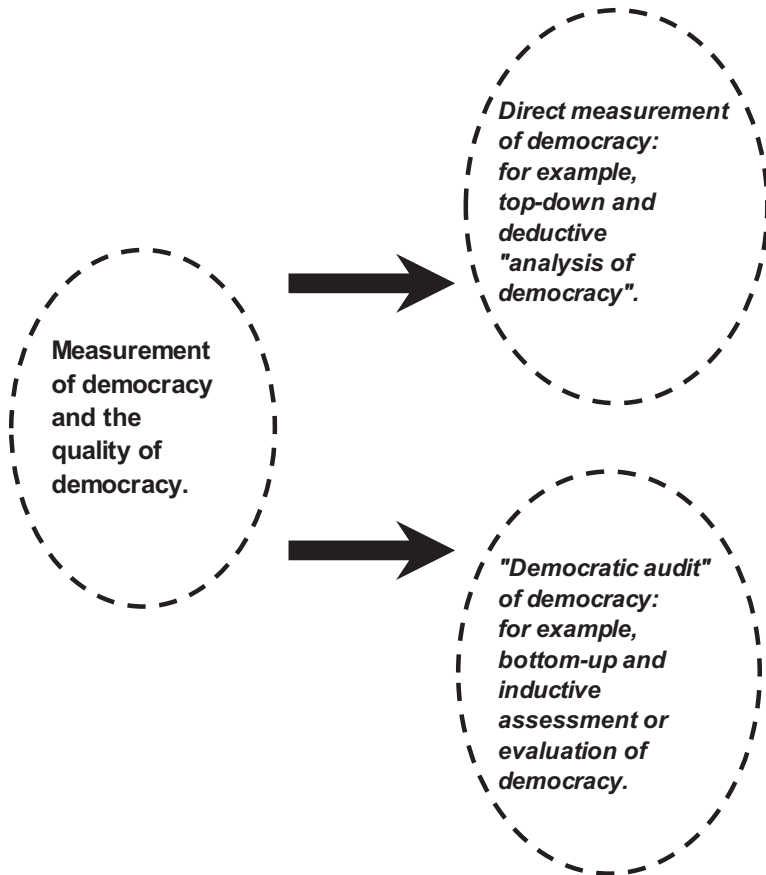


Fig. 1.1 Measurement of democracy and of quality of democracy (types of measurement) (Source Author's own conceptualization)

Beetham was subsequently involved in several democratic audit measures and procedures in and of the UK (for example, see Beetham et al. 2002). The "International Institute for Democracy

stand for public office, fair access for all social groups and parties to the means of communication with the electorate, and so on. And our extension of the democratic indices into the areas of open and accountable government and a democratic society constitute a considerable extension of focus beyond these other indices".

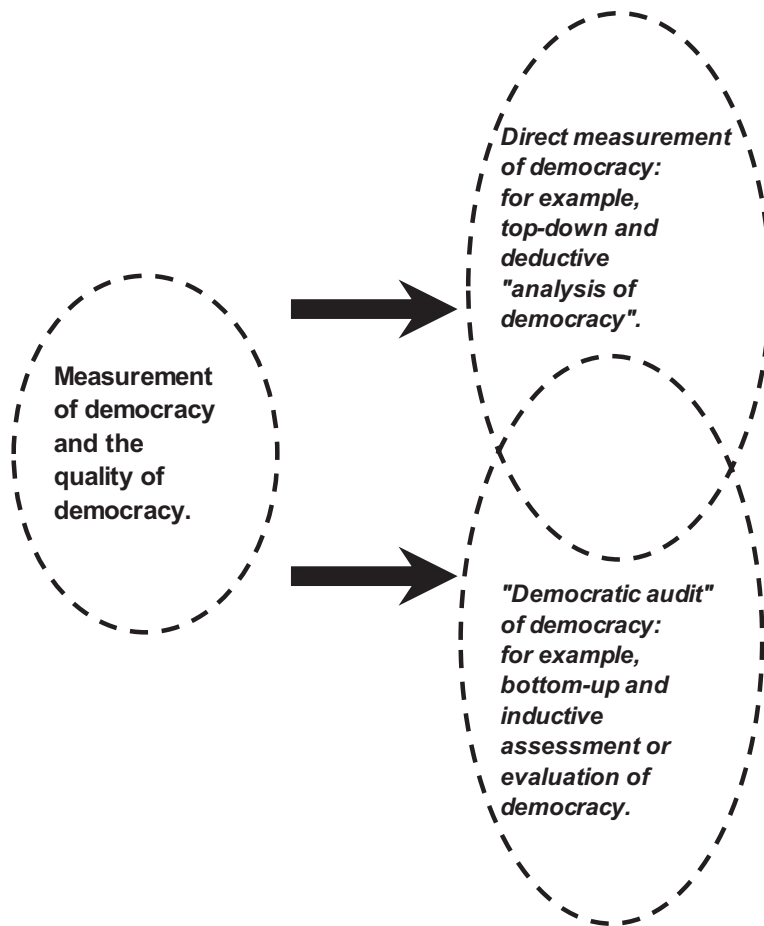


Fig. 1.2 Measurement of democracy and of quality of democracy (types of measurement) (Source Author's own conceptualization)

and Electoral Assistance" (International IDEA),⁵ which is located in Stockholm, Sweden, systematically applies democratic audits for the purpose of evaluating the quality of democracy in different countries,

⁵See the website of IDEA at: <http://www.idea.int/>.

called assessment procedures (“Assessing the Quality of Democracy”). The “State of Democracy (SoD)” “Assessment Framework” of IDEA is guided by and is based on the following two “basic principles”: “*popular control* over public decision making and decision makers” and “*equality* of respect and voice between citizens in the exercise of that control” (IDEA 2008, p. 23). The *assessing-the-quality-of-democracy* framework of IDEA has been directly codeveloped by David Beetham (IDEA 2008, p. 2). In that respect, the IDEA framework may be understood as an attempt of further operationalization and application of some of the original core ideas of David Beetham on democracy and on defining and measuring democracy (Beetham 1994). Since 2000, the assessment framework of IDEA for the evaluation of the quality of a democracy has been applied in twenty-five countries, as of February 2013 (see also Campbell 2012, p. 303; Pickel and Pickel 2006, pp. 199–209).⁶ In the USA and the German-speaking countries in Europe (Germany and Austria), but also in Switzerland, for example, IDEA’s assessment framework was not applied, so far (Campbell 2012, p. 311).

In reference to a combined and integrated conceptual and methodic understanding, our analysis expresses two focuses: (1) *developing a conceptualization of democracy and of quality of democracy (for a global comparison), which refers to existing literature, but introduces also novel elements (so the self-assertion); (2) this conceptualization is then being translated into an empirical model (macromodel) that should demonstrate what the empirical effects of the conceptualization are, how this “conceptualization plays in practice.” Since the conceptualization touches on new grounds, the empirical analysis, therefore, is primarily “explorative” in character. This implied in consequence that the explicit decision was made and taken not to define and introduce hypotheses (on possible empirical outcomes) in advance that then would guide the analysis and the interpretation of the results of our analysis.* The formulation of

⁶See the overview under: <http://www.idea.int/sod/worldwide/index.cfm> (see also <http://www.idea.int/sod/profiles/index.cfm>).

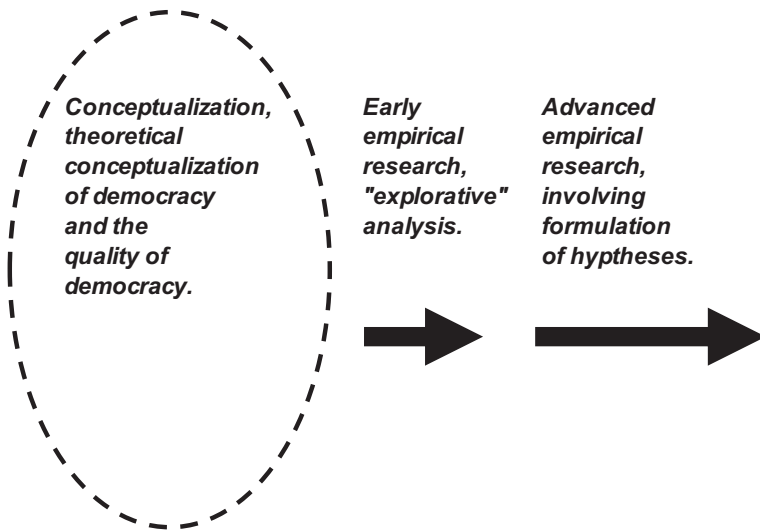


Fig. 1.3 Conceptualization of democracy and different stages of empirical analysis (Source Author's own conceptualization)

hypotheses would require an already more mature or advanced status of the empirical stock of knowledge in a specific field (from a practical point of view). *The "explorative" character of our empirical analysis was valued as early empirical research, so that at these stage procedures of hypotheses-formulation (sophisticated hypothesis-formulation) may be premature.* However, finally, in the conclusion to our analysis, we engage in a tentative process of a hypothesis formulation, which then is not ex-ante to our analysis, but ex-post. For that hypothesis formulation, we attempted a synthesis of our work, based on the findings and empirical outcome of our analysis. These hypotheses may inform later empirical work on democracy and the quality of democracy in global comparison, and could behave as possible reference points (working hypotheses) for next-stage research in the field of democracy. Based on the ex-post hypotheses formulation, possible implications and ramifications for the conceptualization of democracy and quality of democracy, also the theory of democracy, are discussed as well in our conclusion (see Fig. 1.3).

Concerning democracy or democracies, there is also always the question, whether a systematic development or *evolution of democracy* can be observed or stated. In variation of this question, it also can be asked, whether there are different manifestations of democracy, indicating perhaps higher forms of development of democracy. Is it appropriate to talk about different, but also higher stages of democracy?⁷ Are there less, but also more advanced democracies? One connotation of evolution of democracy may be a tendency that democracies move on and move forward to such higher stages of democracy. *The practical test, then, of course, is, whether such a tendency of democracy to evolve into higher stages (conceptual stages) of democracy can really be observed in empirical terms.* However, at the same time, we also can observe that our concepts and theories about democracy are becoming more ambitious, demanding and sophisticated. In the past, the concept of the “electoral democracy” appeared sufficient.⁸ Electoral democracies focus on the process of elections and “political rights.” *Electoral democracies, so the proposition here, understand democracy as a set of minimum requirements, which must be fulfilled, so that the criterion of being a democracy is fulfilled.* The eight criteria of Antony Downs (1957⁹/1985, pp. 23–24) about the “nature of democratic government” can be interpreted this way. Freedom House (2011) applies the following criteria for defining an electoral democracy: “A competitive, multiparty political system”; “Universal adult suffrage for all citizens”; “Regularly contested elections”; and “Significant public access of major political parties to the electorate through the media and through generally open political campaigning.” *The next stage of development of democracy would be represented by the liberal democracy.*

⁷See later Hypothesis 12 and 15 in Sect. 7.2.

⁸Electoral democracy and liberal democracy represent established concepts and categories in the Euro-American discourses on democracy and serve as references for democracy debate.

⁹This book was published first back in 1957.

A liberal democracy is clearly more than to primarily fulfill the minimum requirements of and for a democracy. *The liberal democracy focuses on fulfilling in a sufficient mode (an advanced mode) the criteria of a democracy.* By this, the liberal democracy transcends the minimum requirements of an electoral democracy. Liberal democracy goes beyond electoral democracy. Within the context of the framework of analysis of Freedom House, implications of this are to complement and extend the “political rights” by “civil liberties” for modeling a liberal democracy more comprehensively. Freedom House (2011) states here again: “Freedom House’s term ‘electoral democracy’ differs from ‘liberal democracy’ in that the latter also implies the presence of a substantial array of civil liberties. In the survey, all free countries qualify as both electoral and liberal democracies. By contrast, some partly free countries qualify as electoral, but not liberal, democracies.” As Ludger Helms (2007, p. 18) emphasizes, liberal democracy requires to a sufficient degree the existence of liberal and democratic elements within a democracy.¹⁰ *The currently established democracies in Western Europe, North America and Japan would qualify, by and large, to represent liberal democracies.*¹¹ Liberal democracy, therefore, is the current empirical manifestation of democracy in the context of the Organization of Economic Co-Operation and Development (OECD), i.e., the advanced economies. Empirical democracy, of course, is being challenged by more demanding concepts and theories of democracy. *So, there are always tensions between what democracy-is and what democracy-could-be or democracy-should-be.*

¹⁰“Damit ein System als liberale Demokratie, oder schlicht als liberal-demokratisch, bezeichnet werden kann, müssen sowohl liberale als auch demokratische Elemente in hinreichendem Umfang verwirklicht sein” (Helms 2007, p. 18).

¹¹“Die in dieser Studie behandelten Regierungssysteme Westeuropas, Nordamerikas und Japans lassen sich – bei allen Unterschieden – eindeutig als liberale Demokratien bezeichnen” (Helms 2007, p. 20).

1.2 Conceptualization of Democracy and Quality of Democracy: The Basic Quintuple-Dimensional Structure of Democracy

Box 1.1 Definition and Conceptualizations of Democracy

| | |
|---------------------------|---|
| Definition of democracy | <p>Democracy is a system of “self-ruling”, “self-government” or “self-governance” by the people and of the people that is based on human rights (basic rights), with freedom and equality as two basic principles. Democracy represents a self-organizing system in a consequent understanding. Theory or theories about democracy, therefore, are also theories about a system of self-ruling, self-government or self-governance by the people (human rights based). In that line of thinking, quality of democracy refers to the qualities of self-ruling, self-government or self-governance by the people, also in reference to human rights (basic rights), also in reference to freedom and equality</p> |
| The people in a democracy | <p>In an ideal-typical understanding, the people of a democracy should be identical with the population that is living in this democracy and country. Practically speaking, this is in no democracy the case. The greater the mismatch or non-overlapping between the (political) “people” and the “population” within a democracy, the more troublesome is this for a democracy and the status of quality of democracy. Should the gap of a mismatch also widen, this again would indicate a problematic trend for a democracy. Ideal-typically designed, there should be a maximum overlap of the (political) “people,” empowered with citizenship and franchise, and the population within a country and democracy</p> |
| Quality of democracy | <p>Quality of democracy represents a concept (theory of democracy), which should allow to distinguish between different qualities of democracy, by this implying that there can be democracies with a lower quality of democracy, but also with a higher quality of democracy</p> |

| | |
|---|---|
| Democracy: the political system and the context of the political system | Democracy is a system that addresses government and governance, the political system, but also the context of the political system. The context of the political system is being addressed, where the context is mattering for the political system. This would imply to understand democracy also in the context of society. Democracy then would interlink politics or the political system with society, democracy would transcend the boundaries of the (narrow) political system. The whole context of the political system refers to society, the economy, but also the natural environments of society. Perhaps also additional layers of contextualization could be conceived. Important examples, for this, are of course the human rights, basic rights and political rights. For these to function, the political system must cooperate with the legal system, which also represents a context for the political system, because only this establishes a "rule of law" One functional definition for the political system is: the political system represents a system that is interested in governing by (with) policy the society, economy and the other systems (subsystems) of society |
| Complexity in theory (theories) about democracies | There is a tendency that theories about democracy are evolving more complex over time. With the growing complexity of democracy theory, it could also be suggested or expected that democracies may increase the complexity of their structures and processes |
| Democracy and development | By introducing and incorporating the concept of the quality of democracy or of theories of the quality of democracy in our framework of analysis, the interest is being emphasized and acknowledged, to have the possibility to distinguish between different levels, stages of development or qualities of democracies. "Quality of democracy" should add sharpness and precision to our reasoning and theorizing about democracy. "Quality of democracy" should make differences between democracies better visible. "Quality of democracy" should help exploring, whether democracies achieved to progress, and if so, whether such progress could be displayed |
| Democracy in emerging and developing economies | In principle, democracy now is understood to be possible in emerging, but also developing economies. In that respect, democracy became a truly global phenomenon, and the spreading and diffusion of democracy are seen as a worldwide process. The world of democracy has arrived in a global world |

| | |
|---|---|
| Democracy and sustainable development | High-quality democracy has a system of government and governance (and policy-making) that seeks and takes responsibility for development and performance in society, economy and the environment (and other contexts outside of the political system) via a conscious application or non-application of policy, but also policy evaluation and policy reform. Here, ideas of democracy, quality of democracy, sustainability, and sustainable development, come together |
| Measurement of democracy | To define basic (conceptual) dimensions of and for democracy, and then to attempt measuring and mapping democracies empirically, based on this dimensional design |
| The basic dimensions (basic conceptual dimensions) of democracy | The underlying model for the basic dimensions (basic conceptual dimensions) of democracy and the quality of democracy for the conceptual research design and methodic framework of analysis, being applied and developed here, refers to the following five dimensions: freedom, equality, control, sustainable development, and self-organization (political self-organization). The outcome of this is a quintuple structure of dimensions of democracy or a basic quintuple-dimensional structure of democracy and the quality of democracy |
| Political self-organization and government-opposition-cycles | In context of the analysis here, the analysis will limit empirically the dimension of political self-organization to the government-opposition-cycles by looking at peaceful changes of the head of government and at peaceful party changes of the head of government. Government-opposition-cycles result in political swings (political left/right swings), which appear to be of a crucial importance for democracies: (1) they prevent too dominant concentrations of power, and (2) they provide elasticity for problem-solving and for developing and designing policy to address issues of concern |
| Knowledge democracy, "Democracy as Innovation Enabler" | Knowledge democracy emphasizes the importance of knowledge and innovation for the quality of democracy and the sustainable development of democracy, society and economy. Expectations are that democracies with a higher quality of democracy also will be knowledge democracies. "Democracy as Innovation Enabler" has here at least the following meanings: (1) political pluralism in a democracy encourages also a diversity of knowledge and innovation ("Democracy of Knowledge") that is necessary for development (also economic development and economic growth); (2) advanced economies are driven by knowledge and innovation, so they require a democracy; (3) in principle, "democracy as innovation enabler" also applies to emerging and developing economies, but may not always be realized and applied |

Source Author's own conceptualization and definitions

The analysis, being presented here, refers to democracy in a twofold mode (for a conceptual summary, see Box 1.1). First, the focus is on democracy in a general understanding. Second, the additional focus is on quality of democracy. *Quality of democracy represents a concept (theory of democracy), which should allow to distinguish between different qualities of democracy, by this implying that there can be democracies with a lower quality of democracy, but also with a higher quality of democracy.* In past times, in the twentieth century post-1945, perhaps a *dichotomous dividing-of-the-world-into-two-spheres* appeared to be sufficient, namely contrasting the democracies with the non-democracies, distinguishing between free and non-free political systems. This represented a dominant western view on the world, where there was a bipolar rivalry between the USA and the Soviet Union, where the western liberal democracies were challenged by communist political systems. Democracies, at that time, focused (to a certain extent) on industrialized countries and advanced economies, democracies in developing economies and emerging economies where perhaps of not such a concern, with the possible exception of India and Latin America (and some other countries). Should this retrospective view be valid, then democracy was often associated with higher economic development, perhaps seeing democracy as a privilege of and for advanced economies. It could and should be critically added, whether this past view on democracies was not oversimplified, and whether there was not too much of a positive appraisal for western democracies involved. With the spreading of democracies and democratic regimes (also in the aftermath of the collapse of Soviet communism), more of a need arose, now to distinguish between different manifestations, but also qualities of democracy (Campbell and Barth 2009, p. 210). Also, the one-sided linkage between economic development and establishment was questioned. Democracy, no longer, was being regarded as a privilege of higher economic development, democracy was not something anymore being exclusively reserved for advanced economies. *In principle, democracy now is understood to be possible in emerging, but also developing economies. In that respect, democracy became a truly global phenomenon, and the spreading and diffusion of democracy are seen as a world-wide process. The world of democracy has arrived in a global world.* The contemporary spreading and world-wide

diffusion of democracy¹² are expressed in the metaphor and wording of the “third wave” (Huntington 1991, 1997) and “fourth wave” (McFaul 2002) of democratization and democracy. *This creates also a new type of challenge: Are more or less democratic countries in emerging and developing economies successful in their development, how does here democracy interplay with sustainable development? Also, tensions are being created, whether our established concepts and theories of democracy are well prepared and designed, to grasp, to comprehend and to capture democracy in this globalized context. Or are our concepts and theories of democracy biased in favor of an application to advanced economies (the OECD countries)? Furthermore, democracy does not end with its establishment. The relationship or possible relationships between *democracy and development* or *democracy and economic growth and development* represents a traditional focus of research (Brand et al. 2000; Carayannis and Campbell 2014; Gerring et al. 2005; Hadenius and Teorell 2005; Kesselmann 1973; Knutsen 2012; Merkel 2010; Morlino and Quaranta 2016; Przeworski et al. 2003; Rothstein and Uslaner 2005).*

Reviewing “Democracy and Development” over the years 1950–1990, Przeworski, Alvarez, Cheibub and Limongi assert: “Hence, if the patterns we have observed persist, the world will be better, much better. More people will be living in democracies; they will be wealthier; and they will be enjoying all the benefits that wealth brings, probably including great improvements in public health and medical technology. But not all of us will enjoy this progress. Poverty will still be widespread, dictators will still repress, and wars will still ruin lives” (Przeworski et al. 2003, p. 277).

¹²In congruence with that it should be further noted that democracy fully established itself at least at the level of ideas or in the “world of ideas”. *With very few exceptions, there exists currently no (almost no) state that does not at least formally self-describe itself as a democracy.* So there is a universal assertion of all states to represent a democracy in the early twenty-first century. Of course, in no way this implies an automatic match between this assertion and practice in reality.

A development or evolution of democracy is always possible, we even should expect this, but it is not predecided that this development only must be directed to improvements or gains in democracy. *Increases of quality of democracy, but also decreases, are equally feasible. Democracy is confronted with positive scenarios, but also worst-case scenarios alike, concerning the further progress of a democracy.* A certain level or status of democracy cannot be taken as granted or given forever. *In fact, every democracy is being constantly challenged to self-improve continuously, to reinvent itself, to reinvent democracy. In addition, always new problems and challenges arise in permanence that test the problem-solving capacity and capability of democracy.* In that sense, the themes of democracy and innovation also associate with each other (Helms 2016). *This is already one of the testing grounds for “democracy as innovation enabler”.* Democracy must seek finding creatively new answers to new questions, and this process never interrupts and comes never to a halt. In the “fog of uncertainties of the present,” it is often hard to say, for the moment, whether a certain change in democracy points to a positive or negative development of democracy. *By introducing and incorporating the concept of the quality of democracy or of theories of the quality of democracy in our framework of analysis, the interest is being emphasized and acknowledged, to have the possibility to distinguish between different levels, stages of development or qualities of democracies. “Quality of democracy” should add sharpness and precision to our reasoning and theorizing about democracy. “Quality of democracy” should make differences between democracies better visible. “Quality of democracy” should help exploring, whether democracies achieved to progress, and if so, whether such progress could be displayed.* For the purpose of our analysis, this is crucial and decisive. This allows furthermore conducting a differentiated analysis, which is regarded to be important, to understand democracy as a global phenomenon, to do fairness to democracy, and not only to talk or speculate about democracy in OECD context. Therefore also, an influential thinker to our analysis is Guillermo O’Donnell (2004b). In fact, such

levels of democracy can be distinguished for all countries, democracies and non-democracies alike. In the case of non-democracies, the level of democracy or of the quality of democracy would obviously score low, or would be nonexistent, in other words absent. *Referring back to theory of democracy, it could be asked, whether it would be conceptually reasonable, to distinguish between the following levels or stages of democracy, indicating also a direction for the advancement of democracy: electoral democracy, liberal democracy and liberal democracy or democracy of a high quality* (see Fig. 1.4). In ideal-typical categories (or in conceptual stages), such a classification would make sense. In empirical terms, a practical typology of empirically existing democracies would certainly face challenges and ambiguities.

What is democracy? What are concepts and theories about democracy? Approached from an etymological perspective, the word or term of “democracy” originates in the ancient Greek δημοκρατία (*dēmokratiā*) that brings together the meaning of *dēmos*, the “people,” with *kratos*, which has the meaning of “power” or “rule.” In a literal understanding, democracy means and implies that it is the people who are governing “itself” (themselves). Democracy acknowledges the self-empowerment of people. In a democracy, the people are the base, basis and the (only) legitimate source for ruling and government. *Democracy is a system of “self-ruling,” “self-government” or “self-governance” by the people and of the people that is based on human rights (basic rights), with freedom and equality as two basic principles.*¹³ *Democracy represents a self-organizing system in a consequential understanding. Theory or theories about democracy, therefore, are also theories about a system of self-ruling, self-government or self-governance by the people (human rights based). In that line of thinking, quality of democracy refers to the qualities of self-ruling, self-government or self-governance by the people, also in reference to human rights (basic rights), also in reference to freedom and equality.* Reconstructing the

¹³Government and governance often associate closely, but are not necessarily identical. As already Rhodes (1996) has noted, there can be a “Governing without Government”. For example, this may refer to self-organizing networks or policy networks of higher complexities (see also Campbell and Carayannis 2013a, p. 15).

Higher
conceptual stages
(ideal-typical categories)
of quality
of democracy.

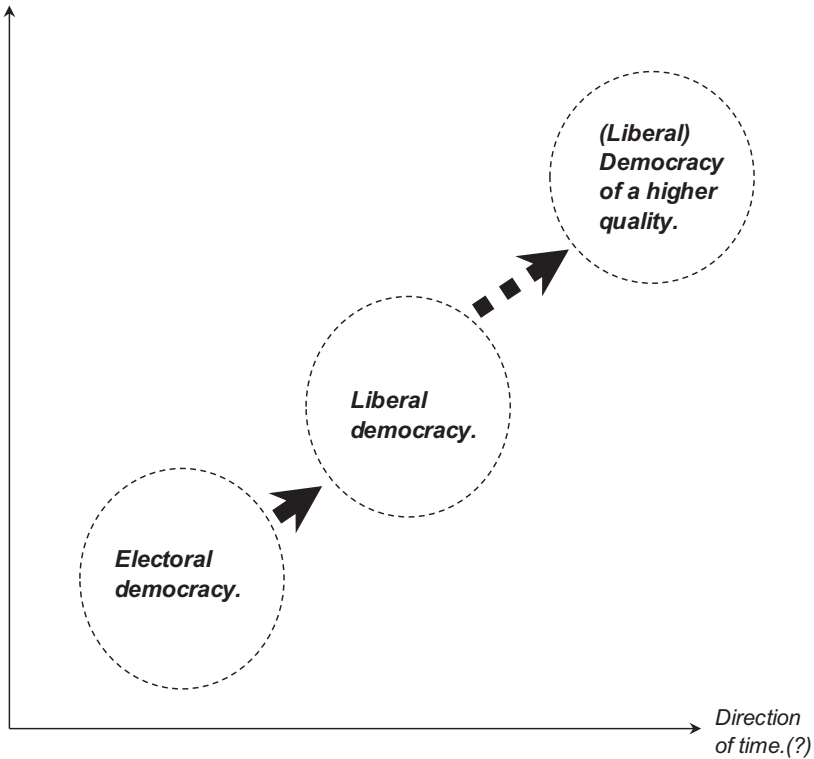


Fig. 1.4 Possible evolution of democracy in different stages (conceptual stages) or in different ideal-typical categories (simplified model) (Source Author's own conceptualization)

etymological meaning of “democracy” has the advantage that this identifies this one crucial core understanding of democracy and the concept of democracy. As Michael J. Sodaro (2004, p. 31) states it and proposes for definition: “The essential idea of democracy is that the people have the right to determine who governs them.” This aspect of self-government by the people in a democracy was also referred to in the famous

“Gettysburg Address” of US president Abraham Lincoln on November 19, in the year 1863, when he said that democracy is a “government of the people, by the people, for the people.”¹⁴ Later, Guillermo O’Donnell (2005, p. 9) paraphrased this historical Gettysburg Address with the following words: “Contemporary democracy hardly is *by* the people; but it certainly is *of* the people and, because of this, it should also be *for* the people.” *Despite this intrinsic meaning and validity of the principle of self-ruling, self-government and self-governance by the people in a democracy, most, if not all, of the contemporarily existing democracies are based on principles and processes of representation and mechanisms of delegation and are thus examples of an “indirect democracy.”* How is the self-ruling, self-government and self-governance of the people being translated into real decision-making by the institutions of government? The standard model of democracy is: the people, more precise the voters, elect in context of competitive elections members or representatives to parliament or multilevel parliamentary systems, and the law-making or the legislative decision-making focuses clearly on the parliaments and the members to parliament, where also principles of delegation and accountability interact and interplay (Strøm et al. 2004; Hooghe and Marks 2001). Legislation or legislative power roots primarily in parliaments and not directly with the people. *Institutionally speaking, the people delegate their legislative power to parliament. So we have to state a dominance or even hegemony of indirect democracy or of systems of ruling and government that are based on principles of indirect democracy. In contemporary context, indirect democracy only is being complemented by direct democracy.* In executive terms, direct democracy refers to the direct popular election (or recall) of executive functions, for example, political leadership along a political multilevel architecture, such as president, governor or mayor. In legislative terms, direct democracy refers to referenda with legislative power or consequences for legislation.

¹⁴The full quote of the crucial passage of Lincoln’s speech is: “It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth” (http://en.wikipedia.org/wiki/Gettysburg_address). Furthermore, see also Sodaro (2004, p. 168).

Referenda can address normal law but also constitutional law. Furthermore, in judicial terms, direct democracy would be when representatives of the legal system, for examples judges, are being voted into office by a popular election. The degree of direct democracy can vary greatly from country to country or democracy to democracy. Examples of countries with a more frequent application of direct democracy are Switzerland and several of the US states (Cronin 1989).¹⁵ *What most, all currently existing democracies have in common is that the basic idea of a democracy of a “self-ruling,” “self-government” or “self-governance” by the people and of the people has been translated into an institutional setting and framework of an “indirect” democracy, which may (or may not) be complemented by means of a direct democracy. The dominant mode of governance within democracy is not direct but indirect.* Concerning the concrete empirical manifestation of democracies and their regimes and systems of governance, a greater degree of variation must be stated (Held 2006; Lijphart 1984, 1999). Systems of governance can take very different forms. This also demonstrates pluralism in the world of democracy, how democracies developed, and how they may develop in the future.

When the one original core idea of a democracy is the self-ruling and self-government of and by the people, then we also must ask: Who “is” (are) the people? The “people” represent the other conceptual focus of the core definition of democracy, in combination with the self-rule, self-government and self-governance (see, for example, Pelinka 2008, pp. 22–23, 33). The answer to that question (*Who “is” or are the people?*) is not always that clear or self-evident. The “political people” would be those people who are entitled with political rights, such as to participate in elections as voters and as candidates. Political rights are mostly reserved for citizens. *In an ideal-typical understanding, the people of a democracy should be identical with the population that is living in this democracy and country.* Practically speaking, this is in no democracy the case. *The greater the mismatch or non-overlapping between the (political) “people” and the “population” within a democracy, the more troublesome is this for a democracy and the status of quality of democracy. Should the gap of a mismatch also widen, this again*

¹⁵Traditionally, in the western U.S. states there is by tendency more of an emphasis on direct democracy (Cronin 1989, p. 47).

would indicate a problematic trend for a democracy (Campbell 2002, pp. 30–31). Factors that can contribute to such phenomena are migration and access to citizenship. Some countries apply a *jus soli* principle to their citizenship law, implying that every person, born in the country, is being automatically granted the citizenship of that country. Other countries, however, accept only a *jus sanguinis* logic, meaning that only the citizenship of the parents is being automatically transferred to the children. Further, several countries follow also a combination of both principles of acquiring a citizenship per birth. It is reasonable to argue that a pure *jus sanguinis* citizenship law is not sufficiently compatible with the quality standards of a developed democracy, because here automatic access to political entitlement is determined by the given political entitlements of the parents. But descent does not qualify as a good qualifier for regulating access to political entitlements, in a good democracy. Furthermore, descent also relates closely, in fact too closely to “biological principles” and a “biological determinism” (Campbell 2002, p. 31; 2012, p. 309). In addition, also the regimes of access to citizenship of a country for migrants would have to be evaluated. It is important to avoid too strict regulations. Every regime of regulation should be governed and carried by the understanding of doing fairness to migrants and to follow principles of a good democracy and of the qualities of a democracy (Rosenberger 2010; Ataç and Rosenberger 2013; Walter et al. 2013). Persons, born within a country, however, should not be considered, under any circumstances, as migrants or foreigners, they constitute members to the political “people,” and if they are not citizens (automatically), this represents a failure of a citizenship law. The Migrant Integration Policy Index (MIPEX) monitors regularly integration policies in the European Union and a few other OECD countries (MIPEX 2013; Huddleston et al. 2011). The evaluation of the (political) people, therefore, always requires that the degree of political enfranchisement of a population is being carefully regarded and assessed. Franchise regulates, who can vote, or who can run as a candidate in elections.¹⁶ Citizenship represents a legal side, and

¹⁶Elections, voting and voting systems are of a particular interest for political science. For an interesting discussion on Austria, see Poier (2001).

franchise (suffrage) a political (and also legal) side of the “people.” *Ideally designed, there should be a maximum overlap of the (political) “people,” empowered with citizenship and franchise, and the population within a country and democracy.* Historically, there have been different waves of expansion of the franchise in the western democracies, typically along the following fault lines: gender (often men could vote before women) and social status (members of privileged classes could vote before this applied to members of the non-privileged classes). Now, “migration” represents one of the new fault lines in democracy.

There is a tendency that theories about democracy are evolving more complex over time. With the growing complexity of democracy theory, it could also be suggested or expected that democracies may increase the complexity of their structures and processes. Earlier ideas on democracy often focused on the concept of electoral democracy, which is carried by the understanding that a democracy or a status of democracy would be taken as granted, when certain minimum conditions are being fulfilled (Downs 1957). Downs identified eight criteria that address the “nature of democratic government”. Three of these criteria are: (1) “The losing parties in an election never try by force or any illegal means to prevent the winning party (or parties) from taking office”; (2) “The party in power never attempts to restrict the political activities of any citizens or other parties as long as they make no attempt to overthrow the government by force”; furthermore, (3) “There are two or more parties competing for control of the governing apparatus in every election” (Downs 1957/1985, pp. 23–24). The concept of liberal democracy already is clearly more demanding, requiring from a democracy that not only the minimum conditions, but that sufficient conditions for a good democracy are being met (Helms 2007; Freedom House 2011). The concept of quality of democracy again raises the expectations on democracy, by actually inquiring what good or advanced conditions for democracy are or would be, so that democracy and quality of democracy could progress over time (O’Donnell 2004b). In his earlier writings, Robert A. Dahl (1971) suggested that already two dimensions would sufficiently explain democracy: *contestation* (or competition) and *participation*. Not much more than thirty years later, Larry Diamond and Leonardo Morlino (2004, pp. 22–23), in an attempt to design

a “multidimensional” framework for the concept of the quality of democracy, already indicate the following “eight dimensions of democratic quality”: (1) *rule of law*; (2) *participation*; (3) *competition*; (4) *vertical accountability*; (5) *horizontal accountability*; (6) *freedom*; (7) *equality*; and (8) *responsiveness*. This exemplifies how the introduction of the concept of quality of democracy has widened the theoretical approach to democracy (see also Barth 2009, 2010, 2011). To assess the quality of a democracy requires a more differentiated framework of analysis than the testing of checklist, whether minimum conditions of an electoral democracy have been met. Quality of democracy widened the theoretical spectrum on democracy (Campbell 2008, pp. 22–25).

There is another line of tension running across different concepts or theories of democracy. *How “focused” or how “wide” (comprehensive) should democracy be conceptualized?* This is also being captured in the metaphor of *minimalist versus maximalist* or *minimum versus maximum* approaches to democracy (see Schlattl 2013; Bühlmann 2013). The basic core understanding of democracy is that it represents a system of “self-ruling,” “self-government” or “self-governance” by the people and of the people. The most minimalist approach to democracy, therefore, would focus democracy on the institutions of government. We can speculate, whether the electoral democracy serves as an equivalent for that. But of course, the institutions of government apply also to liberal democracy. Already wider would be an understanding of democracy, which extends democracy to the whole political system. The next step of widening the concept of democracy would be to say: *democracy is a system that addresses government and governance, the political system, but also the context of the political system. The context of the political system is being addressed, where the context is mattering for the political system.* This would imply to understand democracy also in the context of society. Democracy then would interlink politics or the political system with society, democracy would transcend the boundaries of the (narrow) political system. *The whole context of the political system refers to society, the economy, but also the natural environments of society.* Perhaps also additional layers of contextualization could be conceived. Important examples, for this, are of course the human rights, basic rights and political rights. For these to function, the political

system must cooperate with the legal system, which also represents a context for the political system, because only this establishes a “rule of law” (see O’Donnell 2005). What could be a rationale for extending and stretching the concept of democracy to such a maximalist interpretation? One basic idea here is: *to be able to understand the quality of government and governance, of “self-ruling,” “self-government” or “self-governance” by the people and of the people, in a sufficient way, it is necessary to integrate conceptually the context of the political system into the concept of democracy.* Governance or non-governance imposes effects on the context of the political system. Development and performance in sectors outside of the political system may indirectly mirror effects of governance or non-governance (the presence or absence of policy). Between government and governance (policy-making) on the one hand, and development and performance in society, economy and environment, on the other, a linkage of relationship should be established. *High-quality democracy has a system of government and governance (and policy-making) that seeks and takes responsibility for development and performance in society, economy and the environment (and other contexts outside of the political system) via a conscious application or non-application of policy, but also policy evaluation and policy reform. Here, ideas of democracy, quality of democracy, sustainability, and sustainable development, come together.* In such a line of thinking, it would represent a contradiction to assert that the democracy is good, but society and economy are bad. Because a good democracy would require that political developments are set in good balance with developments in society and the economy. Government and governance would have to address these issues and opportunities. *Perhaps not all political actors or politicians, but at least several political actors or politicians carry the political conviction of trying to influence by policy the society, economy, and also politics. One functional definition for the political system is: the political system represents a system that is interested in governing by (with) policy the society, economy and the other systems (subsystems) of society.* This functional definition of the political system is of course not a universally accepted definition for politics. Minimalist democracy theories could always assert that the maximalist approaches completely overstretch the core concept of democracy and talk instead of a good society or a

good life.¹⁷ Maximalist democracy theories could assert that the minimalist approaches are insufficient, because they do not allow for a comprehensive and sufficient assessment of government and governance by blending out the context of the political system, even though policy or non-policy imposes effects on the context. Therefore, in the maximalist view, the minimalist view does not do justice to the basic core idea of democracy. There should be at least the proposition that the introduction of ideas or concepts of quality of democracy also encouraged to think about democracy from a maximalist perspective or angle. Of course, it is far from trivial how to conceptualize, measure and assess development, performance and sustainable development in the different sectors of society or the economy. Additional complexity results, when democracy is being referred to a type of multilevel system or multilevel architecture of governance (Hooghe and Marks 2001). What are appropriate forms of multilevel decision-making within a democracy? Moreover, how could a concept such as that of *global democracy* be developed further (Held et al. 1999)? Standard models of democracy are often country based (single-country based). The European Union explores multilevel and supra-national governance. In the twenty-first century, the challenge will rise to allow innovation in the democratic governance of international affairs and relations (see Figs. 1.5 and 1.6). This opens even new frontiers for democracy and quality of democracy.

A recent and modern example for a broader understanding of democracy is the theory of the quality of democracy that was developed and introduced by Guillermo O'Donnell (2004b). O'Donnell proposes to explain quality of democracy as the result of a dynamic interplay and complementary development of "human rights" and "human development." Two key quotes in this respect are (O'Donnell 2004b, pp. 12–13): "The concepts of human development and human rights share an underlying, universalistic vision of the human being as an agent," and: "True, in its origins the concept of human development focused mostly on the social and economic context, while the concept

¹⁷Here, Anton Pelinka (2008, p. 23) asserts: "Democracy has come to be mainly understood as a principle on which to base the organization of the state and no longer as a principle employed in shaping society at large". Other authors, however, probably would see and assess this differently (for example, compare with David Beetham 1994, p. 34).

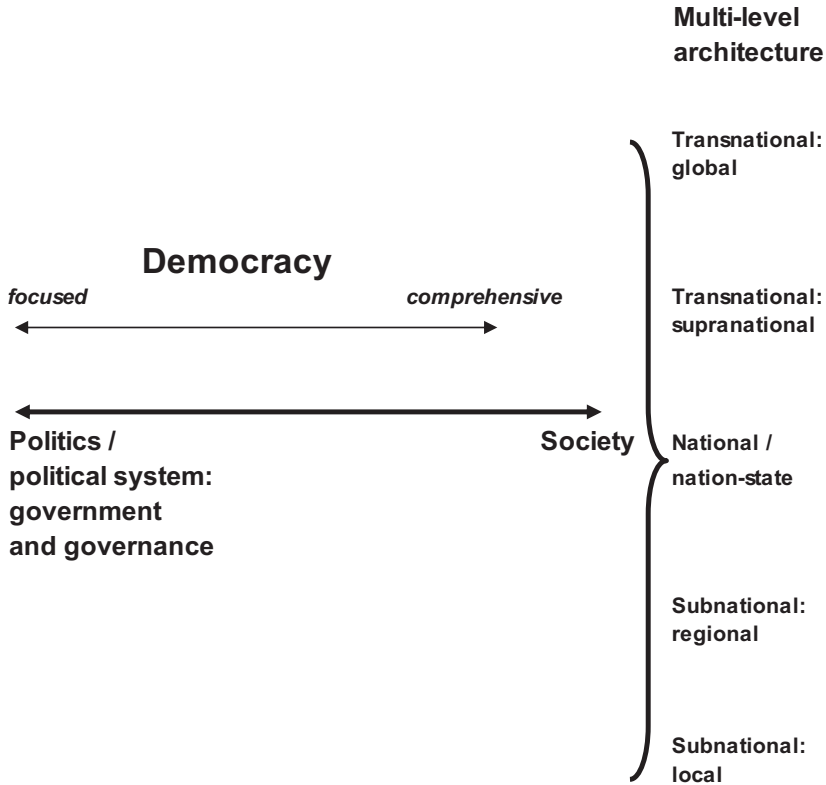


Fig. 1.5 Minimalist versus maximalist concepts and theories of democracy and quality of democracy (Source Campbell 2008, p. 22)

of human rights focused mostly on the legal system and on the prevention and redress of state violence.” With the *human rights*, O’Donnell refers of course to a classical discourse strand in political science (see, e.g., Marshall 1964). O’Donnell also reflects about the necessary milieus so that rights are transformed into freedoms: “These are necessary milieus for the existence of these rights, which in their social expression I have called freedoms” (O’Donnell 2004b, p. 42). Human rights are being regarded to represent a crucial component of content or substance of a democracy. Concerning *human development*, O’Donnell refers these to “human capabilities” and “basic conditions,” by arguing

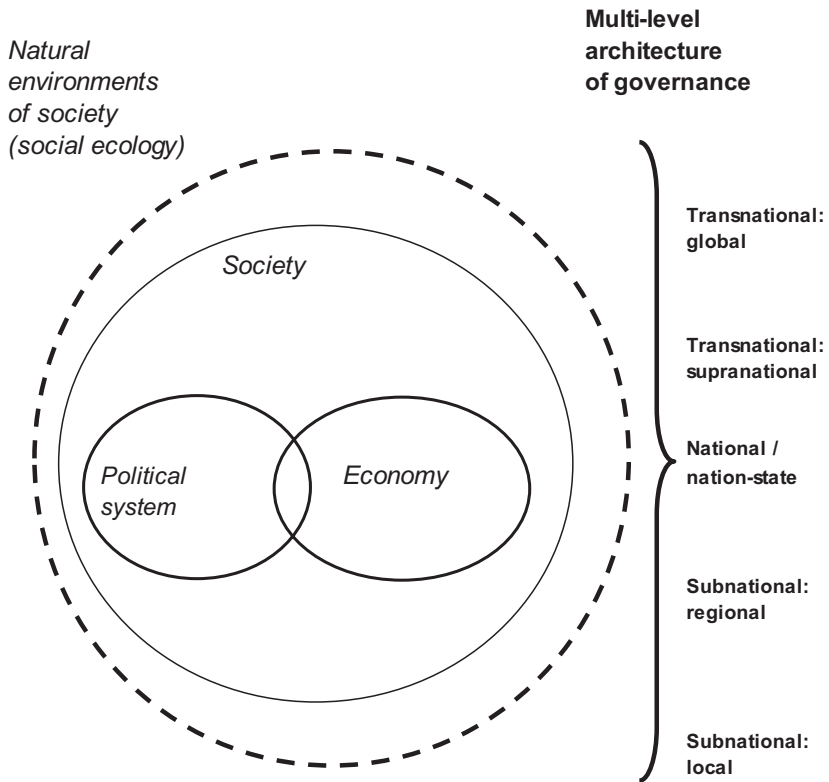


Fig. 1.6 Minimalist versus maximalist concepts and theories of democracy and quality of democracy in context of multilevel governance (architectures) (Source Author's own conceptualization and visualization based on Fig. 1.5 and Campbell (2008, p. 22), Carayannis and Campbell (2010, p. 62), and Carayannis et al. (2012, p. 4))

(O'Donnell 2004b, pp. 12–13): "... what may be, at least, a minimum set of conditions, or capabilities, that enable human beings to function in ways appropriate to their condition as such beings ... This vision leads to the question of what may be the basic conditions that normally enable an individual to function as an agent." Human agency has for O'Donnell (2004b, p. 13) a threefold core meaning: people have (normally) autonomy for making decisions; people have a cognitive ability for reasoning; and people have a responsibility for their actions.

This represents the base and point-of-departure for the ethical system or ethical belief of O'Donnell. The way how O'Donnell *introduces human development* as one of the two basic principles (basic dimensions) into his theory of quality of democracy, of equal importance and equal weight in argument with *human rights* as the second basic principle, allows O'Donnell to directly cross-refer and cross-link to the HDI, as it is being annually released and updated by the United Nations (see, e.g., again UNDP 2011).¹⁸ Guillermo O'Donnell (2004b, pp. 11–12) explicitly draws this link and connection to the Human Development Reports and to Amartya Sen as one of the master thinkers behind and for the HDI. De facto, so it could be argued and interpreted, does O'Donnell make his concept of quality of democracy compatible with the concept of sustainable development, even though the term sustainable development is not explicitly mentioned in the subject index of his cited book publication (O'Donnell 2004b). This interpretation already has been raised (Campbell 2008, pp. 27–28; 2012, pp. 301–302; Campbell and Carayannis 2013b). The Human Development Report of 2011 directly emphasizes sustainability and equity already in the title to the report (UNDP 2011).¹⁹

In this context, Gerardo L. Munck (2009) puts forward the following assessment: “As argued by the proponents of the human development and the capabilities approach such as Amartya Sen (1999) and Martha Nussbaum (2000), a lack of the material resources that are indispensable for an adequate standard of living, access to health, and access to education, is associated with a reduction of human capabilities. And the differential attainment of human capabilities necessarily has ramifications for the political process and, specifically, for the exercise of civil and political rights” (Munck 2009, p. 127; see also Munck 2014, 2016).

The “Democracy Ranking” represents an international initiative of democracy measurement and democracy advocacy that annually ranks democracies world-wide on the basis of their quality of

¹⁸For an overview of all human development reports, also for a free downloading, see <http://hdr.undp.org/en/reports/>. Furthermore, see <http://hdr.undp.org/en/>.

¹⁹Arguments in this paragraph are reproduced on the basis of Campbell (2008, pp. 27–28). See text (Campbell 2008) in the reference list, also the web source for a possible direct and free download.

democracy.²⁰ The Democracy Ranking applies the following conceptual definition of the quality of democracy: “Quality of Democracy = (freedom + other characteristics of the political system) + (performance of the non-political dimensions)” (Campbell 2008, p. 41; Campbell et al. 2012, p. 11). This conceptual definition was developed independently by the Democracy Ranking (Campbell and Sükösd 2002); however, it can be interpreted to reveal structural similarities to the approach of O’Donnell. In retrospect, the theory of the quality of democracy of Guillermo O’Donnell (2004b) can be reinterpreted to have the capability to serve as a theoretical point-of-departure or as a theoretical input for the conceptual model that underlies the Democracy Ranking (Campbell 2008, pp. 40–41). The proposition is: “The conceptual formula of the Democracy Ranking has been developed independently, ... but features structural similarities with the formula of Guillermo O’Donnell, who defines quality of democracy based on an interaction of human rights and human development” (Campbell 2008, pp. 30–41; Campbell et al. 2012, p. 11). The model of the Democracy Ranking refers to one political and five non-political dimensions, to which specific (empirical) indicators are assigned: “(1) politics (political system); (2) gender (gender equality); (3) economy (economic system); (4) knowledge (knowledge-based information society, research and education); (5) health (health status and health system); (6) environment (environmental sustainability)” (Campbell 2008, p. 33). For the calculation of comprehensive scores for the ranking of democracies based on the quality of democracy, these dimensions are aggregated together by applying the following dimension-specific weighting measures: “politics: 50%; gender (socioeconomic & educational): 10%; economy: 10%; knowledge: 10%; health: 10%; and the environment: 10%” (Campbell et al. 2012, p. 11). *Put in summary, the theoretical model of O’Donnell and the practical ranking model of the Democracy Ranking can be regarded to demonstrate a broader, wider and more comprehensive conceptual understanding of democracy and represent maximalist (maximum) approaches to democracy and the quality of democracy.*

²⁰See the website of the Democracy Ranking at: <http://democracyranking.org/>.

As the core idea of democracy, we already defined before: (1) *Democracy is a system of “self-ruling,” “self-government” or “self-governance” by the people and of the people that is based on human rights (basic rights), and where freedom and equality are of fundamental importance.* Another possibility for how to approach democracy would be: (2) *To define basic (conceptual) dimensions of and for democracy, and then to attempt measuring and mapping democracies empirically, based on this dimensional design.* This dimension-based approach should not be at contradiction with the core idea of democracy?

In contemporary research about democracy, the *conceptualization of democracy* already has advanced far (see here more specifically: Bühlmann et al. 2011; Coppedge et al. 2011; Geissel et al. 2016; Giebler and Merkel 2016; Knutsen 2010; Mayne and Geißel 2018; Møller and Skaaning 2010; Munck 2014, 2016; Rothstein and Teorell 2008; Schedler 2006; Schmidt 2010).

What are the basic dimensions or the basic conceptual dimensions of democracy and the quality of democracy? In European and American political thought, therefore also for the traditional western democracies, probably the two single most important dimensions are: *freedom* and *equality*.²¹ In the French revolution (1789–1799), the political demand was summarized in the famous motto of *liberté* (liberty), *égalité* (equality) and *fraternité* (fraternity or brotherhood). Concerning equality, equality may refer either more to equality as an output (result or outcome), and/or to equity as a form of fairer chance for the input. In the language of current or modern political language and political competition, freedom often associates closer with center-right and right (conservative) political views and ideologies, whereas equality often associates closer with left and center-left political views and ideologies (Harding et al. 1986, p. 87). In the context of contemporary political science analysis, Hans-Joachim Lauth (2004, pp. 32–101) introduced a “three-dimensional concept of democracy” that refers to the following three dimensions: equality, freedom and control. In the words of Lauth (2004, p. 96), these three dimensions are sufficient for a definition of

²¹Here, we do not distinguish between freedom and liberty.

democracy (see also Lauth 2010, 2011, 2016; Lauth and Schlenkrich 2018).²² The democracy measurement initiative of the Democracy Barometer reveals structural similarities to the dimensional-conceptual approach that is promoted by Lauth.²³ The Democracy Barometer asserts: “The Democracy Barometer is a new instrument to measure the quality of established democracies.”²⁴ The quality-of-democracy understanding of the Democracy Barometer underlies a concept tree that displays the crucial key principles (dimensions): “In the understanding of the Democracy Barometer project, democracy rests on three principles: *freedom, control* and *equality*.”²⁵ In reference to the Democracy Barometer, Bühlmann, Merkel and Wessels (2008, p. 15) summarize: “...we define freedom, equality and control as the three core principles of democracy. To qualify as a democracy, a given political system has to guarantee freedom and equality. Moreover, it has to optimize the interdependence between these two principles by means of control. Control is understood as control *by* the government as well as control *of* the government.”

The underlying model for the basic dimensions (basic conceptual dimensions)²⁶ of democracy and the quality of democracy for the conceptual research design and methodic framework of analysis, being applied and developed here, refers to the following five dimensions: freedom, equality, control, sustainable development, and self-organization (political self-organization) (see Fig. 1.7).²⁷ The outcome of this is a quintuple structure

²²“Ein erstes Fazit der Demokratiediskussion zeigt: Alle drei Dimensionen (*politische Gleichheit, politische Freiheit* und *rechtsstaatliche und politische Kontrolle*) sind konstitutive Merkmale von Demokratie und zusammen notwendig und hinreichend für ihre Definition” (Lauth 2004, p. 96).

²³Visit the website of the Democracy Barometer at: <http://www.democracybarometer.org/> or http://www.democracybarometer.org/start_en.html.

²⁴See http://www.democracybarometer.org/start_en.html.

²⁵See http://www.democracybarometer.org/concept_en.html.

²⁶The notion of “basic conceptual dimensions” should emphasize that these (five) basic dimensions are analytically “constructed” dimensions in reflection of a reviewing of discourses on democracy and democracy research.

²⁷Rainer Paslack interprets “self-organization” as a scientific paradigm, which, however, dates as far back as the classical Greek philosophy. According to Paslack, the modern focus on self-organization was launched mainly in the 1960s. Paslack (1991, p. 1) asserts: “Seit Beginn der 1960er Jahre bahnt sich eine wissenschaftliche Revolution an, die inzwischen unter dem Sammelbegriff

**Basic Dimensions of Democracy
and the Quality of Democracy:**

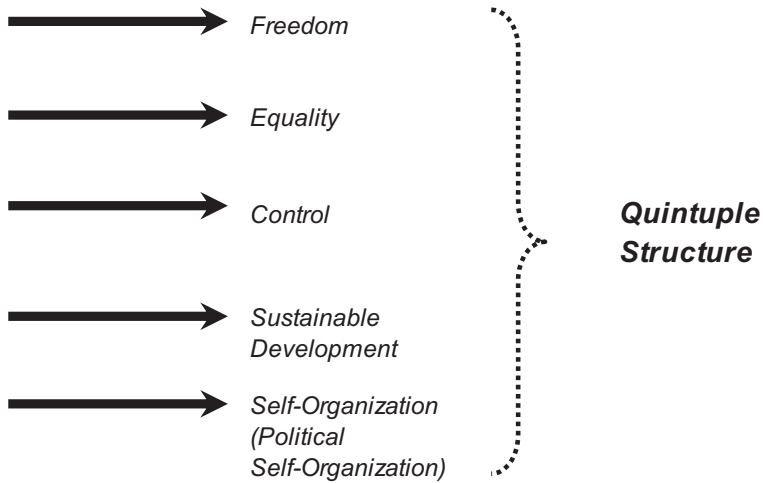


Fig. 1.7 The basic quintuple-dimensional structure of democracy and the quality of democracy (Source Author's own conceptualization and visualization based on Campbell (2008, p. 32; 2012, p. 296) and Campbell and Carayannis (2013b) and for the dimension of "control" based on Lauth (2004, pp. 32–101))

*of dimensions of democracy or a basic quintuple-dimensional structure of democracy and the quality of democracy.*²⁸ The first three dimensions (freedom, equality and control) represent, at least to a certain extent, a consensus in the contemporary political science literature, meaning

'Selbstorganisation' zu einem großangelegten, nahezu alle Wissenschaftsdiziplinen umfassenden Forschungsprogramm ausgereift ist. Im Mittelpunkt dieses neuen Konzepts steht die Untersuchung der spontanen Entstehung, Höherentwicklung und Ausdifferenzierung von Ordnung in dynamischen Systemen fern ab vom Gleichgewicht".

²⁸Here, a certain structural analogy between the quintuple-dimensional structure of democracy and the quality of democracy, on the one hand, and the "Quadruple Helix" innovation systems of "Quintuple Helix" innovation systems, on the other, may be proposed. On Quadruple Helix and Quintuple Helix approaches in knowledge production and innovation see Carayannis and Campbell (2009, 2010, p. 62; 2012, p. 14).

that these dimensions are being regarded and commonly identified as important dimensions of and for democracy. Sustainable development represents a dimension that usually is not assigned for the purpose of conceptualization of democracy. However, there already is the explicit assertion and demand to incorporate sustainable development as the “fourth” dimension in a *quadruple-dimensional structure* of democracy and quality of democracy (Campbell 2012, pp. 296, 301–302, 306; Campbell and Carayannis 2013b). The theory of the quality of democracy of Guillermo O’Donnell (2004b), which interlinks human rights and human development for a dynamic and progressive advancement of democracy, provided the crucial theoretical and conceptual groundwork, why sustainable development qualifies decisively as an additional basic dimension for democracy. *Particularly when the focus should not be limited to the OECD countries and the advanced economies, but the emphasis is placed on the global picture and on global trends, when by tendency all (almost all) democracies (but also all semi-democracies and non-democracies) should be addressed and analyzed, then the dimension of sustainable development is gaining in importance. In context of the emerging and developing economies and countries, the relationship between democracy and sustainable development (non-political sustainable development) represents a sensitive complex of issues.* Finally, as the “fifth” new dimension for the underlying quintuple structure of dimensions for democracy and the quality of democracy, we propose the self-organization (political self-organization) of democracy. *How does democracy self-organize itself? How does the system of a democracy self-organize itself?* This obviously relates to the original basic core idea of democracy, which we phrased as: *Democracy is a system of “self-ruling,” “self-government” or “self-governance” by the people and of the people.* Self-organization of democracy of course has further ramifications, possibly also referring to other characteristics of democracy or its epistemic structure. For example, pluralism is decisive in a democracy, such as governance of pluralism or pluralism in governance. There can be congruence of advanced democracy and advanced other developments. Is there a coevolution of political pluralism in a democracy and knowledge pluralism (diversity and heterogeneity) of advanced knowledge and innovation systems, captured in the phrase and metaphor of

“Democracy of Knowledge” (Carayannis and Campbell 2012, p. 21)? In the context of our analysis here, we will limit empirically the dimension of political self-organization to the government-opposition-cycles by looking at peaceful changes of the head of government and at peaceful party changes of the head of government. *Government-opposition-cycles result in political swings (political left/right swings), which appear to be of a crucial importance for democracies: (1) they prevent too dominant concentrations of power, and (2) they provide elasticity for problem-solving and for developing and designing policy to address issues of concern* (see Campbell 1992, 2002, pp. 20–21; 2007). At least in advanced democracies or a majority of the advanced democracies, government-opposition-cycles are not the exception, but the rule. For example, as Müller and Strøm (2000a, b, p. 589) have demonstrated and verified for coalition governments in Western Europe after 1945, government parties face a higher chance to lose than to win in upcoming elections. Within our framework of analysis, all three indicators used for measuring political freedom are generated by Freedom House. *The two indicators that we designed and assigned to political self-organization* (see above and see below later in Fig. 1.7) *we use to test and discuss the validity of the indicators of Freedom House.*

Quality of democracy can also be associated with knowledge democracy (Carayannis and Campbell 2012, p. 55; Kneuer 2016; Veld 2010a, b). *Knowledge democracy emphasizes the importance of knowledge and innovation for the quality of democracy and the sustainable development of democracy, society and economy. Expectations are that democracies with a higher quality of democracy also will be knowledge democracies. “Democracy as Innovation Enabler” has here at least the following meanings: (1) political pluralism in a democracy encourages also a diversity of knowledge and innovation (“Democracy of Knowledge”) that is necessary for development (also economic development and economic growth); (2) advanced economies are driven by knowledge and innovation, so they require a democracy; (3) in principle, “democracy as innovation enabler” also applies to emerging and developing economies, but may not always be realized and applied.*

Roeland J. in’t Veld (2010a, b) proposed a mature concept, how to frame further the structures and dynamics of a knowledge democracy. He particularly places an emphasis on the media, their roles and

responsibilities. For him, the three crucial references are: “emerging participatory democracy”; “emerging transdisciplinary design/science”; and “emerging bottom-up media” (Veld 2010b, p. 11). Bottom-up media are complementing the “top-down media.” With regard to the relationship of media and politics, Veld (2010b, p. 4) asserts: “Media and politics, a relationship based on mutual interest as on the other hand the media equally need politicians in order to produce news, one of their main products. So this dependence is reciprocal.”

In discussion of models or of factors contributing to models, *there are frequently references to aspects of input, output (also outcome) and “throughput.”* In relation to the presented basic quintuple-dimensional structure of democracy and quality of democracy (see Fig. 1.7; see furthermore Campbell et al. 2015) and the identified five dimensions, the following question could be asked: Do freedom, equality, control, sustainable development, and (political) self-organization associate closer to input or output (or throughput)? Is it possible and appropriate to suggest a specific input/output/throughput profile for each of those specific dimensions? Here, of course, different answers are possible. *Our preferred approach is to see the relationship between the basic underlying dimensions of democracy and the input/output/throughput distinction in the form and constellation of a flexible “matrix” arrangement, implying that to each dimension we can associate aspects of input/output/throughput (by this creating a “cloud” of interpretations). This has as further consequence that no dimension may be one-sidedly be assigned already in advance to either input or output (or throughput).* Depending on analytical considerations, there is variation in the game. The crucial proposition here appears to be that every of those five underlying dimensions of democracy could be discussed under aspects of input or output (or throughput). *Therefore, the approach (most convincing to us) stresses an analytical coconfiguration or analytical codevelopment between the five basic dimensions and criteria of input/output/throughput* (see Fig. 1.8). Of course, this particular understanding here can be contested and questioned.²⁹

²⁹In this context I want to thank Marc Bühlmann, with whom I had carried out a very interesting discussion on that subject. The way how Fig. 1.8 arranges the basic dimensions and input/output/throughput distinction represents my personal conclusion of that debate.

Architectures of Input, Throughput and Output (Outcome) Arrangements and Models:

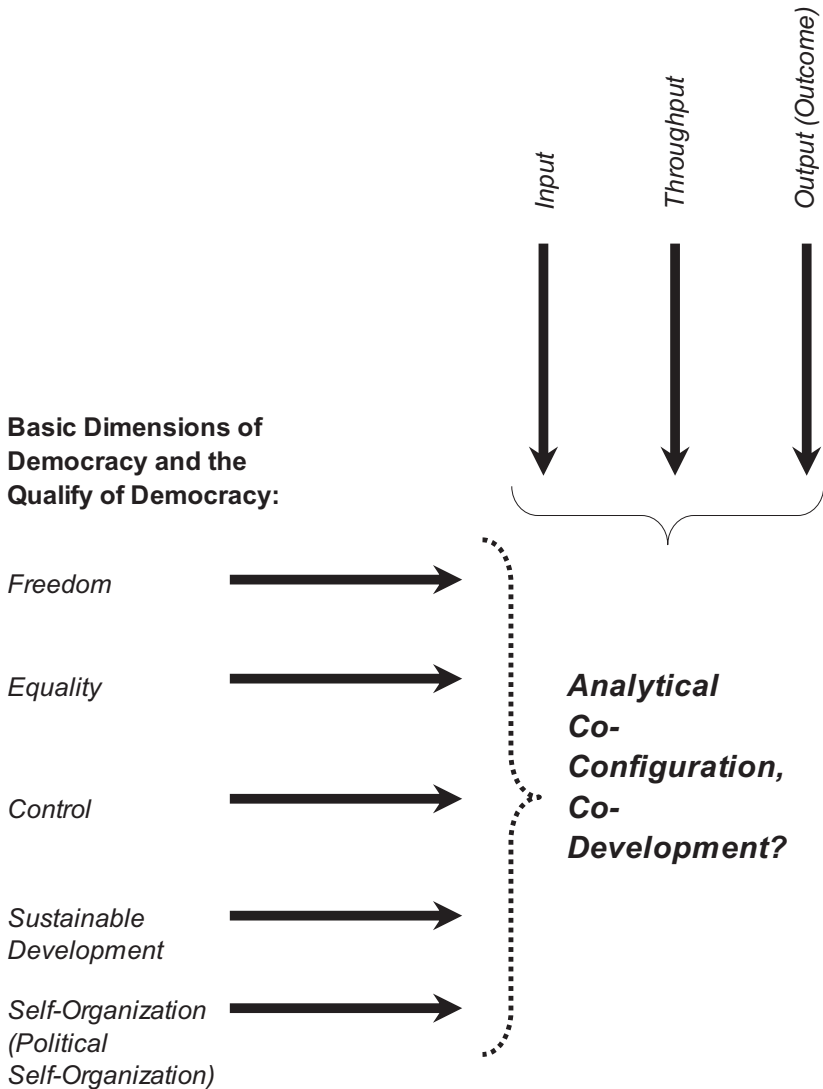


Fig. 1.8 A possible matrix structure of basic dimensions of democracy and quality of democracy and architectures of input, throughput and output (outcome) (Source Author's own conceptualization and visualization based on Campbell (2008, p. 32; 2012, p. 296) and Campbell and Carayannis (2013b) and for the dimension of "control" based on Lauth (2004, pp. 32–101) (see also Fig. 1.7 in the introduction))

1.3 Conceptual Research Design and Methodic Framework of Analysis

As central and key research questions for our analysis we identified: *How to conceptualize and measure democracy and the quality of democracy in global comparison?* Our theoretical and conceptual point-of-departure we already elaborated. The focus of our analysis (in the coming sections and chapters) should also be empirical, expressing our conviction that theories and concepts of democracy and quality of democracy depend on measurement of democracy and quality of democracy, should there be reasonable options and opportunities of developing further theory and theories of democracy. In abstract structural terms, one possible approach for conceptualizing and measuring democracy is: (1) *defining dimensions*, (2) *possibly defining subdimensions*, and (3) *then defining and/or identifying indicators (empirical indicators) that are assigned to the subdimensions or dimensions* (see Fig. 1.9). Boundaries (conceptual boundaries) between dimensions and subdimensions flow always in flux. In reference to the specific perspective or context, a subdimension may be leaning more toward being a subdimension of a more comprehensive and encompassing dimension, or alternatively be reinterpreted as a dimension itself and of its own. One rationale for introducing subdimensions at all is to allow for a more differentiated analysis and discussion of dimensions. Subdimensions contribute to an additional leverage in the analytical assessment. Therefore, the shortcut short-form for the abstract design of conceptualizing and measuring democracy is: (1) *defining dimensions* and (2) *then defining and/or identifying indicators (empirical indicators) that are assigned to the dimensions*.

In the following analysis, we apply a specific conceptual research design and methodic framework of analysis for approaching and assessing the research questions of *conceptualizing and measuring democracy and the quality of democracy in global comparison* (see Fig. 1.10). This conceptual research design is being carried and governed by the following rationale:

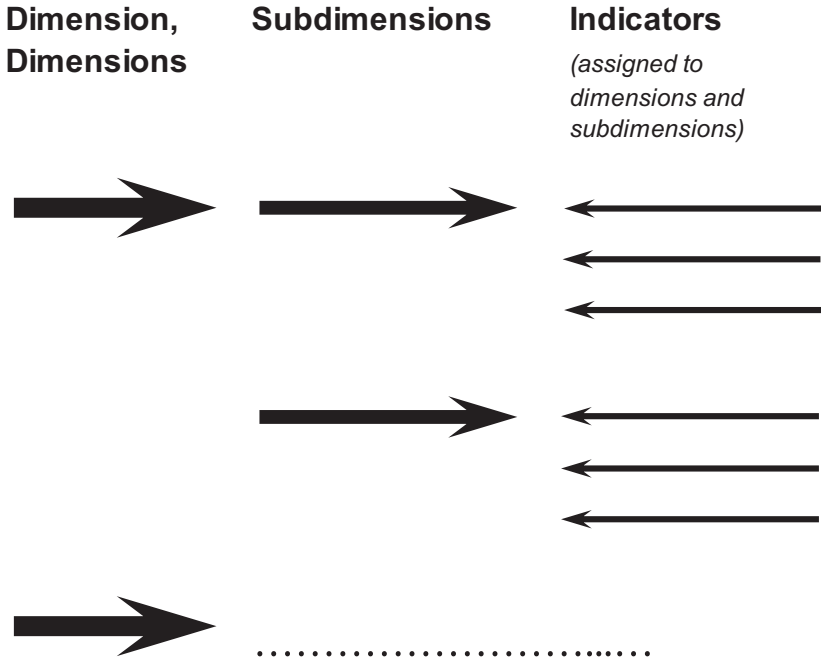


Fig. 1.9 The abstract design structure of dimensions, subdimensions and assigned indicators (Source Author's own conceptualization and visualization)

1. *Quintuple-dimensional structure of democracy and the quality of democracy:* We defined and identified five basic dimensions (basic conceptual dimensions) of and for democracy. These are: freedom, equality, control, sustainable development, and self-organization (political self-organization). Our focus will be on freedom, equality and sustainable development. To a lesser extent, we also refer to political self-organization. The dimension of control we will not consider specifically for our measurement approach.³⁰

³⁰However, as we also mention and indicate in Fig. 1.10 that the two political-swing-indicators, which we assign to the dimension of self-organization, could alternatively be aligned to the dimension of control.

(a)

| Dimension | Subdimensions (Dimensions) | Indicators assigned (sources referred to) |
|--------------------------------|--|---|
| Freedom | <i>Political Freedom</i> | (1) Political Rights (Freedom House). (2) Civil Liberties (Freedom House). (3) Freedom of Press (Freedom House). |
| | <i>Economic Freedom</i> | (1) Index of Economic Freedom (Heritage Foundation). (2) Economic Freedom in the World (Fraser Institute). |
| Equality | <i>Gender Equality</i> | (1) Global Gender Gap Index (World Economic Forum). |
| | <i>Income Equality</i> | (1) Gini Index (or Gini Coefficient) (WDI) (World Bank). |
| Control | | |
| Sustainable Development | <i>Human Development (Index, HDI) re-engineered (re-designed)</i> | (1) Life expectancy at birth, total (years) (WDI) (World Bank). (2) School enrollment, tertiary (% gross) (WDI) (World Bank). (3) GDP per capita, PPP (constant 2011 international \$) (WDI) (World Bank). |
| | <i>(Sustainable) Development Non-Political</i> | (1) Life expectancy at birth, total (years) (WDI) (World Bank). (2) School enrollment, tertiary (% gross) (WDI) (World Bank). (3) Gini Index (or Gini Coefficient) (WDI) (World Bank). (4) Global Gender Gap Index (World Economic Forum). (5) CO2 emissions (metric tons per capita) (WDI) (World Bank). (6) GDP per capita, PPP (constant 2011 international \$) (WDI) (World Bank). |

Fig. 1.10 Dimensions, subdimensions and assigned indicators of the conceptual research design and methodic framework of analysis (Source Author's own design. Notes a "Gini Index" and "Gini Coefficient" are two different names for the same measure; WDI = World Development Indicators (released by World Bank). **b** WDI = World Development Indicators (released by World Bank); Depending on the analytical design, the government-opposition-cycles (political swings) may also be aligned to the dimension of control)

(b)

| Dimension | Subdimensions (Dimensions) | Indicators assigned (sources referred to) |
|---|---|--|
| Sustainable Development | <i>Sustainable Development Comprehensive</i> | <p><i>(Sustainable) Development Non-Political</i></p> <ul style="list-style-type: none"> (1) Life expectancy at birth, total (years) (WDI) (World Bank). (2) School enrollment, tertiary (% gross) (WDI) (World Bank). (3) Gini Index (or Gini Coefficient) (WDI) (World Bank). (4) Global Gender Gap Index (World Economic Forum). (5) CO2 emissions (metric tons per capita) (WDI) (World Bank). (6) GDP per capita, PPP (constant 2011 international \$) (WDI) (World Bank). <p><i>Political Freedom</i></p> <ul style="list-style-type: none"> (1) Political Rights (Freedom House). (2) Civil Liberties (Freedom House). (3) Freedom of Press (Freedom House). |
| Self-Organization (Political Self-Organization) | <i>Government- Opposition- Cycles, Political Swings</i> | <ul style="list-style-type: none"> (1) Peaceful person change of head of government (own analysis). (2) Peaceful party change of head of government (own analysis). |

Fig. 1.10 (continued)

2. *Type of measurement*: The methodic approach of measurement (within our context of conceptualization) of democracy and quality of democracy in this analysis is not a “democratic audit,” but represents more a type of “direct measurement.” We already elaborated nuances of difference in that respect earlier (see again Sect. 1.1 and there Fig. 1.1).
3. *Subdimensions*: Several dimensions are again structured into subdimensions. This should support a more differentiated analysis. For freedom we distinguish between political freedom and economic freedom, and for equality between gender equality and income equality. There is less consensus on the validity of economic freedom for democracy than for political freedom, which is of course essential for democracy and the quality of democracy. But economic freedom could be seen as a contributing component for the overall dimension of freedom. Concerning sustainable development, three subdimensions are proposed: a reengineered HDI, non-political sustainable development and “Comprehensive sustainable development” that includes political freedom. A reengineering of the HDI appeared to us necessary, because the HDI we could not smoothly reconstruct on the basis of published indicators, because there are too many data missing in the sources. For the following analysis, particularly the contrasting of freedom, equality and sustainable development represents an interest to us. Within sustainable development, again non-political sustainable development (without political freedom) and Comprehensive sustainable development (with political freedom) are juxtaposed. By no way, it is necessarily arranged that subdimensions in the context of a dimension (political freedom and economic freedom, gender equality and income equality, non-political sustainable development and “Comprehensive sustainable development”) must move in the same directions or point toward similar outcomes. Counter-movements are also possible. For example, gender equality may improve and income equality may decline. Economic freedom could progress, but political freedom could stagnate. This the analysis then should help to resolve or at least display.
4. *Assignment of indicators to subdimensions (dimensions) and a rescaling of indicators to 0–100*: In Fig. 1.10, we document, which indicators

we assign to which subdimensions and dimensions. With the exception of the two political-swings-indicators (government-opposition-cycles), which we constructed extra, we relied for all the other indicators on published sources. Thus we refer to already empirically existing information and knowledge in the world. Of course, one must be always aware of possible biases in published data. This we attempt to balance with cross-comparison and cross-analysis over the broad spectrum of indicators, subdimensions and dimensions. Freedom House is our source for all three indicators for political freedom. Therefore, we also calculated two government-opposition-cycle-indicators to furthermore discuss the validity of the Freedom House freedom measures.³¹ To make all indicators methodically comparable to each other, all indicators were rescaled to scales (a range) of 0–100, with the following semantic meaning: “0” is the theoretically lowest possible value (score), and “100” is the highest (best) empirically observed value (score) for the covered period of years.³² *By this, all countries (within the framework of our analysis) are being compared and benchmarked with those countries (democracies) that achieved empirically the highest levels and standards in the early twenty-first century (in the first decade of the twenty-first century). All countries are being compared with those democracies that realized the highest quality of democracy (within the time interval of 2002–2016).* This metrics-based approach also implies that (at least to some extent) semi-democracies and non-democracies may be interpreted in terms of lack or absence of democracy or quality of democracy (“scarcity of democracy”). Assessed or evaluated from a theoretical perspective, how high or how low do those empirical standards place? Is there a gap between what has been established empirically and what

³¹These two government-opposition-cycle-indicators (political swings) are: (1) “peaceful person change of head of government”; (2) “peaceful party change of head of government” (see later for more details the analysis in Chapter 6).

³²The theoretically lowest possible value (score) may even be lower than the empirically lowest observed value (score). For example, the theoretically lowest life expectancy at birth in total years is “0”. However, in practice there will be no country (or society) with a life expectancy of “0”, since this would then represent a country without a (living) population.

would be theoretically possible or what is theoretically even desirable? Could it be that from a future perspective such as the late twenty-first century, the highest qualities of our currently best-performing democracies (at the beginning of the twenty-first democracy) are only mediocre, at the most? We always must be aware of such potentialities in reference to a possible theory-practice-gap. The empirical model presented here cannot control for such eventualities. In our discussion of the empirical results, however, we again try to broaden the perspectives, to contextualize our understanding. Because of the character of indicators, in three cases indicators had to be rescaled in a reverse manner to produce in content a compatible (comparable) meaning with the other indicators: freedom of press; Gini index (Gini coefficient); and CO₂ emissions in metric tons per capita. The concrete indicator selection should also be evaluated from the basis of our interest in and the feasibility of a global model on democracy and the quality of democracy.

5. *Covered years, covered countries (democracies, semi-democracies and non-democracies)*: The empirical model covers the years 2002–2016. The main rationale for starting with 2002 is that Freedom House releases the more differentiated “aggregated scores” for political rights and civil liberties only beginning with the calendar year 2002, so this year behaves like a “time wall,” making it difficult to move further back in time, and when depending on Freedom House (see Freedom House 2013a). The whole year period of 2002–2016 represents the status of the world at the beginning of the twenty-first century. Concerning democracies, the focus was on country-based democracies. The decision was, however, not to limit the comparative analysis only to democracies, but to basically address all countries with a population of one million or more, as of the midyear of 2017.³³ Analyses by other authors or institutions sometimes express a certain inclination to cluster countries into different country groups. For example, Freedom House typologizes countries as “free,” “partly free” and “not free” (Freedom House 2013b), while the Democracy Index

³³The main period of the major data retrieval procedure for our analysis here was the fall of 2017.

distinguishes between the following categories in a top-down mode and approach: “full democracies,” “flawed democracies,” “hybrid regimes,” and “authoritarian regimes” (Economist Intelligence Unit 2011, p. 1). Contrary to the conceptual approach of Freedom House and of the Democracy Index, to group countries (democracies) together to categories based on similar (comparable) characteristics, and by this actually engaging in defining country groups or country clusters, the emphasis in our analysis here is different. *Our focus is to relate in a strictly indicator-based approach the different countries (democracies, semi-democracies and non-democracies) to dimensions and subdimensions, but in extensive numerical terms by always using and employing the full numerical spectrum of the scales (ranging from 0 to 100). Thus, there is more leverage for a sensitive distinction and discussion. In this approach, not so much the different country groups represent the interest of analysis, but opportunities of a nuanced discussion of the countries (their quality of democracy or the absence of democracy). This defines and represents our preferred metrics.*³⁴ *In the subtitle of our analysis, we refer to “democracies, semi-democracies and non-democracies,” but this line-up of categories should indicate (metaphorically speaking) more a continuum across scales, and less a focus on different categories of countries (democracies and non-democracies).* Later in the text and analysis, when we speak of “democracies,” “semi-democracies” and “non-democracies,” we want to express more generally that countries differ with regard to realized degrees of political freedom. However, we do not specifically engage in a discussion, which specific countries may fall into the categories of “semi-democracies” or “non-democracies.” Only positively we identify democracies or democracies of a higher quality. However, we do identify concrete levels of political freedom and associate these with concrete

³⁴David Beetham (1994, p. 32) apparently points in a similar direction, when we follow his arguments: “This brings me to a second issue, about the measurability of the indices used in a democratic audit, and along what kind of scale. It should be evident from everything said so far that we see democracy not as an all-or-nothing affair but as a comparative concept, with each of the indices representing a continuum rather than the simple alternative of democratic/non-democratic.”

countries.³⁵ In total, our framework of analysis and model (macro-model) results in a country sample of 160 countries (and territories), addressing democracies, semi-democracies and non-democracies likewise. This large sample of countries appears to be necessary, to understand democracy, democracies and the development of quality of democracy better in the global perspective. In fact, this large country sample (of 160 countries) represents almost the whole world (more than 99% of the world population). *It was an explicit decision of ours not to limit our analysis to the advanced economies and advanced democracies or the OECD countries, since this may have resulted in producing only a limited and restricted view on democracy and democratic progress. For us, to analyze democracy and the quality of democracy in comprehensive terms, it appeared necessary to refer to a global perspective and global comparison, because trends in democracy and the quality of democracy may behave differently and follow (partially) different rules and pattern in emerging and developing economies, when put in contrast to advanced economies. This is also a critical test, whether our established concepts and theories of democracy (in the Euro-American discourses) are fit and viable for transcending the specifics (and boundaries) of the industrialized countries (OECD member countries).* The majority of the world population does not live in OECD countries; the majority of countries in the world are not OECD countries. Therefore, when analyzing democracy only in the OECD world, it would represent per definition a “minority program” in global terms, blending out the world majority (in terms of countries and in terms of population). This work here attempts to bring in the global perspective seriously. The one proposition (working proposition), guiding our analysis, is: *only the global comparison (in a global perspective) allows a comprehensive understanding of democracy and the quality of democracy. This rests on the understanding that democracy should not be misunderstood as a privilege of the advanced economies and advanced societies in the industrialized countries.* Of course, not all of the 160 countries in

³⁵Later in Sect. 2.3 we discuss possible procedures for an empirical identification of “democracies”, “semi-democracies” and “non-democracies”.

our sample are democracies. Our sample comprises democracies, semi-democracies and non-democracies as well. *Therefore, when talking about the global picture of democracy, it would imply not only to analyze democracy and the quality of democracy, but also to analyze the lower-performance and low-performance or absence of democracy. In our model and analytical framework of analysis this is being measured and displayed by referring the countries to the dimensions and subdimensions of freedom, equality and sustainable development, also self-organization (political self-organization).* When discussing and comparing countries, we are interested in commenting, for example, on the degree or degrees of involved and established political freedom, because the absence of political freedom implies that the discussed country does not and cannot qualify as a democracy. This macrosample allows to raise and to address important analytical questions. For instance, non-political sustainable development can be contrasted with “Comprehensive sustainable development” that refers to non-political, but additionally also to political aspects. Particularly in a globalized framework of analysis, this identifies important issues for research. We also share the conviction that only the global perspective enables a sufficient conceptual understanding of democracy and the quality of democracy. In addition to the calculation of means for different world averages (categories of world averages), our comparative analysis will concentrate on the following countries and country groups (country clusters): Nordic countries; USA; European Union (EU15 and EU28); Japan; OECD (member countries to the OECD); Brazil; China; India; Indonesia; Nigeria; Russia (Russian Federation); Latin America; and Asia. *These countries and country groups we defined prior to the process of assigning indicator-based countries (and country groups) to dimensions and subdimensions.*

6. *Indicator-based assignment of countries to dimensions and subdimensions, comparative multidimensional index-building: Strictly based on empirical indicators, we assign the countries (democracies, semi-democracies and non-democracies) to subdimensions and dimensions. The focus is placed on four dimensions (basic dimensions) of democracy and quality of democracy: freedom, equality, sustainable*

development, and already to a lesser extent self-organization.³⁶ This is the procedure for those 160 countries (accounting for more than 99% of the world population), to which we refer to in our analysis for the year period of 2002–2016. *By this procedure, we also assert and claim within the context of our methodic framework of analysis that within this specific boundary of conceptual understanding these 160 countries are and behave to each other comparably in a global perspective. This (empirically grounded) indicator-based assignment of countries to dimensions and subdimensions, using numerical scales, resembles, at the same time, the process of a comparative multidimensional index-building for democracies (democracies, semi-democracies and non-democracies).* Semi-democracies and non-democracies may be seen and interpreted in terms of the absence of democracy (“scarcity of democracy”). *This comparative multidimensional index-building represents a form of output for our procedure of an indicator-based assignment of countries to dimensions and subdimensions.* They behave like “two sides” of the same endeavor (index-building and assignment-to-dimensions), linked structurally together. Because the resulting indices are multidimensional, not the idea of a creation of a single ranking of democracies or of the quality of democracy is being advocated. What may result would be a diversity of rankings, competing with each other for the opportunity of different and diverging interpretations, by this fostering analytical pluralism. *This notion of indices or index-building offers additional reference points for helping to read and to interpret results and effects of assigning indicator-based countries (democracies, semi-democracies and non-democracies) to dimensions and subdimensions. Indices represent one form of legitimate outcome of such a conceptual and methodic approach.*

7. *Weighting of indicators for country clusters by population:* Are indicators calculated for aggregated country regions with more than one county

³⁶The basic dimension of “control” does not represent a major focus for our analysis here (see again Fig. 1.7). Alternatively formulated, some of the indicators, which we use, may also be (dimensionally speaking) assigned to other dimensions and sub-dimensions, different than we did it in our analysis.

(for example, Latin America or Asia), then the indicators are always weighted by population (see Appendix A.3).

8. *Final focus not on analytical synthesis, but on ambiguities, puzzling empirical effects and trade-offs:* In the conclusion to our analysis, we do not attempt to arrive at an analytical synthesis that integrates well-balanced all the empirical findings of our analytical endeavor. Indeed, the empirical outcome to our analysis is quite complex, allowing for competing, perhaps even contradictory interpretations. *The emphasis in our conclusion, therefore, is to represent this whole spectrum of possible and diverging analytical interpretations, and to identify directly the ambiguities, puzzling empirical effects and trade-offs.* This appears to be necessary for formulating further propositions that then again are referred back (“fed-backed”) to the concepts and theories of democracy and quality of democracy. Based on our analysis and the underlying empirical model, perhaps and potentially we arrive in the conclusion at more newly to be asked questions than we can resolve or answer so far. *This “openness” in our final analysis stems also from the circumstance that our empirical analysis here of democracy and quality of democracy is still explorative in character.*
9. *Formulation and proposition of further-guiding hypotheses on democracy and quality of democracy in the conclusion, and possible implications for concepts of democracy and the quality of democracy:* *The analysis here focuses on conceptualizing democracy and the quality of democracy, and then to “translate” these concept into an empirical measurement of democracy and quality of democracy in global comparison and a global perspective.* Multidimensional index-building represents one form of output of this analytical endeavor. However, the understating here is that these conceptualizations are approaching and entering new grounds, also in the “fog of uncertainty.” We considered these attempts of measuring and measurement of democracy to be necessary, so to prevent that the offered conceptualization is primarily theoretical or only theoretical. *Still, the measurement of democracy, which we introduce here, is “explorative” in character. The measurement should demonstrate, how the conceptualization translates in and into practice, how the suggested dimensions and subdimensions play and display empirically, what the empirical effects are.* This is being regarded to be

necessary to improve the concepts and theories of democracy and of quality of democracy, to enable and support conceptual and theoretical learning. But because of this empirically first-stage tentative phase and explorative character of our analysis, we did not engage in formulating already in advance hypotheses that would guide our analysis and empirical reasoning and that would be tested empirically. *After arriving in the conclusion to our analysis, however, we identify, suggest, formulate and propose different hypotheses on democracy and quality of democracy in a global format, comparison and perspective, which may guide future research on democracy and quality of democracy and that also offer more mature reference points for new inquiries in the field of democracy.* This formulation of (future-looking and future-directed) hypotheses could be seen and viewed as our final attempt of analytical synthesis, because our main focus of analysis (empirical analysis) is to reveal ambiguities, puzzling empirical effects and trade-offs in reference to democracy and quality of democracy, wherever and whenever it appears to be appropriate to identify these. *Furthermore, these hypotheses in the conclusion (the hypotheses-formulation there) also allow and encourage a discussion about possible implications for concepts (and theories) of democracy and the quality of democracy, inspired by the results of the empirical inquiry in our explorative analysis.* What does the empirical macromodel (of 160 countries in the years 2002–2016) possibly imply for concepts and theory of democracy? Since these hypotheses represent a certain synthesis of and to our analytical work, these hypotheses are continuing reference points for conceptual learning and further theoretical learning on democracy.

1.4 Preview of Coming Sections and Chapters of Analysis

The key questions of the analysis here are: *How to conceptualize and measure democracy and the quality of democracy in global comparison?* Furthermore: *What can be said about “Democracy as Innovation Enabler”?* The following analysis is organized and structured in the following sections and chapters:

1. ***The Empirical MacroModel: How to Measure Democracy and the Quality of Democracy in Global Comparison.*** In this section (Chapters 2–6), the empirical macromodel is presented that refers empirically and indicator-based in total a sample of 160 countries (representing more than 99% of the world population) to the dimensions of *freedom, equality, sustainable development*, and to a lesser extent also to *political self-organization* (political swings) for the years 2002–2016. These dimensions we regard as basic dimensions (basic conceptual dimensions) of democracy and quality of democracy. Control (another basic dimension) we did not test empirically (and in greater detail) for our model. These five dimensions, in summary, are defined and set as the *quintuple structure* or *basic quintuple-dimensional structure* of democracy and quality of democracy. In a more practical understanding, the explorative assignment of countries to different dimensions results in a procedure and the outcome of a *comparative and multidimensional index-building*. The empirical analysis focuses on the OECD as well as on the non-OECD countries. Particularly the integration of the non-OECD countries into concepts and theories of democracy we regarded to be crucial. In more particular, our analysis concentrates on the following countries and country groups: Nordic countries; USA; European Union (EU15 and EU28); Japan; OECD; Brazil; China; India; Indonesia; Nigeria; Russia; Latin America; Asia; and different averages for the world. *This whole empirical analysis is more explorative in character*, therefore, no ex-ante hypotheses were formulated in advance for the purpose of guiding and guidance of the conducted empirical inquiry.
2. ***Conclusion: Summary and Formulation of Hypotheses for Further Research on Democracy and Quality of Democracy in Global Comparison.*** In the conclusion (Chapter 7), we again summarize some of the findings and key global trends of democracy and quality of democracy (in reference to the conceptually underlying *basic quintuple-dimensional structure*). We are inclined to display ambiguities, puzzling empirical effects and trade-offs, wherever they can be identified, therefore be analytically suggested. This approach is carried by the understanding that such a demonstration of conflicting interpretations for empirical patterns and trends offers opportunities for

a conceptual and theoretical learning. However, in the conclusion, we also engage in developing and formulating hypotheses that may guide further future research on democracy and quality of democracy in global comparison. These hypotheses could be interpreted also as an attempt of synthesis of our research results, wherever appropriate. The hypotheses are also leveraged for a feedback back to the conceptual starting point of our inquiry. We take the hypotheses as a form of input for discussing possible implications of the empirical results for concepts (concepts and theories) of democracy and quality of democracy in global comparison. In the resume to the conclusion, we try to arrive at some last and final reflections.

3. **Appendix, Appendices A.1 until A.3.** In appendix, all data for the indicators used for the 160 countries (in the period 2002–2016) are presented to make transparent the “empirical macro-model” in full extent.

1.5 Resume: How Innovative Is the Here Presented Approach of Conceptualizing and Measuring Democracy and Quality of Democracy in Global Comparison and of Democracy as Innovation Enabler?

In our resume to the introduction, we would like to discuss further in a brief manner and reflect shortly, what the potentially innovative aspects of our analysis are, which may result in contributing to new findings and outcomes for research in political science (now and in the time coming). In political science, already several attempts were made to draw references between democracy and ideas of innovation or innovation as such (for example: Bühlmann 2013; Campbell and Carayannis 2013b; Helms 2013; and Saward 2000). Therefore, we could ask: What are innovative aspects of concepts and theories of democracy and quality of democracy? Conceptualizing and measuring democracy already is being attempted and carried out on a regular basis and with practical experience (see Beetham 1994b; Campbell 2008; Inkeles 1993; Lauth 2004; Munck

2009; Munck and Verkuilen 2002; O'Donnell 2004b). For comparative democracy research, the one established standard is: to define dimensions, to assign indicators to dimensions, and then to plot countries (democracies) indicator-based to these dimensions. Additional complexities may be the number of countries and the extensiveness of years being covered. *In contemporary democracy research, there are already examples for “three dimensional” (Lauth 2004), “four dimensional” (Campbell, 2012, pp. 295–296, 301–302) or a “Quadruple Structure” (Campbell and Carayannis 2013b) conceptualization of democracy.* To these conceptualizations for measurement of democracy the work here refers explicitly (see the literature review component in Sect. 1.2), but we also attempted to elaborate and develop further some concepts or at least some of the involved aspects of the cited concepts. Therefore, in the following, we summarize shortly the *potentially innovative aspects how we conceptualized and measured empirically democracy and quality of democracy in global comparison* in context of the work presented here. To which extent this attempt was actually also successful in being innovative, is (of course) to be judged and assessed by others.

The innovative propositions would be (in the sense of working propositions):

1. *Global comparison of democracy and quality of democracy:* We took the claim of a “global comparison” very serious, almost literally. There is a certain impression that in practical reality the comparison of democracy often is factually narrowed down to the industrialized OECD countries or advanced economies. We wanted to compare democracy in a global perspective, to see and to test whether (and if so, how) democracies evolve differently with regard to differing degrees of economic and socioeconomic development. Do there operate specific trends (“laws,” patterns) of democracy and quality of democracy, in dependence of the degree of development? Also, the question was, whether different rationales of comparison of variant country groups would also “produce” conflicting analytical propositions? With our country sample of 160 countries (for the period 2002–2016), we addressed more than 99% of the world population. This had the implication of extending the perspective from democracies also to the

non-democracies (democracies, semi-democracies and non-democracies). Only data limitations (missing data) constrained the number of countries for the specific and individual comparisons. Of course, there are always also chances for a new dynamism of empirical trends after 2016. This could be the subject of further (and later) inquiry.

2. *Codevelopment of conceptual design and concept application*: We believe that (in the long run, but also already in a midterm perspective) further conceptual development implies the need for actually applying concepts and testing these in real-world scenarios. *Theory development appears only possible on the basis of theory application.*³⁷ What then results is a codevelopment (“co-evolution”) of concept development and concept application, where design and application are mutually cross-connected and interlinked, enabling non-linear learning and innovation. In our work, we treated “conceptualizing” and “measuring” of democracy “equally,” in equal terms, at equal weights. Thus, our work is based in theory of democracy as well as in empirical democracy research. Guillermo O’Donnell, one of the more important and influential recent democracy thinkers, has also done this in a very direct manner, by interlinking human rights and human development (see, for example, O’Donnell 2004b). *Therefore, one key premise for us was to develop our underlying conceptual framework in a way so that it could be directly translated into a process of empirical measuring of democracy and quality of democracy.*
3. *The basic quintuple-dimensional structure of democracy and quality of democracy*: The one established standard for democracy research is to refer democracy to the three dimensions of freedom, equality and control (e.g., see Lauth 2004). For the purpose of applying an underlying conceptual (and theoretical) model for the empirical measurement of democracies world-wide, we decided to create and

³⁷The one assertion here is: “Die Analyse hier wird aber von der zusätzlichen Annahme getragen (die nicht unbedingt geteilt werden muss), dass es zwischen Demokratietheorie einerseits und Demokratiemessung andererseits wichtige (auch konzeptionelle) Wechselbezüge gibt. In dieser Logik verlangt eine Weiterentwicklung oder Verbesserung von Demokratietheorie, dass es systematische Versuche der Demokratiemessung geben soll, so unvollständig oder lückenhaft eine empirische Demokratievermessung auch jeweils sein mag” (Campbell 2012, p. 294).

to opt for a quintuple-dimensional structure of democracy (“basic quintuple-dimensional structure of democracy and quality of democracy”) that identifies five basic dimensions (basic conceptual dimensions).³⁸ The three dimensions of freedom, equality and control are extended by the dimensions of “sustainable development” (*Quadruple Structure*) and “self-organization” or “political self-organization” (*Quintuple Structure*). The following empirical analysis (in the following chapters and sections) will focus on freedom, equality, sustainable development and self-organization (government/opposition cycles); however, control will not be granted with a particular attention. Concerning sustainable development and self-organization, we also would like to add the following comments and considerations:

- 3.1. *Sustainable development: Sustainable development implies a more comprehensive understanding of democracy and quality of democracy, tying together political, social, economic and environmental aspects in progress.* Guillermo O’Donnell combines the two key principles of human rights and human development for his theory and theory design of quality of democracy (O’Donnell 2004b). It could be argued that the “human development,” as is being conceptually introduced by O’Donnell, interplays with “sustainable development,” however, O’Donnell does not make such an intellectual move in an explicit way (Campbell 2012, pp. 301–302). In some conceptualizations of quality of democracy, also the environment and environmental sensitivity are included as contributing crucially to quality of democracy (Campbell 2008). “Social ecology” is a concept that focuses closer on “society-nature” interactions, but also on the “socioecological transition” (Carayannis and Campbell 2010, p. 59; Carayannis and Campbell 2013; see furthermore Carayannis et al. 2012; Fischer-Kowalski and Haberl 2007; as

³⁸Here we would like to restate and re-cite an already earlier made statement (see Sect. 1.2), namely that the notion of “basic conceptual dimensions” should emphasize that such identified basic dimensions are analytically “constructed” dimensions in reflection of a reviewing of discourses on democracy and democracy research. In that logic, these basic dimensions are not “naturally” pre-given or pre-set.

well as Winiwarter and Knoll, pp. 306–307).³⁹ This socioecological transition is being identified as one of the coming key challenges for further progress (European Commission 2009). *Sustainable development (in combination with human development) appears to be a crucial dimension for quality of democracy, particularly when democracy is being assessed in a world-wide approach. For the non-OECD countries, democracy may be “abstract,” when features of sustainable development are ignored.* This follows also the line of thinking of O’Donnell that social context factors are decisive for translating abstract rights into real rights (or real freedoms). O’Donnell (2004b, p. 42) states: “These are necessary milieus for the existence of these rights, which in their social expression I have called freedoms.” We also must emphasize that this is also the case for the OECD countries. *There are possible scenarios of stagnation or even decline of quality of democracy in the advanced democracies or established democracies. Therefore, sustainable development appears to be just as important for the world of the OECD countries, to also raise there the levels and degrees of quality of democracy gradually and constantly (beyond some of the normal or minimum standards of regular democracy).*

- 3.2. *Self-organization, political self-organization:* Political self-organization can take various manifestations and can be measured and analyzed empirically by referring to different indicators. *Government/opposition cycles and political swings (political left/right swings) represent a crucial manifestation of political self-organization.* Later in our work, we identify a particular type

³⁹“‘Social ecology’ looks at the ‘society-nature interactions’ between ‘human society’ (‘culture’, the ‘cultural (symbolic) sphere of causation’) and the ‘material world’ (‘nature’, the ‘natural (biophysical) sphere of causation’). The ‘biophysical structures’ or ‘biophysical structures of society’ mark an area of overlap between culture (the cultural) and nature (the natural), and between these ‘biophysical structures’ and nature a metabolism (or a ‘social metabolism’, with potential of a ‘socio-metabolic transition’), in context of specific ‘metabolic profiles’, occurs (see Fischer-Kowalski 1998; Fischer-Kowalski and Hüttler 1999; Fischer-Kowalski and Haberl 2007; Haberl et al. 2004, pp. 201–202, 204; 2009; see also Hopwood et al. 2005; Kates et al. 2001)” (Carayannis and Campbell 2010, p. 59).

of government/opposition cycles that we investigate in greater detail further and which is the peaceful change (person and party change) of head of government (see Chapter 6).⁴⁰ *It is possible to demonstrate that democracies are characterized by higher degrees of government/opposition cycles than non-democracies. Democracies engage more likely in political swings than non-democracies (Fig. 6.3 in Chapter 6). Therefore, the proposition is that government/opposition cycles (political swings) constitute an essential component for democracies and how they operate and perform and progress. Government/opposition cycles and political swings are key to quality of democracy. Party change of head of government appears to be even more important than person change. In fact, the peaceful change of head of government makes this one great difference between democracies and non-democracies and marks here an important line of division (also in the evolution of political systems). To look at this argument from another perspective: in analytical terms, is there an interest to inquire whether a country or political system can qualify to be regarded as a democracy, then ask and test, whether there have been (and still are) government/opposition cycles in operating. Government/opposition cycles alone do not sufficiently make the case for the existence of a democracy. However, without government/opposition cycles, it is difficult to believe how a political system could be democratic. By this, the non-existence of government/opposition cycles falsifies the possibility of a status of being-a-democracy. In fact, should there be the assertion that a political system is democratic without government/opposition cycles, we should indeed be skeptical, because: How should this work? Perhaps that particular political system would be more an example for a semi-democracy, on the way of attempting for developing into a full democracy (a normal democracy). Several factors interplay in coming together for driving*

⁴⁰More precisely, we will look at the “de facto head of government”. In the following analysis we then define and discuss this term elaborately and specifically with a greater focus (see again Chapter 6).

government/opposition cycles (political swings) in democracies (again see Chapter 6 later): (1) balancing power; (2) allowing a “cycle of seeking”⁴¹; and (3) balancing policy (in a sequential order or in a midterm perspective or in the long run).⁴² In the USA, the research tradition of “realignment” and “dealignment” apparently falls in line with concepts of political swings (Clubb et al. 1990; Schlesinger 1986; Dalton and Wattenberg 2002), but mostly without the explicit wording of “political swings” and reference to this concept. There are also other examples for research on political swings (Campbell 1992, 1996, 2007; Schmidt 1983). *However, the general impression is that of a lack of comparative political science research on political swings and government/opposition cycles*, even so they appear to be essential and constitutional for democracy, also quality of democracy. There is still this gap of research in the domains of political swings.

4. *Quintuple-dimensional structure of democracy, Quadruple and Quintuple Helix innovation systems, and democracy as innovation enabler*: The concepts of knowledge society, knowledge economy and knowledge democracy imply that knowledge is being regarded as being increasingly crucial for driving development and progress in very different areas (Carayannis and Campbell 2012).⁴³ In innovation research, the Triple Helix innovation system represents a classical core model for innovation that looks at “university-industry-government relations” and “trilateral networks and hybrid organizations” and how the three helices of academia (universities), industry

⁴¹The flow of argument here is: opposition parties are more clearly oriented toward policy-seeking, whereas government parties are focusing on office-seeking and vote-seeking. The longer government parties govern and reign, the more they become biased in attempting to preserve their power (institutional power base) and hold of government, so that they still can access and benefit from privileges of power and office. Therefore, it appears to be necessary to vote government parties out of office regularly.

⁴²Compare also with Hypothesis 17 in Sect. 7.2.

⁴³“The *Democracy of Knowledge*, as a concept and metaphor, highlights and underscores parallel processes between political pluralism in advanced democracy, and knowledge and innovation heterogeneity and diversity in advanced economy and society. Here, we may observe a hybrid overlapping between the *knowledge economy, knowledge society and knowledge democracy*” (Carayannis and Campbell 2012, p. 55).

(business) and state (government) intertwine and relate (Etzkowitz and Leydesdorff 2000, pp. 111–112, 118). The Quadruple Helix innovation system concept already is broader and adds additionally as fourth helix the “media-based and culture-based public” as well as “civil society” (Carayannis and Campbell 2009, 2012, p. 14; 2013; furthermore, see Danilda et al. 2009; Bast et al. 2015; De Oliveira Monteiro and Carayannis 2017). The Quintuple Helix innovation system furthermore continues to add on the “natural environments of society” (Carayannis and Campbell 2010, p. 62; 2013). The Quadruple Helix contextualizes the Triple Helix, and the Quintuple Helix contextualizes the Quadruple Helix. It could be interpreted that the Triple Helix represents a basic core model of innovation for the “knowledge economy,” while the Quadruple Helix describes the “knowledge society” and “knowledge democracy,” whereas the Quintuple Helix also refers to “social ecology, society-nature interactions, socioecological transition” (Carayannis and Campbell 2013, Fig. 3 there).⁴⁴ *In that sense, the Quadruple Helix is emphasizing the perspective of democracy as being an import perspective for knowledge and innovation, and in that sense the “Quadruple Helix innovation system” can also serve as a concept, model and theory for the proposition (hypothesis) of “democracy as an innovation enabler” (see Fig. 1.8). Introducing the quintuple-dimensional structure of democracy and quality of democracy clearly implies opportunities of interdisciplinary and transdisciplinary research combinations between research on democracy and research on innovation (“democracy as innovation enabler”).⁴⁵ The Quadruple-Dimensional⁴⁶ and the Quintuple-Dimensional⁴⁷*

⁴⁴The concepts of the Quadruple and Quintuple Helix innovation systems can also be set in relation to discussions about ideas on “epistemic governance” (see Campbell and Carayannis 2013a; Carayannis and Campbell 2013; Vadrot 2011).

⁴⁵On a review of interdisciplinarity and transdisciplinarity, see Prainsack et al. (2014) and Wagner et al. (2011). For an interesting application of interdisciplinarity on “Governing Molecules” see Gottweis (1998).

⁴⁶See again Campbell (2012, pp. 295–296, 301–302), and Campbell and Carayannis (2013b, Fig. 1).

⁴⁷The “basic quintuple-dimensional structure of democracy and quality of democracy” has been presented in a first premiere fashion to the research communities and public precisely in context of the work developed here (see Fig. 1.7 in Sect. 1.2).

structure of democracy may be analytically interconnected in creative research design configurations with the Quadruple Helix and Quintuple Helix innovation-system-approach. Overlapping research on quality of democracy with research on knowledge, knowledge production and innovation provides additional plausibility for concepts such as the knowledge democracy (furthermore, see Blasche and Campbell 2013; Campbell and Campbell 2011; Carayannis and Campbell 2014; Carayannis and Pirzadeh 2014; Carayannis et al. 2012; Bast et al. 2015; Danilda et al. 2009; Eitzkowitz and Leydesdorff 2000; Eigelsreiter 2017; Hemlin et al. 2014; Merz and Sormani 2016; Mitterlehner 2014).

5. *Explorative research and development (formulation) of hypotheses for further research on democracy and quality of democracy in global comparison:* There exist already systematic initiatives of democracy measurement (for example, see Campbell 2008; Campbell and Barth 2009; Campbell et al. 2013c; Freedom House 2013a; Schmidt 2010, pp. 370–398). Our approach here, of course, was quite comprehensive by referring to a country sample 160 countries, and by this addressing a world population of more than 99%. Particularly, the conceptually really novel aspect, in our case, however, is the underlying conceptualization that we designed and provided for measuring quality of democracy world-wide, namely the “basic quintuple dimensional structure of democracy and the quality of democracy” (Sect. 1.2). With this specific conceptualization, we entered new territory for democracy measurement. Because of this, our empirical analysis of measurement is more explorative in character. We therefore decided not to develop in advance ex-ante hypotheses that would guide our research, but more to propose ex-post propositions to discuss and reflect the results of our empirical analysis in reflection of concepts and models (also theories) (see Fig. 1.3 in Sect. 1.1). However, toward the end of our analysis, in the conclusion, we tried to develop and engaged to formulate hypotheses for further research on democracy, which are based on the outcome of our endeavor of conceptualizing and measuring quality of democracy in global comparison. These hypotheses we want to set up for discussion as possible propositions for future research on democracy (Fig. 1.11).

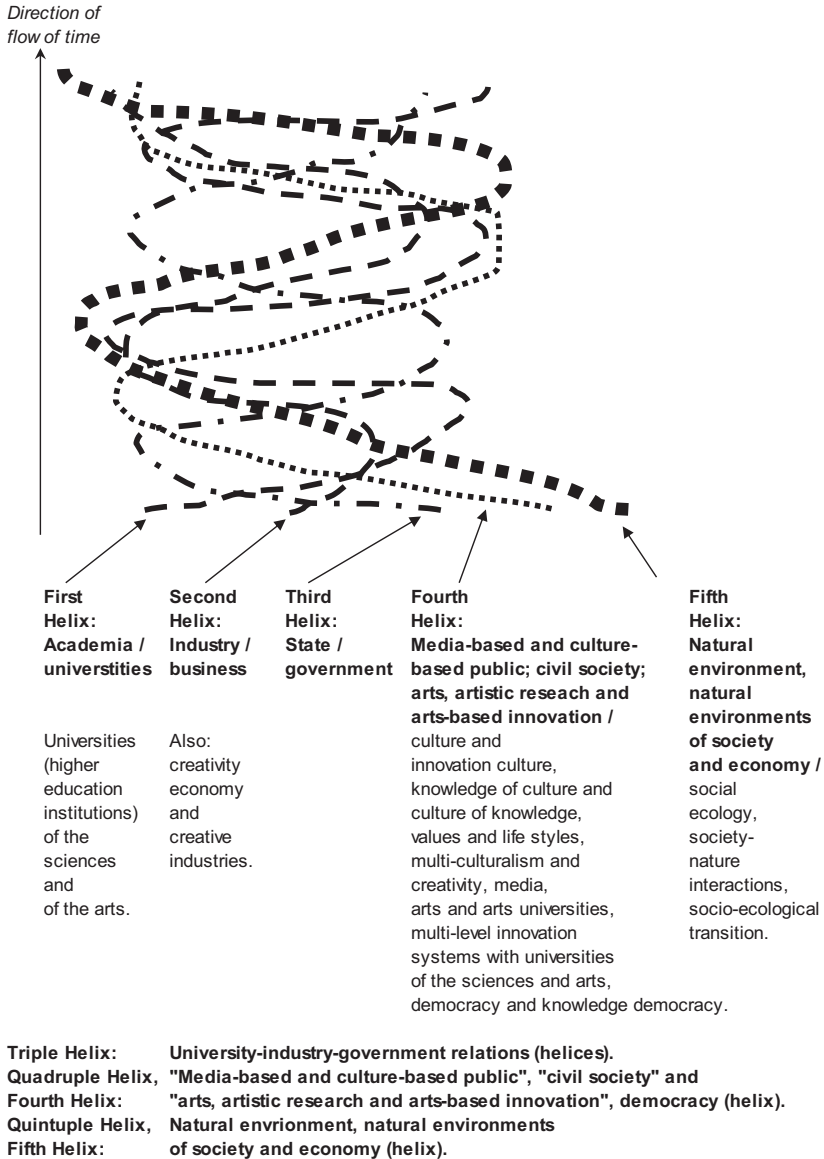


Fig. 1.11 The quadruple and quintuple helix innovation systems (Source Author's own conceptualization based on Carayannis and Campbell (2014, p. 15), and adapted from Carayannis and Campbell (2009, p. 207). See also Etzkowitz and Leydesdorff (2000))

References

- Ataç, I., & Rosenberger, S. (Eds.). (2013). *Politik der Inklusion und Exklusion*. Vienna: Vienna University Press.
- Barth, T. D. (2009). *Theoretische Konzeption und Messung der Demokratiequalität: Brasilien, Südafrika, Australien und die Russische Föderation in vergleichender Analyse 1997–2006* [Theoretical Conception and Measurement of the Quality of Democracy: Brazil, South Africa, Australia, and the Russian Federation in Comparative Analysis, 1997–2006]. Master thesis, “Diplomarbeit”. University of Vienna, Vienna.
- Barth, T. D. (2010). *Konzeption, Messung und Rating der Demokratiequalität. Brasilien, Südafrika, Australien und die Russische Föderation 1997–2006*. Saarbrücken: VDM Verlag Dr. Müller.
- Barth, T. D. (2011). *Die 20 besten Demokratien der Welt. Freiheit – Gleichheit – Demokratiequalität auf einen Blick*. Norderstedt: Books on Demand.
- Bast, G., Carayannis, E. G., & Campbell, D. F. J. (Eds.). (2015). *Arts, Research, Innovation and Society*. New York, NY: Springer. <http://www.springer.com/business+%26+management/technology+management/book/978-3-319-09908-8>.
- Beetham, D. (1994a). Key Principles and Indices for a Democratic Audit. In D. Beetham (Ed.), *Defining and Measuring Democracy* (pp. 25–43). London: Sage.
- Beetham, D. (Ed.). (1994b). *Defining and Measuring Democracy*. London: Sage.
- Beetham, D. (2004). Freedom as the Foundation. *Journal of Democracy*, 15(4), 61–75.
- Beetham, D., Byrne, I., Ngan, P., & Weir, S. (Eds.). (2002). *Democracy Under Blair: A Democratic Audit of the United Kingdom*. London: Politico’s Publishing.
- Blasche, G. W. E., & Campbell, D. F. J. (2013). Cross-Retirement (Cross-Employed Cross-Retired) and Innovation. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 508–513). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_255.
- Brand, U., Brunnengräber, A., & Schrader, L. (2000). *Global Governance. Alternative zur neoliberalen Globalisierung*. Münster: Westfälisches Dampfboot.

- Bühlmann, M. (2013). Innovations of Direct Democracy. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1033–1039). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_483.
- Bühlmann, M., Merkel, W., Müller, L., & Weßels, B. (2011, December 16). The Democracy Barometer: A New Instrument to Measure the Quality of Democracy and Its Potential for Comparative Research. *European Political Science*. <https://doi.org/10.1057/eps.2011.46> and <http://www.palgrave-journals.com/eps/journal/vaop/ncurrent/abs/eps201146a.html>.
- Bühlmann, M., Merkel, W., & Weßels, B. (2008). *The Quality of Democracy: Democracy Barometer for Established Democracies* (Revised Version 20.03.2008). National Center of Competence in Research: Challenges to Democracy in the 21st Century (Working Paper No. 10a). <http://www.nccr-democracy.uzh.ch/nccr/publications/workingpaper/10>.
- Campbell, D. F. J. (1992). Die Dynamik der politischen Links-rechts-Schwingungen in Österreich: Die Ergebnisse einer Expertenbefragung. *Österreichische Zeitschrift für Politikwissenschaft (ÖZP)*, 2, 165–179.
- Campbell, D. F. J. (1996). *Links- und Rechtschwingungen in den westlichen Demokratien ab 1945*, dissertation, University of Vienna, Vienna.
- Campbell, D. F. J. (2002). Zur Demokratiequalität von politischem Wechsel, Wettbewerb und politischem System in Österreich. In D. F. J. Campbell & C. Schaller (Eds.), *Demokratiequalität in Österreich* (pp. 19–46). Opladen: Leske + Budrich.
- Campbell, D. F. J. (2007). Wie links oder wie rechts sind Österreichs Länder? Eine komparative Langzeitanalyse des parlamentarischen Mehrebenensystems Österreichs (1945–2007). *SWS-Rundschau*, 47(4), 381–404.
- Campbell, D. F. J. (2008). *The Basic Concept for the Democracy Ranking of the Quality of Democracy*. Vienna: Democracy Ranking. <http://www.ssoar.info/ssoar/handle/document/29063> and http://democracyranking.org/wordpress/ranking/basic_concept.pdf.
- Campbell, D. F. J. (2012). Die österreichische Demokratiequalität in Perspektive [The Quality of Democracy in Austria in Perspective]. In L. Helms & D. M. Wineroither (Eds.), *Die österreichische Demokratie im Vergleich* [Austrian Democracy in Comparison] (pp. 293–315). Baden-Baden: Nomos. http://www.uni-klu.ac.at/wiho/downloads/QoD-Text_12.pdf.

- Campbell, D. F. J., & Barth, T. D. (2009). Wie können Demokratie und Demokratiequalität gemessen werden? Modelle, Demokratie-Indices und Länderbeispiele im globalen Vergleich [How Can Democracy and the Quality of Democracy be Measured? Models, Democracy Indices and Country-Based Case Studies in Global Comparison]. *SWS-Rundschau* [Social Scientific Review], 49(2), 208–233.
- Campbell, D. F. J., Barth, T. D., Pözlbauer, P., & Pözlbauer, G. (2012). *Democracy Ranking (Edition 2012): The Quality of Democracy in the World*. Norderstedt: Books on Demand (Democracy Ranking Association).
- Campbell, D. F. J., & Carayannis, E. G. (2013a). *Epistemic Governance in Higher Education: Quality Enhancement of Universities for Development* (SpringerBriefs in Business). New York, NY: Springer. <http://www.springer.com/business+%26+management/organization/book/978-1-4614-4417-6>.
- Campbell, D. F. J., & Carayannis, E. G. (2013b). Quality of Democracy and Innovation. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1527–1534). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007%2F978-1-4614-3858-8_509#.
- Campbell, D. F. J., & Carayannis, E. G., Barth, T. D., & Campbell, G. S. (2013). Measuring Democracy and the Quality of Democracy in a World-Wide Approach: Models and Indices of Democracy and the New Findings of the “Democracy Ranking”. *International Journal of Social Ecology and Sustainable Development*, 4(1), 1–16. <http://www.igi-global.com/article/measuring-democracy-quality-democracy-world/77344>.
- Campbell, D. F. J., Carayannis, E. G., & Rehman, S. S. (2015). Quadruple Helix Structures of Quality of Democracy in Innovation Systems: The USA, OECD Countries, and EU Member Countries in Global Comparison. *Journal of the Knowledge Economy*, 6(3), 467–493. <https://link.springer.com/article/10.1007/s13132-015-0246-7>.
- Campbell, D. F. J., & Sükösd, M. (Eds.). (2002). *Feasibility Study for a Quality Ranking of Democracies*. Vienna: Global Democracy Award. http://www.democracyranking.org/downloads/feasibility_study-a4-e-01.pdf.
- Campbell, G. S., & Campbell, D. F. J. (2011). The Semi-aquatic Theory: Semi-aquatic Evolutionary Phase and Environment, Language Development of Modern Humans. With a Short Epilog on Conceptualized Evolution, Social Ecology and the Quintuple Helix. *International Journal of Social Ecology and Sustainable Development*, 2(1), 15–30. <http://www.igi-global.com/bookstore/titledetails.aspx?titleid=47786> and <http://www.igi-global.com/bookstore/article.aspx?titleid=51634>.

- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix Innovation Model: Global Warming as a Challenge and Driver for Innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 1–12. <http://www.innovation-entrepreneurship.com/content/pdf/2192-5372-1-2.pdf>.
- Carayannis, E. G., & Campbell, D. F. J. (2009). “Mode 3” and “Quadruple Helix”: Toward a 21st Century Fractal Innovation Ecosystem. *International Journal of Technology Management*, 46(3/4), 201–234.
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate to Each Other? A Proposed Framework for a Transdisciplinary Analysis of Sustainable Development and Social Ecology. *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69.
- Carayannis, E. G., & Campbell, D. F. J. (2012). *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems: 21st-Century Democracy, Innovation, and Entrepreneurship for Development* (SpringerBriefs in Business). New York, NY: Springer. <http://www.springer.com/business+%26+management/book/978-1-4614-2061-3>.
- Carayannis, E. G., & Campbell, D. F. J. (2013). Mode 3 Knowledge Production in Quadruple Helix Innovation Systems: Quintuple Helix and Social Ecology. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1293–1300). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_310.
- Carayannis, E. G., & Campbell, D. F. J. (2014). Developed Democracies Versus Emerging Autocracies: Arts, Democracy, and Innovation in Quadruple Helix Innovation Systems. *Journal of Innovation and Entrepreneurship*, 3, 12. <http://www.innovation-entrepreneurship.com/content/pdf/s13731-014-0012-2.pdf> and <http://www.innovation-entrepreneurship.com/content/3/1/12>.
- Carayannis, E. G., & Pirezadeh, A. (2014). *The Knowledge of Culture and the Culture of Knowledge: Implications for Theory, Policy and Practice*. Houndmills: Palgrave Macmillan. http://www.amazon.de/The-Knowledge-Culture-Implications-Practice/dp/1403942439/ref=sr_1_1?ie=UTF8&qid=1403080044&sr=8-1&keywords=carayannis+knowledge+of+culture.
- Central Intelligence Agency. (2011). *The CIA World Factbook 2012*. New York, NY: Skyhorse Publishing. <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html>.

- Clubb, J. M., Flanigan, W. H., & Zingale, N. H. (1990). *Partisan Realignment: Voters, Parties, and Government in American History*. Boulder: Westview Press.
- Coppedge, M., Gerring, J., Altman, D., Bernhard, M., Fish, S., Hicken, A., et al. (2011). Conceptualizing and Measuring Democracy: A New Approach. *Perspectives on Politics*, 9(2), 247–267.
- Cronin, T. E. (1989). *Direct Democracy: The Politics of Initiative, Referendum, and Recall*. Cambridge, MA: Harvard University Press.
- Cullell, J. V. (2004). Democracy and the Quality of Democracy: Empirical Findings and Methodological and Theoretical Issues Drawn from the Citizen Audit of the Quality of Democracy in Costa Rica. In G. O'Donnell, J. V. Cullell, & O. M. Iazzetta (Eds.), *The Quality of Democracy: Theory and Applications* (pp. 93–162). Notre Dame, IN: University of Notre Dame Press.
- Dahl, R. A. (1971). *Polyarchy: Participation and Opposition*. New Haven: Yale University Press.
- Dalton, R. J., & Wattenberg, M. P. (Eds.). (2002). *Parties Without Partisans: Political Change in Advanced Industrial Democracies*. Oxford: Oxford University Press.
- Danilda, I., Lindberg, M., & Torstensson, B.-M. (2009). *Women Resource Centres: A Quattro Helix Innovation System on the European Agenda* (Paper). http://www.hss09.se/own_documents/Papers/3-11%20-%20Danilda%20Lindberg%20&%20Torstensson%20-%20paper.pdf.
- De Oliveira Monteiro, S. P., & Carayannis, E. G. (Eds.). (2017). *The Quadruple Innovation Helix Nexus: A Smart Growth Model, Qualitative Empirical Validation and Operationalization for OECD Countries*. New York, NY: Palgrave Macmillan.
- Diamond, L., & Morlino, L. (2004). The Quality of Democracy: An Overview. *Journal of Democracy*, 15(4), 20–31.
- Downs, A. (1957/1985). *An Economic Theory of Democracy*. Boston: Addison-Wesley.
- Economist Intelligence Unit. (2011). *Democracy Index 2010: Democracy in Retreat: A Report from the Economist Intelligence Unit*. London: Economist Intelligence Unit. http://graphics.eiu.com/PDF/Democracy_Index_2010_web.pdf.
- Eigelsreiter, B. (2017). Consumerization of IT, Cyber-Democracy and Cyber-Crime: The Inherent Challenges and Opportunities of Different Ends of a Continuum. In E. G. Carayannis, D. F. J. Campbell, & M. P. Efthymiopoulos (Eds.), *Handbook of Cyber-Development, Cyber-Democracy, and Cyber-Defense*. New York, NY: Springer. <https://link.springer.com/referencework/10.1007%2F978-3-319-06091-0>.

- Etzkowitz, H., & Leydesdorff, L. (2000). The Dynamics of Innovation: From National Systems and “Mode 2” to a Triple Helix of University–Industry–Government Relations. *Research Policy*, 29, 109–123.
- European Commission. (2009). *The World in 2025: Rising Asia and Socio-ecological Transition*. Brussels: European Commission. http://ec.europa.eu/research/social-sciences/pdf/the-world-in-2025-report_en.pdf.
- Fischer-Kowalski, M. (1998). Society’s Metabolism. The Intellectual History of Materials Flow Analysis, Part I, 1860–1970. *Journal of Industrial Ecology*, 2(1), 61–78.
- Fischer-Kowalski, M., & Haberl, H. (Eds.). (2007). *Socioecological Transitions and Global Change: Trajectories of Social Metabolism and Land Use*. Cheltenham: Edward Elgar.
- Fischer-Kowalski, M., & Hüttler, W. (1999). Society’s Metabolism: The Intellectual History of Materials Flow Analysis, Part II, 1970–1998. *Journal of Industrial Ecology*, 2(4), 107–136.
- Freedom House. (2011). *Freedom in the World 2011: Methodology*. Washington, DC: Freedom House. http://www.freedomhouse.org/template.cfm?page=351&ana_page=379&year=2011.
- Freedom House. (2013a). *Freedom in the World: Aggregate Scores of Political Rights and Civil Liberties, 2003–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/AggregateScores_FIW2003-2013%20%28final%29.xls.
- Freedom House. (2013b). *Freedom in the World 2013: Methodology*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2013/methodology>.
- Geissel, B., Kneuer, M., & Lauth, H.-J. (2016). Measuring the Quality of Democracy: Introduction. *International Political Science Review*, 37(5), 571–579. <http://journals.sagepub.com/doi/pdf/10.1177/0192512116669141>.
- Gerring, J., Bond, P., Barndt, W. T., & Moreno, C. (2005). Democracy and Economic Growth: A Historical Perspective. *World Politics*, 57(3), 323–364.
- Giebler, H., & Merkel, W. (2016). Freedom and Equality in Democracies: Is There a Trade-Off? *International Political Science Review*, 37(5), 594–605. <http://journals.sagepub.com/doi/full/10.1177/0192512116642221>.
- Gottweis, H. (1998). *Governing Molecules: The Discursive Politics of Genetic Engineering in Europe and the United States*. Cambridge, MA: The MIT Press.

- Haberl, H., Fischer-Kowalski, M., Krausmann, F., Martinez-Alier, J., & Winiwarter, V. (2009). A Socio-metabolic Transition Towards Sustainability? Challenges for Another Great Transformation. *Sustainable Development*, 17, 20–42.
- Haberl, H., Fischer-Kowalski, M., Krausmann, F., Weisz, H., & Winiwarter, V. (2004). Progress Towards Sustainability? What the Conceptual Framework of Material and Energy Flow Accounting (MEFA) Can Offer. *Land Use Policy*, 21(3), 199–213.
- Hadenius, A., & Teorell, J. (2005). Cultural and Economic Prerequisites of Democracy: Reassessing Recent Evidence. *Studies in Comparative International Development*, 39(4), 87–106.
- Harding, S., Phillips, D., & Fogarty, M. (1986). *Contrasting Values in Western Europe: Unity, Diversity and Change*. Studies in the Contemporary Values of Modern Society. Houndmills: MacMillan.
- Held, D. (2006). *Models of Democracy*. Stanford: Stanford University Press.
- Held, D., McGrew, A., Goldblatt, D., & Perraton, J. (1999). *Global Transformations: Politics, Economics and Culture*. Cambridge: Polity Press.
- Helms, L. (2007). *Die Institutionalisierung der liberalen Demokratie. Deutschland im internationalen Vergleich*. Frankfurt: Campus.
- Helms, L. (2013). Innovation and Democracy. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 928–933). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_262.
- Helms, L. (2016). Democracy and Innovation: From Institutions to Agency and Leadership. *Democratization*, 23(3), 459–477. <http://www.tandfonline.com/doi/abs/10.1080/13510347.2014.981667>.
- Hemlin, S., Allwood, C. A., & Martin, B. R. (2014). *Creative Knowledge Environments: The Influences on Creativity in Research and Innovation*. Cheltenham: Edward Elgar.
- Hooghe, L., & Marks, G. (2001). *Multi-level Governance and European Integration*. Lanham: Rowman and Littlefield.
- Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable Development: Mapping Different Approaches. *Sustainable Development*, 13, 38–52.
- Huddleston, T., Niessen, J., Chaoimh, E. N., & White, E. (Eds.). (2011). *Migrant Integration Policy Index III*. Brussels: British Council and Migration Policy Group. http://www.mipex.eu/sites/default/files/downloads/migrant_integration_policy_index_mipexiii_2011.pdf.

- Huntington, S. P. (1991). *The Third Wave: Democratization in the Late Twentieth Century*. Norman: University of Oklahoma Press.
- Huntington, S. P. (1997). After Twenty Years: The Future of the Third Wave. *Journal of Democracy*, 8(4), 3–12.
- IDEA/International Institute for Democracy and Electoral Assistance (Beetham, D., Carvalho, E., Landman, T., & Weir, S.). (2008). *Assessing the Quality of Democracy: A Practical Guide*. Stockholm: International IDEA. <http://www.idea.int/publications/aqd/index.cfm>.
- Inkeles, A. (Ed.). (1993). *On Measuring Democracy: Its Consequences and Concomitants*. New Brunswick, NJ: Transaction Publishers.
- Kates, R. W., et al. (2001). Environment and Development: Sustainability Science. *Science*, 292(5517), 641–642.
- Kesselman, M. (1973). Order or Movement? The Literature of Political Development as Ideology. *World Politics*, 26(1), 139–154.
- Kneuer, M. (2016). E-democracy: A New Challenge for Measuring Democracy. *International Political Science Review*, 37(5), 666–678. <http://journals.sagepub.com/doi/full/10.1177/0192512116667677>.
- Knutsen, C. H. (2010). Measuring Effective Democracy. *International Political Science Review*, 31(2), 109–128.
- Knutsen, C. H. (2012). Democracy and Economic Growth: A Survey of Arguments and Results. *International Area Studies Review*, 15(4), 393–415.
- Lauth, H.-J. (2004). *Demokratie und Demokratiemessung. Eine konzeptionelle Grundlegung für den interkulturellen Vergleich*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Lauth, H.-J. (2010). Möglichkeiten und Grenzen der Demokratiemessung. *Zeitschrift für Staats- und Europawissenschaften*, 8(4), 498–529.
- Lauth, H.-J. (2011). Qualitative Ansätze der Demokratiemessung. *Zeitschrift für Staats- und Europawissenschaften*, 9(1), 49–77.
- Lauth, H.-J. (2016). The Internal Relationships of the Dimensions of Democracy: The Relevance of Trade-Offs for Measuring the Quality of Democracy. *International Political Science Review*, 37(5), 606–617. <http://journals.sagepub.com/doi/full/10.1177/0192512116667630>.
- Lauth, H.-J., & Schlenkrich, O. (2018). Making Trade-Offs Visible: Theoretical and Methodological Considerations About the Relationship Between Dimensions and Institutions of Democracy and Empirical Findings. *Politics and Governance*, 6(1), 78–91. <https://www.cogitatiopress.com/politicsandgovernance/article/view/1200>.

- Lijphart, A. (1984). *Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries*. New Haven: Yale University Press.
- Lijphart, A. (1999). *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven: Yale University Press.
- Marshall, T. H. (1964). *Class, Citizenship, and Social Development: Essays*. Garden City, NY: Doubleday.
- Mayne, Q., & B. Geißel. (2018). Don't Good Democracies Need "Good" Citizens? Citizen Dispositions and the Study of Democratic Quality. *Politics and Governance*, 6(1), 33–47. <https://www.cogitatiopress.com/politicsandgovernance/article/view/1216>.
- McFaul, M. (2002). The Fourth Wave of Democracy and Dictatorship: Non-cooperative Transitions in the Post-communist World. *World Politics*, 54(2), 212–244.
- Merkel, W. (2010). Das Ende der Euphorie. Kehren die Diktaturen zurück? Theoretische und empirische Befunde. *WZB-Mitteilungen*, 127, 36–39. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.187.1917&rep=rep1&type=pdf#page=36>.
- Merz, M., & P. Sormani (rédacteurs). (2016). *The Local Configuration of New Research Fields: On Regional and National Diversity*. Cham: Springer.
- MIPEX/Migrant Integration Policy Index. (2013). *Migrant Integration Policy Index*. Brussels: British Council and Migration Policy Group. <http://www.mipex.eu/>.
- Mitterlehner, B. (2014): Cyber-Democracy and Cybercrime: Two Sides of the Same Coin. In E. G. Carayannis, D. F. J. Campbell, & M. P. Efthymiopoulos (Eds.), *Cyber-Development, Cyber-Democracy and Cyber-Defense: Challenges, Opportunities and Implications for Theory, Policy and Practice* (pp. 207–230). New York, NY: Springer.
- Møller, J., & Skaaning, S.-E. (2010). Beyond the Radial Delusion: Conceptualizing and Measuring Democracy and Non-democracy. *International Political Science Review*, 31(3), 261–283.
- Morlino, L., & Quaranta, M. (2016). What Is the Impact of the Economic Crisis on Democracy? Evidence from Europa. *International Political Science Review*, 37(5), 618–633. <http://journals.sagepub.com/doi/full/10.1177/0192512116639747>.
- Müller, W. C., & Strøm, K. (2000a). Conclusion: Coalition Governance in Western Europe. In W. C. Müller & K. Strøm (Eds.), *Coalition Governments in Western Europe* (pp. 559–592). Oxford: Oxford University Press.

- Müller, W. C., & Strøm, K. (Eds.). (2000b). *Coalition Governments in Western Europe*. Oxford: Oxford University Press.
- Munck, G. L. (2009). *Measuring Democracy: A Bridge Between Scholarship and Politics*. Baltimore: The Johns Hopkins University Press.
- Munck, G. L. (2014). *What Is Democracy? A Reconceptualization of the Quality of Democracy*. Political Concepts: Committee on Concepts and Methods. Working Paper Series (Working Paper 60, May 2014). [http://www.concepts-methods.org/Files/WorkingPaper/60%20Munck%20\(2014\).pdf](http://www.concepts-methods.org/Files/WorkingPaper/60%20Munck%20(2014).pdf).
- Munck, G. L. (2016). What Is Democracy? A Reconceptualization of the Quality of Democracy. *Democratization*, 23(1), 1–26. <https://www.tandfonline.com/doi/full/10.1080/13510347.2014.918104?scroll=top&needAccess=true>.
- Munck, G. L., & Verkuilen, J. (2002). Conceptualizing and Measuring Democracy: Evaluating Alternative Indices. *Comparative Political Studies*, 35(1), 5–34.
- Nussbaum, M. (2000). *Women and Human Development: The Capabilities Approach*. New York, NY: Cambridge University Press.
- O'Donnell, G. (2004a). Why the Rule of Law Matters. *Journal of Democracy*, 15(4), 32–46.
- O'Donnell, G. (2004b). Human Development, Human Rights, and Democracy. In G. O'Donnell, J. V. Cullell, & O. M. Iazzetta (Eds.), *The Quality of Democracy: Theory and Applications* (pp. 9–92). Notre Dame, IN: University of Notre Dame Press.
- O'Donnell, G. (2005). Why the Rule of Law Matters. In L. Diamond & L. Morlino (Eds.), *Assessing the Quality of Democracy* (pp. 3–17). Baltimore: The John Hopkins University Press.
- Paslack, R. (1991). *Urgeschichte der Selbstorganisation. Zur Archäologie eines wissenschaftlichen Paradigmas*. Wiesbaden: Vieweg.
- Pelinka, A. (2008). Democratisation and De-democratisation in Austria. In E. Fröschl, U. Kozeluh, & C. Schaller (Eds.), *Democratisation and De-democratisation in Europe? Austria, Britain, Italy, and the Czech Republic—A Comparison* (pp. 21–36). Innsbruck: Studienverlag (Transaction Publishers).
- Pickel, S., & Pickel, G. (2006). *Politische Kultur- und Demokratieforschung. Grundbegriffe, Theorie, Methoden. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Poier, K. (2001). *Minderheitenfreundliches Mehrheitswahlrecht. Rechts- und politikwissenschaftliche Überlegungen zu Fragen des Wahlrechts und der Wahlsystematik*. Vienna: Böhlau.

- Prainsack, B., Schicktanz, S., & Werner-Felmayer, G. (2014). *Genetics as Social Practice: Transdisciplinary Views on Science and Culture*. Farnham: Ashgate.
- Przeworski, A., Alvarez, M. E., Cheibub, J. A., & Limongi, F. (2003). *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990*. Cambridge: Cambridge University Press.
- Rhodes, R. A. W. (1996). The New Governance: Governing Without Government. *Political Studies*, *XLIV*, 652–667. <http://law.hku.hk/gl/rhodes.pdf>.
- Rosenberger, S. (Ed.). (2010). *Asylpolitik in Österreich. Unterbringung im Fokus*. Vienna: Facultas.
- Rothstein, B., & Teorell, J. (2008). What Is Quality of Government? A Theory of Impartial Government Institutions. *Governance*, *21*(2), 165–190.
- Rothstein, B., & Uslaner, E. M. (2005). All for All: Equality, Corruption, and Social Trust. *World Politics*, *58*(1), 41–72.
- Saward, M. (Ed.). (2000). *Democratic Innovation: Deliberation, Representation and Association*. London: Routledge.
- Schedler, A. (2006). *Electoral Authoritarianism: The Dynamics of Unfree Competition*. Boulder, CO: L. Rienner Publishers.
- Schlattl, G. (2013). The Quality of Democracy-Concept vs. The Quintuple Helix: On the Virtues of Minimalist vs. Maximalist Approaches in Assessing the Quality of Democracy and the Quality of Society. *International Journal of Social Ecology and Sustainable Development*, *4*(1), 66–85. <http://www.igi-global.com/article/quality-democracy-concept-quintuple-helix/77347>.
- Schlesinger, A. M., Jr. (1986). *The Cycles of American History*. Boston: Houghton Mifflin.
- Schmidt, M. G. (1983). Politische Zusammensetzung der Regierungen. In M. G. Schmidt (Ed.), *Westliche Industriegesellschaften: Wirtschaft – Gesellschaft – Politik* (pp. 371–375). Munich: Piper Verlag.
- Schmidt, M. G. (2010). *Demokratiethorien. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Sodaro, M. J. (2004). *Comparative Politics: A Global Introduction*. With contributions by D. W. Collinwood, B. J. Dickson, J. L. Klesner, & T. D. Sisk (2nd ed.). New York: Mc Graw Hill.
- Strøm, K., Müller, W. C., & Bergman, T. (Eds.). (2004). *Delegation and Accountability in Parliamentary Democracies*. Oxford: Oxford University Press.
- UNDP/United Nations Development Program. (2011). Human Development Report 2011. *Sustainability and Equity: A Better Future for All*. New York,

- NY: United Nations (United Nations Development Program). http://hdr.undp.org/en/media/HDR_2011_EN_Complete.pdf.
- Vadrot, A. B. M. (2011). Reflections on Mode 3, the Co-evolution of Knowledge and Innovation Systems and How It Relates to Sustainable Development. Conceptual Framework for “Epistemic Governance”. *International Journal of Social Ecology and Sustainable Development*, 2(1), 44–52. <http://www.igi-global.com/bookstore/article.aspx?titleid=51636>.
- Veld, R. J. in’t. (2010a). *Knowledge Democracy: Consequences for Science, Politics, and Media*. Heidelberg: Springer. <https://link.springer.com/book/10.1007/978-3-642-11381-9>.
- Veld, R. J. in’t. (2010b). Towards Knowledge Democracy. In R. J. in’t Veld (Ed.), *Knowledge Democracy: Consequences for Science, Politics, and Media* (pp. 1–11). Heidelberg: Springer. https://link.springer.com/chapter/10.1007/978-3-642-11381-9_1.
- Wagner, C. S., Roessner, D., Bobba, K., Klein, J. T., Boyack, K. W., Keytond, J., et al. (2011). Approaches to Understanding and Measuring Interdisciplinary Scientific Research (IDR): A Review of the Literature. *Journal of Informetrics*, 165, 14–26.
- Walter, F., Rosenberger, S., & Ptaszyńska, A. (2013). Challenging the Boundaries of Democratic Inclusion? Young People’s Attitudes About the Distribution of Voting Rights. *Citizenship Studies*, 17(3), 464–478. <http://www.tandfonline.com/doi/abs/10.1080/13621025.2012.707008> and http://inex.univie.ac.at/news-einzelansicht/article/article-online-challenging-the-boundaries/?tx_ttnews%5BbackPid%5D=61650&cHash=e08c9f5c67a73acbb8d4aa45f0aa8fed.



2

The Empirical Macro-Model: How to Measure Democracy and the Quality of Democracy in Global Comparison

This Chapter focuses on the method of our empirical model of measurement of democracy and quality of democracy in global comparison and consists of four sections. The first section (Sect. 2.1) refers to the country sample in the model (a total country sample of 160 countries). The second section (Sect. 2.2) provides further methodic details for the applied framework of analysis. Section three (Sect. 2.3) indicates possible empirical definitions for democracy, semi-democracy and non-democracy. The final section four (Sect. 2.4) discusses the identified countries and country groups.

2.1 Country Sample and Total Sample of 160 Countries

The empirical model of measurement covers, in principle, all countries with a population of one million or more (per year) during the period 2002–2016. As empirical basis for the determination of population figures, the World Development Indicators (WDI) were being used

(World Bank 2018). During the period 2002–2016, the total world population increased and progressed from 6.3 to 7.4 billion (see Fig. 2.1).

There were several reasons for implementing this population threshold of one million into the model. Two key problems for small countries or very small countries (with a population of less than one million) may be:

1. *Data availability*: Not always there is systematic data availability for very small countries to the same extent as is this is the case for medium-sized or larger-sized countries.
2. *Representativity*: How “representative” are very small countries, when compared with medium-sized and larger-sized countries? What can be learned from such very small countries? Very small countries sometimes refer to a highly specific history and path of development, focusing perhaps on a niche in the international system, which (for example) may be to offer tax haven opportunities to rich investors. Their domestic performance (at least in some cases) thus may reflect insufficiently their actual domestic development, but is more a “mirror” for a clever strategy of very small countries of exploiting and leveraging on their positioning in the international context.

The one underlying idea here is to look on “*country-based*” *democracies, semi-democracies and non-democracies*. By this, countries define the unit of analysis (and this analysis does not further descend to local subcountry regions). Territories, not representing (independent) countries, were only included in a few cases. These territories are: Hong Kong, Puerto Rico, and the West Bank and Gaza. *The final macrolist of covered countries (and territories) for the model, being presented and used here, is defined as a country sample of 160 countries* (see Table A.1 in Appendix A.1 for an exact documentation of these countries and territories). This list resulted from combining the population indicator (“population, total”) of the WDI of the World Bank (2010, 2011, 2018) with the way how Freedom House categorizes countries and territories for its freedom surveys (Freedom House 2013d). *In terms of global population, these 160 countries represent more than 99% of*

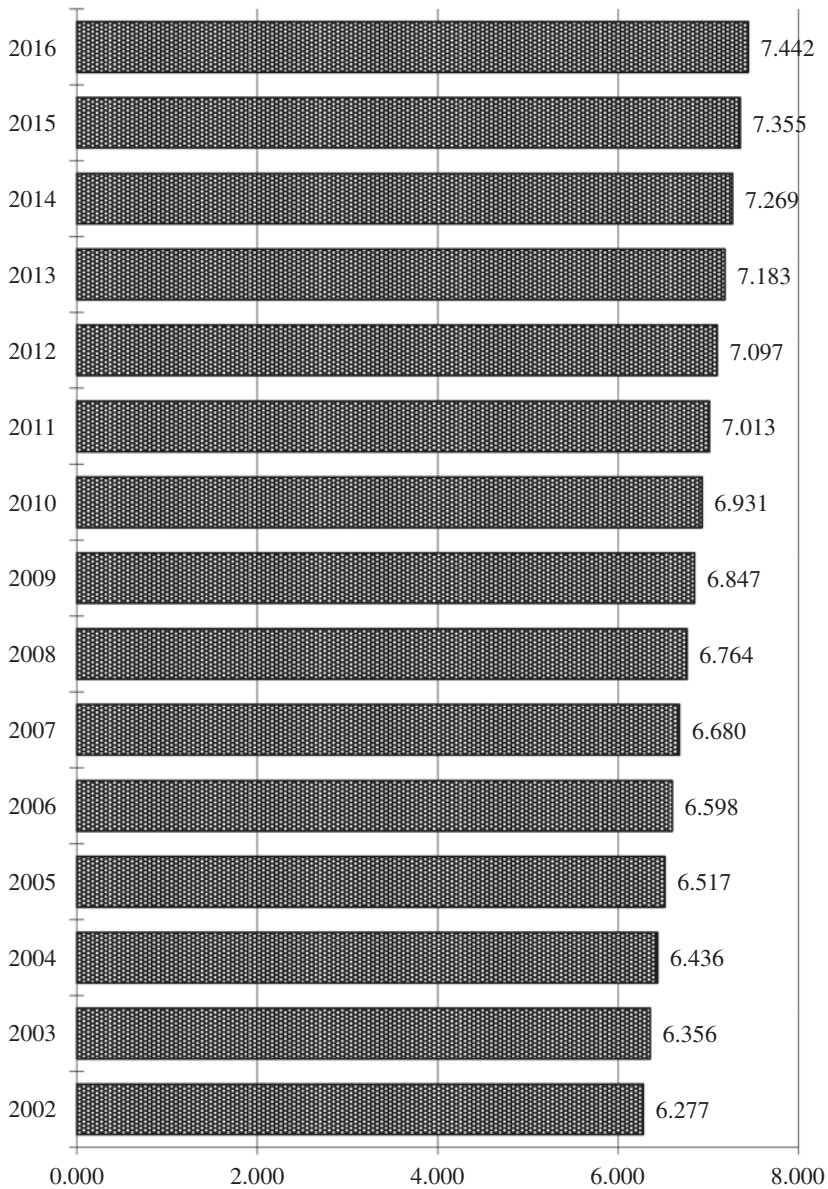


Fig. 2.1 World population in billions (2002–2016) (Source World Development Indicators WDI (World Bank 2018))

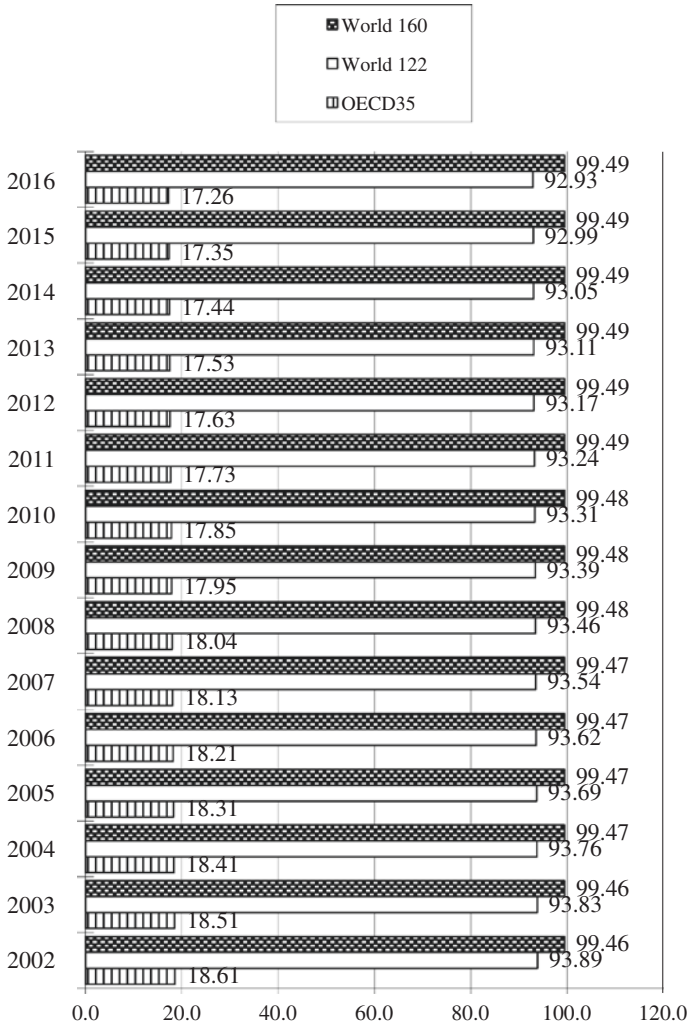


Fig. 2.2 Different country groups as a % of world population (2002–2016). World 122 = all countries with no complete data missing in the model

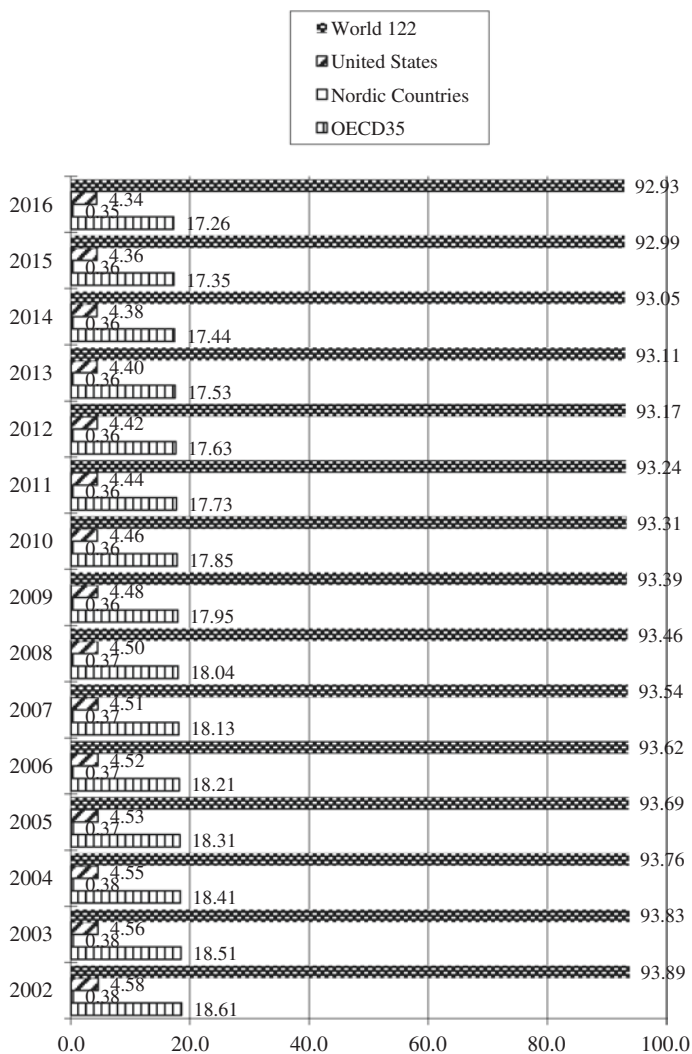


Fig. 2.3 Different country groups as a % of world population (2002–2016).
World 122 = all countries with no complete data missings in the model

the world population (see Figs. 2.2 and 2.3).¹ Therefore, trends of those 160 countries (and territories) qualify as global trends at a world-wide level.²

2.2 Method and Methodology of the Applied Framework of Analysis

The methodic approach for measurement of quality of democracy involved for our framework of analysis the following key steps: (1) *conceptually defining dimensions*, (2) *conceptually defining subdimensions (which also could be interpreted as dimensions)*³ and (3) *then assigning empirical indicators to the dimensions and subdimensions*. In other words, subdimensions and dimensions can also be understood as aggregations based on indicators. Figure 2.4 displays (with the used weight measures) what the exact relationship of dimensions, subdimensions and indicators is in our model, and how here these structural elements are constructed and defined interactively.

Altogether, our model addresses fifteen indicators that cover a broad spectrum of diversity. In appendix section of Appendix A.2, all twelve basic indicators for all 160 countries, which are covered by our framework and for every year of the fifteen-year period 2002–2016, are documented that functioned as an input for our model (macromodel) of measurement of democracy and quality of democracy in global comparison. The indicator documentation addresses the transformed indicators that were rescaled to a value spectrum of 0–100 (see Tables A.2.1–A.2.11 in Appendix A.2). Only the transformed (rescaled) indicators entered into the empirical model.

¹For a more detailed definition of “World 122” in Figs. 2.2 and 2.3 see Sects. 2.2 and 2.4 afterward.

²Taiwan is a country. Taiwan also is being covered by Freedom House (for example, see Freedom House 2013d). In the World Development Indicators data set (World Bank 2010, 2018), however, Taiwan is missing. Thus it was decided to drop Taiwan off the list of covered countries.

³Consequently, dimensions then can be regarded also as meta-dimensions or macro-dimensions (see point one above).

| Dimension | Subdimensions (Dimensions) | Indicators assigned (sources referred to) |
|------------------------------------|--|---|
| Freedom | <i>Political Freedom</i> | (1) Political Rights (Freedom House) (weight: 33.33%). (2) Civil Liberties (Freedom House) (weight: 33.33%). (3) Freedom of Press (Freedom House) (weight: 33.33%). |
| | <i>Economic Freedom</i> | (1) Index of Economic Freedom (Heritage Foundation) (weight: 50%). (2) Economic Freedom in the World (Fraser Institute) (weight: 50%). |
| Equality | <i>Gender Equality</i> | (1) Global Gender Gap Index (World Economic Forum). |
| | <i>Income Equality</i> | (1) Gini Index (or Gini Coefficient) (WDI) (World Bank). |
| Control | | |
| Sustainable Development | <i>Human Development (Index, HDI) re-engineered (re-designed)</i> | (1) Life expectancy at birth, total (years) (WDI) (World Bank) (weight: 33.33%). (2) School enrollment, tertiary (% gross) (WDI) (World Bank) (weight: 33.33%). (3) GDP per capita, PPP (constant 2011 international \$) (WDI) (World Bank) (weight: 33.33%). |
| | <i>(Sustainable) Development Non-Political</i> | (1) Life expectancy at birth, total (years) (WDI) (World Bank) (weight: 10%). (2) School enrollment, tertiary (% gross) (WDI) (World Bank) (weight: 10%). (3) Gini Index (or Gini Coefficient) (WDI) (World Bank) (weight: 10%). (4) Global Gender Gap Index (World Economic Forum) (weight: 10%). (5) CO2 emissions (metric tons per capita) (WDI) (World Bank) (weight: 10%). (6) GDP per capita, PPP (constant 2011 international \$) (WDI) (World Bank) (weight: 50%). |

Fig. 2.4 Dimensions, subdimensions and assigned indicators of the conceptual research design and methodic framework of analysis: the different weight measures (Source Author's own design. Notes a "Gini Index" and "Gini Coefficient" are two different names for the same measure; WDI = World Development Indicators (released by World Bank). **b** WDI = World Development Indicators (issued by World Bank); Depending on the analytical design, the government-opposition-cycles (political swings) may also be aligned to the dimension of control)

| Dimension | Subdimensions (Dimensions) | Indicators assigned (sources referred to) |
|---|--|---|
| Sustainable Development | Sustainable Development Comprehensive | <p>(Sustainable) Development Non-Political</p> <p>(1) Life expectancy at birth, total (years) (WDI) (World Bank) (weight: 10%).</p> <p>(2) School enrollment, tertiary (% gross) (WDI) (World Bank) (weight: 10%).</p> <p>(3) Gini Index (or Gini Coefficient) (WDI) (World Bank) (weight: 10%).</p> <p>(4) Global Gender Gap Index (World Economic Forum) (weight: 10%).</p> <p>(5) CO2 emissions (metric tons per capita) (WDI) (World Bank) (weight: 10%).</p> <p>(6) GDP per capita, PPP (constant 2011 international \$) (WDI) (World Bank) (weight: 50%).</p> <p>Weight: 50%.</p> <p>Political Freedom</p> <p>(1) Political Rights (Freedom House) (weight: 33.33%).</p> <p>(2) Civil Liberties (Freedom House) (weight: 33.33%).</p> <p>(3) Freedom of Press (Freedom House) (weight: 33.33%).</p> <p>Weight: 50%.</p> |
| Self-Organization (Political Self-Organization) | Government- Opposition- Cycles, Political Swings | <p>(1) Peaceful person change of head of government (own analysis).</p> <p>(2) Peaceful party change of head of government (own analysis).</p> |

Fig. 2.4 (continued)

The original data (indicators) were taken from different sources that are in principle also always publicly accessible (see source documentation to the bottom of the following tables). *By this, it should be emphasized that the conceptual framework of analysis of the here applied macromodel of measurement of democracy and quality of democracy refers to a knowledge that already exists and that has been published; therefore, at least in principle, this represents a type of knowledge about the world that is being known by the world.* We also took the decision of never changing, modifying

or adapting any of the indicators (data) of these original sources: *so the indicators (data) are always identical with how they were released and published by exactly these sources that we reference*. By this, we wanted to prevent the possible bias of manipulating data in favor of possible implicit preferences of our model (should they have existed). Using such “official” sources leverages also another important analytical advantage, which is crucial for the analysis of quality of democracy: *possible critical outcomes or conclusions weigh much heavier, when the data and indicators are from official sources, because then the credibility of these sources cannot be questioned that easily, at least not from official institutions or government institutions in general*. Should official institutions challenge official sources, then this would feed critical questions about government procedures.

In Tables A.2.1–A.2.11 not only always the exact sources are indicated, from where the original data were retrieved, but also (in most cases) also a website is identified for a public and a free data download: this allows to reconstruct the original data that served as input for the transformed (rescaled) indicators in Tables A.2.1–A.2.11. This supports the statistical reliability of our applied macromodel of analysis. The major year (month) for data retrieval from these sources was November 2017. As data estimations for years, with no available data information, were taken the averages of the year before (when data available) and of the year after (when data available): the procedure was to search for years with available information as long as data could be identified (otherwise no indicator information was entered into the tabulation, and the whole line for the country was set blank). These original data that were retrieved (and compensated as described for the years with missing data information), and were then transformed in a next-step procedure and routine.

All indicators for our model of measurement were transformed (rescaled) to a value spectrum ranging from 0–100, with the following interpretation: “0” represents the lowest possible value (score), and “100” the empirically highest (best) value (score) that was observed for all 160 countries during the years 2002–2016. The higher the value (score), the better the contribution of this indicator is being regarded for democracy and the quality of democracy. From that construction, there always must be at least one score of 100 in our data documentation per indicator. Not so for “0”: “0” represents more a marginal value or boundary value that is

theoretically possible, but may not be empirically manifest. The purpose of transformation (rescaling) was to make all indicators methodically more comparable to each other, by this also to support the building of dimensions (subdimensions) based on the identified indicators.

Several considerations played into this transformation of the indicators. *The indicators were rescaled to scales of 0–100, for the following purposes and reasons:* (1) to make indicators more comparable, but also directly comparable; (2) to allow data aggregations to “dimensions” (subdimensions) on the basis of averages (means) of several (more than one) indicators; and (3) to apply a consistent interpretation of the indicators, i.e., to standardize, which score direction implies a more positive contribution to democracy and quality of democracy (we rescaled the indicators in a way so that “higher” scores display by tendency a “better” expression of democracy).

At this point it also appears appropriate and necessary, to reflect about the level of measurement or the “type of scale” (“scala”) that the data (indicator-based input data) represent. There are metric and non-metric scales. The scale with the highest data quality is the ratio scale, which is metric, and also has a “natural zero point.” Examples for non-metric scales are the ordinal scale and the nominal scale (the nominal scale places below the ordinal scale) (Backhaus et al. 1987, pp. XI–XII). The higher the scale-specific data quality is, the more statistical procedures can be applied to the data. *For the purpose of our analysis, we propose (in terms of an “as if” working hypothesis) that the data of the transformed (rescaled) indicators (Tables A.2.1–A.2.11) are metric, and could even qualify as a ratio scale.* We designed the transformed indicators in a way that they “have” a natural zero, meaning that the score “0” (would it show up) would have to be interpreted as a natural zero point. Some of our original input indicators quite obviously can be understood as ratio scale-based, for example, those indicators that were retrieved from the WDI Indicators database (World Bank 2018). In other cases, such as the “political rights” (Table A.2.1) and “civil liberties” (Table A.2.1) of Freedom House (2013a, b), this could be questioned. These indicators are based on expert assessment, therefore, representing perhaps more an ordinal scale-type of data. But even there a methodic scenario would be thinkable that such scales, based on expert assessment, fall in line with metric scales. For example: would experts not name a score, but would mark an “x” on a “line” in a literal sense, where only the extreme values (minimum

and maximum) are named (e.g., 0 and 100), then scoring results⁴ could be introduced as results in terms of a metric scale.⁵ *Therefore, in context of our framework of analysis, we want to include the “as if” premise that all expert-based rating and scoring assessment has been produced in such a way (as described here), so that expert ratings are interpretable as metric results. This “as if” assumption appears also to be justified, because we tagged our analysis to be an “explorative analysis,” meaning to prepare the grounds for later follow-up studies that would be possible.* This focus on explorations and explorative aspects in analysis of conceptualization and measurement of quality of democracy in global comparison we already made explicit in the introduction to our inquiry at the beginning (Sect. 1.1). *Furthermore, this explorative character of our analysis wants to allow and intends to encourage an interpretation of empirical results and outcomes from a diversity of perspectives, perhaps even arriving at conflicting and “competing” conclusions and propositions.*

In most cases, the original indicators expressed a data orientation, where a higher scoring already implied in principle a positive, furthering and advantageous contribution to democracy and quality of democracy. There, the rescaling followed this initial data trend. However, in three cases, higher indicator scores actually had to be interpreted “negatively,” because there a lower scoring was to the actual benefit of democracy and quality of democracy. These three indicators are: (1) freedom of press⁶ (Table A.2.1); (2) Gini index or Gini coefficient⁷ (Table A.2.3); and (3) CO₂ emissions in metric tons per capita⁸ (Table A.2.11). Therefore, in these three cases, the rescaling had to reverse the original data

⁴Digital scanners could then re-compute such marks on lines into actual scores.

⁵Should Freedom House (or other initiatives) not already apply such procedures, then this would represent a methodic outlook and scenario for a further improvement of producing and generating data scores.

⁶Freedom House (2013c) calculates freedom of press in a way, where higher scores actually mean less press freedom. For reasons of consistency across all transformed indicators, we therefore had to “turn” the freedom of press indicator.

⁷In context of the Gini coefficient, “0” implies maximum equality of income, and “1” (or 100) stands for a maximum inequality of income.

⁸Higher CO₂ emissions are bad for the environment and (from the perspective of sustainable development) impose negative consequences on society, quality of life and by this also on quality of democracy. Again, to make this indicator consistent with the other transformed indicators, we also “turned” this indicator, so that higher scores actually mean less CO₂ emissions.

orientation (algebraic sign), by setting the lowest observed empirical value (score) to “100” and by interpreting the highest possible value (score) as “0.” By this, the conceptual consistency with theories of democracy and within the whole group of all indicators was achieved.

Calendar year and index year are not necessarily identical. For example, in the case of Freedom House, concerning political rights and civil liberties, the calendar year of 2008 is actually the index year (edition year) of 2009 (see Freedom House 2013d). In the tables, should there be a temporal lagging in time between calendar year and index year, this is therefore always documented.

Concerning the tertiary (gross) school enrollment (see Table A.2.9), one empirical problem surfaced. The reason for this was that in context of this indicator the highest score (“100”) was achieved by Cuba in 2008. To us, this empirical value appeared implausible. Also, because concerning other knowledge indicators, for example, the internet users per 100 people, the scoring of Cuba already is considerably lower and weaker. Our rule, however, reads as not to change individual country scoring within an indicator context, since this could be interpreted as a form of data manipulation. *We always left the indicators by those original sources unmodified.* So we did not adapt the scoring of Cuba on tertiary school enrollment.

Dimensions and subdimensions are constructed and based on the underlying indicators. Therefore, dimensions and subdimensions represent aggregations of the interrelating indicators.

Two dimensions (subdimensions), however, are based only on one indicator (for each of the following subdimension):

1. Gender equality = Global Gender Gap Index (Table A.2.4).
2. Income equality = Gini Index or Gini Coefficient (Table A.2.3).

The other dimensions (subdimensions) are based on more than one indicator (at least two indicators). Here, the respective weight of indicators for the procedure of dimensional (subdimensional) aggregation is the following (see Fig. 2.4)⁹:

⁹Compare also directly with the documentation in Appendix A.2 and A.3.

1. *Political freedom*: averages (means) of (1) Political Rights (Freedom House), (2) Civil Liberties (Freedom House) and (3) Freedom of Press (Freedom House) (equal indicator weight) (Table A.2.1 in Appendix A.2).
2. *Economic freedom*: averages (means) of (1) Index of Economic Freedom (Heritage Foundation) and (2) Economic Freedom in the World (Fraser Institute) (equal indicator weight) (Table A.2.2 in Appendix A.2).
3. *Human Development Index (HDI) reengineered (redesigned)*: averages (means) of (1) life expectancy at birth, total years (World Bank), (2) school enrollment tertiary, % gross (World Bank) and (3) GDP per capita PPP (constant 2011 international \$) (World Bank) (equal weight for indicators) (Table A.2.5 in Appendix A.2).
4. *Sustainable development non-political*: averages (means) with the following weights for (1) Life expectancy at birth, total years (weight 10%) (World Bank), (2) school enrollment tertiary, % gross (weight 10%) (World Bank) (World Bank), (3) Gini Index or Gini Coefficient (weight 10%) (World Bank), (4) Global Gender Gap Index (weight 10%) (World Economic Forum), (5) CO₂ emissions (metric tons per capita) (weight 10%) (World Bank), and (6) GDP per capita PPP (constant 2011 international \$) (weight 50%) (World Bank) (Table A.2.6 in Appendix A.2).
5. *Sustainable development comprehensive*: This subdimension (dimension) was calculated (see Table A.2.7 in Appendix A.2) by aggregating together with equal weight the following two subdimensions (dimensions):
 - 5.1. sustainable development non-political (for the indicator-specific definition see above);
 - 5.2. political freedom for the (indicator-specific definition see above).

The Human Development Index (HDI) is calculated and released annually by the United Nations Development Program in the so-called Human Development Reports (see <http://hdr.undp.org/en>, <http://hdr.undp.org/en/global-reports>). The Human Development Report 2016 (UNDP 2016) addresses the issue of “Human Development for Everyone.” Basically, the HDI is generated by pooling together life expectancy, education and wealth. The “Human Development Report 2013” (UNDP 2013, p. 144) addressed

specifically the following indicators: life expectancy at birth; mean years of schooling; expected years of schooling; and gross national income (GNI) per capita. For our analysis, we wanted to apply a measure of HDI or similar to the HDI. However, since we were not able to reconstruct the HDI at the indicator level, we had to “reconstruct,” “re-engineer” or “re-design” the HDI by referring to similar indicators.¹⁰ *Therefore, our “HDI-r” or “HDI re-des” is not identical with the HDI of the United Nations Development Program (UNDP), but, so hopefully, a good approximation or proxy.*

The more detailed analysis of democracy and quality of democracy in global comparison focuses on fifteen identified countries and country groups. These are the following: Brazil; China; India; Indonesia; Japan; Nigeria; Russian Federation (Russia); USA; European Union (EU15); European Union (EU28); Nordic countries; OECD (OECD33); Latin America (Latin America 17); Asia (Asia15); and the World (World 122, World 160)¹¹ (see Sect. 2.4 for a more specific discussion). *In Table A.3.1 in Appendix A.3 the indicators and scores of dimensions and for subdimensions are being documented specifically in an overview summary of these identified fifteen countries and country groups.*

2.3 Possible Empirical Definition of Democracies, Semi-democracies and Non-democracies

Political freedom represents a crucial dimension (subdimension) for democracy and quality of democracy. Within the conceptual framework of our analysis (see Fig. 1.10 in Sect. 1.3), we calculated political freedom by drawing an average (mean) on the basis of three indices

¹⁰Our ambition was to calculate directly an HDI measure and to link this to our conceptual design of dimensional model building. However, the data availability prevented us from doing so. The “World Development Indicators” data base of the World Bank (2013, 2018) did not sufficiently support such an endeavor.

¹¹See again Fig. 2.2 in Sect. 2.1.

that are being regularly released by Freedom House (2013a, c): “political rights,” “civil liberties” and “freedom of press.” In Table A.2.1 in Appendix A.2, the scores for political freedom are documented for our whole country sample. In Table 6.4, the countries are furthermore ranked in accordance to their political-freedom scores (see Chapter 6).

In our analysis, we sometimes distinguish conceptually between “democracies,” “semi-democracies” and “non-democracies.” Actually, we do not specifically identify, which country would fall into which of these three groups or categories (with the exception of “democracies”). When speaking explicitly of individual countries, we preferably associate countries with higher or lower degrees of political freedom. *The distinction between “democracies,” “semi-democracies” and “non-democracies”* should be here more understood as a general statement that there are differences among countries with regard to levels of *political freedom, and that these differences matter, whether a country can qualify as a democracy or as a democracy with higher quality.*

There are various options for a possible empirical definition or identification of democracies, semi-democracies and non-democracies. Point-of-departure may be a scale of political freedom, identical or similar to our construction of the dimension of political freedom. This scale could then be put in contrast to other measurement initiatives that also group countries (democracies) together into specific clusters (groups) on the basis of democracy-relevant criteria. For example, Freedom House typologizes countries also as “free,” “partly free” and “not free” (Freedom House 2013b), and the Democracy Index puts forward the following differentiation of democracy (or non-democracy): “full democracies,” “flawed democracies,” “hybrid regimes,” and “authoritarian regimes” (Economist Intelligence Unit 2011, p. 1). We then could discuss further, whether (for instance in the flow of rationalization of Freedom House) the “free” countries would qualify as “democracies,” the “partly free” as “semi-democracies” and the “not free” countries as “non-democracies.” Within the context of our analysis here, however, we did not attempt to follow further this research procedure, but apparently it would have been possible.

2.4 Identification of Countries and Country Groups for the Comparative Analysis of Freedom, Equality, Sustainable Development, and Self-Organization (Political Self-Organization)

The here presented empirical macromodel of analysis refers to 160 countries (and territories). In conceptual terms, these sample countries are assigned to the following basic dimensions of democracy and quality of democracy: *freedom, equality, sustainable development, and to a much lesser degree also to (political) self-organization. The outcome of this procedure may also be interpreted as the attempt of trying to engage in a comparative multidimensional index-building.* Our assessment of freedom, of equality and of sustainable development is country based, and consequently we cover the broad spectrum of democracies, semi-democracies and non-democracies. We do not look at the subcountry level.¹² The structure and characteristics of the *indicators and data (indicator data)*,¹³ which we use, does not allow this, because our data and indicators are all aggregated to the level of whole countries.

Our core conceptual approach of the empirical analysis of freedom, equality and sustainable development focuses on comparing freedom, equality and sustainable development in different countries and country groups (for the period 2002–2016). In methodic terms, we base our analysis on:

1. graphical visualizations in figures;
2. descriptive statistics (calculation of averages as means);

These descriptive statistics and graphical visualizations provide the empirical data and information (the “empirical base”) that we input into the analytical assessment and analytical development of propositions (hypotheses)

¹²Some of the “territories” (covered in our data tables) could be regarded to be sub-country level.

¹³In methodic technical language, an indicator disaggregates into its specific data (series of datum elements).

in relation to our research question(s). This analytical assessment will be processed in a two-cycle approach. In the Chapters 3–6, we will engage in a broad reviewing of the indicators and data. In Chapter 7, we reiterate the previous sections in a second cycle of analytical assessment, by concentrating (summarizing) our analytical focus. At the same time (in context of the here presented analysis) it was explicitly decided not to apply advanced statistics (for example, multivariate analyses). The rationale for this refers to how the emphasis was assigned and invested here: our empirical efforts concentrated on a *comparative multidimensional index-building of (and for) freedom, equality and sustainable development and on putting together an empirical database for 160 countries (for the fifteen-year period 2002–2016)* that is (partially) more explorative and tentative in character. However, this database already allows (at least in our opinion) analytical assessment and proposition development. In fact, we designed this database to promote and to open up a route for well-reasoned analysis that is already clearly more than well-meant speculations. *But we decided (for our analytical journey and endeavor in the context of here) to stay within the descriptive realm of our empirical data. Not to engage in advanced statistics was the one trade-off for focusing efforts on setting up exactly this empirical database as a result of the index-building process.* Applying advanced statistics may even would go so far as to define “*a completely new project*” in procedural terms, which could be done, of course, *but is explicitly (as we define this) not part of our work here*. In that sense, our work (and empirically based indices of freedom, equality and sustainable work) has the potential to induce and support other (alternative) interpretations and further analytical investigations that could rely on more advanced statistical methods and tools.

As a general methodic rule, all (available) indicators and data for all 160 countries, for the whole period 2002–2016, are documented in the appendices toward the end of our analysis. For every dimension and/or indicator, the countries are presented and listed according to their country name (in English).

Our methodic approach of empirical analysis focuses on graphical visualizations (in figures) and on descriptive statistics (calculation of means), and a combination of these. To visualize 160 countries certainly represents a major challenge, and it is less than trivial not to loose here

the overview or oversight. *To sustain the feasibility of these visualizations in practical terms, it was, therefore, decided to identify countries and country clusters on which then the comparative empirical analysis would concentrate. Altogether, we tagged eight population-larger individual countries and six (aggregate) country clusters. In addition, we also aggregated a “whole world.”* These countries and country clusters are presented below. Their number allows and supports a good application of graphical visualizations. In the following, we also discuss in greater detail the specific rationales, why we believe that these countries and country groups represent good references for analysis. These countries and country groups, of course, set up a “grid” that will structure our empirical analysis. Would the to-be-analyzed countries and country groups have been identified differently, the momentum of analysis, and some of the conclusions, may have moved into different directions. This could be portrayed as a *philosophical master view* on our research topic. The documented indicators and data in the appendices (Appendix A.1–A.3) are open and feasible for very different methodic and conceptual approaches. On the other hand, it is also fair to say that analytical assessment of other countries and country groups not necessarily would have to arrive at conclusions in contradiction to our approach. These forms or procedures of testing still would have to be carried out.

A major logic of looking more closely on the countries and country groups was to compare OECD (Organization for Economic Co-Operation and Development) with non-OECD countries. *The majority of the OECD countries represent countries that are more “advanced” economically and socially (societally) than the non-OECD countries*, but of course also here there are country exceptions.¹⁴ “Advanced,” here, means in reference to the data and indicators that we used for indexing freedom, equality and sustainable development. “Advanced,” of course, is also a relative term, depending on the underlying conceptual considerations. For example, from a philosophical perspective, it always could be questioned, what really should qualify as “advanced,” as “degrees of advancedness” and whether “advanced”

¹⁴We also must add that not all OECD countries qualify to be being typologized as advanced, for example Mexico. There are also other countries, such as Singapore, qualifying as advanced in at least some respect, which, however (and so far), are not members of the OECD community.

defines an appropriate category. *Advanced societies*, *advanced economies* and *advanced democracies* still are concepts, being used in some conventional understanding (e.g., Carayannis and Campbell 2011; Dubina et al. 2012), thus providing a rationale for comparing OECD with non-OECD countries. In addition, we also clustered all countries together to the “whole world.” The whole world would refer here in our model to 160 countries. However, not always data and indicators were available for all of the 160 countries. So the *World 160* would be the maximum aggregate. *World 122* are those countries for which always indicators with empirical data are available. World160 represents 99.46–99.49% of the world population, and World122 92.93 to 93.89% (see again Fig. 2.2 in Sect. 2.1).

The countries and country groups for our empirical analysis are, on the one hand, a few individually larger countries and, on the other, several country clusters. Below the world level, we refer to fourteen countries and country clusters. *Including the world level, the countries and country clusters for the empirical analysis of our comparative multidimensional index-building are (in alphabetical order for the countries):*

1. Brazil;
2. China;
3. India;
4. Indonesia;
5. Japan;
6. Nigeria;
7. Russian Federation (Russia);
8. USA;
9. European Union (EU), EU15: in the context of our analysis, the term “EU” (EU15) refers more to an aggregation of the different and individual member countries (national member countries) of the EU and not specifically to the supranational institutional framework of the whole EU (see also below for EU28);
10. European Union (EU), EU28: in the context of our analysis, the term “EU” (EU28) refers more to an aggregation of the different and individual member countries (national member countries) of the EU and not specifically to the supranational institutional framework of the EU (see also above for EU15). As a consequence

of the British BREXIT referendum in the UK in 2016, it is being projected that the UK will leave the EU in 2019 (Campbell et al. 2017). In that situation, the EU28 again will convert into an EU17 (without the UK) as of 2019 (or shortly later and afterward);

11. *Nordic Countries*, Denmark, Finland, Norway, and Sweden,¹⁵ representing also the *Social-Democratic (Universal) Welfare Regimes* in the typology (classification) of Gøsta Esping-Andersen (1990).^{16,17} In addition to those “Social-Democratic (Universal) Welfare Regimes,” Esping-Andersen (1990) also identifies “Liberal Welfare Regimes” (Canada, USA, UK, Australia, and New Zealand) and “Conservative Welfare Regimes” (Austria, Belgium, France, Germany, Italy, Netherlands, and Switzerland). But the Liberal Welfare Regimes and the Conservative Welfare Regimes, for now, are not being addressed specifically in the context of our analysis¹⁸;
12. *Liberal Welfare Regimes* (here Canada, USA, UK, Australia, and New Zealand),¹⁹ also following the typology of Gøsta Esping-Andersen (1990);
13. *Conservative Welfare Regimes* (here Austria, Belgium, France, Germany, Italy, Netherlands, and Switzerland),²⁰ again adopting the typology of Gøsta Esping-Andersen (1990);

¹⁵We restricted the Nordic countries to the four countries listed here, and did not include Iceland, also, because Iceland has a population of under one million. See on Wikipedia http://en.wikipedia.org/wiki/Nordic_countries#cite_note-0. In addition, in the classical conception of Esping-Andersen (1990), only those four countries (Denmark, Finland, Norway, and Sweden, see above) are being named.

¹⁶See the personal homepage of Gøsta Esping-Andersen under: <http://www.esping-andersen.com/>.

¹⁷For a short overview information about Gøsta Esping-Andersen, see on Wikipedia http://en.wikipedia.org/wiki/G%C3%B8sta_Esping-Andersen; http://de.wikipedia.org/wiki/G%C3%B8sta_Esping-Andersen.

¹⁸In an analysis, carried out earlier and restricted to the years 2002–2008, these two country clusters were also part of the analysis. Therefore, in a future research project, these two country clusters may again be integrated for purposes of an analytical reflection and interpretation. However, results of this earlier analysis are being presented and discussed for the OECD countries in Chapter 3.

¹⁹These countries represent to a far degree the English-speaking countries (or the core countries of the English-speaking world, locating worldwide on a global scale in three different continents).

²⁰The countries in this listing represent core regions of Continental Europe.

14. OECD (Organization for Economic Co-Operation and Development), here OECD35²¹;
15. Latin America (Latin America 17), here Central America and South America, covering seventeen countries, and excluding the Caribbean islands. These seventeen countries are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela (RB);
16. Asia (Asia 15), covering (non-OECD) East Asia, South Asia, South-East Asia, and Central Asia, including the large-sized countries China and India, excluding Russia and the former Soviet Union region, and excluding Afghanistan, Iran, Turkey, Israel, and the Arab countries. Asia, here, covers fifteen countries. These are: Bangladesh, China, India, Indonesia, Lao (PDR), Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Timor-Leste, and Vietnam²²;
17. *World 122*, refers here to those 122 countries with no missing indicators.

In Table A.1, in Appendix A.1, all 160 individual countries (and territories) are being explicitly listed and documented. The one and same country can of course belong to more than one country cluster. For example, Germany refers to EU15, EU28 and OECD35. Mexico and Chile, to take two other examples, align with Latin America as well as with the OECD (Latin America, therefore, falls already partially into the world of OECD countries).

In methodic terms, it should be emphasized that the averages (means) of all data (indicators, dimensions) for those country clusters (with more than one country) were weighted in relation to the population of the countries within a specific country cluster. Averages (means) for country clusters are not simple averages across the countries, but reflect the weights of

²¹As of April 2018, the OECD has 35 member countries. For an overview, see <http://www.oecd.org/about/membersandpartners/list-oecd-member-countries.htm>.

²²Because of data missing, Singapore was not included into *Asia15*.

different population sizes. Differences in population numbers are thus reflected and are being expressed in the average values (means) of the identified country clusters.

What was the logic or rationale for specifically suggesting these countries and country groups for a further and more in-depth and into-depth empirical analysis? Several considerations were coming here together and into play:

1. *World (World 122)*: To identify and suggest the “whole world” as one reference implies to countermove approaches of only looking at a smaller sample of countries, which might not be representative for the world on a global scale. The whole world as a maximum aggregation for analysis underscores and emphasizes that also the conditions and context conditions for the average person in this world should be reflected. Because by looking (for example) only on the OECD countries, the majority of world population is blended out of the analytical assessment. Only 17.26–18.61% of the world population lived in OECD countries during the period 2002–2016 (Fig. 2.2 in Sect. 2.1). When we even focus on a more prosperous region within the OECD, for example, the (four) Nordic countries, it should be kept in mind that much less than one percent of the world population, exactly 0.35–0.38% (see Fig. 2.3 again in Sect. 2.1), live in the Nordic country cluster, with a percentage ration even further dropping over time (because of the current dynamics of growth of world population). The whole world acts methodically also as a critical benchmark against focusing too narrowly on a minority of countries and a minority population share of the world: this should prevent to formulate assumptions about the whole world, when in fact we are only talking about the OECD and a few other specific non-OECD countries.
2. *Brazil, China, India, Indonesia, Japan, Nigeria, Russian Federation (Russia), USAs*: Each of these countries are in terms of population major countries, thus it appears legitimate to focus on these countries individually and more specifically. A global ranking of countries on the basis of population numbers places the following countries into the top ten ranking (the “Big 10”): China, India, USA, Indonesia, Brazil, Pakistan, Bangladesh, Nigeria, Russia, and

Japan (World Bank 2011, 2018). Of these top ten countries, all (except Pakistan and Bangladesh) are being covered by our analysis individually. Taking Pakistan and Bangladesh out of the top ten creates here something like a “Big 8.” It should be kept in mind that these Big 8 countries already address more than half of the world population, more exactly between 54 and 55% during the years 2002–2008 (World Bank 2011). China and India are by far the two population largest countries in the world, so it would be difficult justifying not listing these two countries specifically. In terms of geopolitical power (also in combination with military power), the USA still is being understood (in conventional thinking) as the most powerful superpower.²³ Outside of the OECD, China and Russia (or Russia and China) represent two geopolitical key powers. The USA, China, and to a certain extent also Russia (for example, with the supply of natural resources) express economic world power. Economic power also must be assigned to Brazil and India (but with a geopolitical power lesser than in the case of China and Russia). After China and India, Indonesia ranks third in population numbers for an Asian country. Nigeria is by far the population largest country of all of Africa as well as of Sub-Saharan Africa.²⁴ The USA and Japan are the two population largest countries within OECD. The larger European member countries to the OECD (in context of our analysis) are not looked at individually, but are being aggregated into the European Union (EU). To a varying political, economic and military degree, all of these “Big 8” have an (obvious) influence on the political and economic world system. This explains (at least partially), why to suggest that it is important to assess systematically freedom, equality and sustainable development in these countries. By this, however, we do not assert that it would be less important to focus analytically also on other (for example smaller) countries (this inversion of an argument

²³We do not engage here in further reflections or predictions, whether the United States can continue this dominant geo-political position as a superpower throughout (or even beyond) the twenty-first century (or what the likeliness of this is).

²⁴For a definition of Sub-Saharan Africa, see on Wikipedia http://en.wikipedia.org/wiki/Sub-Saharan_Africa.

we do not make). The impact (potential impact) of the “Big 8” on the global system represents one argument for us to project here an analytical focus of detailed inquiry.

3. *The USA and the European Union (EU15 and EU28)*: Sometimes, democracy in the USA and democracy in Europe (EU, the Nordic countries) are being presented and discussed as two currently existing role models for how democracy, society and the economy could or even should be organized and innovated.²⁵ The USA may serve here as a prototype for “liberal democracy” (citing and interpreting, in a free manner, Fukuyama 1989; see also Sodaro 2004, p. 48). The supranational integration and formation process of the European Union is also being portrayed as a learning process for overcoming national and nationalistic rivalry that could lead to serious conflict and even war (Campbell 1994). It is being said that the model of European Union integration also has a (potential) attraction to other world regions outside of Europe, who are interested in seeking options of supranational integration in connection with projected (and hoped for) benefits. In *Of Paradise and Power: America and Europe in the New World Order*, Robert Kagan (2003) portrays the USA and European Union as two role models, but also emphasizes the decisiveness of their interaction, implying the mutual dependency of both. Kagan, however, also underscores that Europe has benefitted from an “American security guarantee,” allowing European governments to reduce defense spending, and to use these investments for other purposes (for a further building of society and welfare regimes). In *The European Dream: How Europe’s Vision of the Future Is Quietly Eclipsing the American Dream*, Jeremy Rifkin (2004) asserts that Europe or the European Union already represents a role model that seriously challenges the American role model. According to Rifkin, the EU could become a global superpower and may be interpreted as a “postmodern governing body.”²⁶ Summarizing these

²⁵In metaphorical anecdotes we may ask, whether the current European Union would allow for some analogies in reference to ancient Greece, and the current United States in reference to ancient Rome?

²⁶See on Wikipedia http://en.wikipedia.org/wiki/The_European_Dream.

different assertions of a USA and (and/or) EU role model, it appears well-reasoned to compare empirically and analytically the USA and the aggregate of the EU member states across the dimensions of freedom, equality and sustainable development. *Who is more free, more equal or better developed: the USA or the EU?*²⁷ We even could say that out of several reasons it is fairer to compare the USA with the whole aggregate of the European Union and not just individually selected EU member countries. We should not completely rule out the (political and conceptual) interpretation that also the USA could be understood as an aggregation of fifty member states. California, with a population of almost 40 million (in 2017), already would fall into the category of a population-larger EU member country. The term and concept of *multilevel governance* is traditionally being closely associated with the European Union integration process (Hooghe and Marks 2001; Kübler 2015; Buonanno and Nugent 2013). However, for us it is equally important to emphasize that there are no intrinsic reasons for conceptually limiting multilevel governance to the European integration. *The framework of multilevel governance cannot only be applied to the European Union in a meaningful way, but also to the USA (and perhaps also to other world regions)*. Governance and governing of and in the USA may be interpreted and approached from a perspective of multilevel governance. Furthermore, we can ask, is it more appropriate to compare the USA with the EU15 or the EU27? There are pros and cons for either approach. The European Union (currently), is being defined (also in legal terms) as the EU28, and not EU15. But also within the European Union, there are different depths of integration. For example, not all EU countries have joined the euro area (area of one single currency)²⁸ or the Schengen²⁹ area so far. Within the EU; there are different speeds of integration. The EU15 represents more the classical Western Europe,

²⁷See later Hypothesis 19 in Sect. 7.2.

²⁸See http://ec.europa.eu/economy_finance/euro/index_en.htm, <http://www.ecb.int/home/html/index.en.html>.

²⁹See <http://www.axa-schengen.com/en/schengen-countries>.

with national governments with a long tradition of and in established democracy. EU28 combines both, Western Europe and the new democracies of Central-Eastern Europe that belonged to the hemisphere of direct Soviet influence before 1989.³⁰ Concerning indicators on sustainable development, perhaps also on freedom and equality, we may expect that the EU15 is performing better than the EU28. Therefore, in terms of comparative learning and analysis, we formulate the expectation and proposition that the EU15 is more competitive vis-à-vis the USA than the EU28. Or, to turn this argument: based on a benchmarking of a basket of indicators, it may be easier for the USA to outpace the EU28 than EU15.

4. *The USA, the European Union (EU15 and EU27), and the Nordic countries:* Three of the four Nordic countries, being identified here, are also member states of the European Union. Only Norway is not part of the EU.³¹ Thus, a majority of the Nordic countries falls into the aggregate category of the European Union, but this is not true for the whole Nordic country region.³² In addition, several of the EU members of the Nordic country region have not carried their EU integration as far as other countries. For example, only Finland adopted the euro currency. However, all of the Nordic countries (including Iceland) are part of the Schengen area.³³ *The main reason and rationale for us, to include the Nordic countries as a distinct unit of country group for our empirical analysis, in parallel to the EU15 and EU28, refers to the circumstance that the Nordic countries are being regarded as belonging to the most developed countries.* In terms of sustainable development, the Nordic countries qualify as a leading benchmark of and for the world. *The Nordic countries do*

³⁰Nowadays, we are so familiarized that the number of member states to the U.S. appears more of less stable and fixed. However, this was not always the case. In the nineteenth century, the U.S. was growing rapidly in geographical size and also in the number of states. This draws analogies to the expansion of the EU in the later twentieth and earlier twenty-first centuries.

³¹In two public referenda, in 1972 and 1994, a majority of the Norwegian electorate rejected a joining of the EU.

³²Iceland is here another “Nordic” country that does not belong to the European Union.

³³To give a counter-example: Ireland introduced the euro, but did not join Schengen.

not necessarily lead in all indicators, but at least in many (of the crucially important key indicators). So the Nordic countries also demonstrate empirically, which level of development (of a democracy) already is possible in and for the world. The Nordic countries set a crucial (and highly competitive) benchmark for the rest of the (other) EU as well as the USA. This assertion (proposition) of a globally leading level of development of the Nordic countries may be illustrated by the last “Human Development Reports” that are being published by the United Nations, more specifically the United Nations Development Program (UNDP). Every Human Development Report also issues a specific Human Development Index plus components. In the Human Development Index (HDI) 2010, Norway ranks first (United Nations Development Program, UNDP 2010, p. 143); in the HDI 2007, again Norway is first ranking (United Nations Development Program, UNDP 2009, p. 171); and in the Human Development Index 2005, Iceland is first, and Norway ranks second (United Nations Development Program, UNDP 2007, p. 229). To continue here with another example: in the Democracy Ranking 2010,³⁴ referring to the quality of democracy, the first three ranking countries (democracies) are Norway, Sweden and Finland, all Nordic. The fourth-ranking country is Switzerland, but the fifth-ranking country is again Nordic, Denmark (Campbell et al. 2010, p. 9). Furthermore, in the key findings to the Democracy Ranking 2010, therefore, also the following analytical assessment is being offered and released: “**The top 10 (top 15) countries of the Democracy Ranking 2010:** The Nordic countries (Norway, Sweden, Finland, Denmark) and Switzerland are the top five countries, also New Zealand, the Netherlands, Ireland, Germany, and the UK have very high scores. This continuing global top position of the Nordic countries is impressive, also because this top position is being reproduced quite stable across the different (sub-)dimensions. Thus it can be said that the Nordic countries define—in

³⁴See <http://democracyranking.org/wordpress/>; <http://www.democracyranking.org/en/ranking.htm>.

a positive view—a global benchmark for quality of democracy that is empirically already available. From the top 10 countries, seven belong to the EU. In total, the prominent representation of European democracies at the top positions is remarkable. This underscores that the European integration process should be understood, in the global context, even more clearly as a ‘democracy project.’ The ‘quality of democracy’ of Europe’s democracies will influence and support the endurance of the European integration and of the EU” (Campbell 2010, p. 2; see also Campbell et al. 2012, p. 172). The Human Development Indexes (Human Development Reports) and the Democracy Rankings provide consistent empirical evidence for how far developed the Nordic countries already are in empirical terms in global comparison. *The Nordic countries are setting high (and indicator-based) benchmarks for the whole world, for the OECD countries, the USA as well as the EU altogether.* The Nordic countries demonstrate how far developed the European Union, but also the USA could be. *So, in context of our analysis, the country group of the Nordic countries acts and behaves as the “Great Challenger” for the contemporary world, raising the expectations high to very high.*

5. *Nordic Countries (Social-Democratic [Universal] Welfare Regimes), Liberal Welfare Regimes and Conservative Welfare Regimes:* The typology of country-based welfare regimes that we apply here refers to the already presented classification of Gøsta Esping-Andersen (1990). For Esping-Andersen, the social-democratic welfare regimes coincide with the four Nordic countries presented here, Denmark, Finland, Norway, and Sweden. So here we have a concentrated overlap of regime type and geographic region. The liberal welfare regimes, in the typology of Esping-Andersen, include the USA, Canada, the UK, Australia, and New Zealand, thus they represent (to a far, but not complete extent) the English-speaking countries in their global stretch-out. The interpretation of the USA as a liberal welfare regime aligns with interpreting the USA as a “liberal democracy” (Sodaro 2004, p. 48). The conservative welfare regimes, again in the typology of Esping-Andersen, include the following countries: Austria, Belgium, France, Germany, Italy, the Netherlands, and Switzerland. These countries represent geographically clustered-together core regions of Continental Europe and represent,

with the exception of Austria and Switzerland, founding member states of the European Union.³⁵ Austria joined the EU (EU15) in 1995. Switzerland, at least up until now, has not joined the European Union, also not the European Economic Area, but a high density of “technical agreements”³⁶ is governing the relationship between Switzerland and the European Union, and Switzerland is also part of the Schengen area. Of course, every clustering of countries into specific groups can be changed or may be altered. So there have also been attempts to define a “Mediterranean” type.³⁷ Michael J. Sodaro (2004, p. 48), an American scholar, sees “most West European countries typically” leaning “toward social democracy,” but traces also “numerous social welfare benefits” in the USA. So, for Sodaro we can formulate the proposition that in his interpretation the social-democratic welfare regimes are not limited to the Nordic countries, but also diffuse into Continental (Western) Europe. Furthermore, could specific welfare regime types be also be defined, for example, for Asian countries? *Bengt-Åke Lundvall (1992)*, also *Richard R. Nelson (1993)*, developed and applied the concept of the *National Innovation System (or National Systems of Innovation)*, defined as: “It follows that a system of innovation is constituted by elements and relationships which interact in the production, diffusion and use of new, and economically useful, knowledge and that a national system encompasses elements and relationships, either located within or rooted inside the borders of a nation state” (Lundvall 1992, p. 2). In the meantime, the national innovation system also has been extended conceptually to “multi-level innovation systems” (Kaiser and Prange 2004; Carayannis and Campbell 2011, pp. 352–354). An interesting (conceptual and empirical) analysis of course could be, to look into and to investigate, how similar or dissimilar national clusters of innovation systems and welfare regimes may be. Ex-ante propositions could be developed in both directions (asserting similarities,

³⁵The six founder countries of the predecessor organizations of the European Union are Belgium, France, Germany, Italy, Luxembourg, and the Netherlands. See http://europa.eu/about-eu/eu-history/index_en.htm, http://europa.eu/abc/12lessons/lesson_2/index_en.htm.

³⁶See http://eeas.europa.eu/switzerland/index_en.htm.

³⁷See, on Wikipedia http://en.wikipedia.org/wiki/G%C3%B8sta_Esping-Andersen.

asserting dissimilarities). According to Esping-Anderson (1990, p. 26), *welfare regimes* or “welfare-state regimes” can be distinguished on the following grounds: “As we survey international variations in social rights and welfare-state stratification, we find qualitatively different arrangements between state, market, and the family. The welfare-state variations we find are therefore not linearly distributed, but clustered by regime-types.” For Esping-Andersen (1990, p. 37), “de-commodification” plays a key role for creating a typology of welfare regimes: “The variability of welfare-state evolution reflects competing responses to pressures for de-commodification. ...Rather, the concept refers to the degree to which individuals, or families, can uphold a socially acceptable standard of living independently of market participation.” Hans Pechar and Lesley Andres (2011) refer to the typology of Esping-Andersen, in an attempt to explain differences in national higher education systems: “All Organization for Economic Cooperation and Development (OECD) countries have experienced an unprecedented expansion in higher education during the second half of the twentieth century. This was only possible because higher education became part of national welfare policies. OECD countries differ, however, with respect to the significance of education, and more specifically, higher education policies within their overall framework of welfare policies. We employ the concept of the ‘welfare regime’ and a ‘trade-off’ hypothesis to understand the different national approaches to higher education participation, funding, tuition, and student financial aid” (Pechar and Andres 2011, p. 25). Sodaro (2004, p. 308) offers the following general definition for a *welfare state*: “Broadly defined, the welfare state is a form of political economy in which the state assumes responsibility for the general welfare of its population, especially its most vulnerable elements, through spending on such items as education, housing, health care, pensions, unemployment compensation, food subsidies, family allowances, and other programs.” Political economy, in context of the knowledge-based society and economy, therefore may be specified (refined) as: *the state (government) supports and leverages knowledge (including research and education) and innovation*

for the welfare of society and the performance of the economy.³⁸ This approach also opens gateways to the (advanced) knowledge society, knowledge economy and knowledge democracy (Carayannis and Campbell 2011, p. 367). All of the countries, listed here in the typology of Esping-Andersen, are also member states of the OECD. This illustrates one of our main motivations, why we have decided to orient our analysis also toward country groups, identified and formed under the aspect of different welfare regimes. *We do not only want to reflect about the OECD as a whole, but want to have the opportunity to distinguish between (country) subgroups within OECD.*

6. *OECD (OECD35)*: We interpret the country cluster of the OECD as the group of those countries that by tendency are more “advanced” economically, politically and socially (societally) than the non-OECD countries. In conceptual terminology, here also the term of *advanced economies* is being used and applied. The IMF (International Monetary Fund) refers explicitly to the term and concept of *advanced economies* to indicate those economies that are the most developed economic systems in global comparison.³⁹ In a very recent classification of economies,

³⁸This is a (self-defined) conceptual formula that I used for recent teaching in university classes in Austria.

³⁹For a definition of an *advanced economy*, see “What Does Advanced Economies Mean? A term used by the International Monetary Fund to describe developed countries. While there is no established numerical convention to determine whether an economy is advanced or not, advanced economies have a high level of gross domestic product per capita, as well as a very significant degree of industrialization. ... Another metric commonly used to identify advanced economies is the Human Development Index, which combines multiple factors to measure a country’s status. As of 2010 the IMF classified 34 nations as advanced economies. These include the United States and Canada in North America, most nations in Europe, Japan and the Asian tigers, as well as Australia and New Zealand” <http://www.investopedia.com/terms/a/advanced-economies.asp#axzz1ZipsAPL2>. On the website of *The World Factbook* of the CIA (Central Intelligence Agency), it is being stated: “**advanced economies** a term used by the International Monetary FUND (IMF) for the top group in its hierarchy of advanced economies, countries in transition, and developing countries; it includes the following 33 advanced economies: Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, South Korea, Luxembourg, Malta, the Netherlands, NZ, Norway, Portugal, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, UK, US; note—this group would presumably also cover the following nine smaller countries of Andorra, Bermuda, Faroe Islands, Guernsey, Holy See, Jersey, Liechtenstein, Monaco, and San Marino that are included in the more comprehensive group of ‘developed countries’” <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html>.

the IMF (2011, p. 150) distinguishes between three types of economic systems: “advanced economies,” “emerging economies” (emerging Asia, emerging Latin America and emerging Europe) and developing economies. The two extreme poles here would be the advanced economies, on the one hand, and the developing economies on the other. The IMF lists 23 countries (economies) as advanced economies, which are: the USA and Canada (North America), Japan, Australia and New Zealand, and several Western European countries that belong mostly (but not all) to the European Union (EU15). *The characteristic of being advanced*, however, is not limited to properties of the economy. Further applications are to refer conceptually to “advanced society” and “advanced democracy” (Carayannis and Campbell 2011, p. 367). *Advancedness* (degrees of “advancedness”) refers typically to those indicators that are being used for (international) comparison and benchmarking for purpose of analysis and learning. Those indicators, which we incorporated into our model of comparative multidimensional index-building, are good examples for this. *Advanced development, advanced sustainable development, also aligns with the concepts of (advanced) knowledge society, knowledge economy and knowledge democracy. This is carried by the belief and conviction that knowledge and innovation (the application and use of knowledge) are key drivers, act as key drivers for development* (Carayannis and Campbell 2011, p. 367; Carayannis and Campbell 2012). Knowledge and innovation, of course, are not the only drivers of and for development. Generally speaking, this also does not deny that the concept of “advanced” and that the specific indicators, used for measuring degrees and developments of advancedness, can always be criticized. Here a pluralism of (philosophical) discourses always is necessary, conducted in a permanent mode. Only 17.26–18.61% (2002–2016) of the world population live in OECD (OECD35) countries (see Fig. 2.2 in Sect. 2.1). Therefore, when comparing the OECD average with the world average, this has (by tendency) qualities of comparing the OECD-world with the non-OECD-world.⁴⁰ *The OECD (already on a larger and wider basis) demonstrates empirically, how far the world already could have developed,*

⁴⁰For such propositions, the specific data structure must be reviewed carefully.

in terms of freedom, equality and sustainable development. A much smaller fraction of the world population lives in the Nordic than in the OECD countries (only 0.35–0.38%, during the years 2002–2016, see Fig. 2.3 in Sect. 2.1). The Nordic countries are higher developed than the OECD average or the world average (see the empirical verification of that proposition later in Sect. 7.2). *Therefore, the Nordic countries demonstrate to the OECD (also to the USA and to EU15 and EU28) as well as to the world as a whole, which levels of freedom, equality and sustainable development are already empirically possible in our present at the moment.*⁴¹ Within the context of OECD, we defined and identified several country subgroups to allow a meaningful distinction and comparison further on between specific OECD (and non-OECD) countries.

7. *Latin America (Latin America17) and Asia (Asia15):* We define the specific country clusters of Latin America and Asia in a way, so that they represent two world regions that are either largely (Latin America)⁴² or completely (Asia) outside of the current OECD context. Latin America, here, includes seventeen countries from mainland Central America and South America (but excludes the Caribbean islands). Asia, here, includes fifteen countries from East Asia, South Asia, South-East Asia, and Central Asia, also including the worldwide number-one-ranking and number-two-ranking countries in population figures and size, China and India.⁴³ The majority of the Newly Industrialized Countries (NICs),⁴⁴ also called Newly Industrialized Economies (NIEs), are represented by the country groups of Latin America and Asia, as they are being defined and specifically being proposed here. In the conceptual language of the IMF (International Monetary Fund), the NICs as well as the NIEs belong to the category of an economic type of *Emerging*

⁴¹Do the Nordic countries represent something like an “*avant-garde of development*” in the current world context?

⁴²Mexico and Chile belong to Latin America as well as the community of OECD member countries.

⁴³As already mentioned before, Singapore was omitted from the country group of Asia (Asia15) because of missing data information.

⁴⁴The term NICs, first, was used for the so-called Four Asian Tigers: South Korea, Taiwan, Hong Kong, and Singapore. In IMF terminology, these countries are categorized as belonging to *Emerging Asia* (IMF 2011, p. 150).

Economies, so they place in-between the *Advanced Economies* and the *Developing Economies* (IMF 2011, p. 150). The two major NICs in Latin America are represented by Mexico and Brazil. The major NICs in Asia are: China, India, Malaysia, the Philippines, and Thailand. Important other NICs are Turkey and South Africa. By presenting the two country groups of Latin America and Asia as we do it here, we also have the opportunity of comparing freedom, equality and sustainable development in the OECD, but also in the NICs.⁴⁵ Some of the larger NICs have the potential of seriously challenging, also economically, some of the leading OECD countries within the next one or two decades. Already as far back as 2007, Goldman Sachs (2007, p. 3) released a forecast that in terms of total purchasing power parity (PPP) that the Chinese market would outpace the US market in the second half of the 2020s.⁴⁶ However, in PPP per capita, the US domestic market still would be ahead of the Chinese market. Since then, should we want to refer to a tendency of predictions on economic scenarios, the general expectation is perhaps even to predate the overtaking of the American economy by China. There are even speculations, whether, in two or three or four decades, also India would have a potential to outpace the USA domestic market in terms of total purchasing power parity. *What exactly are the implications for the political world system, democracy and the quality of democracy, and the sustainable development of countries, when some of the larger Newly Industrialized Countries, such as China and India, outrun the leading OECD countries in total purchasing power parities (PPP), most prominently the USA, but, at the same time, these OECD countries continue their lead in PPP per capita?* It is difficult to present a clear analytical assessment of the implications of this trade-off between total PPP and relative PPP per head. Divergent

⁴⁵Mexico, of course, expresses cross-membership with the OECD and the NICs.

⁴⁶In a study by the Stockholm International Peace Research Institute (SIPRI), the authors assert that China, in terms of military and energy cooperation, also will become increasingly independent vis-à-vis Russia. Key proposition of the conclusion is: "In the coming years, while relations will remain close at the diplomatic level, the two cornerstones of the partnership over the past two decades—military and energy cooperation—are crumbling. As a result, Russia's significance to China will continue to diminish" (Jakobson et al. 2011, p. 43). China emerges more and more as a self-sufficient power (politically and economically) for the global system and in the global system.

interpretations and propositions for discussion may be developed and set-up here. For geopolitical power games and global influence, total PPP, of course, is important. *When reflecting on sustainable development-conditions and quality-of-democracy-conditions for the concrete individual, the concrete person, then, as it seems, the relative PPP per capita is just as (if not even more) important.* But put in summary, this also has the potential of challenging theories on democracy that are OECD-centric or are focusing one-sidedly on the advanced countries and economies.

The Newly Industrializing Countries, also Newly Industrializing Economies, have all the potentials to dynamize our world empirically, but also conceptually, in the way in which we use and apply theories for explaining the world, society, economy, and democracy.

8. *Possible complementary and alternative definitions and clusters of country groups:* Our analysis of freedom, equality and sustainable development will focus on eight individual countries, six country groups at the sub-world level and one country-based aggregation of the whole world (of those countries, which we covered and for which empirical data and indicators are available, resulting in a possible maximum of 160 countries for our analysis). These were explicit conceptual and methodic decisions we made in context of the work here. It is fair to acknowledge that particularly for the non-OECD countries also some complementary country clusters also could have been designed and proposed as reference points for analysis. Possible candidates for complementary country groups obviously are: Sub-Saharan Africa,⁴⁷ the Muslim-majority countries^{48, 49, 50} or the countries of the region of the post-Soviet

⁴⁷To Nigeria we refer in our analysis as an individual country.

⁴⁸In our country group of *Asia14* there are three predominantly Muslim countries with an overwhelming majority of their Muslim population (Pakistan, Bangladesh and Indonesia), and one more country with a clear Muslim majority (Malaysia). Nigeria represents a sub-Saharan country with an only narrow (marginal) majority of their Muslim population (Pew Research Center, 2009).

⁴⁹See on Wikipedia http://en.wikipedia.org/wiki/Muslim_world; http://en.wikipedia.org/wiki/List_of_Muslim-majority_countries.

⁵⁰According to conceptual convention, an “Islamic country” or “Islamic state” would be a country or state where Islam is being granted the status as the official ideology for the political system.

Union.⁵¹ This, however, was not done here, instead we concentrated our non-OECD emphasis on comparing and contrasting the dynamics and developments in Latin America (*Latin America17*) and Asia (*Asia15*). When wanting to stretch and expand the analytical focus from Latin America and Asia to other (non-OECD) world regions, one also could engage in designing alternative country groups, deviating from (and/or complementing) the country groups being presented here. In principle, multiple designs for alternative country groups always are possible, but, of course, are exposed to also provide a sufficient reasoning for their plausibility in country group-designs. Whether or not this would change analytical assessment and conclusions cannot be answered here, remains to be a speculation for the moment, and would have to be addressed by alternative research designs as next steps.

References

- Backhaus, K., Erichson, B., Plinke, W., Schuchard-Fischer, C., & Weiber, R. (1987). *Multivariate Analysemethoden: Eine Anwendungsorientierte Einführung*. Berlin: Springer.
- Buonanno, L., & Nugent, N. (2013). *Policies and Policy Processes of the European Union*. Houndmills: Palgrave Macmillan.
- Campbell, D. F. J. (1994). European Nation-State Under Pressure: National Fragmentation or the Evolution of Suprastate Structures? *Cybernetics and Systems: An International Journal*, 25(6), 879–909. <http://www.informaworld.com/smpp/title-db=all-content=g770888219>.
- Campbell, D. F. J. (2010). *Key Findings (SUMMARY Abstract) of the Democracy Ranking 2010 and the Democracy Improvement Ranking 2010*. Vienna: Democracy Ranking. http://democracyranking.org/wordpres/ranking/2010/data/Key%20findings%20of%20the%20Democracy%20Ranking%202010_A4.pdf.
- Campbell, D. F. J., Alexandra, F., & Amelie, D. (2017). Innovations in Presidential Elections: The United States, France and Austria in

⁵¹We only took Russia (and not the whole former Soviet Union region) as case for our analysis.

- Comparison. In E. G. Carayannis (Ed.), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1–8). New York, NY: Springer. https://link.springer.com/referenceworkentry/10.1007/978-1-4614-6616-1_200083-1.
- Campbell, D. F. J., Barth, T. D., Pözlbauer, P., & Pözlbauer, G. (2012). *Democracy Ranking (Edition 2012): The Quality of Democracy in the World*. Norderstedt: Books on Demand (Democracy Ranking Association).
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix Innovation Model: Global Warming as a Challenge and Driver for Innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 1–12. <http://www.innovation-entrepreneurship.com/content/pdf/2192-5372-1-2.pdf>.
- Carayannis, E. G., & Campbell, D. F. J. (2011). Open Innovation Diplomacy and a 21st Century Fractal Research, Education and Innovation (FREIE) Ecosystem: Building on the Quadruple and Quintuple Helix Innovation Concepts and the “Mode 3” Knowledge Production System. *Journal of the Knowledge Economy*, 2(3), 327–372. <http://www.springerlink.com/content/d11r223321305579/>.
- Dubina, I. N., Carayannis, E. G., & Campbell, D. F. J. (2012). Creativity Economy and a Crisis of the Economy? Coevolution of Knowledge, Innovation, and Creativity, and of the Knowledge Economy and Knowledge Society. *Journal of the Knowledge Economy*, 3(1), 1–24. <http://www.springerlink.com/content/t5j8l12136h526h5/>.
- Economist Intelligence Unit. (2011). *Democracy Index 2010: Democracy in Retreat: A Report from the Economist Intelligence Unit*. London: Economist Intelligence Unit. http://graphics.eiu.com/PDF/Democracy_Index_2010_web.pdf.
- Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.
- Freedom House. (2013a). *Freedom in the World: Aggregate Scores of Political Rights and Civil Liberties, 2003–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/AggregateScores_FIW2003-2013%20%28final%29.xls.
- Freedom House. (2013b). *Freedom in the World 2013. Methodology*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2013/methodology>.
- Freedom House. (2013c). *Freedom of the Press: Scores and Status Date 1980–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/FOTP%20Scores%20and%20Status%201980-2013_0.xls.

- Freedom House. (2013d). *Freedom in the World Comparative and Historical Data. Country Ratings and Status by Region, FIW 1973–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/Country%20Status%20and%20Ratings%20By%20Region%2C%201973-2013_0.xls.
- Fukuyama, F. (1989). The End of History? *The National Interest* (Summer 1989), 3–18. <http://www.cla.wayne.edu/polisci/kdk/Comparative/SOURCES/fukuyama.htm>.
- Hooghe, L., & Marks, G. (2001). *Multi-level Governance and European Integration*. Lanham: Rowman & Littlefield.
- IMF (International Monetary Fund). (2011). *World Economic Outlook, April 2011. Tensions from the Two-Speed Recovery Unemployment, Commodities, and Capital Flows*. Washington, DC: International Monetary Fund. <http://www.imf.org/external/pubs/ft/weo/2011/01/pdf/text.pdf>.
- Jakobson, L., Holtom, P., Knox, D., & Peng, J. (2011). *China's Energy and Security Relations with Russia: Hopes, Frustrations and Uncertainties*. Stockholm: Stockholm International Peace Research Institute (SIPRI). <http://books.sipri.org/files/PP/SIPRI29.pdf>.
- Kagan, R. (2003). *Of Paradise and Power: America and Europe in the New World Order*. New York, NY: Knopf.
- Kaiser, R., & Prange, H. (2004). The Reconfiguration of National Innovation Systems—The Example of German Biotechnology. *Research Policy* 33, 395–408.
- Kübler, D. (2015). De-nationalization and Multi-level Governance. In D. Braun & M. Maggeti (Eds.), *Comparative Politics. Theoretical and Methodological Challenges* (pp. 55–89). Cheltenham: Edward Elgar.
- Lundvall, B. (Ed.). (1992). *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter Publishers.
- Nelson, R. R. (Ed.). (1993). *National Innovation Systems: A Comparative Analysis*. Oxford: Oxford University Press.
- Pechar, H., & Andres, L. (2011). Higher-Education Policies and Welfare Regimes: International Comparative Perspectives. *Higher Education Policy*, 24(1), 25–52.
- Rifkin, J. (2004). *The European Dream: How Europe's Vision of the Future is Quietly Eclipsing the American Dream*. Cambridge: Polity Press.
- Sachs, G. (2007). *Global Economic Paper No. 153*. New York, NY: Goldman Sachs. <http://www.chicagobooth.edu/alumni/clubs/pakistan/docs/next11dream-march%20'07-goldmansachs.pdf>.

- Sodaro, M. J. (2004). *Comparative Politics: A Global Introduction* (2nd ed.). With contributions by D. W. Collinwood, B. J. Dickson, J. L. Klesner, & T. D. Sisk. New York: Mc Graw Hill.
- UNDP (United Nations Development Programme) (2007). *Human Development Report 2007/2008. Fighting Climate Change: Human Solidarity in a Divided World*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2007-8/>.
- UNDP (United Nations Development Programme). (2009). *Human Development Report 2009. Overcoming Barriers: Human Mobility and Development*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2009/>.
- UNDP (United Nations Development Programme) (2010). *Human Development Report 2010: 20th Anniversary Edition. The Real Wealth of Nations: Pathways to Human Development*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2010/>.
- UNDP (United Nations Development Program). (2013). *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World*. New York, NY: United Nations. http://hdr.undp.org/en/media/HDR_2013_EN_complete.pdf and <http://hdr.undp.org/en/reports/global/hdr2013/>.
- UNDP (United Nations Development Program). (2016). *Human Development for Everyone*. New York, NY: United Nations. <http://hdr.undp.org/en/content/human-development-report-2016-human-development-everyone> and http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf.
- World Bank. (2010). *World Development Indicators* (Web-based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2>.
- World Bank. (2011). *World Development Indicators* (Web-based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2>.
- World Bank. (2013). *World Development Indicators* (Web-based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=world-development-indicators>.
- World Bank. (2018). *World Development Indicators* (Web-based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>.



3

Comparative Empirical Analysis of the OECD Countries: Freedom, Equality and Sustainable Development in the OECD Countries (2002–2016)

In our first round of comparative empirical analysis, we focus on the OECD countries (OECD35), with more specific data breakdowns for the USA, the European Union (EU15 and EU28), the Nordic Countries and Japan. We will have a closer look at all the indicators and dimensions across the period of 2002–2016. See also Figs. 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, and 3.11 and the tables in Appendix A.1 and A.2.

1. *The dimension of freedom for the OECD countries*

- 1.1. *Political freedom in the OECD countries*: The Nordic countries position themselves here at the very top, almost (more or less) realizing and representing the empirical maximum of 100 (see Fig. 3.1). The Nordic countries lie also clearly ahead of all the other predefined OECD country groups, including the USA. The USA, EU15, EU28 and Japan, they all place in a middle field, and above the (mean-based) average of the OECD. When looking at the trends from 2002 to 2016, there appear to be two phenomena at work: either a ceiling effect or even a modest

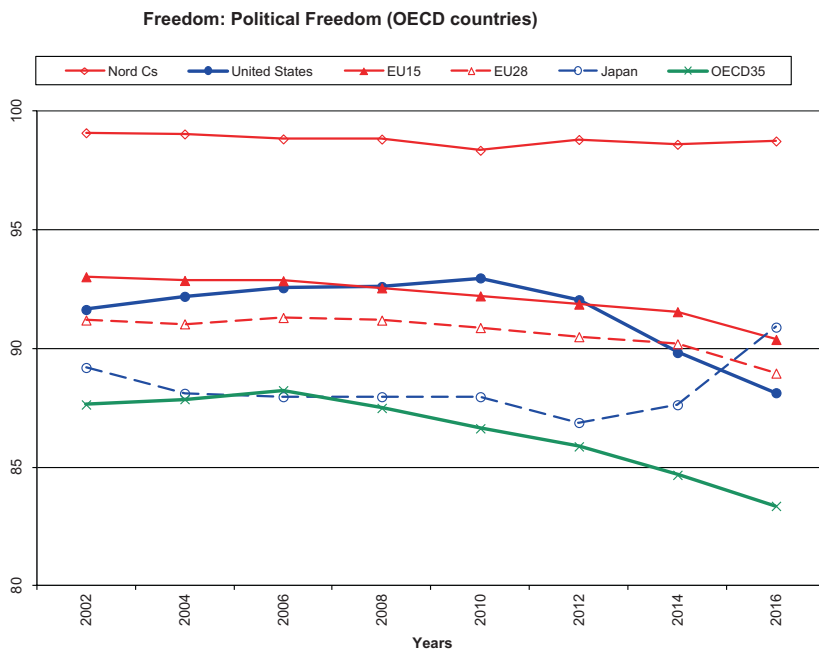


Fig. 3.1 Political freedom in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

downsliding of or for political freedom. So why is there no more growth of political freedom? On the one hand, this may reflect a conceptual and methodic problem of the used indicators, allowing no more substantial gains and thus putting the used indicators at challenge. On the other hand, there may be more of a need and demand for rethinking and reconceptualizing what new dimensions (manifestations) of freedom can be or even have to be, well suited and adequate for the following course of the twenty-first century.

- 1.2. *Economic freedom in the OECD countries:* Patterns and trends here (see Fig. 3.2) somewhat deviate from the picture in reference to political freedom. Concerning economic freedom,

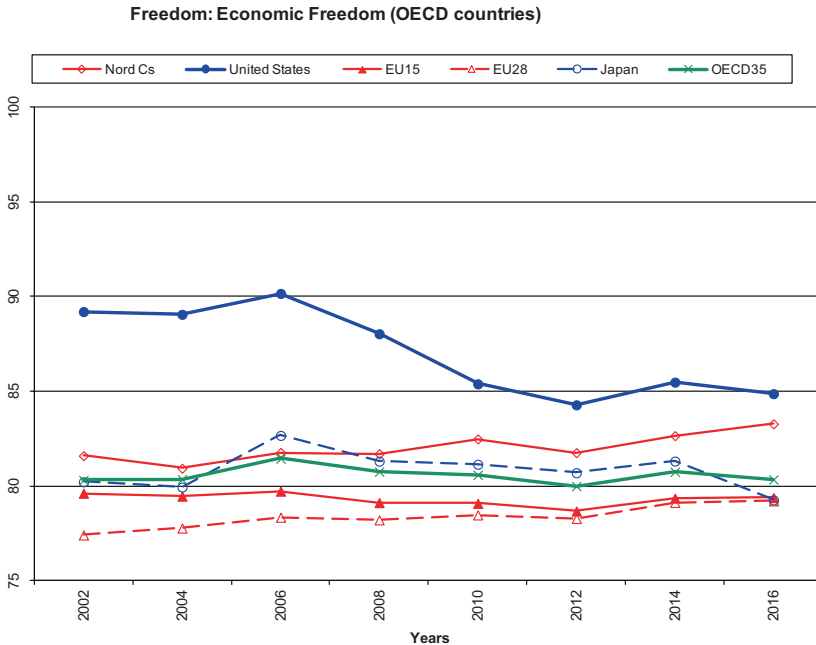


Fig. 3.2 Economic freedom in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

clearly the USA ranks first. Second are the Nordic countries, while Japan and the EU15 and EU28 member countries are oscillating around the OECD average. Particularly, during the first half of the 2000s, there has been a general increase in economic freedom, which, however, leveled off during the second half of the 2000s and later on. Economic freedom in the USA declined after 2006 and slightly increased or stayed stable in the other OECD country groups, this implicating a closer coming together in the whole OECD context.

2. The dimension of equality for the OECD countries

2.1. *Income equality in the OECD countries:* The Nordic countries clearly rank here first, with a certain downsliding of income

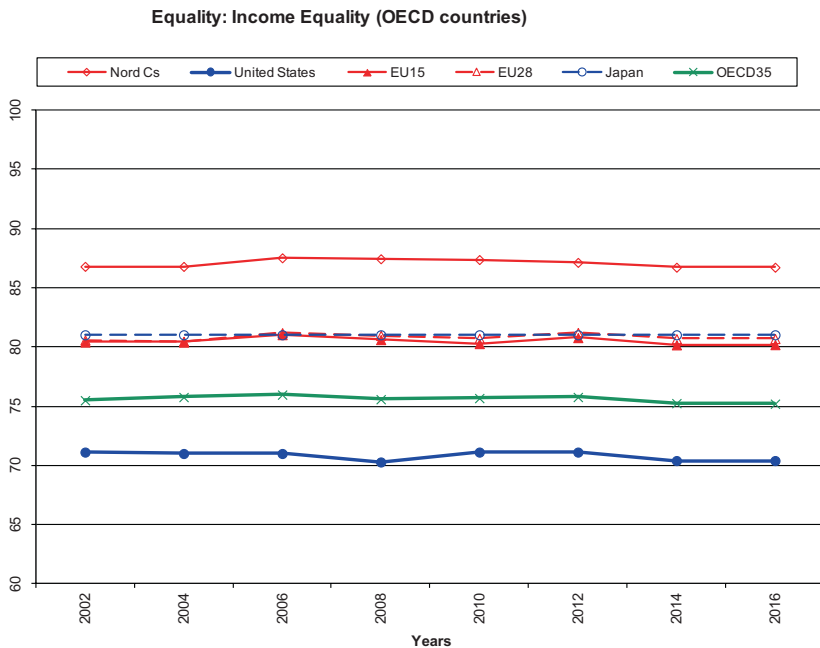


Fig. 3.3 Income equality in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

equality after 2010, however, not questioning their comparative number one status (see Fig. 3.3). Japan, the EU15 and EU27, they lie closely together. The USA, on the contrary, places obviously and clearly below OECD average. The lead of the USA in economic freedom is being sharply contrasted by this considerably behind positioning in income equality. In OECD context, the Nordic countries and the USA represent here the two opposing poles concerning differing and deviating degrees of income equality. As a general rule, it can be said that income equality has come under further pressure after 2010, particularly in the USA, the Nordic countries and OECD average. So, income equality should mark and indicate a considerable concern.

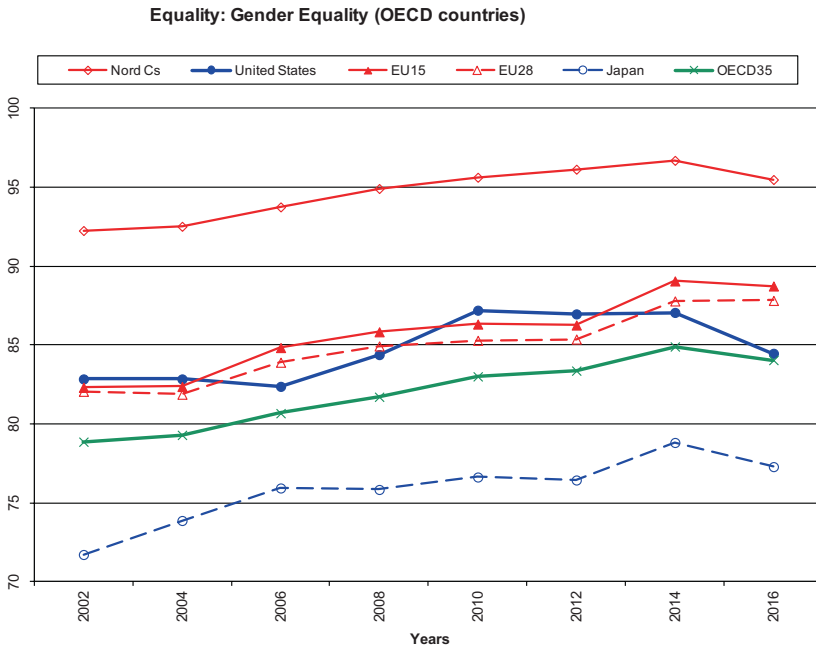


Fig. 3.4 Gender Equality in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

2.2. *Gender equality in the OECD countries:* Concerning gender equality, the Nordic countries (again, as in the case of income equality) are leading far ahead of the other OECD countries (see Fig. 3.4). In the middle field place the European Union (EU15 and EU28) and the USA. There has been a certain and positive shift in ranking positions during the 2000s. In the early 2000s, the USA was slightly leading ahead of the EU, but, in the later 2010s, this ranking shifted in favor of the European Union and to the disadvantage of the USA. EU15, EU28 and the USA place with regard to gender equality higher than the OECD average. Concerning the countries and country groups here covered, Japan ranks the last, and below OECD average.

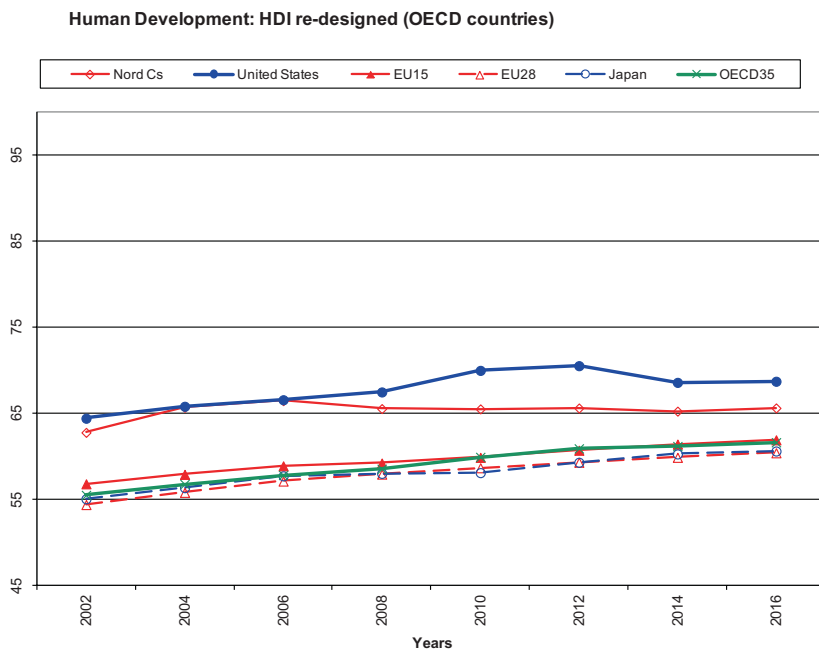


Fig. 3.5 Human development (HDI re-designed) in the OECD and OECD countries (2002–2016): Nordic countries, US, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

While Japan is performing better with income equality (above OECD average), it performs less good on gender equality. With the USA, the relationship is opposite: an above average performance on gender equality, but obviously clearly below OECD average regarding income equality. In both equality dimensions, the European Union (EU15 and EU28) is ranking higher than the OECD average. The lead of the Nordic countries in gender equality is more distinct than with income equality. For the OECD countries and country groups, gender equality gradually increased (at least in relative terms) over the 2000s and 2010s, while income equality has come under pressure, with a certain tendency of decline and further declining. However, as a

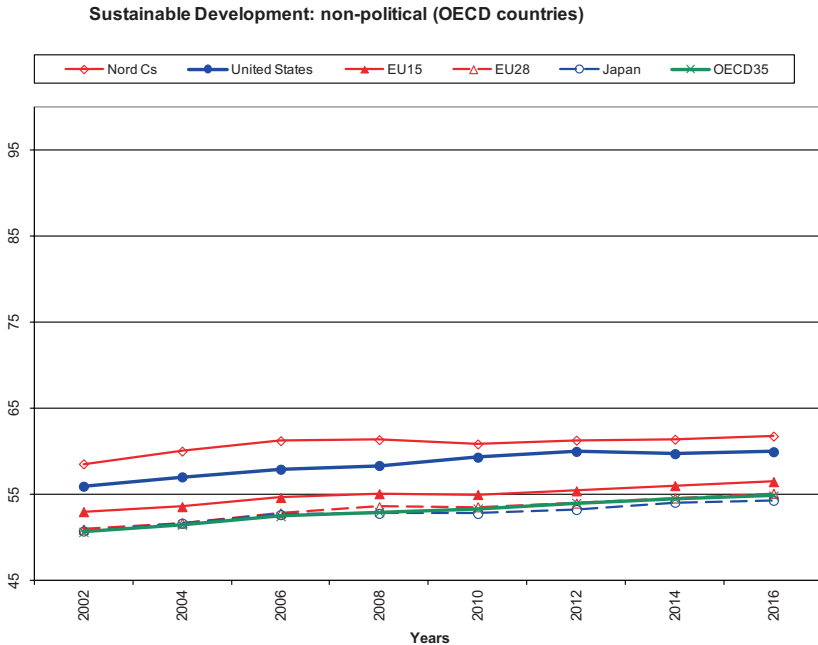


Fig. 3.6 Sustainable development (non-political) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

general trend, gender equality also has declined (again) in the OECD and all (most) identified OECD country groups after 2014. Either this marks a short-term fluctuation or the beginning of a serious new trend that must be very carefully and closely observed in the coming time.

3. The dimension of sustainable development for the OECD countries

3.1. *Human Development Index redesigned*: In the context of this work here, we (partially) redesigned the Human Development Index, interested in preserving the character of the Human Development Index (HDI), but applying indicators that can be more easily accessed (via the World Development Indicators, World Bank 2018). We were interested in using indicators

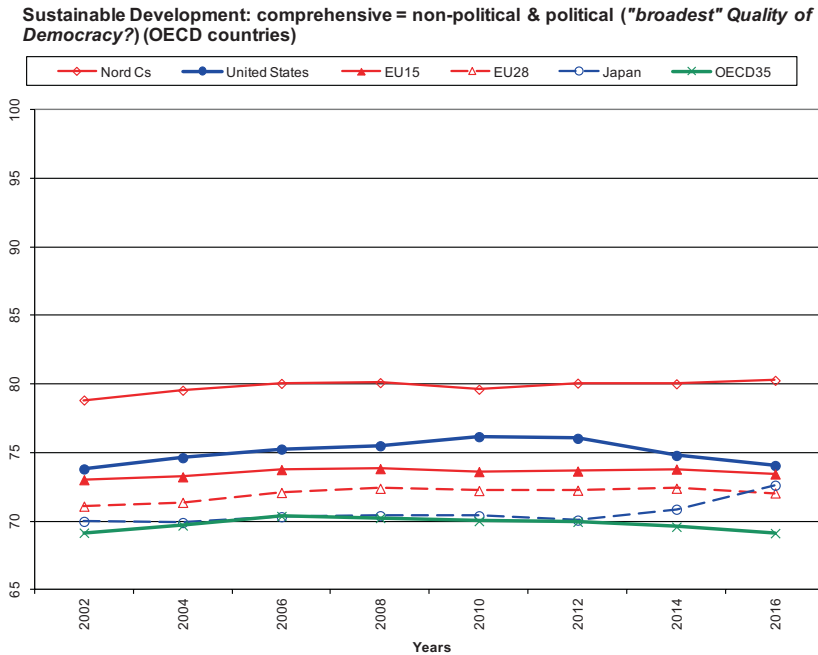


Fig. 3.7 Sustainable development (non-political and political) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

with a good empirical coverage for the time window of 2002–2016, displaying not too many data missings. To recapitulate, the redesigned HDI averages (means): life expectancy at birth (in total years), school enrollment tertiary (% gross) and GDP per capita in PPP¹ (constant 2011 international \$). In context of the OECD countries, the USA and the Nordic countries score first on the redesigned HDI (see Fig. 3.5). The EU member countries (EU15 and EU28) and Japan are grouping around the OECD average (OECD35). Throughout the whole period 2002–2016, there is a steady increase in scores

¹PPP stands for: Purchasing Power Parity.

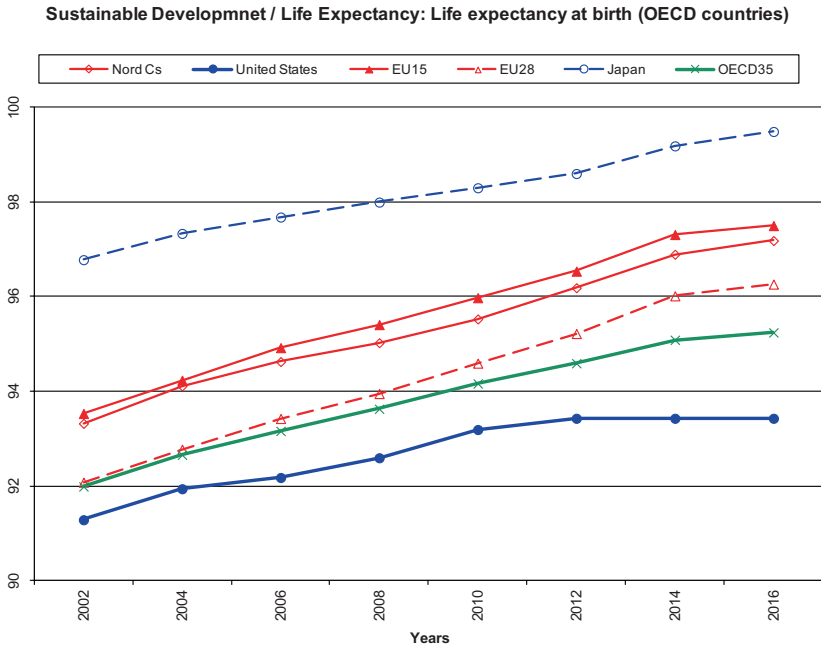


Fig. 3.8 Life expectancy (sustainable development) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28 and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

for all the here-mentioned countries and country groups, while this increase again has (slightly) decreased for the USA and the Nordic countries after 2010. When comparing the redesigned HDI with the original HDI of the UNDP (United Nations Development Program), there are some similarities, but also some marked differences. *This suggests that we can recommend and set up for discussion the proposition that it matters, which indicators are being taken specifically for defining, constructing and building indices and dimensions. Indicators matter.* Indicators can impose effects, and different indicators may impose different effects. This refers back to the starting point, which indicators should be taken? *Designing and building a pluralism of competing indices (dimensions) for purposes of simultaneous analysis may*

"Sustainable Development" / Tertiary education: School enrollment, tertiary (% gross) (OECD countries)

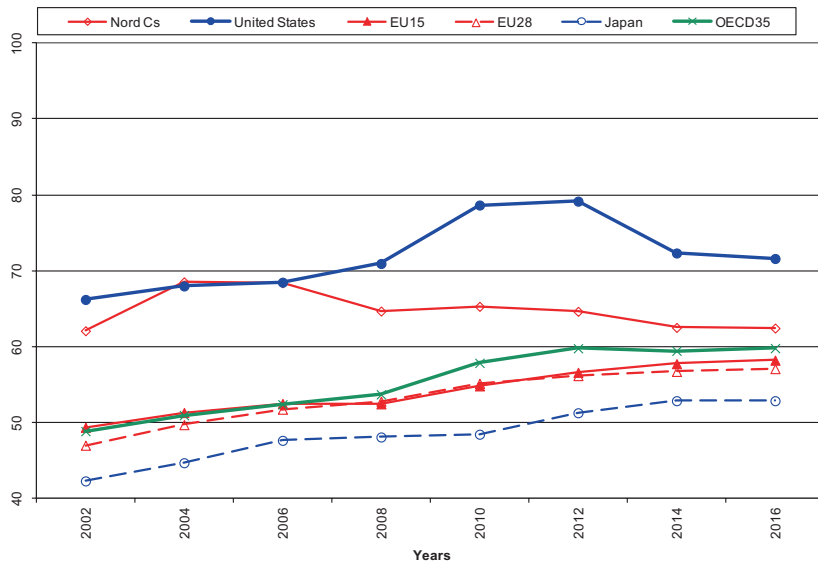


Fig. 3.9 Tertiary education ("SUSTAINABLE DEVELOPMENT") in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28, and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

represent one approach for generating a more balanced picture and overview on status, patterns, clusters and trends. Every approach of a non-pluralistic drafting of indices runs the risk of encouraging the production of biased interpretations.

- 3.2. *Sustainable Development non-political:* The non-political sustainable development, in context of the conceptual framework for analysis being presented here, averages (means) the following indicators (with specific weight measures being attached): life expectancy at birth (total years), school enrollment tertiary (% gross), Gini Index (issued by the World Bank), Global Gender Gap Index (issued by the World Economic Forum), lower CO₂ emission (metric tons per capita) and GDP per capita in PPP (constant 2011 international \$). Therefore, the non-political

Sustainable Development / GDP per capita: GDP per capita, PPP (constant 2011 international \$) (OECD countries)

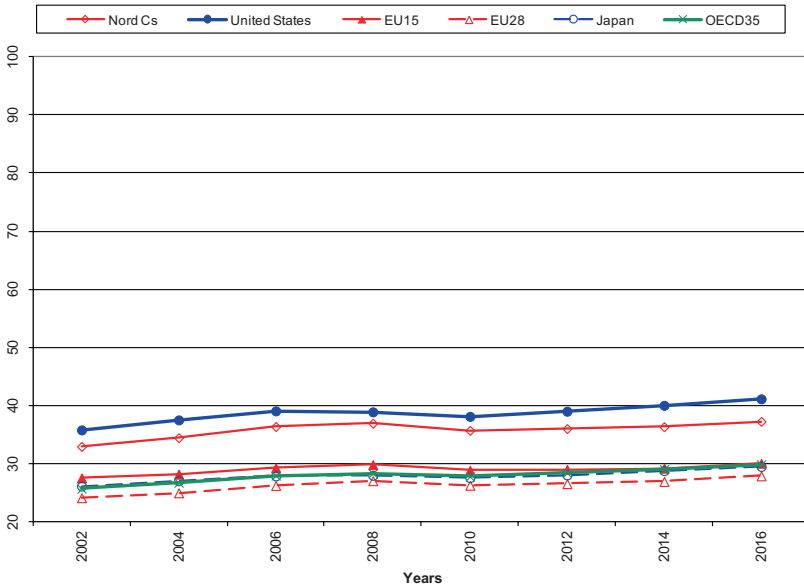


Fig. 3.10 GDP per capita (SUSTAINABLE DEVELOPMENT) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28, and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

sustainable development clearly represents a broader indicator basket than the redesigned HDI. In reference to this non-political sustainable development, the Nordic countries demonstrate the outright lead, being followed closely by the USA (see Fig. 3.6). The EU15, EU28 and Japan group together very closely around the OECD average. The scores for non-political sustainable development also show a steady increase over the years 2002–2016, however, also a certain ceiling effect for the Nordic countries and the USA after 2010. When results of non-political sustainable development are being compared with the redesigned HDI, then the propositions are: First of all, the overall lead of the Nordic countries is now clearer and more distinguished. Furthermore, the lead of the USA over the EU and

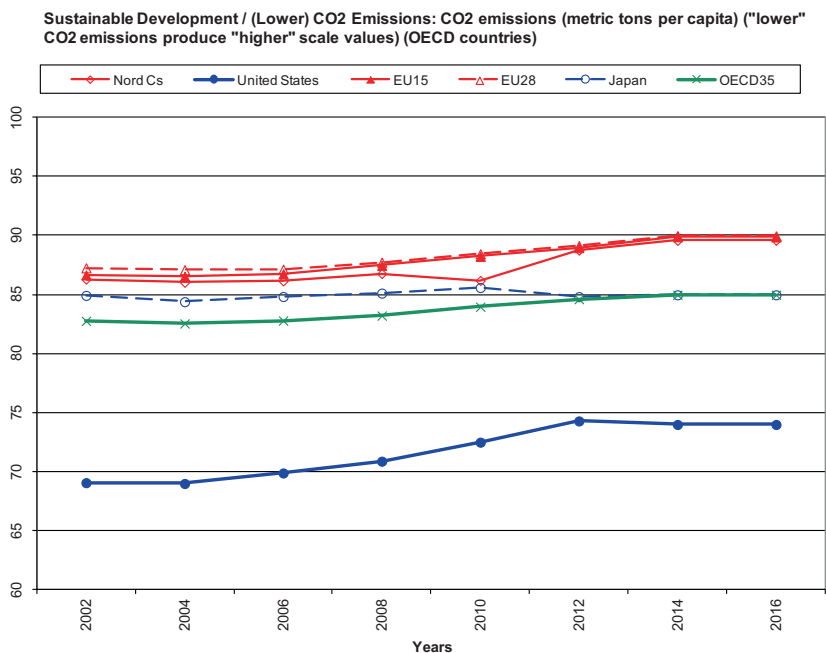


Fig. 3.11 (Lower) CO₂ emissions (SUSTAINABLE DEVELOPMENT) in the OECD and OECD countries (2002–2016): Nordic countries, USA, EU15, EU28, and Japan. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

Japan narrows down more considerably. *Thus it appears that the more indicator-narrow definition of the redesigned HDI favors the USA, while the indicator-broader setup of the non-political sustainable development is more often at the favor of European democracies. Gender, income equality and lower CO₂ emissions play (when combined and aggregated) apparently for the advantage of Europe (on several occasions).* Differences in scores and rankings between the non-political sustainable development and the UNDP's Human Development Index (e.g., UNDP 2009, 2010) are even more pronounced than in the case of comparing the UNDP's HDI and the redesigned HDI (here). *This reemphasizes the earlier proposition that the specific indicator coverage of indices does matter and has effects for rankings over countries and time.*

3.3. *Sustainable Development comprehensive (a “broad” conceptualization of Quality of Democracy)*: Sustainable development, in comprehensive terms, averages (means) (1) non-political sustainable development² and (2) political freedom. “*Comprehensive sustainable development*,” as is being defined and presented here, represents, therefore, a type of a conceptually “broad” definition of democracy and quality of democracy. To turn this argument: Is there an interest in measuring the quality of democracy, this then could be approached in an indicator-based way by applying a conceptual formula as we do it for “Comprehensive sustainable development.” *Conceptually, such a broadly defined concept of quality of democracy, conceptually and theoretically in line with (a broadly defined) sustainable development, represents (again in conceptual and theoretical terms) an opposite pole to a narrowly defined electoral or liberal democracy.* In metaphorical terms, lending spatial categories from language (in language): *the conceptual and theoretical space of democracy has on the one side the vertex (corner point) of a narrowly defined liberal democracy, and on the other side the vertex (corner point) of a broadly defined high-quality democracy that is based on sustainable democracy.* This may also indicate separating lines in values and ideology. Of course, out of reasons of fairness, we should add that sustainable development could be defined in a fashion differently than we did this here, by using other indicators or by weighting indicators alternatively with other weights. Looking at the empirical results of “Comprehensive sustainable development,” the Nordic countries are clearly leading and rank impressively first (see Fig. 3.7). The USA, the EU15 and EU28 and Japan cluster together very closely, also with a diminishing and evaporating gap over time, almost converting together into an area of overlap. The Nordic countries, the USA, EU15 and

²Non-political sustainable development averages (means) the following indicators with specific weights (see also above): life expectancy at birth (total years), school enrollment tertiary (% gross), Gini Index (issued by the World Bank), Global Gender Gap Index (issued by the World Economic Forum), lower CO₂ emission (metric tons per capita), and GDP per capita in PPP (constant 2011 international \$).

EU28 and Japan, they all place higher and above the OECD average. *It is interesting and should be emphasized that the USA and EU15 score balanced and in an equilibrium, resulting almost in a stalemate, when we refer to “Comprehensive sustainable development” and define sustainable development the way we did it. Despite clear indicator-specific differences between the USA and EU15, when aggregated, these differences score up in a counterbalanced comprehensive measure.* This opens up the room and unlocks the opportunity of developing contradictory propositions and expressing conflicting views. Could this even lead to an ideological deadlock? Or does this also imply that our concepts for understanding democracy, society and economy and their interwoven dynamics are still underdeveloped and too partial, and we still lack a sufficient meta-perspective? While the EU15 scores (almost at par) with the USA, the USA still leads slightly ahead of the EU28, concerning “Comprehensive sustainable development.” This refers to the already earlier raised question, whether EU15 or EU28 should be regarded as the better or fairer peer for purposes of comparison with the USA. Focusing on EU28, it then could be demonstrated on the basis of empirical measurement that the USA leads ahead of Europe concerning the quality of democracy and “Comprehensive sustainable development.” *When, however, taking the EU15, we may assert an equilibrium (or ideological deadlock) between the USA and Europe (European Union) in reference to quality of democracy and “Comprehensive sustainable development.”* When looking more specifically at the individual European (EU) countries (and referring to 2016 as the mattering benchmark year), then (in terms of such a broadly defined quality-of-democracy concept) ten European and (out of this) eight EU member countries outpace the USA.³ Thinking a step further, of course, we

³Those European countries, ranking on quality of democracy higher than the USA in 2016, are in the order of sequence (see Table A.2.7 in Appendix 2): Norway, Ireland, Sweden, Switzerland, Netherlands, Denmark, Finland, Belgium, Germany, and Austria. Non-European countries, ranking higher than the USA (again in 2016), are: Australia, Canada and New Zealand.

could ask, what would happen, should we disaggregate the USA into the 50 US member states, and compare these then with the 15 or 28 member states (member countries) of the EU? Perhaps an interesting matrix would result. The EU member states (and the US states) also can be disaggregated into subnational regions. This indicates routes for further interesting analysis and future research questions. In the context of the empirical analysis here, we decided to focus our model and conceptual framework of analysis to democracies (and non-democracies) at the level of countries (nation states). *Despite this deadlock of ideology and performance between the USA and EU15, however, the Nordic countries clearly lead ahead of the USA as well as the EU15 (also EU28 and Japan), regarding a broadly defined quality of democracy, and based on "Comprehensive sustainable development."* This Nordic lead (and widening gap in favor of the Nordic countries) is the result of empirical measurement (following a specific conceptualization of democracy and sustainable development), and not of ideological assertions. *Should ideological positions be deadlocked between a favorable (ideological) view to the advantage of the USA or to the advantage of the European Union (USA versus EU), then this Nordic performance enables additionality by bringing in a new perspective, something close to a meta-perspective above the USA and EU.* The Nordic countries introduce a crucial reference point for meaningful analysis and empirically-based comparison. Should this encourage more of an intelligent and of a sensitively comparative benchmarking of the USA and EU with the Nordic countries? What can the USA, but also the EU, the OECD countries in general and the world learn from the Nordic countries (and what can the Nordic countries learn from the world)? In terms of quality of democracy and based on "Comprehensive sustainable development," Japan is behind the Nordic countries, slightly behind the USA and EU15, but performs still better than the EU28 (as of 2016) and OECD average (whole period). What are differences in empirical effects between "Comprehensive sustainable development" (Fig. 3.7) and non-political sustainable development

(Fig. 3.6). “Comprehensive sustainable development” appears to have a favoring effect for European democracies, and puts the USA under pressure. The introduction of political freedom plays to the advantage of Europe and the EU, not to the advantage of the USA (in recent years). This tendency is also consistent when we look back at the redesigned Human Development Index, which does not incorporate political freedom and is even more narrowly indicator-defined than the non-political sustainable development (Fig. 3.5): concerning redesigned HDI, here the USA is leading over the Nordic countries, the EU and Japan. For Japan, it can be stated that Japan is having a profile that is similar to (with) the EU across all three indicator sets: “Comprehensive sustainable development” including political freedom, sustainable development excluding political freedom, and the HDI redesigned. Therefore, Japan is not a contrast-profile against Europe or the USA, but aligns more closely with Europe (EU).⁴ This may be interpreted as a surprising result. *Therefore, as a general proposition, we may put forward: concepts of a broadly defined quality-of-democracy, based on “Comprehensive sustainable development,” play by tendency more in favor of European democracies and the EU, not so much in favor of the USA. Japan, surprisingly, has a profile that is quite similar to Europe and to the EU (in the context of the conceptual framework being applied here). The theoretical point of departure for conceptualizing democracy and the quality of democracy and their measurement, does matter and does impose deviating effects, when conceptual references are being drawn differently.* This always should be kept in mind and can be traced by empirical measurement. An ongoing reflection of the conceptual characteristics is therefore always necessary.

⁴In an earlier analysis, referring only to the years 2002–2008 and where tertiary education was compensated by the indicator of internet users (per 100 people), the performance profile of Japan behaved differently. Concerning the redesigned HDI, Japan scored (behind the leading USA and Nordic countries) better than the EU (EU15 and EU17). However, concerning the broader defined “Comprehensive sustainable development” or the sustainable development without political freedom, Japan scored in balance with the EU (but again behind the Nordic countries and the USA) (Campbell 2013).

4. *The specific non-political indicators of sustainable development for the OECD countries*: In the following, we shortly discuss and review those non-political indicators that we used for aggregating a dimension of sustainable development.⁵ In combination, these non-political indicators define in context of our *comparative multi-dimensional index-building* the non-political sustainable development. When political freedom is being added to the non-political indicators, then “Comprehensive sustainable development” results (within the framework of our model).

4.1. *Life expectancy at birth in total years (non-political indicator of sustainable development)*: Here, Japan clearly leads and ranks first (see Fig. 3.8). EU15 and the Nordic countries cluster together in close proximity, however, always EU15 ranks second and the Nordic countries rank third. Then follows EU28, still above the OECD average. Finally, the USA rank below OECD average. Life expectancy (per capita) cannot fluctuate as much as GDP per capita. Insofar, life expectancy contains most likely more information about the actual distribution within a population or society, so that the mean life expectancy may be closer to the median life expectancy than the mean GDP per capita to the “median” GDP per capita.⁶ Life expectancy resembles perhaps some patterns of similarity to income equality (compare Figs. 3.8 and 3.3). *The above OECD average of life expectancy in Europe and Japan correlates positively with the above OECD average of income equality again in Europe and Japan. In both regards, life expectancy and income equality, the*

⁵Income equality or Gini Index (issued by the World Bank) and gender equality, based on the Global Gender Gap Index of the World Economic Forum, we discussed already earlier (see Figs. 3.3 and 3.4). Therefore, we will not repeat (here) the discussion of these non-political indicators of sustainable development.

⁶The median implies that half of the population or of a sampled score higher than the median, whereas the other half scores lower. So the median really places in the middle of a distribution. For a more formal definition of the median, see on Wikipedia: <http://en.wikipedia.org/wiki/Median>; for a definition of the mean (arithmetic mean), see again on Wikipedia: <http://en.wikipedia.org/wiki/Mean>.

USA places under (below) the OECD average. Life expectancy carries implicit and explicit information about the distribution of wealth (and the quality of life and living) in a society, and will also, at least in some cases, indicate access and access opportunities of the population, the average individual, and the voter (voters) to welfare regimes and health care systems (see also Wilkinson and Pickett 2010). Interestingly, life expectancy is in EU15 (slightly) higher than in the Nordic countries, even though the Nordic countries achieve a higher GDP per capita and more income equality than EU15. As a general trend, life expectancy has increased for the identified OECD country groups over the whole period 2002–2016. However, in recent years, this increase again has slowed down.

- 4.2. *Tertiary education, tertiary gross⁷ school enrollment (non-political indicator of sustainable development):* Tertiary education clearly represents an indicator for sustainable development. Even though we review and discuss here tertiary education, we look at tertiary education also as a separate or distinct indicator that (in combination with other indicators) *can be interpreted also to represent a dimension that we may want to conceptualize as a “dimension of knowledge” (knowledge dimension).* This also interplays with the concept of “knowledge democracy” (Carayannis and Campbell 2012, pp. 16, 19, 52, 55; Veld 2010a, b; Biegelbauer 2013). Concerning tertiary education, the USA and the Nordic countries cluster together very closely; however, the USA ranks first and the Nordic countries rank second (after 2006) (see Fig. 3.9). EU15 and EU28 rank

⁷“Net” would indicate here that only the percentage enrollment of specific (predefined) age cohorts would be indicated. Since, however, tertiary education is not necessarily limited to specific age cohorts, this indicator is only being reported as “gross” in context of the World Development Indicators (World Bank 2011). In fact, the idea and concept of lifelong learning (LLL) emphasizes that there is a need or at least potential of spreading forms of tertiary education along the whole life spectrum, thus addressing very different age cohorts. Here, tertiary education and lifelong learning overlap with academic or tertiary continuing education. These appear to be trends for the advanced economies and societies, but could also apply to emerging economies.

third and fourth, close at, but still continuously slightly under the OECD average. During the 2010s, the EU15 is only marginally, almost negligibly ahead of EU28. Japan ranks fifth and is clearly under OECD average. In reference to tertiary education, we can conclude that the USA and the Nordic countries are leading definitely in advance of the OECD average. The Nordic countries and the USA occupy here a very strong (and potentially competitive) position. The European Union (EU15 and EU28) performs slightly below this benchmark of OECD average. Furthermore, and certainly, the EU definitely does not perform in advance of the OECD average. *Therefore, concerning knowledge and the knowledge dimension (when being identified as is here the case), there continues to exist a gap and cleavage to the advantage of the USA and to the disadvantage of the European Union. In context of the knowledge-based society and economy, or the knowledge society, knowledge economy and knowledge democracy, which underscore the importance of knowledge for development, performance and progress, this should be seen and identified as a weakness of the European Union and of European democracy vis-à-vis the USA* (Carayannis and Campbell 2011; Dubina et al. 2012). These propositions may also apply to knowledge democracy (Carayannis and Campbell 2011, p. 367). *The USA has more opportunities of leveraging knowledge than Europe. Therefore, the European Union should focus increasingly on efforts to promote more (and better) knowledge.* In their knowledge lead, the USA and the Nordic countries are apparently at par. *But this also implies that within context of the knowledge dimension (unlike several other dimensions) the Nordic countries are not leading or performing ahead of the USA.* Here the USA (as a major country) approached clearly (and also surpassed) Nordic levels. Concerning tertiary education, Japan falls behind the EU. One may want to speculate, whether the indicator of tertiary education may be even more important in reference to a comparative multidimensional index-building, because of the several ramifications of (tertiary) education for democracy and the quality of democracy, by perhaps providing more of a crucial

relevance than other knowledge indicators, such as technology diffusion (e.g., frequency of internet use). However, at least within the world of OECD countries, growth of tertiary education behaves also more saturated and changes in ranking positions are only difficult to achieve.⁸ Growth in technology diffusion (internet use) still is more dynamic, and shifts and improvements in positions and positioning can be achieved more easily by different countries. This current dynamism and dynamics of technology diffusion explain why growths in internet use may contribute so importantly to the dimension of knowledge. What are the current and potential future benefits of technology diffusion (internet use) for the by tendency “saturated” OECD growth in tertiary education? While tertiary education still has expanded in the EU and Japan during most phases in the 2000s and 2010s, these growth curves in tertiary education have saturated, even declined in the USA and Nordic countries in recent years. What does this tell us about further growth trajectories of knowledge economy, knowledge society and knowledge democracy?

- 4.3. *GDP per capita, PPP, in constant 2011 international \$ (non-political indicator of sustainable development)*: Concerning this indicator, the USA performs clearly as first-ranking (see Fig. 3.10). Second, perform already the Nordic countries. Almost at par perform the EU15 and Japan. EU15 and Japan place around OECD average, and EU28 performs slightly under the OECD average. *GDP per capita marks clearly an area of great strength for the USA*. In methodic terms, GDP per capita is more a mean value (a value of the arithmetic mean), and not a median score. Therefore, the GDP per capita does not indicate what are the patterns of distribution of wealth within a country (democracy or non-democracy). High GDP per capita does not automatically imply that the average citizen is well off and

⁸Scores for the Nordic countries even peaked in the mid-2000s. Scores for the USA peaked in the early 2010s.

prospering. *The USA ranks top regarding GDP per capita. This, however, is being counterbalanced by an income equality-ranking far below OECD average* (compare Figs. 3.10 and 3.3). The Nordic countries rank second (and still above OECD average) concerning GDP per capita, but are top in relation to income equality (far higher than the OECD average). *Therefore, when we compare GDP-per-capita-based, the Nordic countries and the USA are interested in the actual distribution of wealth across society (and the economy), where is the average citizen, again in terms of wealth, better off? Is the “median” GDP per capita higher in the USA or in the Nordic countries? The one big data problem, with which we are confronted, is the circumstance that the median GDP per capita is not being reported (systematically and comprehensively) in context of standard data compendiums or databases* (such as the World Development Indicators, issued regularly by the World Bank; see for example World Bank 2018). Life expectancy (Fig. 3.8) has some distributional information (at least more than in the case of the GDP-per-capita-indicator), and here the USA performs below OECD average. All of this really indicates the serious need of starting to calculate and to report a median GDP per capita as a crucial and new indicator (or starting to design such an indicator).

- 4.4. *Less CO₂ emissions, in metric tons per capita (non-political indicator of sustainable development)*: This indicator we designed (redesigned) in a way so that higher (indicator) scores actually indicate less (lower) CO₂ emissions. Therefore, higher ranking positions are in line with less CO₂ emissions. With this indicator reference of CO₂ emissions, we want to include environmental sensitivity (Carayannis and Campbell 2010) and social ecology (Fischer-Kowalski and Haberl 2007) into the model-building, conceptualization and measurement of democracy and the quality of democracy. In that understanding, the social (societal) context of the political system matters, but is also the environmental context of society and of the political system of importance. In the model of Quintuple Helix innovation systems, the environmental challenge is being seen

and interpreted as a potential driver for further knowledge production and innovation (Carayannis and Campbell 2010, pp. 58–63). Could a democracy be regarded as a high-quality democracy that is ignorant of the environmental embeddedness of society, politics and the economy? Environmental pollutions obviously put at risk the further prospering or even the survival of a society, a democracy as well as an economy. The United Nations' Human Development Report of 2007/2008 also focused on the topic of "fighting climate change," thus highlighting and emphasizing the importance of ecological issues and features for the further development and progress of humanity (UNDP 2007). Concerning less CO₂ emissions, the European Union and the Nordic countries group together very closely (see Fig. 3.11). Japan ranks already as fourth, also with CO₂ emissions approximately at levels comparable with the OECD average. The USA behave here opposite, with CO₂ emissions considerably higher than the OECD average. Interestingly, this pattern reveals certain similarities with income equality (compare Figs. 3.11 and 3.3). In OECD countries, with more income equality, there are less CO₂ emissions. However, in OECD countries with more CO₂ emissions, there is also less income equality, or more of an income inequality (formulated here as a proposition). Among the observed OECD countries and country clusters, conclusively Europe (European Union, and the Nordic countries) expresses less CO₂ emissions than Japan and the USA. The record of the USA is here the least favorable. As a general tendency, levels of CO₂ emissions decreased in all identified OECD country groups during the 2000s and 2010s, which should be valued as a good sign. However, after 2012, this decrease again slowed down. This, obviously, represents again a critical trend in the more recent years.

5. *Comparative contrast profiles of the USA, the Nordic countries, the EU15 and EU28*: The USA, the Nordic countries and the European Union are frequently being treated as "role models" of and for democracy. This provides a rationale for again comparing focused

and summative these three country groups. The USA often qualifies as a “liberal democracy” (Sodaro 2004) or also as a *Liberal Welfare Regime* (Esping-Andersen 1990). The European Union is closer associated with social welfare systems or also “social democracy” (Sodaro 2004, p. 48). The Nordic countries, in particular, are typologized as *Social-Democratic (Universal) Welfare Regimes* (Esping-Andersen 1990). The Nordic countries and European Union overlap not completely, but substantially.

5.1. *The USA and Nordic countries in comparison:* Of the 11 indicators or dimensions, which we conceptualized and measured empirically in context of our comparative multidimensional index-building, the USA lies only in three indicators ahead of the Nordic countries. These are: economic freedom, GDP per capital and tertiary education (see Figs. 3.3, 3.9 and 3.10). Concerning the other eight indicators or dimensions, the Nordic countries lead (partially unambiguously) higher-ranking than the USA. This Nordic country lead also refers to and includes political freedom, both equality measures (gender equality and particularly striking concerning the income equality), the composite redesigned Human Development Index, the non-political sustainable development as well as the “Comprehensive sustainable development.” With the exception of GDP per capita and tertiary education, the Nordic countries outrank and outperform the USA with regard to the other indicators of sustainable development. We can expect that the lead of the USA, concerning GDP per capita, is being substantially counterbalanced by the circumstance and empirical fact that income equality is by far greater in the Nordic countries. It could be asserted that the higher levels of economic freedom in the USA add and contribute to the higher levels of GDP there. However, when higher GDP is also being accompanied by larger income inequality, so what are then the remaining positive effects for the average American citizen? *Summarizing our empirical findings, the proposition could be set up that, based on our empirical indicators, the quality of democracy has developed to higher levels in the Nordic countries than in*

the USA. In that sense, the Nordic countries behave and qualify more as a global benchmark, reference and country reference cluster for quality-of-democracy to the world than in the case of the USA. In that rationale and line of thinking, the USA could learn substantially from the Nordic countries (Carayannis and Kaloudis 2010). But, to emphasize this here again as a general statement, every system, country and democracy can and should learn from the other countries and democracies, so also the Nordic countries from the USA. For example, the (marginal) lead of the USA, concerning tertiary education, should be treated seriously by the Nordic countries.

- 5.2. *The USA and EU15 in comparison:* The comparative analysis of indicators, dimensions and outcome of the USA and EU15 refers to a much more balanced picture than in the case where we compared the USA with the Nordic countries (where, by and large, the Nordic countries lead). Focusing and refocusing now on the comparison of the USA with the EU15: The USA leads by five indicators and the EU15 by four, and for two indicators, we should state a too-close-to-call balance. The USA leads with regard to: economic freedom, redesigned Human Development Index, non-political sustainable development, tertiary education, and GDP per capita. The EU15 leads concerning: income equality, gender equality, life expectancy, and less (lower) CO₂ emissions. Political freedom and “Comprehensive sustainable development” are more undecidable; here the USA and EU15 behave and perform balanced in relation to each other. Based on these empirical findings, several (partially competing) propositions could be set up for further discussion. *In the following, we want to elaborate on three of such possible propositions and want to develop arguments from different perspectives:*
- (1) The USA leads in more indicators (dimensions) than the EU15, this may point to a marginal advantage of the USA.
 - (2) The USA and EU15 developed different profiles of competences and patterns of quality of democracy. *The USA, as a country, system and democracy, focuses more on core categories of dynamic economic growth, leveraging economic freedom, and*

promoting and leveraging the dimension of knowledge, since knowledge functions as a crucial input for economic growth and performance in context of the knowledge economy and knowledge society. The EU15 (when compared with the USA) follows more the approach of a balanced development in equilibrium, recognizing and acknowledging equality, and emphasizing more the social and ecological dimensions. Challenges for EU15 may be the mobilization of dynamic economic growth, and a greater emphasis to be placed on the dimension of knowledge. Challenges for the USA are a sustainable growth, since the dynamics of USA growth is overshadowed by greater (economic and social) inequalities. In a quality-of-democracy concept, emphasizing more the spheres of equality, the EU15 ranks higher than the USA. In a quality-of-democracy concept, favoring opportunities of economic growth and dynamism, the USA may have the cutting edge. The dilemma, of course, is that in the long run equality and economic growth are mutually dependent, and this challenges the EU15 as well as the USA. These profile differences of the USA and EU15 also imply (particularly, when the practical effects of empirical indicators are known and when linked to the building of conceptual models of democracy and the quality of democracy) that one-sided models could be designed in a way so that they one-sidedly either favor the USA or the EU15: conceptual emphasis on dynamic growth of the knowledge economy plays to the favor of the USA, whereas a conceptual emphasis on equality and the social and ecological dimensions plays to the favor of the EU15. Interestingly, freedom, and here most notably political freedom, does not provide either the USA or the EU15 an advantage (competitive advantage) over the other.

- (3) The balanced (almost equal) lead of the USA and EU15 in different indicator areas (five indicators point to the favor of the USA, four to the favor of EU15, and 2 are undecided) creates here a situation of balance (paradoxical balance). *The USA and the EU15 are caught up in a deadlocked situ-*

ation in a stalemate, implying that the USA and EU15 are at par (from a whole aggregated perspective). This means that it is too close to call, whether the quality of democracy is more advanced in the USA or in EU15. The conceptual model and the techniques of measurement, accompanying our comparative multidimensional index-building, have the “unsharpness” of not providing certainty, whether the USA or EU15 occupy the lead position. Any assertion or claim of a (ranking) leadership would be (too) vague, since it could only be achieved by giving different methodic weight to different indicators or by dropping some of indicators from the list of applied indicators. This would give “subjectivity” very much room, meaning that both propositions (a lead of the USA as well as of EU15) could be argued and model-based verified. This is being furthermore emphasized (also symbolically) by the circumstance that two (for quality-of-democracy) crucial key indicators themselves, political freedom and sustainable development, do not allow predicting a clear lead of the USA or EU15. This also could be interpreted as a deadlock situation in and of ideology. Despite their difference, also ideological differences, the performance of democracy does not differ sufficiently enough to say, whether the quality of democracy is higher developed in the USA or in the EU15. Based on subjective preferences, the underlying values and driving ideologies appear more or less preferable to an observer or a single actor, however, assertions of supremacy of a specific ideology are not linked to a clear lead in the performance scoring. What does this tell us about the explanatory power of theories, concepts and ideologies that we have at our disposal and our use, for the moment? Is there still too much conceptual fog involved? Perhaps we would have to progress here to a next-stage meta-perspective, which, however, is not on the horizon of our current mainstream thinking. Even should there be such conceptual (theoretical) prospects, this balance of not-being-able-to-decide may also migrate to the next higher meta-level. Some individual member countries (member states) of EU15 rank higher than the USA. For

example, when we take “Comprehensive sustainable development” as a benchmark indicator for the quality of democracy, in 2016, then no less than eight member countries of the EU15 rank higher than the USA.⁹ On the other hand, of course, also the USA could be disaggregated into its 50 member states, calculating scores of “Comprehensive sustainable development” for each USA member state individually. This would create a matrix of complex multilevel comparison between the USA and EU15.

- 5.3. *The USA and EU28 in comparison: While the scoring between the USA and EU15 is more balanced (almost undecideable), the balance shifts clearly in favor of the USA, when the USA is being compared with EU28.* Of the eleven indicators (dimensions), used for our comparative multidimensional index-building, the EU28 leads only with respect to four indicators: income equality, gender equality, life expectancy and less CO₂ emissions. The USA leads in both freedom dimensions (but not in political freedom after 2012), in two individual indicators of sustainable development (GDP per capita, and the knowledge dimension), and in the aggregated dimensions of sustainable development (redesigned Human Development Index, non-political sustainable development and “Comprehensive sustainable development”). The lead of the USA in “Comprehensive sustainable development” (a benchmark dimension for quality of democracy) is marginal, the gap is closing, but there is still a (small) lead advantage in favor of the USA. Core dimensions, where EU28 can defend and emphasize a leadership position, are equality, life expectancy and the environment (lower CO₂ emissions). The USA emphasizes leadership in freedom and in a majority of (but not all) indicators of sustainable development (most notably wealth and knowledge) as well as the dimensional aggregations of sustainable development. This, of course, refers us back to the earlier discussion point, which Europe or

⁹See again Table A.2.7 in Appendix.

which European Union indicates a “fairer peer” for comparison with the USA? Since the USA represents such a large-sized country with a large-sized population, this already may pose per se some problems when comparing the USA with small-sized European countries (such as the Nordic cluster), because then, from a pro-American perspective, it could be argued why not picking a few of the best-performing US states for the purpose of a comparison with assessment character? In political real terms, currently, the EU28 exists, and not the EU15. The EU15 was politically a configuration of the past. (In the future, as of 2019, the EU28 may again be downscaled to an EU27, after the UK will have left the European Union.) This may imply a preference of comparing the USA primarily with the EU28. From a pro-European (or pro-EU) perspective it could then be argued, however, that the aggregation of the EU15 should be granted the status of a good, fair and competitive benchmark for the USA, because (at least to a certain extent) the lower performance of the EU28 results from circumstances that several Eastern-Central European countries were integrated in 2004 and 2007.¹⁰ Performance problems of the Eastern-Central European countries were (and still are) substantially caused by the deficiencies of the communist regimes during the era of Soviet control over these regions and their long-lasting legacies and outcomes (Campbell 1994). Functional deficiencies of communism had roots different than the political, economic and social regimes of the EU15 in Western Europe. The extension of EU membership to Eastern-Central European countries actually intended also to support sustainable development there. Therefore, the EU15 should qualify as the “fair peer” (fairer peer) for comparisons with the USA. Thinking in methodic terms, what would be the effects for empirical results and the quality of democracy, when the USA, Canada and Mexico would be aggregated to a country cluster of “North

¹⁰See on that chronology: https://europa.eu/european-union/about-eu/history_en.

America”? This may be justified by arguments that all three countries belong to the OECD and that North America has an aggregated population closer to the population size of EU28. To further illustrate this point: regarding “Comprehensive sustainable development,” and again referring to the year 2016, 13 countries ranked higher than the USA, of which 10 were European, and of these again 8 belonged to the traditional core or EU15.¹¹ To turn this observation: None of the EU28 countries, not belonging to the historical core of EU15, ranked higher than the USA. *Trying to balance these pros and cons arguments together into a meta-perspective, we probably have to say that there can be in-permanence competing and conflicting arguments and opinions, whether the EU15 or EU28 serves as a better reference or fairer peer for comparisons with the USA. One way how to balance methodically such conflicting viewpoints is exactly to compare the USA always with both, the EU15 and the EU28.* This allows at least specific and individual assessment, counter-balancing effectively one-sided interpretations.

6. *Comparative contrast profiles of Liberal Welfare Regimes, the Nordic countries (Social-Democratic [Universal] Welfare Regimes) and Conservative Welfare Regimes:* In the empirical analysis before, we compared the USA with the Nordic countries, the EU15 and EU28. *In the following section, we want to rerun this analysis, by referring explicitly to the (already discussed) welfare regime typology of Gøsta Esping-Andersen (1990).* For the so-called Western OECD countries, Esping-Andersen suggests the following three-fold typology (in his conceptual core approach): the *Liberal Welfare Regimes*, referring to Canada, the USA, United Kingdom, Australia, and New Zealand; the *Social-Democratic (Universal) Welfare Regimes or Nordic countries*, based on Denmark, Finland, Norway, and Sweden; and the *Conservative Welfare Regimes*, being represented by Austria, Belgium, France, Germany, Italy, the Netherlands, and Switzerland. We want to test and inquire analytically, whether a comparison based on this

¹¹See again Appendix Table A.2.7.

typology provides different empirical results in contrast to the comparison of the USA with the Nordic countries and EU15 and EU28. The timeline, being applied here, is shorter, running from 2002 only to 2008. Further, the indicator base has been expanded by one indicator, being technology diffusion in the form of internet users per 100 people (World Bank 2018). Also, the country references now are the USA, EU15 and EU27 (EU28 without Croatia).

6.1. *The Liberal Welfare Regimes and Nordic countries (Social-Democratic [Universal] Welfare Regimes) in comparison:* Of the twelve covered indicators (dimensions), the Liberal Welfare Regimes lead only in two areas, these are economic freedom and GDP per capita. In all other ten indicators (dimensions), the Nordic countries are leading ahead. The USA still could achieve a ranking lead in three indicators, namely economic freedom, GDP per capita and tertiary education. When compared with the Liberal Welfare Regimes together, then the Nordic countries perform better with regard to tertiary education.¹² *This encourages formulating the proposition that the USA alone performs somewhat better and more competitive than the whole five-country aggregation of the Liberal Welfare Regimes: here comes into play that the USA realizes a comparatively high achievement rate of tertiary education.* For example, in 2008, based on the indicator of tertiary education, only five countries ranked higher than the USA. Among these were South Korea, Finland, Greece, and Slovenia.¹³ *Formulating a more general proposition, we can assert (reassert) that by tendency the Nordic countries (Social-Democratic [Universal] Welfare Regimes) outperform the Liberal Welfare Regimes as well as the USA, not in all indicator domains, but in a majority of indicators (dimensions).*

¹²Only in 2002, the Liberal Welfare Regimes rank higher on tertiary education than the Nordic countries. In all of the following years (2003–2008), the Nordic countries rank here higher.

¹³Number-one-ranking country (in 2008) for this indicator was Cuba. We already discussed the pros and cons or plausibility of that circumstance or datum attribute (World Bank 2018).

6.2. *The Conservative Welfare Regimes and Nordic countries (Social-Democratic [Universal] Welfare Regimes) in comparison:* The Conservative Welfare Regimes lead only in two indicators marginally ahead of the Nordic countries, which are life expectancy and lower rates of CO₂ emissions. In all other indicators (dimensions), the Nordic countries rank higher, partially substantially higher, thus outperforming the Conservative Welfare Regimes. The Nordic countries lead in the dimensions of freedom, equality and all aggregations of sustainable development, including “Comprehensive sustainable development” that can be regarded as a broad measure for the quality of democracy. With the exception of Norway, the Nordic countries (as being typologized here, and in accordance with Gøsta Esping-Andersen 1990) belong to the European Union, also the Conservative Welfare Regimes, with the exception of Switzerland. In that understanding, at least to a certain extent and for the purpose of reasoning and assessment here, we may interpret (with exceptions) the Nordic countries as the Nordic region within the EU and the Conservative Welfare regimes as the (as a core) Continental European region within EU. The Nordic EU region scores mostly and considerably better across a wide range of indicators and dimensions of performance and quality of democracy than the Continental EU. *Does this imply that the Nordic EU region represents the most (several-country) advanced region within the EU? For the further development of Continental EU as well as of the whole EU, therefore, the Nordic EU and the Nordic countries serve as a crucial reference and benchmark, which should be carefully analyzed and assessed. The Nordic countries, at least to a certain extent, present here a role model for progress and progressing quality of democracy, for and to the EU and the entire world.* The assertion of a role-model-quality of the Nordic countries is not of an ideological nature, but is based empirically on indicators and performance (on the “Nordic model,” see also Carayannis and Kaloudis 2010, pp. 10–15). One interesting circumstance, however, which should be noted is that despite the general lead of the Nordic countries, life expectancy in the

Conservative Welfare regimes (Continental EU) is higher than in the Nordic countries, only marginally, but still.

- 6.3. *The Liberal Welfare Regimes and Conservative Welfare Regimes in comparison:* Of the twelve indicators (dimensions), covered by our model of comparative multidimensional index-building, the Conservative Welfare Regimes lead only in four indicators: income equality, gender equality, life expectancy, and less CO₂ emissions. In all the eight other indicators (dimensions), the Liberal Welfare Regimes are leading. Alternatively, one may assert that four indicators are also too-close-to-call for a real ranking trend: gender equality (with a marginal shift in favor of the Continental Welfare Regimes as of 2007), on the one hand, and political freedom, non-political sustainable development and “Comprehensive sustainable development” on the other, with only a marginal advantage for the Liberal Welfare Regimes, and a gap even smaller for non-political sustainable than for “Comprehensive sustainable development.” *Here even the proposition could be put forward that concerning the ranking and performance of aggregated non-political and “Comprehensive sustainable development,” the Liberal and Conservative Welfare Regimes are deadlocked.* This alternative interpretation would have the effect on the assessment of scoring that the Liberal Welfare Regimes lead with regard to five indicators (dimensions), the Conservative Welfare Regimes lead in three indicator domains, and for four more indicators (dimensions) it cannot be clearly decided, to which favor they play. *Put in summary, the Conservative Welfare Regimes express a ranking advantage in equality, the Liberal Welfare Regimes in freedom, while for sustainable development these two types of welfare regimes are caught up in a stalemate. What is so interesting about these empirical results is that they basically reproduce (at least by tendency) the same ranking results and ranking leads when the USA is being compared with the EU15 as well as EU28. So the country-regrouping of the USA into the Liberal Welfare Regimes and the country-regrouping of the EU15 and EU28 into the Conservative Welfare Regimes does not produce a different ranking outcome for that*

particular type of aggregate comparison, even though some of the countries shift groups (for example the UK and Switzerland). We see, how influential the USA impacts the aggregate scores for the Liberal Welfare Regimes and how influential the scores of the Conservative Welfare Regimes are for the aggregate scores of EU15 and EU27 (EU28). *This may lead to the proposition that two “parallel types” of role models may be asserted that mark specifically possible contrast points for comparisons: the USA and/or Liberal Welfare Regimes, and the EU15, EU27, EU28 and/or Conservative Welfare Regimes.* Does this allow portraying the USA as a prototype of a liberal welfare regime and the EU15 (EU27, EU28) as a prototype of a conservative welfare regime? In the case of the USA, such an assertion probably has more plausibility. In context of the European Union, however, two types of (ideal-typical) welfare regimes coexist, at least according to Gøsta Esping-Andersen (1990), when we want to refer to his typology: the (Continental European) Conservative Welfare Regimes and the (Nordic) Social-Democratic (Universal) Welfare Regimes. We already noted a slight difference in the ranking of indicators, when we compare the Nordic countries (Social-Democratic [Universal] Welfare Regimes) either with the Liberal Welfare Regimes (comprising the USA) or with the USA alone. The Nordic countries perform somewhat stronger against the aggregate Liberal Welfare Regimes (by one indicator) than the USA as a single country. *What, however, is more important is that while the (Continental European) Conservative Welfare Regimes cannot outperform either the Liberal Welfare Regimes or the USA,¹⁴ the Nordic countries (Social-Democratic [Universal] Welfare Regimes) outrank the USA in a majority of indicator domains (dimensions). Implications of this are that based on the conceptual welfare-regime-typology of Gøsta Esping-Andersen (1990), there exist or coexist in Europe at least two*

¹⁴In fact, the (Continental European) Conservative Welfare Regimes are partially in a defensive and lower-ranking position against the Liberal Welfare Regimes and USA.

different types of welfare regimes, the (Continental European) Conservative Welfare Regimes and the Nordic countries (Social-Democratic [Universal] Welfare Regimes). This difference in typology also manifests itself in a different performance. After all, differences in European welfare-regime-performance provide additionally crucial conceptual legitimacy to the welfare typology of Esping-Andersen.

References

- Biegelbauer, Peter. (2013). *Wie lernt Politik? Lernen aus Erfahrung in Politik und Verwaltung*. Wiesbaden: Springer VS.
- Campbell, D. F. J. (1994). European Nation-State Under Pressure: National Fragmentation or the Evolution of Suprastate Structures? *Cybernetics and Systems: An International Journal*, 25(6), 879–909. <http://www.informaworld.com/smpp/title-db=all-content=g770888219>.
- Campbell, D. F. J. (2013). *Conceptualizing and Measuring the Quality of Democracy in Global Comparison. Freedom, Equality, Sustainable Development, and Political Self-Organization (Political Swings, Government/Opposition Cycles) in 151 Countries (Democracies, Semi-democracies and Non-democracies), 2002–2008*. Habilitationsschrift. Vienna: University of Vienna (Habilitationsschrift).
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate To Each Other? A Proposed Framework for a Transdisciplinary Analysis of Sustainable Development and Social Ecology. *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69.
- Carayannis, E. G., & Campbell, D. F. J. (2011). Open Innovation Diplomacy and a 21st Century Fractal Research, Education and Innovation (FREIE) Ecosystem: Building on the Quadruple and Quintuple Helix Innovation Concepts and the “Mode 3” Knowledge Production System. *Journal of the Knowledge Economy*, 2(3), 327–372. <http://www.springerlink.com/content/d11r223321305579/>.
- Carayannis, E. G., & Campbell, D. F. J. (2012). *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems. 21st-Century Democracy, Innovation, and Entrepreneurship for Development (SpringerBriefs in Business)*. New

- York: Springer. <http://www.springer.com/business+%26+management/book/978-1-4614-2061-3>.
- Carayannis, E. G., & Kaloudis, A. (2010). A Time for Action and a Time to Lead: Democratic Capitalism and a New “New Deal” for the US and the World in the Twenty-First Century. *Journal of the Knowledge Economy*, 1(1), 4–17. <https://link.springer.com/article/10.1007/s13132-009-0002-y>.
- Dubina, I. N., Carayannis, E. G., Campbell, D. F. J. (2012). Creativity Economy and a Crisis of the Economy? Coevolution of Knowledge, Innovation, and Creativity, and of the Knowledge Economy and Knowledge Society. *Journal of the Knowledge Economy*, 3(1), 1–24. <http://www.springerlink.com/content/t5j8l12136h526h5/>.
- Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.
- Fischer-Kowalski, M., & Haberl, H. (Eds.). (2007). *Socioecological Transitions and Global Change: Trajectories of Social Metabolism and Land Use*. Cheltenham: Edward Elgar.
- Sodaro, M. J. (2004). *Comparative Politics: A Global Introduction* (2nd ed.). With contributions by D. W. Collinwood, B. J. Dickson, J. L. Klesner, & T. D. Sisk. New York: McGraw Hill.
- UNDP (United Nations Development Programme). (2007). *Human Development Report 2007/2008. Fighting Climate Change: Human Solidarity in a Divided World*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2007-8/>.
- UNDP (United Nations Development Programme). (2009). *Human Development Report 2009. Overcoming Barriers: Human Mobility and Development*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2009/>.
- UNDP (United Nations Development Programme). (2010). *Human Development Report 2010. 20th Anniversary Edition. The Real Wealth of Nations: Pathways to Human Development*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2010/>.
- Veld, R. J. in't. (2010a). *Knowledge Democracy: Consequences for Science, Politics, and Media*. Heidelberg: Springer. <https://link.springer.com/book/10.1007/978-3-642-11381-9>.
- Veld, R. J. in't. (2010b). Towards Knowledge Democracy, 1–11. In R. J. in't Veld (Ed.), *Knowledge Democracy: Consequences for Science, Politics, and Media*. Heidelberg: Springer. https://link.springer.com/chapter/10.1007/978-3-642-11381-9_1.

- Wilkinson, R. G., & Pickett, K. (2010). *The Spirit Level: Why Equality is Better for Everyone*. London: Penguin Books.
- World Bank. (2011). *World Development Indicators* (Web-based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2>.
- World Bank. (2018). *World Development Indicators* (Web-based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>.



4

Comparative Empirical Analysis of the Non-OECD Countries: Freedom, Equality and Sustainable Development in the Non-OECD Countries (2002–2016)

In our second round of empirical analysis, we shift the focus now on the non-OECD countries and the world regions of Latin America (LA17) and Asia (Asia15), which consist completely or almost completely of non-OECD countries.¹ Concerning individual (non-OECD) countries, we develop a closer look at Brazil, China, India, Indonesia, Nigeria and Russia (Russian Federation). This individual country sample is geared toward Latin America and Asia, in fact allowing a comparative juxtaposition of these two important and crucial world regions. We consider the complementing of the OECD countries by this non-OECD country perspective as crucial, since this is necessary for creating a comprehensive perspective for approaching closer to a global perspective. By far, the OECD countries are less representative for the whole world than those non-OECD countries and regions, identified and specified here. Finally, we also include the whole world (World122),² based on

¹The only exceptions here are Mexico and Chile, belonging to the region of Latin America and representing an OECD country at the same time.

²As World122 we define those 122 countries (regions) in our model with no missing indicators (see again Sect. 2.4 in Chapter 2 for the definition of country groups).

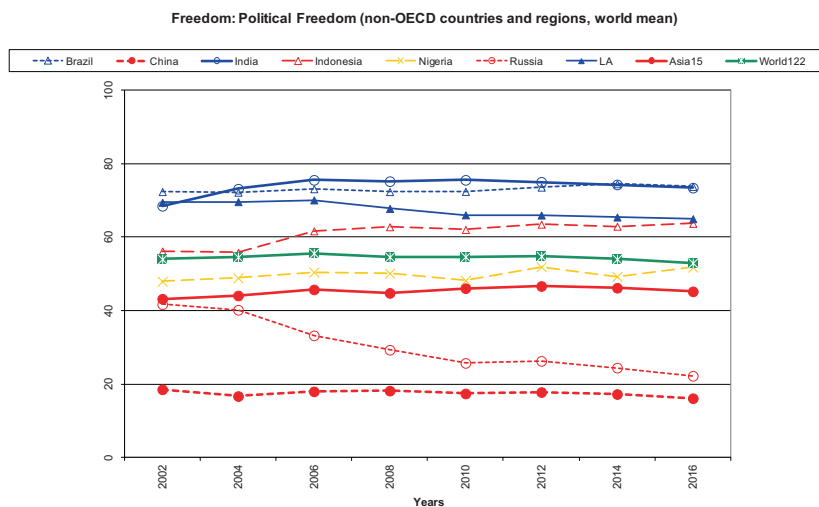


Fig. 4.1 Political Freedom in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (*Source* Author's own calculation and visualization)

averages (means) weighted by population, into the comparison with the non-OECD countries. This supports propositions whether a country develops and performs above or below the world average. For the non-OECD countries, being presented and being portrayed here, we also refer to the same period of 2002–2016. See also the comprehensive Figs. 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, and 4.12 and furthermore the tables in Appendix A.2 and A.3.

1. *The dimension of freedom for the non-OECD countries*

- 1.1. *Political freedom in the non-OECD countries:* Brazil, India and Indonesia place above, Nigeria, Russia and China below the world average (see Fig. 4.1). While India, Indonesia and Nigeria managed and achieved gains, Russia suffered the biggest decline in political freedom, but political freedom also declined in China. *When we look more comprehensively at the world regions of Latin America and Asia, then we can conclude that Latin America*

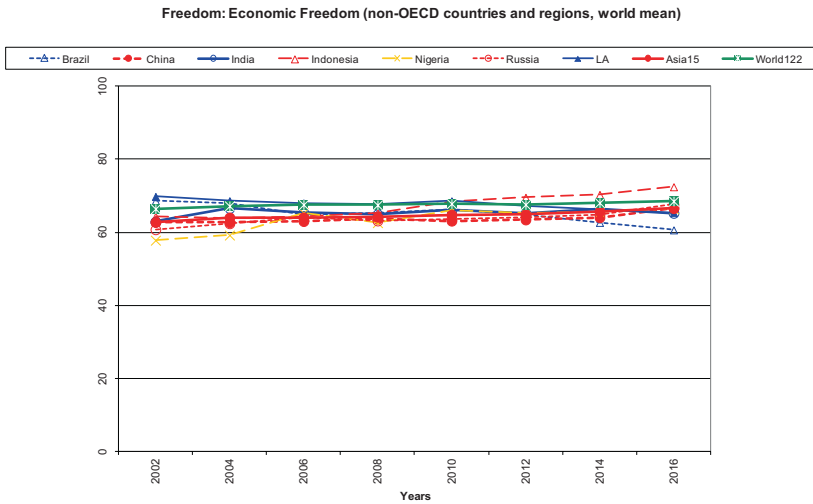


Fig. 4.2 Economic Freedom in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (Source Author’s own calculation and visualization)

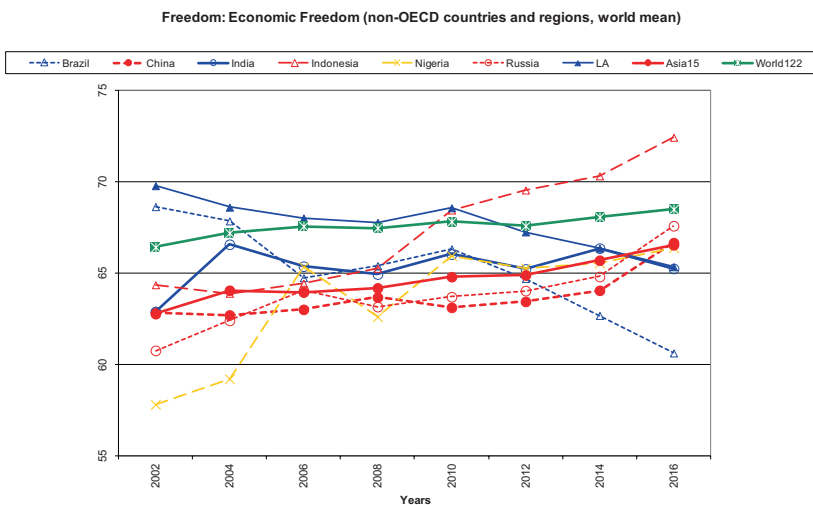


Fig. 4.3 Economic Freedom in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (Source Author’s own calculation and visualization)

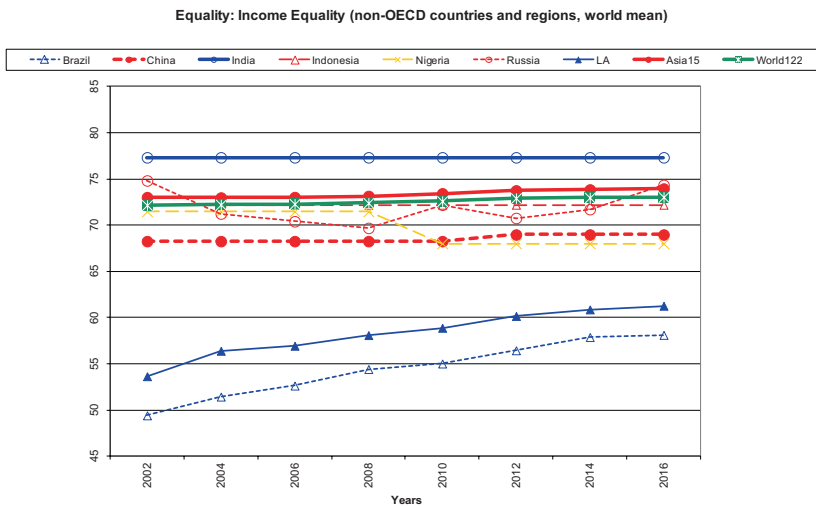


Fig. 4.4 Income Equality in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation and visualization)

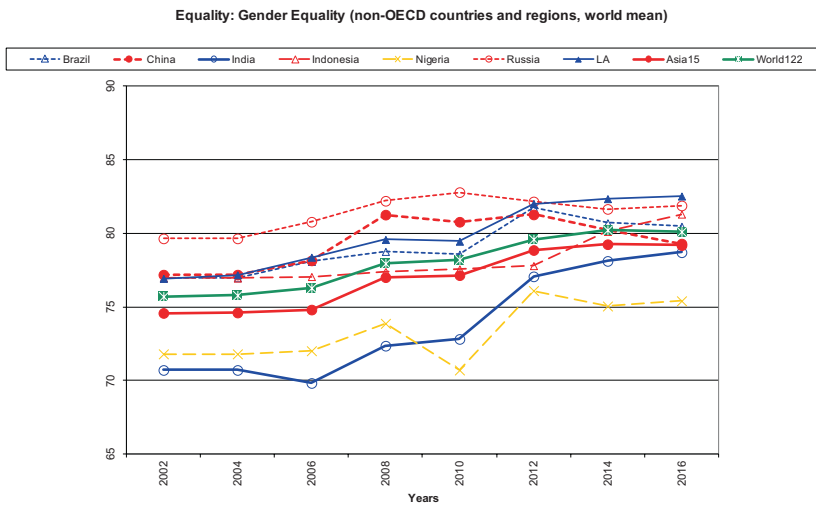


Fig. 4.5 Gender Equality in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation and visualization)

developed a political freedom ahead of the world average, while Asia still performs under (or below) the world average. To be more precise, there appears to be a dividing line or gap running through Asia, with developments in South Asia and South-East Asia (India and Indonesia) more in favor of political freedom, while developments in China and Russia are less favorable for political freedom. At the same time, general conditions of political freedom gradually progressed somewhat in Asia, while political freedom, aggregated for all of Latin America, slightly decreased by tendency. Still, it should be emphasized that as a general statement, political freedom has developed considerably to higher levels in Latin America than in Asia. In addition, the selected countries and country groups, being portrayed and analyzed here, cover a broad range of very different manifestations of political freedom, ranging from high to very low. The world average (World122) of political freedom decreased even modestly, when put in reference to the whole period of 2002–2016. Particularly after 2009, there is a continuous downsliding of political freedom. *Overall, there is the impression that political freedom stagnates world wide, when being viewed at from a global perspective.* This has the potential of a troublesome indication. Several implications are possible. Three crucial interpretations are: (1) political freedom does not really progress anymore in a global format³; (2) political freedom only progresses in some world regions, whereas it stagnates or even declines in other world regions; and (3) our conceptual and methodic tools for measuring political freedom beyond the establishment of a certain threshold (or minimum) of political freedom are exhausted or have never been really invented, reinvented or innovated so far, so we lack here the innovation of creating new tools for conceptualizing and measuring the progress of advanced and advancing political freedom.

- 1.2. *Economic freedom in the non-OECD countries:* While we observed a greater expression of variation of (higher and lower) political freedom across the selected non-OECD countries, the

³Based on our data and model, this could be asserted at least for the long period of 2002–2016.

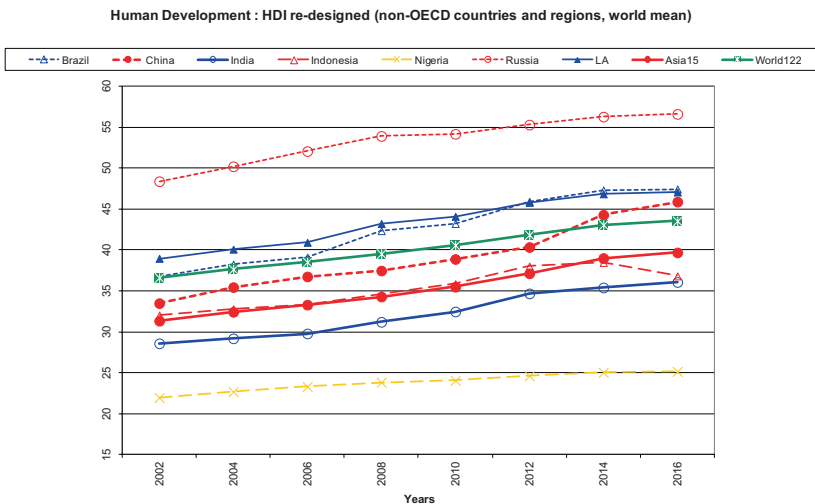


Fig. 4.6 Human Development (HDI redesigned) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation and visualization)

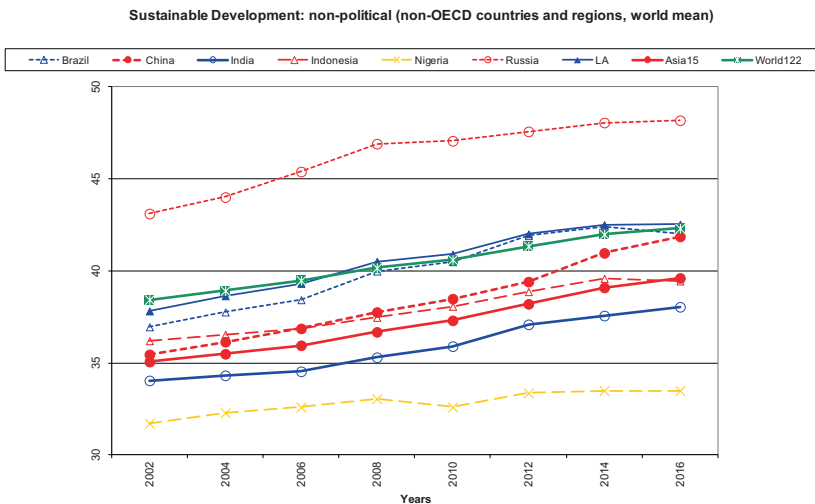


Fig. 4.7 Sustainable Development (non-political) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation and visualization)

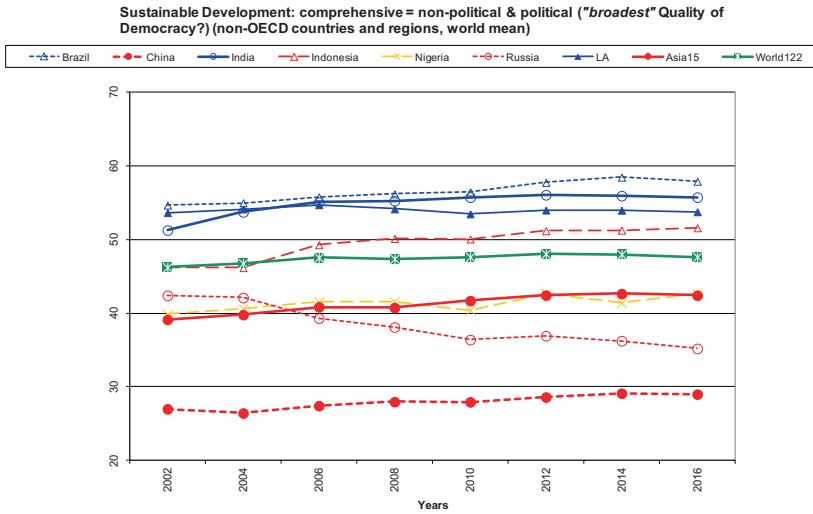


Fig. 4.8 Sustainable Development (non-political and political) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation and visualization)

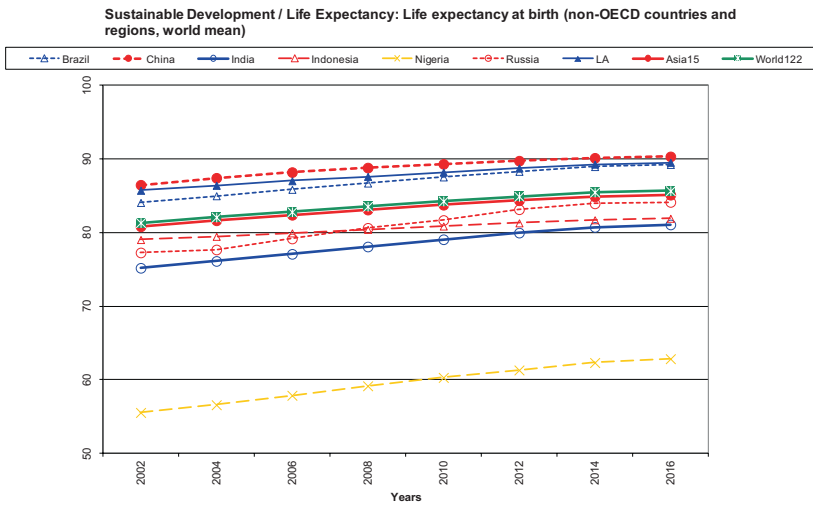


Fig. 4.9 Life expectancy (Sustainable Development) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation and visualization)

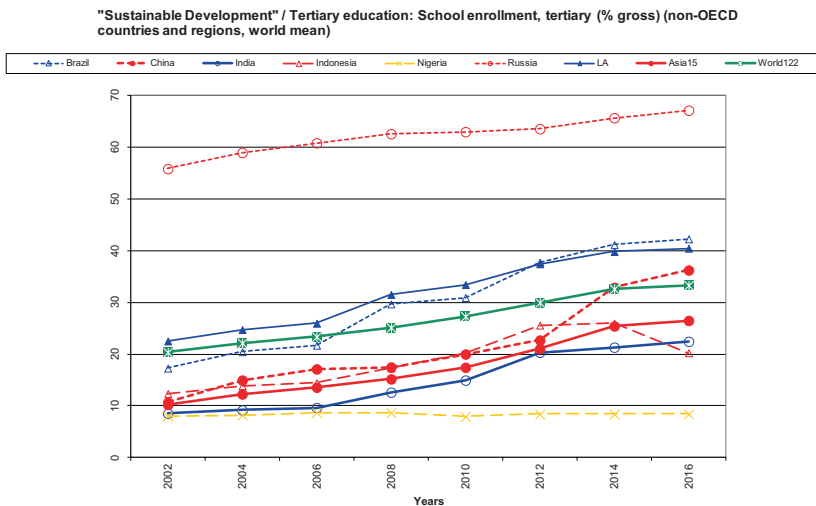


Fig. 4.10 Tertiary education ("Sustainable Development") in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

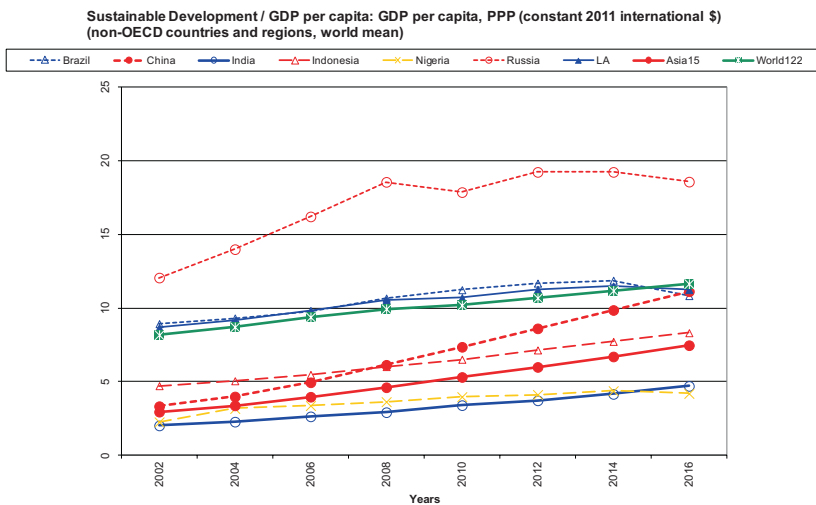


Fig. 4.11 GDP per capita (Sustainable Development) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

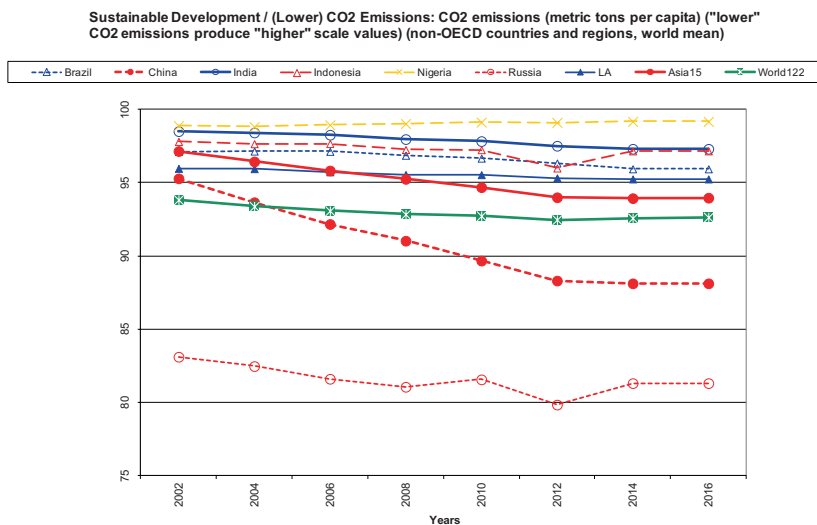


Fig. 4.12 (Lower) CO₂ emissions (Sustainable Development) in the non-OECD countries and world regions (2002–2016): Latin America (LA), Asia, Russia and Nigeria. Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

situation for economic freedom is quite different and opposite here to political freedom. Concerning economic freedom, the non-OECD countries cluster together much closer, by this expressing a more similar degree of economic freedom (compare Figs. 4.1 and 4.2). When we zoom in closer on the non-OECD countries, we also can state that by tendency economic freedom increases for the world average and for most of our sampled non-OECD countries (Fig. 4.3). For example, Indonesia and Nigeria leaped with regard to economic freedom. In Brazil, on the contrary, economic freedom decreased and stagnated in the aggregated region of Latin America. *Within the context of the non-OECD countries, there is not necessarily a correlation or linkage (interplay) between economic and political freedom, to a certain extent they even can be and perform de-coupled and independently.* For example, China scores low on political freedom. However, at the same time, China realizes a higher

degree in economic freedom than Brazil. While economic freedom decreases in Brazil, it has increased, as a trend, in China. These may be categorized as puzzling effects. How can a country achieve economic freedom without political freedom? In context of the OECD countries, economic and political freedoms appear to behave far more accordingly and structurally more similar and interrelated to each other, in the sense that the degree of variability of both freedoms falls into a comparable range (see Figs. 3.1 and 3.2).⁴ Furthermore, the variability range of political and economic freedom in the OECD countries is closer to the economic freedom variability range of the non-OECD countries, but less similar to the variability range of political freedom in the non-OECD countries. *Between OECD and non-OECD countries there is more of a correspondence concerning economic freedom, but less of a correspondence concerning political freedom. A possible convergence of the world in terms of economic freedom is being counterbalanced by a non-convergence concerning political freedom. Does this mean: While the world is enjoying economic freedom, the world still is suffering from a lack of political freedom? So is there a gap between economic and political freedom, on a global scale, when being assessed from a global perspective?* Greater political variability of political freedom in the non-OECD countries could also imply that there is less of a consensus, how to conceptualize and measure political freedom there (for example, for the emerging economies, the Newly Industrialized Countries or the Newly Industrialized Economies). We could be confronted by a situation, where the validity of measuring political freedom in non-OECD countries still is weaker than when we refer to OECD countries. *Mapping political freedom in advanced countries or advanced economies*

⁴Concerning freedom in the OECD countries, two countries (country groups) are deviant. The USA expresses a very high degree of economic freedom, while the Nordic countries (and not the USA) demonstrate highest degrees of political freedom (Figs. 3.1 and 3.2). This is the structural “pattern and patterning” of freedom that arises, when the USA and the Nordic countries are being compared.

(or in advanced democracies) may be simpler than in emerging and developing economies (on this typology of economies see again IMF 2011, p. 150).

2. *The dimension of equality for the non-OECD countries*

- 2.1. *Income equality in the non-OECD countries*: Of the individual non-OECD countries, covered here, income equality is above the world average only in India, representing South Asia (see Fig. 4.4). In Russia, income equality oscillates around world average, and Indonesia places (performs) slightly under the world average. In China and Nigeria, income equality is below world average. Particularly striking is here the case of Brazil and the whole region of Latin America: There, income equality is scoring far below world average, despite some progress (increase in income equality) during the whole period of 2002–2016, but the progress slowed down again after 2012. When we compare all of Asia (Asia15) with all of Latin America, the contrast then is striking: Asia positions itself slightly above world average, while Latin America falls way below world average. *Income equality, therefore, marks a crucial difference between countries in Asia and in Latin America. By tendency, Asian countries demonstrate higher levels (partly higher than the world average) of income equality, whereas Latin America developed income equality levels that rank considerably under the world average.* In that respect, Latin America underperforms. Here, so far, countries have developed and perform quite differently in Asia and Latin America. Income equality manifests itself differently in the democracies of South Asia and South-East Asia, on the one hand, and the democracies of Latin America, on the other. In context of the OECD countries, income equality in the USA is below OECD average; however, income equality in the European Union (EU15 and EU28) and in the Nordic countries places above OECD average (see Fig. 3.3). *So there appears to be a certain structural analogy between the below-world-average income equality in Latin America and the below-OECD-average income equality in the United States.* Did here the American role model for economy

and progress of society influence the economic developments in Latin America?

- 2.2. *Gender equality in the non-OECD countries:* Gender equality (in non-OECD countries) is (when we benchmark with the year 2016) above world average in Russia, Indonesia and Brazil, but below world average in China, India and Nigeria (see Fig. 4.5). *In that sense, gender equality, by tendency, behaves reverse to income equality.* In the whole region of Latin America, gender equality is higher than the world average, while in the whole region of Asia (Asia15), gender equality is lower than the world average. *Within the framework of our comparison (and country selection), we can set up the proposition for discussion that at least in some cases, countries, ranking higher on income equality, rank lower on gender equality and vice versa: a higher ranking on gender equality sometimes is being accompanied by a lower ranking on income equality. Particularly, when we compare Latin America and Asia, this reverse relationship between gender equality and income equality manifests itself* (for the whole regions of Latin America and Asia, and being frequently reproduced at the level of the individual countries). *In addition, more political freedom does not automatically (not necessarily) imply more gender equality.* There is more political freedom and more gender equality in the whole region of Latin, when compared with Asia. However, gender equality is in Russia (with less political freedom) higher than in Brazil and India (with more political freedom) (compare Figs. 4.5 with 4.1).⁵ This certainly creates a puzzling effect, to some degree counterintuitively. We would like to expect that more of a political freedom would translate itself quasi automatically into more gender equality, by this then implying that the establishment and progressing of democracy enacts positive effects on supporting gender equality. As our analysis and discussion have demonstrated so far, this is not necessarily the case

⁵While India has more of income equality, it has less of gender equality.

in context of the non-OECD countries. When we again have a look at the OECD countries, we see that gender equality is above OECD average in the USA and the EU, while gender equality is far above OECD average in the Nordic countries (see Fig. 3.4). Thus, the Nordic countries combine far-above-OECD-average levels in income equality and political freedom (Fig. 3.1).⁶ In terms of income equality, Japan performs above OECD average, and in terms of gender equality below OECD average (Figs. 3.3 and 3.4). In that sense, Japan is falling into the general tendencies of the “Asian cluster” and performs accordingly. *Focusing again on the general trend and overall picture for the non-OECD countries, it appears that income equality stagnates, i.e., does not improve. Gender equality, on the contrary, does make progress after 2006, but the progress again has slowed down in the recent years.* These general developments of the non-OECD world seem to be reproduced by the OECD countries: stagnation (decline) in income equality, but improvements in gender equality (compare Figs. 3.3, 3.4, 4.4, and 4.5).

3. *The dimension of sustainable development for the non-OECD countries:*
 - 3.1. *Human Development Index re-designed:* The redesigned Human Development Index (HDI) averages (means): life expectancy at birth (in total years), school enrollment tertiary (% gross) and GDP per capita in PPP⁷ (constant 2011 international \$). In reference to this indicator, three non-OECD countries (out of our focused country sample here) perform above OECD average; these are Russia, Brazil and China (see Fig. 4.6). Particularly, Russia manages here a lead, throughout the whole covered period 2002–2016. Brazil increased its above-world-average performance and also China progressed considerably, repositioning itself from below world average to above world average (after 2012). Nigeria

⁶The Nordic countries represent this ideal-typical case and example, where (comparatively) high levels of political freedom perform in parallel with high levels of gender equality as well as income equality. *The Nordic countries, therefore, refer to an empirical manifestation of a win-win situation of democracy.*

⁷PPP is the acronym for: Purchasing Power Parity.

also improved, however, still is ranking lowest for those countries looked here at more specifically. Indonesia and India also managed an improvement, but their increases still are placing below world average. Looking at the whole regions of Latin American and Asia comparatively, developments are interesting. In 2002, Latin America already placed slightly above the world average, but increased its lead over the world average considerably since. Asia was below world average in 2002. Asia improved, but slower than the world average, so the gap in disfavor of Asia, when compared with the world average, became even larger, but then again smaller after 2014. Therefore, put in comparison, Latin America increased faster and improved more than the whole region of Asia. China, belonging to the country group of Asia, grew faster than all of Asia, but still slower than all of Latin America, however, almost has approached the levels of Latin America as of 2016. Concerning this indicator (*Human Development Index redesigned*), therefore, *Latin America outperformed all of Asia, but China outperformed also “all of Asia” and has now reached levels almost comparable with Latin America* (in the time period of 2002–2016). India, also Indonesia, express more political freedom than Russia and China (see Fig. 4.1). However, Russia and China progressed faster and to higher levels in reference to the redesigned Human Development Index than India and Indonesia. This allows the formulation of two propositions: (1) *More political freedom does not necessarily translate into more or faster development* and (2) *some countries manage more (economic) development with less political freedom than some of the politically more free countries*. This obviously sets challenges for democracy and the theory of democracy. In context of the OECD countries, the Nordic countries and the USA place highest, and clearly above the OECD average (see Fig. 3.5). The Human Development Index (HDI) of 2007, issued in the “Human Development Report 2009” (UNDP 2009, pp. 171–174), provides for the non-OECD countries, being addressed here, the following ranking positions: Russia (rank 71, score 0.817), Brazil (rank 75, score 0.813), China (rank 92, score 0.772),

Indonesia (rank 111, score 0.734), India (rank 134, score 0.612) and Nigeria (rank 158, score 0.511). This ranking sequence also is being reproduced, by and large, by our redesigned Human Development Index for the year 2008 and the whole period 2002–2016 (see again Fig. 4.6). So we can assume here a certain congruence of measurement (by HID and redesigned HDI) for those identified six non-OECD countries. The Human Development Index (HDI) 2011, released by the Human Development Report 2011 (UNDP 2011, pp. 127–130), asserts the following ranking for our specified non-OECD countries: Russia (rank 66, score 0.755), Brazil (rank 84, score 0.718), China (rank 101, score 0.687), Indonesia (rank 124, score 0.617), India (rank 134, score 0.547) and Nigeria (rank 156, score 0.459). *Implications of this are that according to the Human Development Index (HDI), which the United Nations publishes regularly and annually (UNDP 2009, 2011), the relative ranking positions and positioning of the non-OECD countries of Russia, Brazil, China, Indonesia, India and Nigeria, relative to each other, have not changed over the period 2007–2011.* As a general global trend (World122), we should also note that the redesigned Human Development Index has improved during the whole period 2002–2016 with a steady growth momentum.

- 3.2. *Sustainable Development non-political:* Non-political sustainable development (within the framework and model of our analysis) is being broader defined than the previously presented redesigned Human Development Index, by calculating averages (means) of the following indicators: life expectancy at birth (total years), school enrollment tertiary (% gross), Gini Index (issued by the World Bank), Global Gender Gap Index (issued by the World Economic Forum), lower CO₂ emission (metric tons per capita) and GDP per capita in PPP (constant 2011 international \$). The general picture and sequence of ranking are quite similar when compared with the redesigned Human Development Index; however, there are also some differences. Therefore, for non-political sustainable development, we can therefore establish the following observations (see Fig. 4.7): Russia ranks clearly

highest and above world average. Brazil and China rank second and third, still below world average, but have achieved almost world average levels (Brazil already in some of the former years). Indonesia and India realized also improvements and score gains. Nigeria ranks here lowest and, however, achieved also some modest improvements. The world average (World122) also increased with a steady momentum. Since the later 2000s, Latin America places constantly above world average. Asia (Asia15) performed through the whole period 2002–2016 below world average. Asia managed improvements, particularly after 2010. Russia, to a lesser extent also China, perform considerably better than the average of Asia. For non-political sustainable development, one characteristic is being reproduced that we already noted for the redesigned Human Development Index: *more political freedom is not automatically being connected with (or leads automatically to) more sustainable development* (compare with Fig. 4.1). Depending on the specific comparison, different observations can be drawn, complicating easy answers and solutions. *Latin America is politically more free and achieved higher levels of (non-political) sustainable development than all of Asia (which is politically less free). However, Russia and China are politically less free, but realized higher levels of (non-political) sustainable development than Brazil or all of Latin America (in the case of Russia) or Indonesia and India (in the case of China). Latin America, Brazil, India and Indonesia are more free than Russia and China. In addition, China almost has approached the levels of Brazil and Latin America (in 2016), and has the potential to overtake Brazil and Latin America (in the coming few years).* This obviously creates challenges for the formulation of further propositions. Because based on the concrete design of a (the) comparative framework, meaning and implying which countries or regions are being put specifically into a comparison, the empirical results can be reversed and may guide and induce a contradictory and conflicting formulation of propositions. When we compare the world average (World122) of non-political sustainable development with that of the redesigned Human Development Index for the period

2002–2016 (see Figs. 4.6 and 4.7), we see the following developments: (1) *the levels of non-political sustainable development and of the redesigned Human Development Index improved both;* (2) *the redesigned Human Development Index improved somewhat faster than the non-political sustainable development;* and (3) *the levels of the redesigned Human Development Index are finally also higher (as of 2011) than the levels of non-political sustainable development.* We can speculate whether the indicators of the redesigned Human Development Index associate closer to the economy and economic activity and economic performance than the whole spectrum of indicators of non-political sustainable development, as it is being measured here. *This may also imply that the methodic design of the Human Development Index (HDI), which is officially being used and applied by the United Nations (e.g., UNDP 2011), is more friendly toward advanced economies and the industrialized countries than the non-political sustainable development as we design it here.* The OECD average for non-political sustainable development is lower than the OECD average for the redesigned Human Development Index (see Figs. 3.5 and 3.6). *However, as is being shown in Chapter 5 later (see Fig. 5.7), the gap between the OECD and the whole world has slightly decreased for the re-designed Human Development Index, but slightly increased for non-political sustainable development, when the years 2002 and 2016 are being compared. This has perhaps the implication that it is easier for countries to perform higher or better in reference to the re-designed Human Development Index than to non-political sustainable development.* What does this exactly mean? *Is it more easy to achieve good economic performance than to achieve a general good non-economic performance? For the medium-range newly developing and emerging countries (and economies) this may have the implication (and challenge) that economic growth perhaps can be faster realized (also in contexts that are politically less free) than a more evenly distributed general (sustainable) development of economy and society? For the newly emerging (and developing) economies, are there possibly even trade-offs between economic growth and economic and social development (in certain*

situations and certain scenarios)? However, in the longer run, does it then represent a particular challenge how to distribute or redistribute gains of economic growth into broader categories of social and educational development, also as a basis for further growth? Broader sustainable development has the potential of fully translating “global quality of democracy as innovation enabler” into further progress.

- 3.3. *Sustainable Development comprehensive (a “broad” conceptualization of Quality of Democracy):* Sustainable development, in a comprehensive approach and understanding, averages (means) (1) non-political sustainable development⁸ and (2) political freedom. As already stated before, “*Comprehensive sustainable development*”, as is being defined and presented here, represents conceptually a “broad” type of definition of and for democracy and quality of democracy. “*Comprehensive sustainable development*” integrates non-political sustainability and political sustainability (political freedom) on an equal basis. It is most interesting to compare the selected non-OECD countries in reference to the dimensions of “*Comprehensive sustainable development*” (Fig. 4.8) and non-political sustainable development (Fig. 4.7). Brazil ranks first on “*Comprehensive sustainable development*,” whereas Russia ranks first on non-political sustainable development. With regard to the other, selected countries, however, the differences are also striking. Concerning “*Comprehensive sustainable development*,” India and (after 2004) Indonesia place above the world average (World122): however, in reference to non-political sustainable development, Indonesia and India place below the world average. Contrary is the situation for Russia and China. Concerning “*Comprehensive sustainable development*,” Russia and China position themselves clearly below world average: In reference to non-political sustainable development, Russia places above world average and China almost at world

⁸Repeating ourselves, non-political sustainable development averages (means) the following indicators (see above): life expectancy at birth (total years), school enrollment tertiary (% gross), Gini Index (issued by the World Bank), Global Gender Gap Index (issued by the World Economic Forum), lower CO₂ emission (metric tons per capita) and GDP per capita in PPP (constant 2011 international \$).

average. Nigeria ranks last with regard to non-political performance: However, based on our modeling of “Comprehensive sustainable development,” Nigeria still performs clearly under the world average, but performs better than Russia and China (because of the factor of political freedom). *India and Indonesia, and Russia and China, they appear to represent very different and contradictory cases for development. These four countries (Russia, China, India, and Indonesia), therefore, demonstrate that there can be a considerable divergence in performance and ranking, when performance in “Comprehensive sustainable development” is being compared with performance in non-political sustainable development: (1) There are non-OECD countries (Russia, to a lesser extent also China), performing above-world-average in non-political sustainability, but below-world-average in comprehensive sustainability and (2) and there are non-OECD countries (India and Indonesia), performing above world average in comprehensive sustainability, but below world average in non-political comprehensive sustainability.* For measuring and scoring “Comprehensive sustainable development,” the dimension of political freedom is decisive and crucial. These four non-OECD countries (Russia, China, India and Indonesia) behave contrary on the dimensions of political freedom and non-political sustainable development (compare Figs. 4.1, 4.7, and 4.8). *There are non-OECD countries (Russia and China), performing below-world-average on political freedom, but above -world-average on non-political sustainable development. But there are also non-OECD countries (India and Indonesia), performing above-world-average on political freedom, but below world average on non-political sustainable development. Implications of this are: (1) political freedom and non-political sustainable development must be treated as distinct dimensions, not necessarily correlating positively with each other; (2) good⁹ performance in political freedom does not automatically imply good performance in non-political sustainable development; and (3) there can be a good performance in non-political sustainable development, without a good performance in political*

⁹With “good” we mean here above the world average (World122).

freedom. The almost impossible question to raise or to answer is: Are India and Indonesia, or Russia and China, more representative for the development of the world? *For democracy and the prospects of democracy it would amount to a nightmare or disaster, should, in context of the Newly Industrialized Countries (NICs) or the emerging economies and developing economies, the politically-less-free countries perform (on average) better in non-political sustainable development than the politically-more-free countries*; or should the best practice country examples for a good development and performance in non-political sustainable development be also countries that are by tendency politically less free than the other NICs, because this then would allow formulating the hypothesis of a negative payoff of political freedom for the prospects of development for a country. *Reality (in context of the non-OECD world) is here so complex, perhaps "too" complex (for our conceptual modeling), since different countries (India and Indonesia versus Russia and China) indicate in opposite directions of development and opposite relationships between political freedom and non-political sustainable development (positive versus negative "correlations")*. For the moment, it appears that we still do not have a meta-concept or grand theory of democracy and development (see on this Przeworski et al. 2003) that would resolve and integrate these contradictory country-based examples of development in a convincing manner and framework. When we compare the whole country group of Latin America and of Asia (Asia15) with each other, then the picture again differs: *Latin America appears to be in a win-win situation, because Latin America performs above world average (World122) with regard to non-political sustainable development (after 2006) as well as "Comprehensive sustainable development"*. Asia, on the contrary, performs below world average concerning non-political and "Comprehensive sustainable development". However, at the same time, China, as a single Asian country, almost has approached the levels of all of Latin America in non-political sustainable development (as of 2016). While the above-world-average lead of Latin America in "Comprehensive sustainable development" has become somewhat weaker in the recent years, Asia (Asia15) is catching up in this category. *When basing a*

comparison primarily on contrasting Latin America and Asia as a whole, an analysis may be prompted to formulate the following propositions: (1) freedom adds (by tendency) positively to the capabilities and dynamics of countries in favor of sustainable development and (2) freer countries (by tendency) unfold and excel a more dynamic path of progress for their sustainable development. In theoretical and conceptual terms, this creates another puzzle for us, not easy to dissolve or to interpret. Depending on whether the comparison is based primarily on Latin America *versus* Asia or primarily on Russia and China *versus* India and Indonesia, an analysis may be tempted to draw opposite conclusions: (1) the comparison of Latin America *versus* Asia suggests to acknowledge for political freedom the potential of acting as a driver (codriver) for sustainable development; (2) however, the comparison of Russia and China *versus* India and Indonesia is leaning more in favor of the assertion that sustainable development (at least for the Newly Industrialized Countries [NICs] or the emerging economies and developing economies) is possible without political freedom; and (3) *therefore, it remains quite a tricky proposition, how to resolve this appearing contradiction at a higher conceptual meta-level, because comparative analysis may run the risk of being strongly determined by the specific country composition on which the comparison is being based.* Latin America consists of more countries than Russia, China, India and Indonesia. However, the demographic population weight of Russia, China, India and Indonesia supersedes clearly all of Latin America. When we compare the non-OECD countries (Figs. 4.6 and 4.7) with the OECD countries (Figs. 3.6 and 3.7), it appears that the picture (and the trends) are more consistent in case of the OECD. For non-political sustainable development as well as “Comprehensive sustainable development” the Nordic countries always rank first (with a major lead), the USA rank second and the EU15 as third. EU28 and Japan perform on both dimensions more or less at equal levels. For the OECD and OECD countries, therefore, we are more in a comfortable position of formulating the following propositions: (1) in case of the OECD or the advanced economies, there appears to be (by tendency) a positive co-evolution of freedom and sustainable

development; (2) in case of the OECD or the advanced economies, freer countries are also likelier to develop higher levels of sustainable development; (3) *implications of this may be that the achievement of advanced levels of sustainable development (beyond a certain threshold) is not possible without achieving progress (perhaps also beyond a certain threshold) in the dimension of freedom: in that sense the quality of democracy clearly acts as an “innovation enabler” (at the higher levels of development); and (4) paths of development of the OECD or the advanced economies are possibly more similar to each other than in context of the non-OECD countries and their trajectories of development.* Refocusing on the non-OECD countries and global trends by monitoring changes for the world averages (World122), we are inclined to stress the following propositions: (1) throughout the period of 2002–2016, the world average for “Comprehensive sustainable development” is higher than the world average for non-political sustainable development; (2) over the 2000s and 2010s, non-political sustainability as well as comprehensive sustainability had progressed, however, non-political sustainability progressed and expanded considerably faster than comprehensive sustainability; (3) *one overall dilemma appears to be that while political freedom stagnates in global context (by tendency), the dimension of non-political sustainable development achieves growth rates and an upward mobility in scoring (by tendency); (4) looked at again from a global perspective and with a particular focus on the non-OECD countries, it again appears that there is global progress for non-political sustainability without further substantial progress in political freedom, implying that there can be development without more political freedom; and (5) for a modeling of measurement of democracy and quality of democracy in a world-wide perspective this also implies potentially that (in empirical terms) mainly the non-political indicators may be responsible for expressing performance improvements of countries, whereas political indicators, based on political freedom, create more the impression of a global hold-still stagnation.* For attempts of a comprehensive theory-building and world wide model building on democracy and the status of democracy in the world (Campbell et al. 2013), these global macrofashioned top-down reflections on trends again raise uneasy and uncomfortable

questions. *Can there be more progress without more freedom?* Trends of development are not necessarily similar when OECD and non-OECD countries are being compared to each other. *Partially different rationales for further development apply perhaps to the worlds of the OECD and non-OECD.*

4. *The specific non-political indicators of sustainable development for the non-OECD countries:* In the following, we will review shortly the non-political indicators and their behavior that input into the dimensions of sustainability (the non-political sustainable development and the “Comprehensive sustainable development”). This creates more a disaggregate picture of trends below the aggregation of a whole dimension.¹⁰
 - 4.1. *Life expectancy at birth in total years (non-political indicator of sustainable development):* Life expectancy is an important indicator, because it can be convincingly argued that life expectancy represents also a measure for the whole quality of life. Life expectancy is being influenced by a broad spectrum of social and economic conditions. We may also assert that the mean life expectancy is closer to a median life expectancy than the mean GDP per capita when put in contrast to a (constructed) median GDP per capita. In that respect, life expectancy probably tells us more about the distribution within a population or society than a GDP per capita value as such. Of the non-OECD countries being addressed here more specifically, China and Brazil rank above world average (China also ranks before Brazil) (see Fig. 4.9). Russia,¹¹ Indonesia and India perform below world average, Nigeria even considerably below world average. Latin America as a region scores higher than the world average, Asia (Asia15), however, lies slightly below world average. With regard to the countries of China, Brazil, Russia (after 2008), Indonesia, India and Nigeria, there is no clear picture, whether people live longer in countries with higher or lower

¹⁰Income equality and gender equality we already discussed for the non-OECD countries (see the discussion for Figs. 4.4 and 4.5). Therefore, we will not repeat this discussion in the section here.

¹¹It is interesting to note that life expectancy in Russia is scoring considerably lower than in China, even so GDP per capita is in Russia higher.

levels of freedom. By tendency there is more political freedom in Latin America, and there, people live by tendency also longer than in Asia (Fig. 4.1). When we throw a short look at the OECD countries again, then we see that life expectancy is above OECD average in Japan, the European Union¹² and the Nordic countries, whereas the USA performs here lower than the OECD average (Fig. 3.8). Interestingly, within our groups of specifically addressed individual countries, Japan ranks first among the OECD, and China among the non-OECD countries. For all of the identified non-OECD countries and the country regions of Latin America and Asia, levels of life expectancy are in 2016 higher than in 2002.

- 4.2. *Tertiary education, tertiary gross¹³ school enrollment (non-political indicator of sustainable development)* : Tertiary education clearly represents also an indicator for sustainable development. *But tertiary education has certainly qualities of and for sustainable development. Tertiary education also supports the characteristics of a “knowledge democracy” and refers to an underlying “dimension of knowledge”* (Carayannis and Campbell 2012, pp. 16, 19, 52, 55; Veld 2010a, b). Indicators in reference to technology diffusion could also be regarded as indicators that fall within the portfolio of a knowledge

¹²Life expectancy is in the EU15 higher than in the Nordic countries.

¹³In contrast to “gross”, a term such as “tertiary net school enrollment” would mean that only the enrollment (as a percentage) of specific (predefined) age cohorts would be considered and addressed. As tertiary education (in contrast to secondary education) is not focusing on predefined age cohorts, the World Bank, in context of the World Development Indicators (World Bank 2018), reports only on “tertiary gross school enrollment”. Approaches and concepts, such as the lifelong learning (LLL), even suggests that tertiary education should be understood as a form of education stretching over a whole life period (at least in principle, but also practically in frequent cases). Requirements of advanced economies (advanced knowledge economies), emphasizing continuous improvements of the knowledge competences of a person (of knowledge workers), play in favor of applying tertiary education to a whole life period. These, however, are also trends that we should expect to become more manifest in the emerging and developing economies of the Newly Industrialized Countries. Knowledge economy or the principles of the knowledge economy are not only reserved to advanced economies or the world of the OECD countries.

dimension. In the following, the indicator of tertiary education should be discussed in more detail for the non-OECD countries. Of the non-OECD indicators covered and discussed, Russia deviates to the positive side the most, because Russia ranks clearly first, and far above the world average (see Fig. 4.10). Brazil ranks second and performs ahead of the world average since 2007. The other (covered) non-OECD countries already perform below the world average, in the following ranking sequence: China, India, Indonesia and Nigeria. However, in the recent years, China also has moved on to perform above the world average (as of 2014). The whole country region of Latin America performs ahead of the world average, while Asia performs behind world average. *The world-average-level of tertiary gross school enrollment also increased. The OECD-average-level of tertiary gross school enrollment increased slower during the same period of years 2002–2016, but of course on a higher level than for the world average* (see Fig. 3.9). The USA and the Nordic countries place first and second in the OECD context, and ahead of the OECD average, while the EU15 and EU28 place almost at, but slightly under the OECD average. Scoring for EU15 and EU28 behaves here quite similar (with a marginal lead for EU15). Russia scores always ahead of the OECD average, but also ahead of the EU15 (and EU28). Concerning tertiary gross school enrollment, Russia behaves more in accordance with the OECD countries and has therefore more similarities with OECD than the non-OECD countries. Of course, tertiary gross school enrollment is more a quantitative indicator about enrollment and enrollment participation rates and does not tell us too much or in a sufficient manner about the actual quality of tertiary education that is being delivered to students (the beneficiaries of education). Tertiary enrollment and technology diffusion (for example, internet users per 100 people) refer both to an underlying dimension of knowledge, with ramifications for the prospects and opportunities of knowledge democracy (for example, see again Fig. 4.10; World Bank 2018). *The dynamics of increase, however, is considerably different for both indicators. While the world-average-level of tertiary school enrollment*

increased gradually, the increase of the world-average-level for internet users (per 100 people) was dramatic. Non-OECD countries demonstrate more of a rapid growth in internet usage than with regard to tertiary school expansion. This raises several interesting questions for the further prospects of world development, particularly on possible relationships between tertiary education and the use of the internet (the diffusion and intensity of the internet):

1. What actually is the relationship between tertiary education (also pretertiary education in general) and the internet, for example internet usage and the frequency of internet usage across a whole population or society? Tertiary education can use and leverage the opportunities and possibilities of the internet, and it should do so. In fact, one could go so far as to assert that there cannot be a good tertiary education (at the beginning of the twenty-first century) that does not refer to or ignore the prospects, which the internet already is offering.
2. The empirical thesis is that in context of the non-OECD countries the internet or the internet-based usage expands faster and more dynamic than some of the more “traditional” indicators of tertiary education participation. The crucial question here to be raised is obvious: Does this place a particular emphasis on tertiary education in non-OECD countries actually to use and to leverage opportunities and means of the internet for tertiary education, to reach out and to address a larger audience of population in society? There are ramifications for teaching and the tools and means being applied by and in teaching. But there may also be ramifications for the structure how a whole curriculum of a study program or a cluster of study programs at higher education institutions is being organized.
3. The even more radical approach then would be to ask: What is still the hegemony or control of higher education institutions over academic (science-based) knowledge of a high quality? In a more traditional understanding, the university systems and higher education institutions are the institutional core carriers of high-quality academic knowledge. Should, however, the internet expands and grows at a rapidly faster and more dynam-

ic pace than tertiary education in the non-OECD countries, then this could have the implication that at least some manifestations of high-quality academic knowledge diffuse and are being communicated outside of the conventional boundaries of higher education institutions. The internet could turn into a competitive carrier for academic knowledge vis-à-vis the domestic higher education systems. More interesting, also more challenging because of the involved potential opportunities, would be the organization of networks and hybrid networks, where higher education institutions and other forms of Web-based arrangements collaborate and work together, by this defining and representing new types of organizational structures, for the purpose of promoting, excelling, spreading and diffusing academic knowledge of a de facto tertiary high quality. (But of course: What would be the value of web-based academic knowledge and knowledge production without their anchorage in domestic higher education institutions?) Such hybrid networks of organizations and institutions are not necessarily restricted to one country or one national home base, they could be designed and developed to cross-cut and to cross-link several of the non-OECD countries, but could also involve OECD countries and their institutions and organizations. This refers to potentialities of a structural architecture of an underlying knowledge dimension for democracy in advanced as well as emerging and developing markets alike. Benefits of a global openness refer to higher education institutions in non-OECD, but also OECD countries.

When we compare tertiary gross school enrollment and internet users (per 100 people) for the OECD countries (see World Bank 2018), we also can conclude that internet usage expresses more of a dynamic growth in context of the advanced economies and societies. Therefore, not only in the non-OECD context, but also in OECD context the internet use (technology diffusion) expresses a more dynamic growth than tertiary gross school enrollment in recent years. This has the implication that several of the (above) raised questions about the relationship of higher

education (higher education institutions and systems) and internet use for the creation, production and diffusion of academic (sciences-based) knowledge can also be referred to the OECD countries: also for the advanced societies and economies it can be expected that between traditional forms of academic knowledge production within the boundaries of tertiary education institutions, on the one hand, and the internet, on the other, more network-style and network-based co-operations and new types of knowledge production will emerge and evolve. In context of the OECD as well as the non-OECD countries (the later reflected in the world average), internet use expanded faster and more dynamically than tertiary gross school enrollment. Even though the growth of the internet use was more active, dynamically and energetic than tertiary education participation in the non-OECD countries, the OECD demonstrate an even more dynamic growth of internet use. So while there is an expansion of internet use in both groups of countries (OECD and non-OECD), the growth momentum of the OECD countries is even ahead of the non-OECD countries. So, we can speculate whether the digital divide is in the world now larger or smaller. There can be optimistic and pessimistic narratives on the opportunities of the internet and internet use for the whole world, and the non-OECD countries in more particular.

- 4.3. *GDP per capita, PPP, in constant 2011 international \$ (non-political indicator of sustainable development):* In our specific sample of non-OECD countries and non-OECD country regions, only Russia (as an individual country) performs above world average, also demonstrating a growth path that is faster and more dynamic than for the world average (see Fig. 4.11). Brazil performs almost at par with the world average and, however, has dropped below world average as of 2015. All the other non-OECD countries rank already below, in some cases considerably below the world average, in the following sequence: China, Indonesia, India and (lastly) Nigeria (for the year 2016). For most of the period of 2002–2016, Latin America (as a whole

region) performed slightly above the world average, but slipped in 2015 below world average. Asia (Asia15) performs more markedly under the world average. However, Asia grew and increased faster than Latin America, but still places lower than Latin America. But China as a single country outperformed Brazil as a country in 2016. Furthermore, the GDP-per-capital level in China almost equals the GDP-per-capita levels in aggregated Latin America, again in 2016. All of the here addressed non-OECD countries achieved gains, also the world average (World122) grew. *The indicator that counterbalances crucially and critically with wealth (GDP per capita) is income equality. Should income equality equally improve (or at least stay constant) in parallel to and with wealth increases, then we can assert a win-win situation. However, should income equality decrease, while wealth (GDP per capita) increases, then we are facing a problematic situation with at least ambiguous effects. Should income equality erode faster than the economic effects of wealth increase, then potentially benefiting effects of a GDP-per-capita-surplus for society are being neutralized, or are even turned into a contrary and reverse direction. Should income equality erode considerably faster than the general GDP per capita, then the mean or median income may even decline, with all the involved problematic consequences of such a development.* In trying to engage in and present a first assessment of the empirical relationship between GDP per capita and income equality for some of the non-OECD countries, we can formulate the following observations (by comparing Fig. 4.11 with Fig. 4.4): (1) Russia demonstrates the clearest increase in GDP per capita in the years 2002–2016, but there income equality also dropped (by tendency) during the same period of time; (2) India and Indonesia position themselves at (comparative) bottom levels of GDP per capita, but there income equality scores higher in context of the non-OECD countries; (3) concerning GDP per capita, China ranks considerably higher than Indonesia and India, but, at the same time, income equality is in China lower than in India and Indonesia; (4) Nigeria may qualify as a “loose-loose” case, because there GDP per capita is lower

than in all (of the sampled) Asian countries and in Russia, but Nigeria expresses also less income equality than the (observed) Asian countries and Russia (for all years after 2010); (5) looking at the aggregated regions, we see that GDP per capita places in Latin America considerably higher than in Asia (Asia15), but regarding income equality, here Latin America positions itself way under Asia; and (6) while the GDP per capita world average (World122) increased during the 2002–2016 time window, income equality only increased marginally or basically stayed the same (or even stagnated) on the basis of world averages in those respective years. Recalling the trends in the OECD countries (by again comparing Figs. 3.3 and 3.10), we see the following trends: (1) the USA ranks first and above OECD average concerning GDP per capita, but below OECD average concerning income equality; (2) the Nordic countries, EU15 and Japan rank above or around OECD average in GDP per capita, their income equality is also above OECD average¹⁴; (3) *GDP per capita increased for the OECD average, income equality, on the other hand, dropped slightly (in context of the OECD the developments of income increase and income equality are therefore by tendency reverse and contrary)*; and (4) *income equality in the OECD countries is slightly (but only slightly) ahead of income equality for the world average, but while income equality improved modestly in context of the world average, there is a slight decline in income equality of the OECD countries during the period 2002–2016* (compare Figs. 3.3 and 4.4). Keeping these recent developments in the OECD countries in mind, but focusing now on the non-OECD countries, there are strong indications for a troublesome relationship between GDP per capita (the general wealth) and income equality (the specific distribution of wealth). For a further discussion we formulate the following propositions: (1) non-OECD countries, with relatively higher GDP-per-capita levels (e.g., Russia, also China), have by tendency sometimes

¹⁴For the EU28, income equality is ahead of the OECD average. Regarding GDP per capita, the EU28 performs lower than the OECD average.

lower income-equality-levels; (2) non-OECD countries, with relatively higher income-equality-levels (for example, India and Indonesia), have by tendency often lower GDP-per-capita levels; (3) in some non-OECD countries (see, for example, again Russia), the increases in GDP per capita were accompanied by decreases in income equality during certain years; (4) *the troublesome hypothesis, therefore, is that at least in some of the non-OECD countries higher levels of GDP per capita are paralleled (and over-shadowed) by lower levels of income equality, and that these interrelate reversely (negatively) with each other, so that higher wealth levels associate with lower levels of income equality*; (5) *in that sense, in context of the non-OECD countries, it appears that GDP per capita possibly has more an impact of predictability on income equality than the extent of political freedom (so we see less of a relationship asserting that countries or regions with more political freedom express also more income equality) (compare Figs. 4.1, 4.4, and 4.11)*; (6) *for theories of democracy and quality of democracy it would have been an easier world, should we have been in a position to demonstrate (and based on empirical information and data) that political freedom (and not GDP per capita) could have served and could have been applied as an explaining factor for the extent and variation of income equality in the non-OECD countries*; and (7) there are also non-OECD countries (for example, Nigeria) with low (lower) levels of GDP per capita and low levels of income equality. *This reverse relationship between income-increases (GDP per capita) and income-equality decreases creates several puzzles, challenges and tensions that cannot be resolved easily.* It would have been easier, also in the favor of democracy and further democratization, could we have reported a tendency that wealth increases (GDP per capita) would have been coupled to more increases in equal wealth distribution (income equality): or that political freedom provides for a positive influence in support of a greater income equality. Such trends or relationships, however, cannot be derived from the empirical data being presented here.

- 4.4. *Less CO₂ emissions*, in metric tons per capita (*non-political indicator of sustainable development*): This indicator has been designed (redesigned) by us in such a way so that higher (indicator) scores actually indicate less (lower) CO₂ emissions (see Fig. 4.12). This theoretical, conceptual and methodic approach is being carried by the understanding and conviction that measuring the treatment of the (natural) environments by society and the economy (and the political system) is necessary for capturing quality of democracy comprehensively (or that it is at least legitimate for a model of and about democracy to do so). Furthermore, the Quadruple Helix Innovation model conceptualizes ecological challenges also as possible drivers for innovation and knowledge production (Carayannis and Campbell 2010; Carayannis et al. 2012).¹⁵ The sensitive treatment of the (natural) environments, expressed for example in the avoidance of environmental pollution, should in fact be regarded as a crucial reference, deciding or co-deciding on the capabilities of humanity for survival or further prospect. Progress on the basis of a destroyed environment does not seem possible. Such ecological concerns are being carried and emphasized from different sides (for example, by UNDP 2007). The higher a country or country group scores or ranks in Fig. 4.12, actually the lower are the CO₂ emissions (metric tons per capita). Above the world average (in a positive sense) ranks first Nigeria, followed by India, Indonesia and Brazil. China already slipped considerably below world average (2005 and afterward), Russia already positions itself clearly under the world average for the whole covered time period 2002–2016. Since 2007, Asia (Asia15) scores lower than Latin America as a whole region. *The generally problematic effect however is that CO₂ emissions perform contrarily to GDP per capita (see Figs. 4.11 and 4.12): there is a tendency that*

¹⁵In the Quintuple Helix model of innovation systems it is also being proposed to interpret the natural environments of society as a challenge, but also as an opportunity and driver for knowledge production and innovation (Carayannis and Campbell 2010, p. 62; Carayannis et al. 2012, p. 4).

a higher GDP per capita evolves in combination with a higher (a growing) rate of CO₂ emissions. For the here covered non-OECD countries, we can state: Russia ranks first and Nigeria ranks last concerning GDP per capita, but Nigeria ranks first, and Russia last, concerning the CO₂ emissions. The country ranking order (top-down) for GDP per capita is (for the year 2016): Russia, China, Brazil, Indonesia, India and Nigeria. The ranking scoring sequence for CO₂ emissions (top-down) is (almost) just the opposite (again for the year 2016): Nigeria, India, Indonesia, Brazil, China and Russia. Latin America has considerably higher GDP-per-capita levels than Asia, but lower levels of CO₂ emissions when being compared with Asia (Asia15), so by this would represent a positive exception. *Summarizing these (tentative) observations, the following propositions can be put forward for discussion: (1) there is a certain tendency that higher GDP-per-capita-levels are coupled with higher-levels-of CO₂-emissions (which is the bad news) and (2) however, there is also a certain amount of flexibility being involved, meaning that increases (or decreases) of GDP per capita are not necessarily coupled in a linear or symmetric way to levels-of-CO₂-emissions: greater increases of GDP per capita may only be followed by modest increases of levels-of-CO₂-emissions (this would qualify perhaps as not such bad news). This demonstrates why, in the long run, it would be necessary to seek (ecologically-friendly) opportunities for decoupling growth rates of GDP-per-capita-levels from increases of levels-of-CO₂-emissions.* This need addresses the non-OECD as well as the OECD countries, is valid for the advanced economies, but is also valid for emerging and developing economies (Obama 2017). In context of the OECD countries (of the covered countries and country groups of our sample), the USA ranks first and above OECD average concerning GDP per capita, but scores clearly under the OECD average concerning CO₂ emissions. In the case of the USA, there appears to be a trade-off situation between GDP and CO₂ emissions (see Figs. 3.10 and 3.11). The Nordic countries, on the contrary, are here more in a win-win situation. A high ranking (second to the first

ranking USA) regarding wealth (GDP per capita), but also an above-OECD-average-scoring on CO₂ emissions. To a lesser extent, this is also true for the EU15 and EU28. The Nordic countries and the EU15 (also the EU28, to a lesser extent even Japan) could be interpreted and proposed for discussion as examples and attempts of starting to decouple growth rates of GDP per capita from the development of CO₂ emissions. Still, CO₂ emissions score in the OECD countries (within context of our model) lower than for the world average (compare Figs. 3.11 and 4.12): this means that the actual levels of pollution by CO₂ emissions are considerably higher for advanced economies than for the emerging and developing economies. *In this respect is the ecological scoreboard of the OECD much more troublesome, create the advanced economies a much more negative balance for the natural environments than the non-OECD countries. In ecological terms, the OECD countries (and OECD economies) live at the expenses of the non-OECD countries.* The scoring of the CO₂ emissions modestly improved for the OECD countries during the years 2002–2016, indicating a minor reduction of the actual CO₂ emissions (at least per capita). The scoring for the world average (World122) slightly decreased during the same time period, having the implication that pollution by CO₂ emissions actually increased in the world wide context. Based on CO₂ emissions, there was no betterment of the global ecological scoreboard, in fact the situation even continued (and continues) to worsen. Earlier, we had discussed, whether there exists an empirically observable relationship between wealth and income equality in the sense that there is a tendency that higher GDP-per-capita levels correlate with lower levels of income equality: we analyzed this separately for the OECD countries (Figs. 3.3 and 3.10) as well as the non-OECD countries (Figs. 4.4 and 4.11). Continuing this line of argument, we may raise the question or at least speculate, whether income equality also correlates negatively with increased levels of CO₂ emissions. Placed in a broader setting, the challenge therefore is (for the OECD and non-OECD countries, the advanced economies as

well as the emerging and developing economies): *How is it possible to expand wealth by increases of GDP-per-capita-levels without simultaneously producing more income inequality and more of an environmental pollution (e.g., increases of levels-of-CO₂-emissions)? Empirical analysis suggests trends and tendencies of trade-off relationships. The challenge (and opportunity) focuses on creating win-win co-developments.*

5. *Comparative contrast profiles of Latin America and Asia, India and China, and Russia and China:* Our comparative analysis (over the years 2002–2016) in context of the non-OECD countries focused on and referred to the following countries and country groups: Brazil, China, India, Indonesia, Nigeria, Russia (the Russian Federation), Latin America and Asia (Asia15). We compared these countries across the dimensions of freedom, equality and sustainable development, and twelve indicators (partially also qualifying as an aggregation to a whole dimension) in more particular. In the following, we again will shortly summarize our findings and (even better formulated) propositions for a further discussion. We will focus here on three pairs of comparison: (1) Latin America and Asia (Asia15) represent the two (mainly) non-OECD regions, covering and integrating several countries, at which we looked closer, for developing statements about development paths and opportunities (but also risks) in the non-OECD context; (2) India and China are the two main Asian countries, at least in terms of population.¹⁶ In addition, India and China are examples for the possibility and reality of different paths of development for non-OECD countries. One ramification of academic analysis may even be, to ask, to which extent they could qualify as distinct types of countries for development in the contemporary world; and (3) Russia and China are the two countries, the two powers that in global context balance the western systems and western countries the most, in economic as well as political-economic (strategic, also military) terms. As global powers, Russia and

¹⁶Both of these countries, India as well as China, belong to the country group of Asia15, as is being defined here for the purpose of our analysis.

China challenge the aspirations (explicit, implicit) of dominance and hegemony of the USA, also that of the European Union, to the furthest degree and potentiality in the current world system. In one image depiction of global power and global power relationships, the combined “western” pole of the USA and EU is being counterbalanced by the pole of Russia and China. Similarly to the earlier comparison of the USA and the European Union (in Chapter 3), we will compare here again Russia with China.

5.1. *Latin America and Asia (Asia15) in comparison*: When we look on Latin America and Asia (Asia15) as an aggregated region (on the basis of the individual countries that belong to these regions), then we can formulate the following propositions. *Across all dimensions (freedom, equality and sustainable development) and indicators (specific indicators for sustainable development), Latin America is leading ahead of Asia, with only two exceptions.* Income equality is in Latin America (considerably) lower than in Asia, and Asia scores (slightly) higher on economic freedom as of 2016. Everywhere else, Latin America ranks higher and performs better than Asia. Within this concrete framework of analysis and the here presented model of dimensional and indicator-based formation, Latin America, as a wider region, presents itself as a “success story” (at least as a relative success story) for development, when compared with Asia, and at least at this highly aggregated level, and not denying or excluding the possibility of failures and negative scenarios for individual countries in (or within) Latin America. When referring (in a more spontaneous mode) to the content of news messages in the global media system, then this lead of Latin America may be surprising: it appears that the media system is more geared to and more inclined to report about Asia, also in a positive way.¹⁷ *Only referring to media messages, the*

¹⁷This is now an assertion, being presented here for discussion, but without a further validation or without cited evidence. Some of the following arguments, however, will leverage this assertion as a point-of-departure for the further analysis. This assertion is based on the subjective perception of the author.

impression is being generated and fostered that it actually should be Asia that would earn to be labeled as the success story of development, particularly in reference to the economy and society, and probably lesser in reference to democracy: this, however, is in contradiction to the results of a strict indicator-based approach of analysis. The indicator-based analysis, being presented here, speaks a different language, and supports the reverse interpretation, namely that not Asia, but that actually Latin America is leading, not only concerning freedom, but also with regard to sustainable development. This may serve and qualify as an example, how selective or even distorting reality construction by the media may be, when a less prosperous world region is being given more “positive” media attention (in our case Asia) than a more prosperous region (Latin America). With the exception of income equality (and economic freedom more recently), Latin America outperforms (outperformed in the years 2002–2016) Asia in all other aspects. There is considerably more political freedom in Latin America than in Asia. This supports the formulation of the proposition that there is (that there can be observed empirically) a positive pay-off of freedom (of political freedom) for the general sustainable development of society and economy, where free (freer) democracy achieves more momentum for economic growth and social (societal) forward-development than un-free or authoritarian political regimes. Latin America apparently plays in favor of a “democratic narrative” that aligns itself with a type of understanding of democracy that is more similar to models of so-called “Western” democracy, as they are being practiced in North America and Western Europe, with the following messages: the more free a democracy in a county is and performs, the more progress of society there is and the more economic growth and economic development, culminating in tendencies of a forward-carrying sustainable development, can be achieved and realized. This positive scenario of a “free democracy” development and prospering of and in Latin America of course still could be questioned, from the angle of different analytical perspectives. We present here some critical arguments about Latin America:

- (1) First of all, our assessment is tied to and by this bound by a particular framework of analysis and assessment, implying the potentiality that different (other) indicators would shed a more critical light on Latin America. For example, crime rates or developments of public debts may be more troublesome for some of the Latin American countries, by this also for the whole region of Latin America; (2) The dynamics of trends, developments and scenarios may be for the years after 2016 different to the several-year period of 2002–2016. Only, because Latin America was leading in the time window of 2002–2016, does not create an automatic implication that this also must be necessarily the case for after 2020 or the 2020s. For many indicators in reference to sustainable development, Asia pre-2016 also already demonstrated an upward mobility. *Most striking may be here the recent economic growth curve and development in China. For example, concerning GDP per capita, China has overtaken Brazil and reached levels almost comparable with Latin America in 2016;* and (3) In reference to one of the covered indicators, in our analysis, Latin America shows a troublesome lagging behind Asia. There is much less of an income equality in Latin America than in Asia, even though income equality has improved in Latin America in the recent years (see Fig. 4.4). Greater income inequality can have several negative side-effects for the economy, society and politics in a country, with potential ramifications for corruption and crime. This greater income inequality of Latin America in context of the non-OECD countries resembles structural similarities to the greater income inequality in the USA in context of the OECD countries (compare with Fig. 3.3).
- 5.2. *India and China in comparison:* Benchmarked with the year 2016, India is leading ahead of China in reference to the following dimensions or indicators: political freedom (substantially); income equality; “Comprehensive sustainable development”; and less CO₂ emissions (in metric tons per capita). In summary, this produces a lead of India on the basis of four indicators (dimensions). The greatest lead India

generates in political freedom. In reference to all the other dimensions or indicators, China is leading, which are: economic freedom (marginally); gender equality (marginally); Human Development Index redesigned; sustainable development non-political; life expectancy; tertiary education (tertiary gross school enrollment); GDP per capita (PPP, in constant 2011 international \$). In summary, this implies that China is leading ahead of India in reference to seven indicators (dimensions). While in the case of our discussion (see above) on the basis of a comparison of Latin America with the whole region of Asia (Asia15) the analysis could assert that democracies or freer democracies (on average) perform better than non-democracies or less free political regimes, the narrative of comparing India and China produces a much more ambiguous outcome and picture, resulting in some puzzling effect. For further discussion, we can propose the following propositions focusing on the comparison of India and China:

1. India is leading with regard to political freedom, while China is leading in all of the non-political indicators of sustainable development, with the only exception of income equality and less CO₂ emissions. Less CO₂ emissions, however, may represent primarily less economic (industrial) activities in the case of India (and not necessarily an ecologically-more-sensitive approach of the economy and society in India).
2. *When we compare India and China, there appears not to be a pay-off of political freedom for non-political sustainable development in the spheres of the economy and society. China, on the contrary, manages in economic and social (societal) terms more of a sustainable development, without political freedom or the degree of political freedom that is being practiced in India. As a radical ad hoc proposition, therefore, could be raised: first of all, more political freedom is not necessarily linked to a more of economic and social (non-political) sustainable development; second, there can be economic and social (non-political) sustainable development without or without a mature degree of political freedom.* In context of the comparison of India and Chi-

na, it is certainly China that is challenging the assumption and belief that the democracies are always out-performing the non-democracies. China is demonstrating that a non-democracy¹⁸ can achieve a more dynamic growth and growth trajectory of non-political sustainable development in economic and social (societal) indicators than the democracy of India. *This creates challenges and critical references for the “democratic narrative”, when empirical analysis provides evidence that at least in some cases the non-democracies outperform the (some of the) democracies: there can be economic and social sustainable development without democracy, and there can be democracy without sustainable development of the economy and society.*

3. *In the case of India, of course, it should be valued as an achievement and as a success that this society and political system, without a reinforcing economic and social development comparable to the momentum of development that is currently being experienced in China, could establish this high degree of political freedom. But, for example, it surprises that there is less of a gender equality in India than in China. Therefore, is political freedom in India only insufficiently connected and linked to “freedom of gender” (gender freedom, freedom by gender)? Furthermore, when economic and social development is not gaining more momentum in India, could this again challenge the contemporarily achieved degree of political freedom in India? Critics could question, whether there is any payoff of freedom for development (sustainable development) and whether not India should critically rethink some of its current political premises. So, how stable and how viable is the fundament for political freedom and for democracy in India? What are the prospects and future scenarios for politics, society and the*

¹⁸The term non-democracy is based on the way, better on the source of “political freedom” that we apply in our analysis here. According to Freedom House, China represents a “not free” country. Since the beginning of freedom measurement of countries in the year 1972, China has always been categorized as “not free” by Freedom House (<http://www.freedomhouse.org/sites/default/files/FIW%20All%20Scores%2C%20Countries%2C%201973-2012%20%28FINAL%29.xls>).

economy in India?

4. When a win-win situation is not possible, and developments point toward a trade-off scenario: *What is of a greater importance, political freedom or non-political sustainable development of the society and economy?* Counts the political freedom of India or the economic and social (societal) sustainable development of China more? What is of a greater value, political freedom or non-political sustainable development, and what are implications for the short run or in a longer perspective? Does India or China qualify as a success story (or both or neither)? When there is a discussion about the appropriateness of paths and scenarios of development or to-be-implemented-models for non-advanced economies in context of the Newly Industrialized Countries (NICs) and emerging and developing economies, what should serve as the more valid reference: *The achievement of degree of political freedom in India or the momentum of non-political sustainable development of the economy and society in China?* Particularly, when there is an expectation of a trade-off scenario in at least some contexts (implying that you cannot have both, at least in the short run), how does this influence policies, strategies and the involved rationales for decision-making? *Based on the comparison of India and China, some puzzling effects and serious ambiguities arise for theory of democracy and wanted-beliefs-for-democracy, making the overall picture more complex and complicated, meaning that there may not always be a win-win situation and scenario for democracy (democracies) and their success, meaning further that not always simple answers and simple solutions can be provided.*
5. When we are trying to pool together the results of comparison of Latin America and Asia (Asia15), on the one hand, and of India and China, on the other, what can possibly be said, at least for the moment? Is it possible to resolve the “contradictions” in findings between these two “narratives on democracy”? A first reasoning may ask, which comparison is more representative for developments in a global context?

Here, again, it may be difficult to provide a straightforward answer: the comparison of Latin America and Asia is based on a larger sample of countries, however, China and India are the two largest countries (based on population) in the world. Another potential question to be asked may be: *Depending on the level of development of society and the economy, could this have the implication that there is a different pattern of interaction between political freedom and non-political sustainable development?* In general, wealth (GDP per capita) is higher in Latin America than in Asia, and higher in Asia and China than in India (see Fig. 4.11).¹⁹ This corresponds by tendency also with life expectancy, which is in Latin America higher than in Asia (but in China marginally higher than in Latin America), and in China and Asia higher than in India (see Fig. 4.9). *One possible proposition here could assert and interpret that the higher the economic and social level of a country developed and progressed, the higher is the probability of a stronger link and mutual reinforcement of political freedom and non-political sustainable development, which would mean of speaking of a co-evolution of democracy and of economic and social (societal) development. This would imply that “democracy as an innovation enabler” may be more the case, when society and economy have advanced beyond a certain threshold of development. Have economy and society in India not matured enough, for generating a benefit and pay-off of political freedom for economic and social development? But, in the long run, can China continue its pace of economic and social (societal) development, without allowing and introducing more political freedom, without finally turning, developing and transforming more into a democracy?*²⁰ For example, greater technology diffusion (use of internet by people), the effective application of principles of a knowledge

¹⁹In contrast to GDP per capita, income inequality is also in Latin America higher than in Asia, China and India (see Fig. 4.4).

²⁰In the following section, we revisit this proposition, by introducing a wider perspective by also referring to and discussing trends and developments in Russia and in Latin America.

economy, greater participation rates in education and tertiary education, how can China be here continuously successful, when political freedom is still being constrained as it is currently the case? Not allowing more political freedom in the future implies for China a risk of bottle-necking and curtailing its momentum of economic and social development.

6. Concerning China, also the special status of Hong Kong must be mentioned and reviewed more consequently. Even in global terms, Hong Kong represents a developed region, and Hong Kong also enjoys considerable degrees of political freedom much higher than in (whole) China (see the tables in Appendix A.2). *In the case of Hong Kong, there is a (positive) correlation and association between a high developmental status and advanced political freedom.* Hong Kong is also a region, politically embedded within China. *So in that sense one could speculate, to which extent China allows this political freedom to (and in) Hong Kong, so that China can participate in and profit from the advances of Hong Kong in knowledge (knowledge production) and innovation (knowledge application)? But of course, in the long run, can Hong Kong continue its degree of political freedom, or will there be a decline in political freedom, caused by from-the-outside political pressures from mainland China?*
- 5.3. *Russia and China in comparison:* Russia positions itself ahead of China with regard to (referring to the year 2016): political freedom; economic freedom (only marginally); income equality; gender equality (only marginally); Human Development Index redesigned; sustainable development non-political; sustainable development comprehensive; tertiary education (tertiary gross school enrollment); GDP per capita (PPP, in constant 2011 international \$); and tertiary education (tertiary gross school enrollment). China is ahead of Russia (again in 2016): life expectancy and less CO₂ emissions (in metric tons per capita). Put in summary, this implies that Russia is leading in ten indicators (dimensions), while China is leading in two indicators (dimensions). *When compared with China, Russia expresses a higher degree of political freedom and also a*

higher level of achievement of non-political sustainable development. But, the growth of non-political sustainable development was in China more dynamic than in Russia over the whole-year period of 2002–2016. A particular problem of Russia appears to be that in some of the non-political indicators, for example, life expectancy, Russia is lagging behind China and other non-OECD countries. *This indicates for Russia the challenge of better balancing benefits of and achievements in sustainable development across a broader spectrum. Concerning life expectancy, Russia underperforms in comparison with China* (see Fig. 4.9).²¹ In context of the comparative discussion of India and China, the question and possible proposition was introduced, *whether political freedom becomes more important when non-political sustainable development progresses to higher levels (beyond a certain threshold)? Then there may be more effects of “democracy as an innovation enabler”.* Implications of such scenarios further are that non-political sustainable development is possible to certain levels without political freedom, but beyond such threshold levels, further non-political sustainable development may be exposed to phenomena of a bottle-necking or ceiling, should this not be paralleled and supported by a sufficient maturing of political freedom. *Russia has more political freedom and a higher level of non-political sustainable development than in China, while the whole and aggregated region of Latin America expresses higher levels of political freedom and also higher levels of non-political sustainable development in comparison with China, but non-political development in Russia is higher than in Latin America and China* (compare Figs. 4.1 and 4.7). This comparative ranking and rating by countries and country regions (Latin America, Russia and China) could be leveraged as empirical evidence in favor of the argument that underscores the importance of political freedom for sufficient or for advanced sustainable development of society and the economy. A closer look at the details, however,

²¹Life expectancy in Russia is even lower than the average for Latin America (Fig. 4.9).

complicates too generalist interpretations and demonstrates the complexity of wanting to draw conclusions:

1. There are some indicators, where Russia clearly outperforms Latin America. In GDP per capita and tertiary education, Russia has a lead over Latin America. Therefore, when non-political sustainable development is being disaggregated into the specific components and indicators, the performance of Latin America is coming under pressure (also by advances of China in non-political sustainable development).
2. The level of non-political sustainable development of Russia increased during the years 2002–2016, however, the degree of political freedom actually declined during the same period of time (compare Figs. 4.1 and 4.7). Therefore, in the case of Russia (and in context of the analytical framework of analysis being applied here), there was actually a negative trade-off cycle between non-political sustainable development and political freedom in the 2000s and 2010s, with the following interaction: more non-political sustainable development on the one hand, but less political freedom on the other. For our narratives on democracy (and theorizing and model building), this produces further ambiguities.
3. There is more political freedom in Russia than in China, in relative terms (during the time window of 2002–2016). However, in absolute terms, Russia does not represent a free country. While Freedom House categorized Russia as “partly free” for the period 1991–2003, Freedom House changed the rating of Russia to a “not free” country since 2004.²² This has (in reference to the above said) the consequence that “not free” Russia outperforms the “freer” Latin America in important areas and on the basis of specific indicators of and for non-political sustainable development. At the same time, however, this also exemplifies why, in a longer perspective

²²See: <http://www.freedomhouse.org/sites/default/files/FIW%20All%20Scores%2C%20Countries%2C%201973-2012%20%28FINAL%29.xls>.

(but also short-term), there is a need and a conceptual need of further validating the freedom ratings of Freedom House in reference to other independent sources. In our model, being applied here, the scores for political freedom rely completely on the freedom assessment conducted by Freedom House. The crucial question obviously is: Is Freedom House too critical about the extent and degree of political freedom in Russia, are the freedom rankings of Freedom House possibly biased one-sidedly in favor of an American perspective of US foreign policy in the world? *The current empirical dilemma is that in contemporary context there exists no other independent source that carries out empirical ratings of political freedom in the world in a global and in a periodic (regular) format in such a way so that is comparable with Freedom House.* In that sense, Freedom House still is enjoying the status of a de facto monopoly. This complicates every empirical and comparative analysis that is interested in factoring-in political freedom.

References

- Campbell, D. F. J., Carayannis, E. G., Barth, T. D., & Campbell, G. S. (2013). Measuring Democracy and the Quality of Democracy in a World-Wide Approach: Models and Indices of Democracy and the New Findings of the “Democracy Ranking”. *International Journal of Social Ecology and Sustainable Development*, 4(1), 1–16. <http://www.igi-global.com/article/measuring-democracy-quality-democracy-world/77344>.
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix Innovation Model: Global Warming as a Challenge and Driver for Innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 1–12. <http://www.innovation-entrepreneurship.com/content/pdf/2192-5372-1-2.pdf>.
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate To Each Other? A Proposed Framework for a Transdisciplinary Analysis of Sustainable Development and Social Ecology. *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69.

- Carayannis, E. G., & Campbell, D. F. J. (2012). *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems. 21st-Century Democracy, Innovation, and Entrepreneurship for Development* (Springer Briefs in Business). New York: Springer. <http://www.springer.com/business+%26+management/book/978-1-4614-2061-3>.
- IMF (International Monetary Fund). (2011, April). *World Economic Outlook. Tensions from the Two-Speed Recovery Unemployment, Commodities, and Capital Flows*. Washington, DC: International Monetary Fund. <http://www.imf.org/external/pubs/ft/weo/2011/01/pdf/text.pdf>.
- Obama, B. (2017, January 9). The Irreversible Momentum of Clean Energy. *Science, Policy Forum*. <https://doi.org/10.1126/science.aam6284>, <http://science.sciencemag.org/content/early/2017/01/06/science.aam6284.full>.
- Przeworski, A., Alvarez, M. E., Cheibub, J. A., & Limongi, F. (2003). *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990*. Cambridge: Cambridge University Press.
- UNDP (United Nations Development Programme). (2007). *Human Development Report 2007/2008. Fighting Climate Change: Human Solidarity in a Divided World*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2007-8/>.
- UNDP (United Nations Development Programme). (2009). *Human Development Report 2009. Overcoming Barriers: Human Mobility and Development*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2009/>.
- UNDP (United Nations Development Program). (2011). *Human Development Report 2011. Sustainability and Equity: A Better Future for All*. New York: United Nations (United Nations Development Program). http://hdr.undp.org/en/media/HDR_2011_EN_Complete.pdf.
- Veld, R. J. in 't. (2010a). *Knowledge Democracy. Consequences for Science, Politics, and Media*. Heidelberg: Springer. <https://link.springer.com/book/10.1007/978-3-642-11381-9>.
- Veld, R. J. in 't. (2010b). Towards Knowledge Democracy. In R. J. in 't Veld (Ed.), *Knowledge Democracy: Consequences for Science, Politics, and Media* (pp. 1–11). Heidelberg: Springer. https://link.springer.com/chapter/10.1007/978-3-642-11381-9_1.
- World Bank. (2018). *World Development Indicators* (Web-based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>.



5

Comparative Empirical Analysis of Global Trends of the OECD and Non-OECD Countries and of the Whole World: Freedom, Equality and Sustainable Development in the World (2002–2016)

In the previous Chapters 3 (OECD countries) and 4 (non-OECD countries), the main focus concentrated on analyzing in comparative context individual countries and to compare and to position these in relation to specific (predefined) country groups. Concerning the OECD countries, the reference was made to: USA, Nordic countries, EU15 and EU28 and Japan. Concerning the non-OECD countries, emphasis was placed on: Brazil, China, India, Indonesia, Russia and Nigeria. Country-group references were either the OECD countries or Latin America, Asia (Asia15) and the whole world (averages for World122). In the following, global trends of country groups should be revisited, by defining the comparative framework of analysis in a way by contrasting the OECD countries (here OECD35) with means for the whole world. World averages (means) are always weighted in accordance with population.¹ World122 covers and includes as a category all those countries, for which for each indicator (and each dimension) there were no complete data missings for the whole time period in the years 2002–2016.

¹See the definition of the specific and concrete country groups in Sect. 2.4.

For a further discussion, we want to set up the following propositions on global and world wide trends for the whole OECD and non-OECD countries as input for coming debates on democracy and the quality of democracy in global perspective:

1. *Improvements in scores and score levels of the whole world across all (almost all, with the exception of two) indicators (and dimensions): Across all indicators (but two), scores and by this score levels for the world average (means of World122) are in 2016 higher than in 2002. This can and ought to be interpreted as a relative progress for the development of countries in a global and world wide perspective during the addressed year period of 2002–2016* (see Fig. 5.4).² This general improvement is not only manifest by looking at the indicators of World122, but is also being reproduced by aggregating together all countries with available indicator information³ to a world average over the period 2002–2016 (see Figs. 5.1, 5.2 and 5.3)⁴: all types of different country aggregations to world averages (means) demonstrate an improvement in scoring and performance. *Improvements in scores, scoring and scoring levels (in context of the framework of analysis and model of measurement being applied and presented here) should be interpreted positively as successes in a higher performance and for a better performance with beneficial opportunities for countries (democracies, also semi-democracies, but even non-democracies).* At least potentially, this speaks in favor of the capabilities of the world for a further progressing of democracy and democratization currently and in the next and coming years: Because the reverse trend, a decrease in scoring across a broad (broader) spectrum of indicators,

²For a year-by-year flow of scores for the OECD and the whole world (World122), see Figs. 5.1 and 5.2.

³The phrase of *available indicator information* implies here that for a specific country at least for one year there is an empirical information for the respective indicator.

⁴In Figs. 5.2 and 5.3 also graphs for technology diffusion (Tech Diff) are being plotted for the years 2002–2008. The exact definition for this indicator is: internet users per 100 people (World Bank 2018). For this particular indicator, the score reading of “0 = (theoretical) minimum” and “100 = empirical maximum” refers only to the years of 2002–2008.

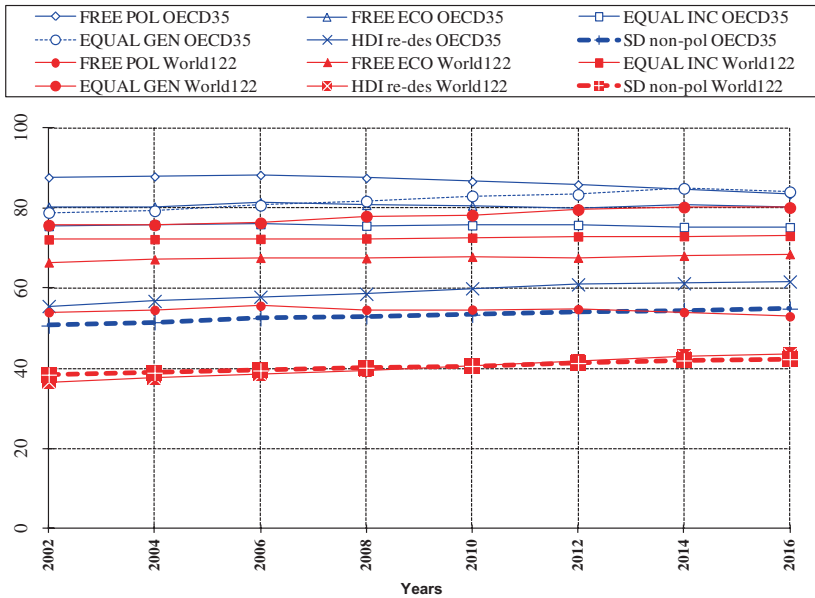


Fig. 5.1 Comparison of the OECD (OECD35) with the world (world122) across dimensions and indicators (2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation and visualization)

would have created a scenario of producing obstacles and problems for the progress opportunities of democracy and democratization in the world. However, only two indicators it is not possible to report an improvement. (1) With regard to CO₂ emissions (in metric tons per capita) the scoring decreased, implying that in 2016 the global level of CO₂ emissions was higher than in 2002. So in 2016, there is more environmental pollution caused by CO₂ emissions than at the beginning of the 2000s. This greater amount of environmental pollution overshadows, at least to a certain extent, the improvements of the world in development and sustainable development in other aspects and fields. What are the benefits of improvements in development worth, when they are achieved at the cost and to the disadvantage of the natural environments of society and economy? The ecological balance, also the socioecological transition (for example,

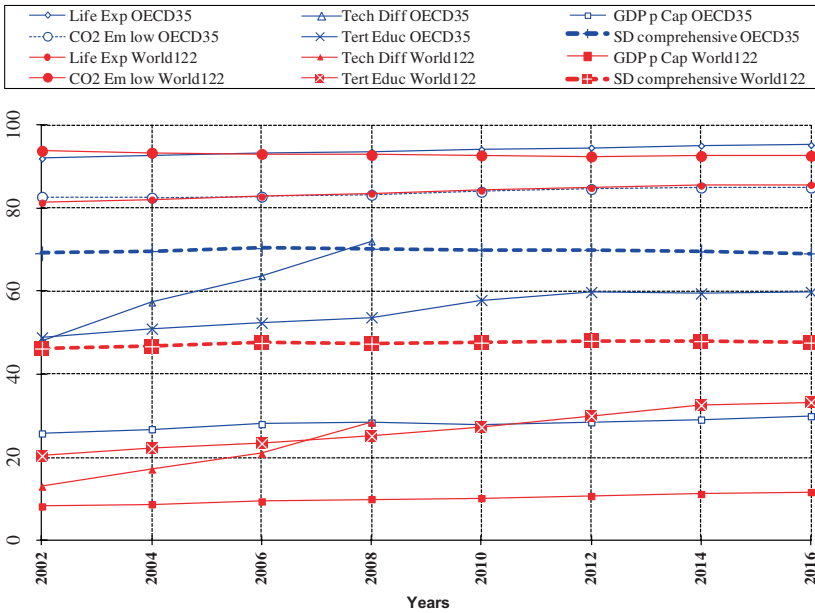


Fig. 5.2 Comparison of the OECD (OECD35) with the world (world 110) across dimensions and indicators (2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation and visualization)

see European Commission 2009) of society, economy and politics in a world wide perspective and framing, marks therefore an area of crucial importance for the survival, but also (preferably) for the betterment and further progressing of humanity and human civilization. The balancing of development with a more sensitive ecological interaction with the natural environments defines a key necessity, which must be tackled and addressed more clearly and focused. This also is being exactly addressed by the concepts and models of the Quadruple and Quintuple Helix innovation systems (Carayannis and Campbell 2009, 2010, 2014). (2) The other indicator (dimension, subdimension), for which there is not a score increase, but actually a modest score decrease (or at least stagnation) during the whole period 2002–2016, is political freedom. This of course represents

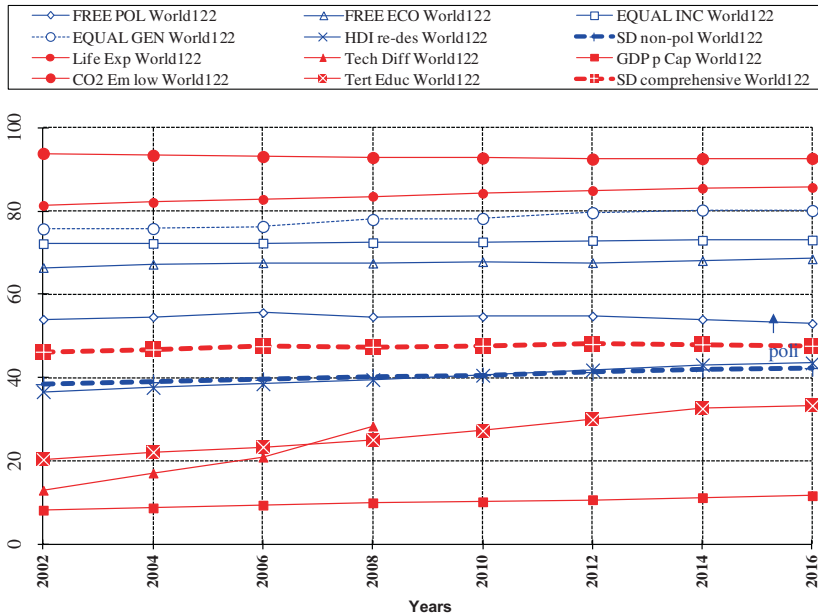


Fig. 5.3 Development of the world (world122) across dimensions and indicators (2002–2016). Scale range 0–100: 0 = (theoretical) minimum, 100 = empirical maximum (Source Author's own calculation and visualization)

troublesome information and represents a critical trend for democracy and democratization in global context, since freedom (political freedom) is a core domain for democracy and quality of democracy.

2. *Growth rates of scores and score levels of the whole world across specific indicators (dimensions):* For two indicators we must diagnose a negative growth rate, and these are political freedom and CO₂ emissions in metric tons per capita (see Fig. 5.5). For all other indicators (dimensions) “positive” growth rates can be observed and stated, linked to the empirical phenomenon that all indicators (and dimensions), with only two exceptions (political freedom and CO₂ emissions), express an improvement in score levels, when the late 2010s (2016) are being compared with the early 2000s (2002). In the following, we shortly want to comment on the degree and variation of degree of the observed growth rates:

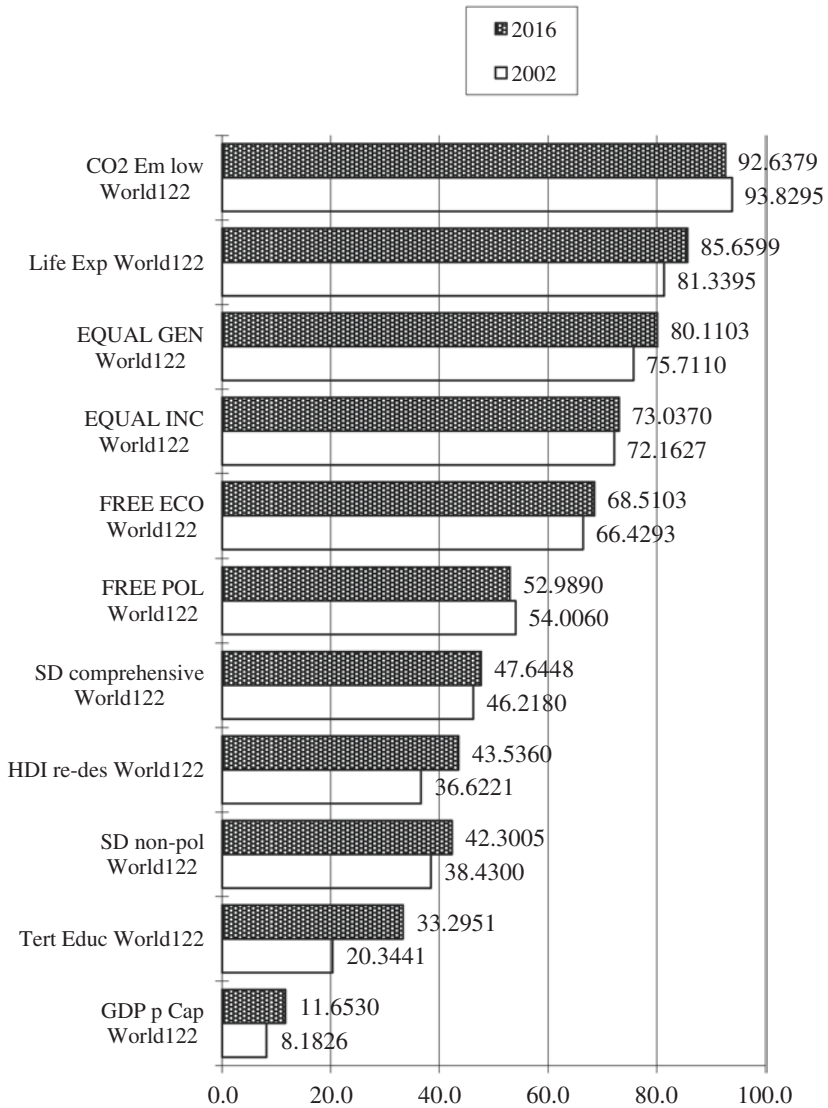


Fig. 5.4 Comparison of score values (levels) for the world (world 122) for the early 2000s and late 2010s (2002 and 2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation)

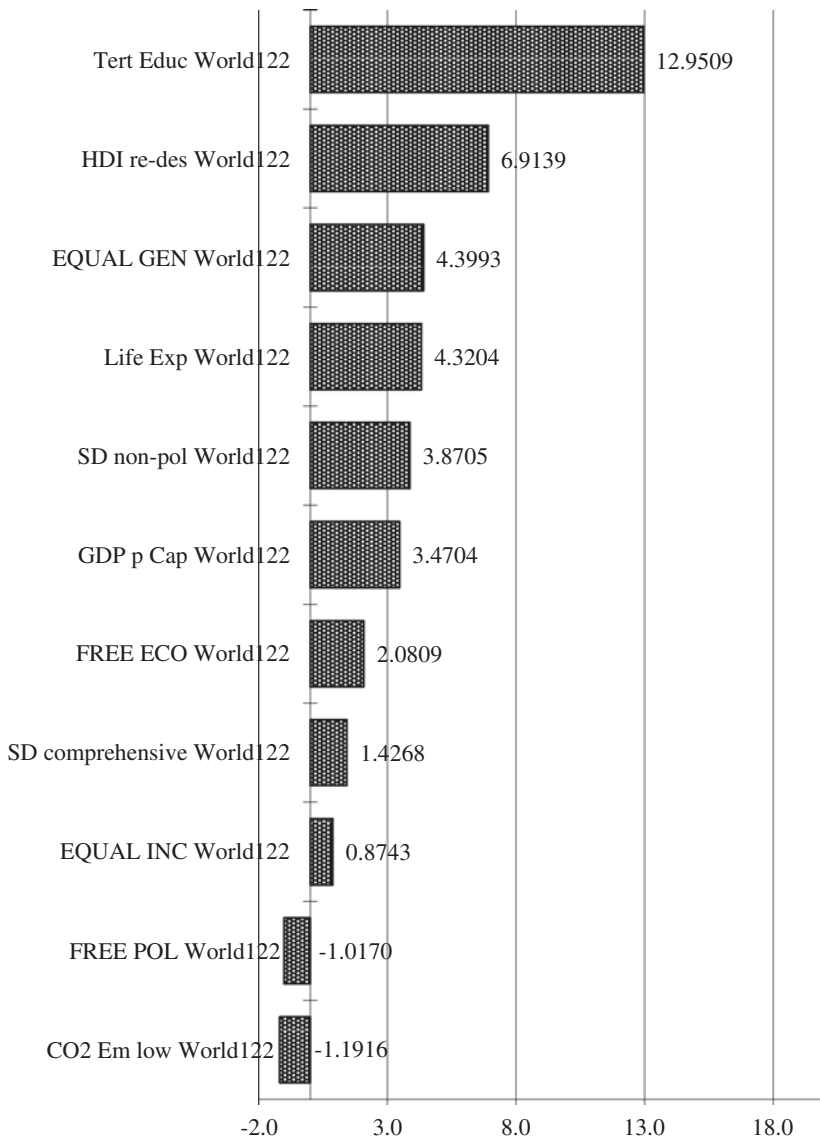


Fig. 5.5 Growth rates of score values (levels) for the world (world 122) for the 2000s and 2010s by comparing 2002 and 2016 (Source Author's own calculation)

- (1) Tertiary education (tertiary gross school enrollment) achieved the highest growth rates over the period of years of 2002–2016. This is being followed by the growth rates for the Human Development Index redesigned. *In that context it should be noted that in global context the most dynamically growing indicator can be referred to and be associated clearly with knowledge. Tertiary education allows the (conceptual) construction of a knowledge dimension. In consistency with the empirical observation stated here, the proposition can be formulated that knowledge as well as a knowledge dimension for society and the economy have the potential and capability of expressing a growth that is more dynamic and more vibrant than for other indicators and dimensions. This also emphasizes the need and importance of a knowledge-based and knowledge-driven innovation. Furthermore, here are opportunities for “democracy as innovation enabler.”* This adds evidently more plausibility to the concepts of knowledge society, knowledge economy, but also knowledge democracy (Carayannis and Campbell 2012, p. 55; Veld 2010a, b). When knowledge is that fast-growing world wide (when set in a relative contrast perspective to other indicators), then this reinforces the understanding and strategy of defining and interpreting knowledge as a crucial approach for supporting and realizing sustainable development in a mid-term and long-term perspective.
- (2) For less CO₂ emissions (in metric tons per capita) a “negative” growth must be stated, implying an increase of CO₂ emissions, and by this of environmental pollution based on CO₂ emissions. *This of course must be recognized as a highly troublesome trend and tendency, because it means that the world wide human society (and civilization) is still not in an ecological balance with the environment and natural environments.* Concentrations of CO₂ emissions in the atmosphere are reaching historical all-time highs, causing severe ecological problems, such as global warming (World Meteorological Organization 2017). Ecological pollution also has been identified as the primary

reason for disease and premature death in the world of today (Lancet Commission 2017; see also Vadrot 2014).⁵

- (3) *Also, the global growth rate for political freedom stagnated, but more so declined (modestly) by tendency. This also possibly implies a stagnation of the short-term prospects and opportunities for more political freedom in the world. And the indicator with the lowest growth rates is income equality. In the case of income equality, it is not-much-more than a “cero” growth, indicating a trend dramatically close to a complete stagnation for the period of 2002–2016. It even could be that income equality may be on the brink of sliding into a “negative” value range, then meaning and addressing a declining trend for income equality (i.e., pointing toward an increase in and of income inequality). Declines in political freedom and in income equality would (do) certainly and dramatically challenge the global prospects of and for more democracy in the coming years.*
- (4) *There is a tendency that in world context and averaged as world means the non-political indicators grow faster and express a more dynamic profile of progress, progressing and advancement than the political indicators. For example, the redesigned Human Development Index and non-political sustainable development outperform the “Comprehensive sustainable development” (which includes political freedom); also economic freedom progresses faster than political freedom. Furthermore, the more narrowly defined (in terms of used and integrated indicators) redesigned Human Development Index expanded faster than the more broadly defined non-political sustainable development. This creates puzzles and challenges. One proposition could assert that more modest improvements in the political sphere are being outpaced by more dynamic improvements in the non-political spheres.*

⁵The assertion here is: “Pollution is the largest environmental cause of disease and premature death in the world today. Diseases caused by pollution were responsible for an estimated 9 million premature deaths in 2015—16% of all deaths worldwide—three times more deaths than from AIDS, tuberculosis, and malaria combined and 15 times more than from all wars and other forms of violence” (Lancet Commission 2017, p. 1).

Therefore, are society and economy of a greater importance than politics? What does this tell us about democracy? Should democracy place a greater concern on non-political issues and characteristics? Different interpretations and implications are feasible or at least possible. In the following, we want to refer to a few possible conclusions: (a) *In the case of some political indicators, such as political freedom, we may still face a conceptual problem of how to measure these adequately.* What could result are minimum or minimalist definitions, for example for political freedom, with the consequence that only a passing of certain thresholds becomes evident and can be documented (with a certain power of conviction), whereas the measuring of higher levels of maturity still represents a real challenge. (b) Minimalist definitions of democracy, focusing and concentrating on fewer and limited political aspects and political characteristic, perhaps communicate and deliver the impression of a world wide tendency of a stagnation or only modest improvement for the endeavor of democracy. Broader conceptualizations of democracy that emphasize the importance of sustainable development for the quality of a democracy and that refer therefore to developments and improvements in society and economy and in society and in economy, reveal (by tendency) perhaps a different picture: *when such broader conceptualizations are being translated into attempts of empirical measurement (by this including also non-political indicators), then we may see in global context a more progressive development of society and economy (also of knowledge society and knowledge economy), and to a certain extent also of democracy or at least of the opportunities and prospects for democracy (including the concept of the knowledge democracy). In practical terms, what this can mean is (for example): should medium-high or very high scores of political freedom stagnate, then democracies still can focus on improving their “non-political” sustainable development in society (and economy). To raise for discussion a radical proposition or at least a challenging question: Is there a certain plausibility to assert that also in theoretical terms the broader conceptualization of democracy and the*

quality of democracy is more dynamic (by referring also to development, also to non-political development) than minimalist conceptual approaches toward democracy and the quality of democracy (that only look on political freedom in a narrow sense)?

- (5) In conceptual as well as in empirical terms there is still a difference between growth rates of scores, on the one hand, and score levels of indicators (and dimensions) and the actual height or highness of score levels as such, on the other. For example, tertiary education expresses a leading growth momentum, however, scores as score level are still lower when being compared with the score levels of other indicators and dimensions (see again Figs. 5.4 and 5.5). *However, the analysis of growth momentums (of indicators) is particularly important, because growth momenta could be interpreted as predictors (of course only to a certain extent and probability) of the future importance of different areas and the involved opportunities of future development of society, economy and democracy.*
3. *Comparison of scores and score levels of the OECD and of the whole world: In all dimensions and for all indicators (but one) the country group of the OECD (here OECD35) outperforms the world average (here means for World122).⁶ The only exception for that comparison are CO₂ emissions (in metric tons per capita), meaning that the OECD produces and generates (per capita) more environmental pollution on the basis of CO₂ emissions than the non-OECD countries (see Fig. 5.6). In that respect the OECD countries and advanced economies balance ecologically more negatively than the non-OECD countries and the emerging and developing economies.* When we compare the score levels of the OECD and of the whole world in 2002 with 2016, then we can identify the following trend (see Figs. 5.7, 5.8 and 5.9): for eight indicators (dimensions), the gap became smaller, however, with regard to three indicators (dimensions), the gap even widened to the advantage of the OECD and to the

⁶To add here a methodic note: scores for world averages include also the OECD countries. Therefore, comparing the OECD with the world is actually a comparison of the OECD countries, on the one hand, with the OECD and non-OECD countries, on the other (within the applied framework of our analysis).

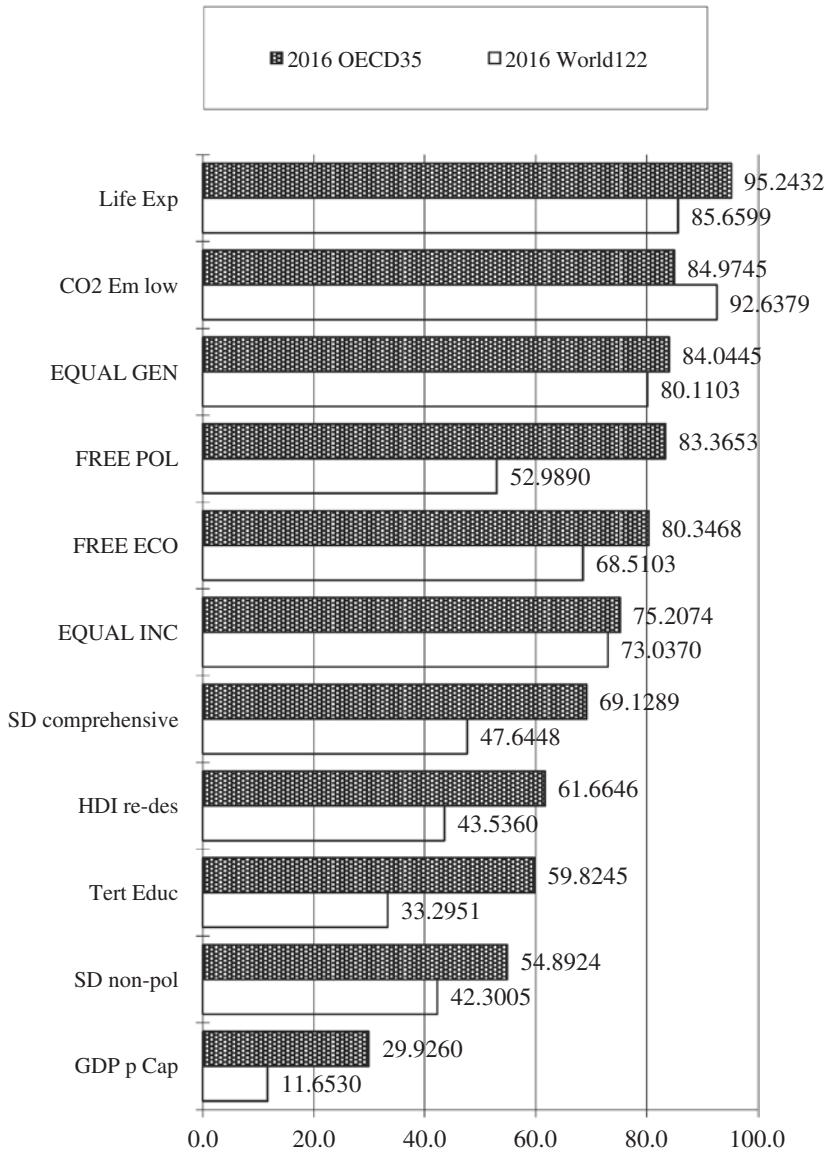


Fig. 5.6 Comparison of score values (levels) for the OECD (OECD35) and the world (world 122) for late 2010s (2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation)

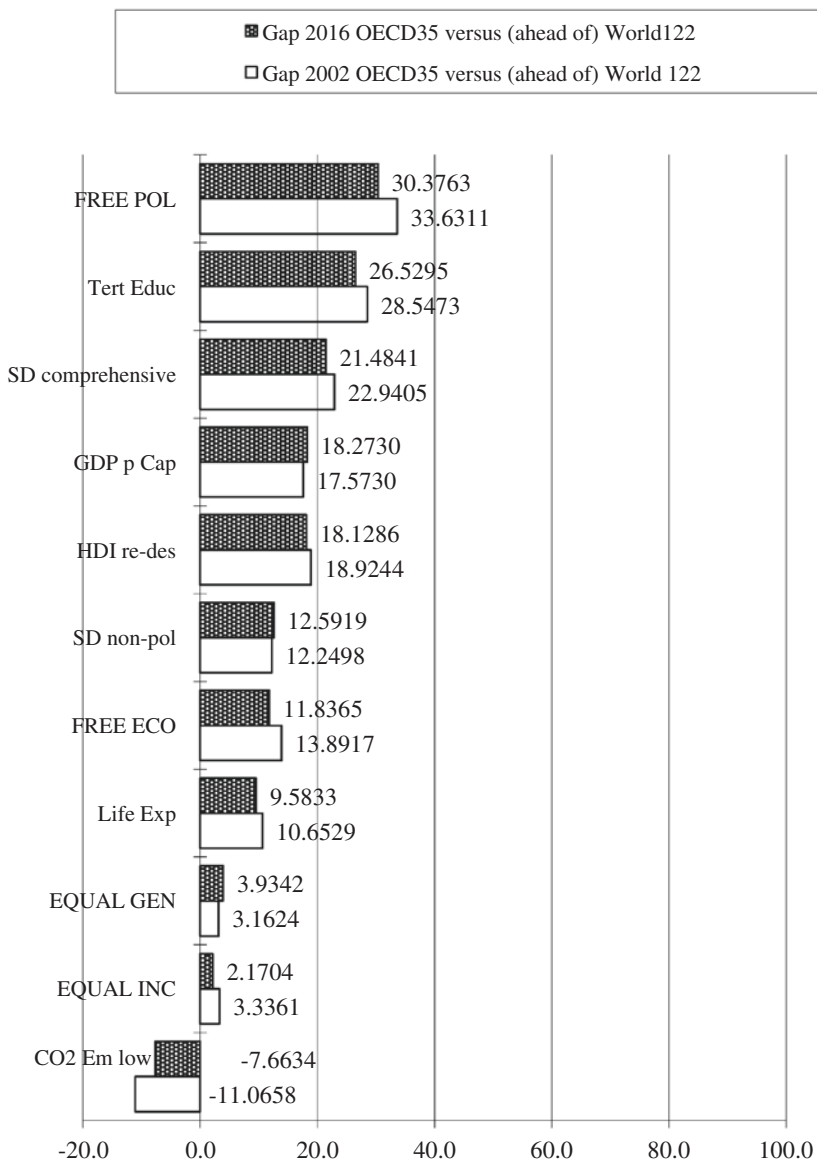


Fig. 5.7 Comparison of distance (gap) of score values (levels) for the OECD (OECD35) ahead of the world (world 122) for the early 2000s and late 2010s (2002 and 2016) (Source Author's own calculation)

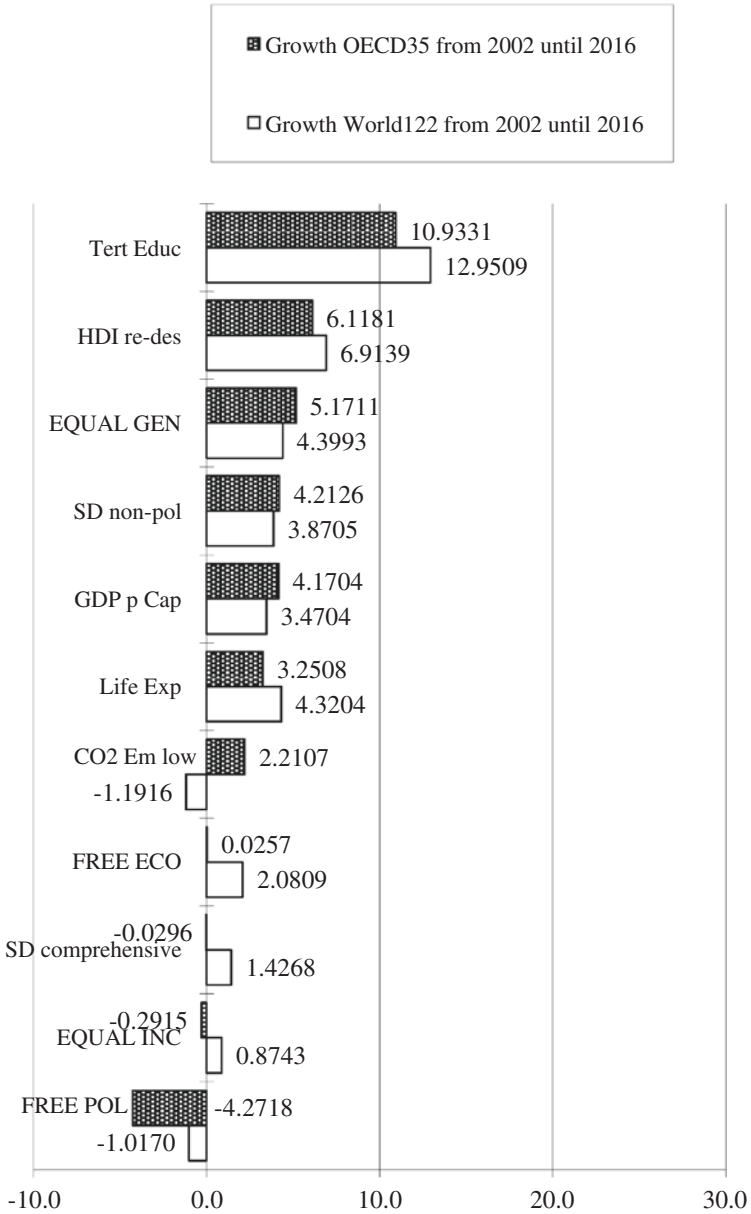


Fig. 5.8 Growth rates of score values (levels) for the OECD (OECD35) and the world (world 122) for the 2000s and 2010s by comparing 2002 and 2016 (sorted by OECD) (Source Author’s own calculation)

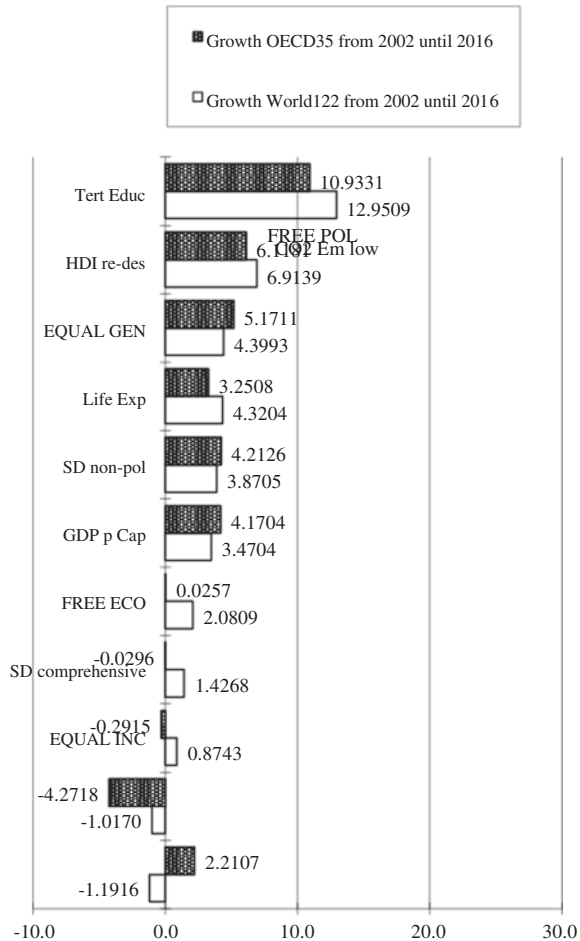


Fig. 5.9 Growth rates of score values (levels) for the OECD (OECD35) and the world (world 122) for the 2000s and 2010s by comparing 2002 and 2016 (sorted by world) (Source Author's own calculation)

disadvantage of the whole world (the non-OECD countries). Referring to other (already stated) empirical observations, we can conclude: *During the fifteen-year period of 2002–2016, the whole world improved its score levels across a broad range, but the whole world (non-OECD countries) improved faster than the OECD countries.* In that respect, it has become easier for the non-OECD countries (or for some of the

non-OECD countries) to catch up with the OECD countries and to make the gap smaller. *On a global scale, the world as a whole (by tendency) moves more into the direction of an increasingly equal status (from a cross-country comparative perspective, and now not looking at distributions within countries). The path of development accelerates for the non-OECD countries faster than for the OECD countries. Toward the end of the 2010s, the OECD expresses less of a lead and of a performance lead against the whole world (the rest of the world outside of the OECD) than was the situation at the beginning of the 2000s. The momentum of development of the whole world progresses more balanced and more evenly distributed across the different countries in world context. Does this also slowly balance and “neutralize” the global divide between OECD countries and the non-OECD world? Are there any chances for the developing economies to reach levels of development that are or will be comparable (in the foreseeable future) to the levels of development of in advanced economies? Of course, it should be critically mentioned that the gap of GDP per capita has not become smaller between the OECD countries and the whole world (non-OECD countries), but even has widened to some degrees. So, what is the essence of a gradual global socioeconomic balancing, if this does not also materialize in concrete terms such as GDP per capita? Of course, another critical question would have to be asked and raised here: Taking into account that political freedom has stagnated (modestly declined) during the period 2002–2016, so what was actually the role of democracy (and of democratization) for this general global improvement of socioeconomic development and in world wide socioeconomic development? The gap between the OECD and the means (averages) for the whole world are the largest in the domain of the following indicators: political freedom, tertiary education (tertiary gross school enrollment), “Comprehensive sustainable development,” GDP per capita (PPP, in constant 2011 international \$), and redesigned Human Development Index. The gap between the OECD and the world average is the smallest for: gender equality and income equality. Concerning lower CO₂ emissions (in metric tons per capita), the average for the whole world scores better than the average for the OECD. Based on that specific profile of the slowly becoming smaller gap between the OECD the world (the non-OECD countries), the following propositions can be put forward for discussion:*

- (1) This trend that for a majority of indicators (dimensions) the gap between the OECD and the world (the non-OECD countries) became smaller, when the years 2002 and 2016 are being compared, is also therefore so interesting, because this was not the case for an earlier time period. When the same methodic model, which we use here (with the score meaning of “0=(theoretical) minimum” and “100=empirical maximum”), is being applied for the shorter time period of 2002–2008, then we arrive at the reverse trend, meaning that the gap between OECD and the rest of the world (the non-OECD countries) actually has increased: “... during the seven-year period of 2002–2008, the whole world improved its score levels across a broad range, but the world of the OECD countries improved faster than the world of the non-OECD countries. In that respect, it appears to be or to become for the non-OECD countries increasingly difficult, to catch up and to be at par with the OECD countries. On a global scale, the world as a whole moves more into the direction of an increasingly unequal status. The path of development accelerates for the OECD countries faster than for the non-OECD countries. Toward the end of the 2000s, the OECD expresses more of a lead and of a performance lead against the whole world (the rest of the world outside of the OECD) than at the beginning of the 2000s. The momentum of development of the whole world progresses increasingly unbalanced and unevenly distributed across the different countries in world context. Does this deepen and worsen the global divide between OECD countries and the non-OECD world? Are there any chances for the developing economies to reach levels of development that are or will be comparable (in the foreseeable future) to the levels of development of the advanced economies” (Campbell 2013, p. 250). *While the whole world has become more unequal during 2002–2008, the whole world has realized here an important trend reversal, by managing to make the gap between the OECD countries and the whole world (the non-OECD countries) smaller (by tendency). Several of the emerging economies are progressing faster than the advanced economies (in several areas and domains).*

- (2) *Should those indicators (dimensions) be characterized further, where the lead of the OECD (and the gap to the disadvantage of the whole world and the non-OECD countries) is the greatest, then the assertion can be drawn that the OECD leads with regard to knowledge or a “knowledge dimension” (tertiary education), the political freedom and the one economic core indicator of wealth (GDP per capita). This double lead in knowledge and political freedom could also be portrayed as a particular lead of the OECD countries in “knowledge democracy.” It would be challenging, trying to distinguish here what the phenomena of a coevolution may be or if even casual relationships would apply (but what would determine what then of course?). In case of the advanced economies and advanced societies in context of the OECD, it appears to be empirically evident that there we experience at least a strong tendency that in advanced societies and economies also higher degrees of political freedom are being realized. There is by tendency a likeliness that advanced economies also will be democracies. Top performances in the economy and in sustainable development require also the establishment, continuation and progressing of democracy: without democracy, a breakthrough to top achievements and top performances in the economy and in sustainable development would be much more difficult to achieve (if not even be impossible). Advanced economies appreciate higher levels of political freedom. Therefore, this supports beliefs or assumptions of a coevolution of the economy and of democracy in the high end of performance (of sustainable development). The freedom lead to the advantage of the OECD is also stronger (superior) for political freedom than for economic freedom, meaning that OECD countries are more leading with regard to political freedom, and are less leading with regard to economic freedom, when compared with the non-OECD countries. This coevolution of freedom (political freedom), economy and sustainable development for the advanced economies also clearly supports (at least for this country group) the proposition of “democracy as an innovation enabler,” because advanced economies depend on knowledge and innovation as drivers. Knowledge and innovation appear to be key drivers for advanced economies, but*

also for (advanced) democracies. Without sufficient and mature knowledge and innovation (of a high quality), advanced economic development in advanced economies cannot be realized (or only with a greater improbability). *Here, knowledge economy, knowledge society and knowledge democracy align and associate together in coevolution* (Carayannis and Campbell 2012, p. 55). The one crucial indicator, in which economic lead manifests itself, is wealth, here foremost GDP per capita (from an economically aggregated perspective). *Developed and advanced economies express higher GDP-per-capita levels than the non-advanced (emerging and developing) economies. GDP per capita (as an indicator, but of course also by content) still discriminates against the non-OECD countries.*

- (3) *Those two indicators (dimensions), where the lead of the OECD, in comparison with the whole world (and by this also with the non-OECD countries), is the smallest, refer to :equality gender equality and income equality.*⁷ Here, of course, we speak of aggregated scores. But still, the empirical evidence (within the methodic concept of our applied model) is puzzling, and striking. *While the advanced economies (and advanced societies) of the OECD have created a substantial lead with regard to freedom (political freedom, also economic freedom) as well as sustainable development vis-à-vis the world of the non-OECD countries, the lead with regard to equality (gender equality, income equality) appears only to be marginal or secondary.* Provoking (thought-provoking) propositions, therefore, are: (a) advanced sustainable development and the degree of freedom associate or coevolve together, implying a tendency that in context of advanced economies the economic progress and progress of society align with progress in freedom; (b) *however, again in context of the advanced economies, progress in economy and society did not (necessarily) create a progress or substantial advancement of equality (particularly income equality), when compared with freedom;* (c) *substantial surpluses in freedom*

⁷We already indicated and discussed that on CO₂ emissions (in metric tons per capita) the OECD even scores worse and less good than the whole world (the non-OECD countries) (World Bank 2018). In that indicator domain, therefore, the OECD has no lead (see Fig. 5.8).

*are being overshadowed by modest increases and improvements (or even decreases) in equality, so, in context of the advanced OECD countries, progress in freedom is being decoupled from only-modest-progress in equality; (d) advanced economies appear to be successful to coevolve or even reinforce freedom, but they appear to be less successful in reinforcing and supporting a coevolution with equality; (d) in empirical terms, again in context of the advanced economies of the OECD, we cannot assert convincingly that progress in freedom will coevolve (with a high probability) with progress in equality. The radically asked question and the to-be-asked-questions therefore may be: *Were freedom and sustainable development in the advanced economies developed, emphasized and driven at the cost of equality? Has there even been a trade-off between freedom and equality in the process of progress for advanced economies and societies, to the disadvantage of equality? Does freedom represent the “strong dimension” and equality the “weak dimension” of and in advanced democracy? Does equality resemble the “Achilles’ tendon” of progress and further progress of economy, society and democracy? Was “equality” sacrificed for “freedom”? All those raised and suggested (for-discussion-suggested) propositions must be treated with great caution, because analytically we operate here at highly aggregated levels, so for individual countries the empirical assessment may indicate opposite and contrary findings. The explanatory power of the here applied framework of analysis of course is limited. Still, these aggregated scores seemingly highlight some tendencies and trends, by this creating an analytical demand for next-stage inquiry into the relationship of freedom, equality and sustainable development during the course of development and country evolution. Furthermore, equality and inequality are areas, on which more research should and must focus (Piketty 2015; Wilkinson and Pickett 2010; World Inequality Database 2018a, b).**

- (4) *While there is a large lead of the OECD ahead of the whole world with regard to economic wealth, indicated by GDP per capita, the lead of the OECD with regard to life expectancy already is substantially smaller. To a certain extent, this may represent a puzzling*

effect, because one could expect that surpluses in (economic) wealth would translate more directly into greater surpluses of life expectancy. In that respect the whole world (the non-OECD countries) were successful in compensating their further-lagging-behind (when being compared with the OECD) of GDP per capita with a less-lagging-behind concerning life expectancy.

- (5) Concerning less CO₂ emissions (in metric tons per capita) the whole world (and by this mainly the non-OECD countries) score better than the OECD. *Here, the non-OECD countries perform ecologically more sensitive, or to turn this argument around: at least partially, achievements of the OECD in sustainable development and economic progress are at the cost of also producing more environmental pollution for the whole world.* Should the rest of the world follow a path of economic development, which is in ecological terms similar to the OECD, then it is foreseeable that more of an ecological challenge will be arising for the world in the coming years.
4. *Comparison of growth rates of scores and score levels of the OECD and of the whole world across specific indicators (dimensions): Interestingly, the profiles of growth rates of indicators (and dimensions) over the period 2002–2016 reveal structurally some similarities by tendency for the OECD and non-OECD (the whole world), but of course there are also differences (see Figs. 5.8 and 5.9 and compare with Fig. 5.5).* The similarities between the OECD and non-OECD (whole world) are: there is greater growth of indicators in association with knowledge, such as tertiary education (tertiary gross school enrollment); the redesigned Human Development Index grows faster than non-political development (and “Comprehensive sustainable development”); non-political sustainable development grows faster than “Comprehensive sustainable development” (also including political freedom); economic freedom expands faster than political freedom; and gender equality progresses faster than income equality. For further in-depth analysis, we want to focus closer on the following aspects:

- (1) *Within context (and of course also the limitations) of the model being used here, there is a certain plausibility being generated, that knowledge and innovation act as driver for development and progress not only for the OECD, but also the non-OECD countries. In that sense, the concepts of knowledge economy and knowledge society (furthermore knowledge democracy) apply to advanced economies and societies as well as to emerging and developing economies and their associated societies.* This transforms knowledge into a global category and a global principle for development and sustainable development. The degree, maturity and advancedness of knowledge obviously differs across countries and economies. However, there are strong indications that the concepts of the knowledge society and of knowledge economy are also valid in the context of emerging and developing economies. One implication of this is that there is a need and necessity to develop a tertiary education system and types of universities and higher education institutions also in developing economies and the Newly Industrialized Countries. Higher education systems are not a privilege of the OECD countries, but represent a global standard that is valid everywhere. This associates potentially positively with the proposition of a “democracy as innovation enabler.”
- (2) *Non-political sustainable development grew faster in the OECD countries as well as for the whole world than “Comprehensive sustainable development” (which also includes political freedom). Non-political development expands in the advanced economies, but also in the emerging and developing economies more rapidly than political development.* In that sense and respect, there is a structural similarity between OECD and non-OECD countries (the Newly Industrialized Countries): in both contexts, (1) non-political development grew more dynamically than “Comprehensive sustainable development” or (2) the practically and successfully applied sustainable development (as it is being conceptualized here) associates perhaps closer to non-political development. At the same time, further progress in political development (political freedom) appears to stagnate

somewhat. Concerning political freedom, there is stagnation or modest decline in the non-OECD world and even more so of a stagnation and modest decline in the OECD world (but at a comparatively high level in the OECD countries).⁸ *This again refers to the issue, whether our current metrics or scales of measurement of political freedom are still focusing too much on checking or verifying, whether a minimum threshold of political freedom has been achieved.* Should this be the case, then the measurement of development (of democracies and non-democracies) may slide over in favor toward using more non-political dimensions and indicators. *On the contrary to political freedom, economic freedom grew faster than political freedom in the OECD countries and for the whole world.*

- (3) *Growth rates for income equality rank (together with growth rates for less CO₂ emissions and political freedom) in the lower third of the here measured dimensions and indicators.⁹ Income equality, in fact, stagnates, and did not really progress over the period of 2002–2016. More troublesome, however, is the trend in context of the OECD: in the OECD, income equality even decreased during the years of the 2000s and 2010s (while income equality stabilized and perhaps even slightly improved for the whole world). This feeds fears and worries that income could decline while economies and societies are evolving and are becoming richer. The critical question here would be: Is there a negative correlation between income equality and GDP per capita? The critical proposition would be: Should income equality decrease, while the general wealth (GDP per capita) in a society, economy and democracy is increasing, then how do advanced societies, advanced economies and advanced democracies cope with these challenges? When would a drop (a further drop) in income equality produce a negative balance for the average GDP per capita mean (median) for the average person*

⁸See Fig. 5.5.

⁹For life expectancy we must note comparatively high levels of score values in empirical terms: for the OECD, life expectancy ranks first, i.e., highest. For the whole world (non-OECD), life expectancy still ranks second (see Fig. 5.7).

(individual) in a society? Should such a negative scenario take place, then further increases of a general (aggregated) GDP per capita would not translate comprehensively (sufficiently) into income surpluses at the individual level. This would have all the potentials to trouble-spot, in the long run, the further prospects of democracy and of sustainable development of democracy, and may increase the chances that populism and radical populism could challenge and further challenge democracy (Heinisch et al. 2017; Wineroither and Kitschelt 2017).

- (4) Contrary to the stagnation or decline of income equality, the gender equality is increasing. *Gender equality is increasing for the OECD countries as well as the whole world (the non-OECD countries). In that sense it is interesting to see that gender equality and income equality are performing differently, and failures in income equality are being contrasted by successes in gender equality.* More of a gender equality may be also be one of the factors contributing decisively to advancements in tertiary education and in the broadening of tertiary education, since the enrollment to and participation in tertiary education are becoming socially more equally distributed in a society.
- (5) Our index of CO₂ emissions (in metric tons per capita) expresses for the OECD countries and the world average a negative growth. *This implies that CO₂ emissions actually accumulated (for the OECD and for the world) empirically over the observed period of 2002–2016. We must state that environmental pollution, based on CO₂ emissions, has been on the increase.* The increase took place in context of the OECD countries, but also in the global context of the comprehensive world. Concerning CO₂ emissions, the ecological balance of the whole world turned negative and developed clearly unfavorably. This indicates that ecological (socioecological) treatment of nature or of the natural environments of society and economy still represents a serious and crucial challenge for further sustainable development (see again Lancet Commission 2017; World Meteorological Organization 2017). *Should there be no betterment of the ecological balance of humanity, then future advances*

and progress of society, economy and democracy are clearly at risk. Ecology represents a serious and dramatic bottleneck for the coming next steps in the route striving to make more progress and advancements. This again emphasizes the need to transform or to translate ecological challenges into drivers for knowledge, knowledge production and innovation. This is being exactly attempted by the concept and model of the “Quintuple Helix Innovation System” (Carayannis and Campbell 2009, 2010, 2014). Social ecology represents a crucial field for further global development and the future of humanity (Fischer-Kowalski 1998; Fischer-Kowalski and Hüttler 1999; Fischer-Kowalski and Haberl 2007).

- (6) *The growth rates of scores and score levels across dimensions and indicators are (to a certain extent) structurally similar between OECD countries and the whole world.* In that respect, and to formulate here a proposition, we experience structural similarities or parallel trends (patterns of development) of the OECD as well as the non-OECD world (see and compare Figs. 5.8 and 5.9). *This could add a certain plausibility to the assertion and proposition that the inner logic of development or of sustainable development may be to some degree similar in context of the OECD countries (advanced economies), but also in context of the non-OECD countries (emerging and developing economies).* Should this represent an accepted point-of-departure, then principles of knowledge and innovation of the knowledge economy and knowledge society would also apply to the emerging and developing economies and to the Newly Industrialized Countries. In that sense the principle of “democracy as innovation enabler” could be loaded with a broader meaning. *Despite these structural similarities in the growth patterns (across dimensions and indicators), however, there is one interesting aspect: by and large, the non-OECD countries are growing faster than the OECD countries. With the exception of four indicators,¹⁰ the gap*

¹⁰These four indicators are gender equality, non-political sustainable development and GDP per capita. Also, while CO₂ emissions in metric tons per capita are somewhat decreasing for the OECD countries, they increased for the whole of the world.

between the OECD and non-OECD world, therefore, is becoming smaller to the advantage of the non-OECD countries (for seven indicators). So the lead of the OECD countries has decreased somewhat. In that respect, the world has become more equal during the 2000s and 2010s, when non-OECD countries are being compared with the OECD countries (and now not referring to distributions within countries). The current (mid-term) trend is that the OECD and non-OECD countries developed and progressed during the years 2002–2016, but the non-OECD countries developed and progressed faster, while the OECD countries moved slower ahead. Should this be regarded now as a positive message on the prospects of development (further development) of the non-OECD countries? Certainly positively factors in that there was an aggregate development and upward mobility of the non-OECD countries as a whole (at least it would be reasonable to argue in such a way). At least for a few of the non-OECD countries, it is now possible to continuously make the gap toward the OECD countries smaller, perhaps even to catch up with some of the OECD countries and to overtake them. At the same time, however, concerning the “absolute” score levels, the OECD countries still are leading substantially in a diversity of areas (for example, GDP per capita). So while in “relative terms” the whole world is becoming more equal, in “absolute terms” the world still is substantially unequal in several of the important areas and domains. Furthermore, and this is equally important for the non-OECD countries, but also the OECD countries themselves, also the “internal equality” of countries and societies matters, and may even increasingly matter in the future (for example, concerning income equality or income inequality). So there is continuously a mixed balance on equality in the world and on the equality of the global world developments.

References

- Campbell, D. F. J. (2013). Conceptualizing and Measuring the Quality of Democracy in Global Comparison. Freedom, Equality, Sustainable Development, and Political Self-Organization (Political Swings, Government/Opposition Cycles) in 151 Countries (Democracies, Semi-democracies and Non-democracies), 2002–2008. Habilitationsschrift. Vienna: University of Vienna (Habilitationsschrift).
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix Innovation Model: Global Warming as a Challenge and Driver for Innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 1–12. <http://www.innovation-entrepreneurship.com/content/pdf/2192-5372-1-2.pdf>.
- Carayannis, E. G., & Campbell, D. F. J. (2009). “Mode 3” and “Quadruple Helix”: Toward a 21st Century Fractal Innovation Ecosystem. *International Journal of Technology Management*, 46(3/4), 201–234.
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate to Each Other? A Proposed Framework for a Transdisciplinary Analysis of Sustainable Development and Social Ecology. *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69.
- Carayannis, E. G., & Campbell, D. F. J. (2014). Developed Democracies Versus Emerging Autocracies: Arts, Democracy, and Innovation in Quadruple Helix Innovation Systems. *Journal of Innovation and Entrepreneurship*, 3, 12. <http://www.innovation-entrepreneurship.com/content/pdf/s13731-014-0012-2.pdf> and <http://www.innovation-entrepreneurship.com/content/3/1/12>.
- European Commission. (2009). *The World in 2025: Rising Asia and Socioecological Transition*. Brussels: European Commission. http://ec.europa.eu/research/social-sciences/pdf/the-world-in-2025-report_en.pdf.
- Fischer-Kowalski, M. (1998). Society’s Metabolism: The Intellectual History of Materials Flow Analysis, Part I, 1860–1970. *Journal of Industrial Ecology*, 2(1), 61–78.
- Fischer-Kowalski, M., & Haberl, H. (Eds.). (2007). *Socioecological Transitions and Global Change: Trajectories of Social Metabolism and Land Use*. Cheltenham: Edward Elgar.

- Fischer-Kowalski, M., & Hüttler, W. (1999). Society's Metabolism: The Intellectual History of Materials Flow Analysis, Part II, 1970–1998. *Journal of Industrial Ecology*, 2(4), 107–136.
- Heinisch, R., Holtz-Bacha, C., & Mazzoleni, O. (Eds.). (2017). *Political Populism: A Handbook*. Baden-Baden: Nomos.
- Lancet Commission. (2017, October 19). The Lancet Commission on Pollution and Health. *The Lancet*. <http://societyforindooenvironment.net/sites/default/files/pdf/Landriganetal2017TheLancetComissionsHealthAsiaReview.pdf> and http://gahp.net/wp-content/uploads/2017/03/PE_InfoLancetSummary.pdf.
- Piketty, T. (2015). *The Economics of Inequality*. Cambridge, MA: Harvard University Press.
- Vadrot, A. B. M. (2014). *The Politics of Knowledge and Global Biodiversity*. Abingdon: Routledge.
- Veld, R. J. in 't. (2010a). *Knowledge Democracy: Consequences for Science, Politics, and Media*. Heidelberg: Springer. <https://link.springer.com/book/10.1007/978-3-642-11381-9>.
- Veld, R. J. in 't. (2010b). Towards Knowledge Democracy. In R. J. in 't Veld (Ed.), *Knowledge Democracy: Consequences for Science, Politics, and Media* (pp. 1–11). Heidelberg: Springer. https://link.springer.com/chapter/10.1007/978-3-642-11381-9_1.
- Wilkinson, R. G., & Pickett, K. (2010). *The Spirit Level: Why Equality is Better for Everyone*. London: Penguin Books.
- Wineroither, D. M., & Kitschelt, H. (2017). Die Entwicklung des Parteienwettbewerbs in Österreich im internationalen Vergleich, 251–285. In L. Helms & D. M. Wineroither (Eds.), *Die österreichische Demokratie im Vergleich*. Baden-Baden: Nomos.
- World Bank. (2018). World Development Indicators (Web-Based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>.
- World Inequality Database. (2018a). *World Inequality Database*. WID. <http://wid.world/>.
- World Inequality Database. (2018b). *World Inequality Report 2018*. WID <http://wir2018.wid.world/>.
- World Meteorological Organization. (2017, October 30). The State of Greenhouse Gases in the Atmosphere Based on Global Observations Through 2016. *WMO Greenhouse Gas Bulletin* 13. https://ane4bf-datap1.s3-eu-west-1.amazonaws.com/wmocms/s3fs-public/ckeditor/files/GHG_Bulletin_13_EN_final_1_1.pdf.



6

The Basic Dimension (Basic Conceptual Dimension) of Self-Organization (Political Self-Organization): Government/Opposition Cycles and Political Swings (Political Left/Right Swings), Peaceful Person Change of Head of Government and Peaceful Party Change of Head of Government in Global Comparison (2002–2016 and 1990–2017)

This chapter focuses on two central research questions: (1) *How does political freedom relate to government/opposition cycles; and, furthermore, (2) how can the freedom ratings of Freedom House for political freedom be validated (if at all)?* By approaching these questions, we want to add further perspectives to the overall analysis of democracy and quality of democracy in the world and our attempt of conceptualizing and measuring democracy in global context. In fact, these two research questions, raised here, add a crucial line of thinking to our understanding of democracy.

For the underlying model for the basic dimensions (basic conceptual dimensions) of democracy and the quality of democracy, we proposed a quintuple-dimensional structure (see again Figure A.5 in the introduction). The quintuple structure identifies the following five dimensions: *freedom, equality, control, sustainable development and self-organization (political self-organization)*. Self-organization can take very different manifestations. *One approach for looking at self-organization*

closer is to focus on government/opposition cycles, which can also result in “political swings”, for example political left/right swings (see Figs. 6.1 and 6.2). Government/opposition cycles (and political swings) may also be treated as an indicator for the dimension of “control”

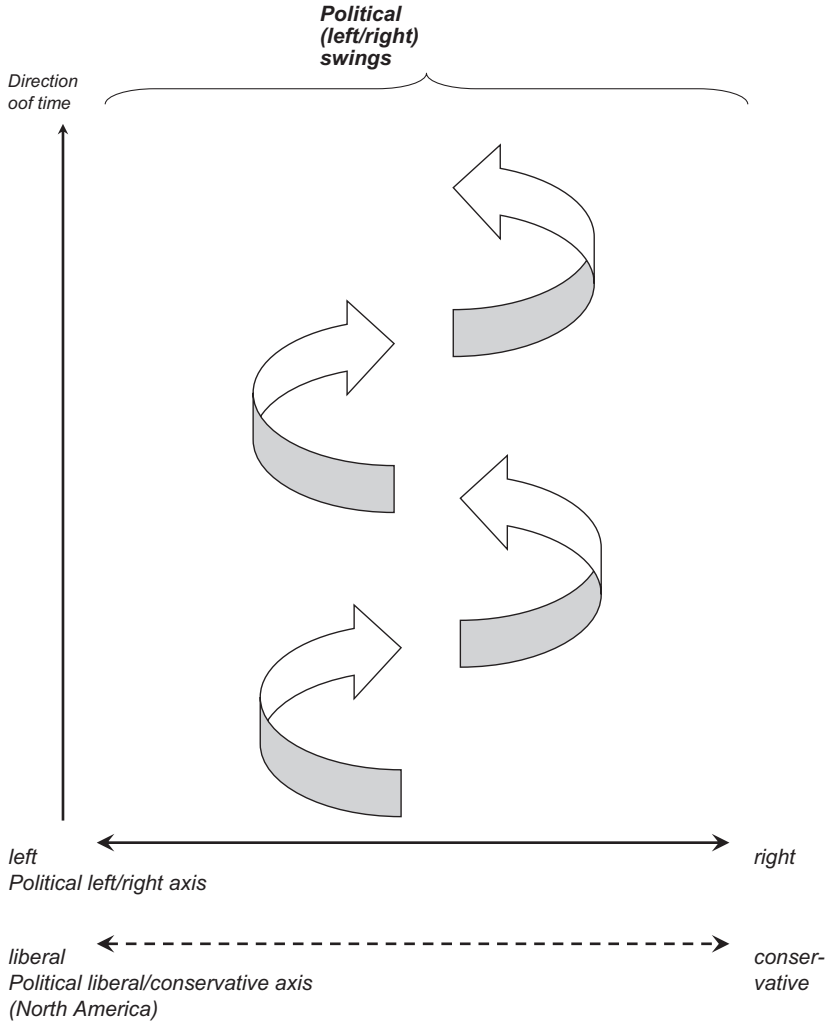


Fig. 6.1 Political swings, political left/right swings (Source Author’s own conceptualization and visualization)

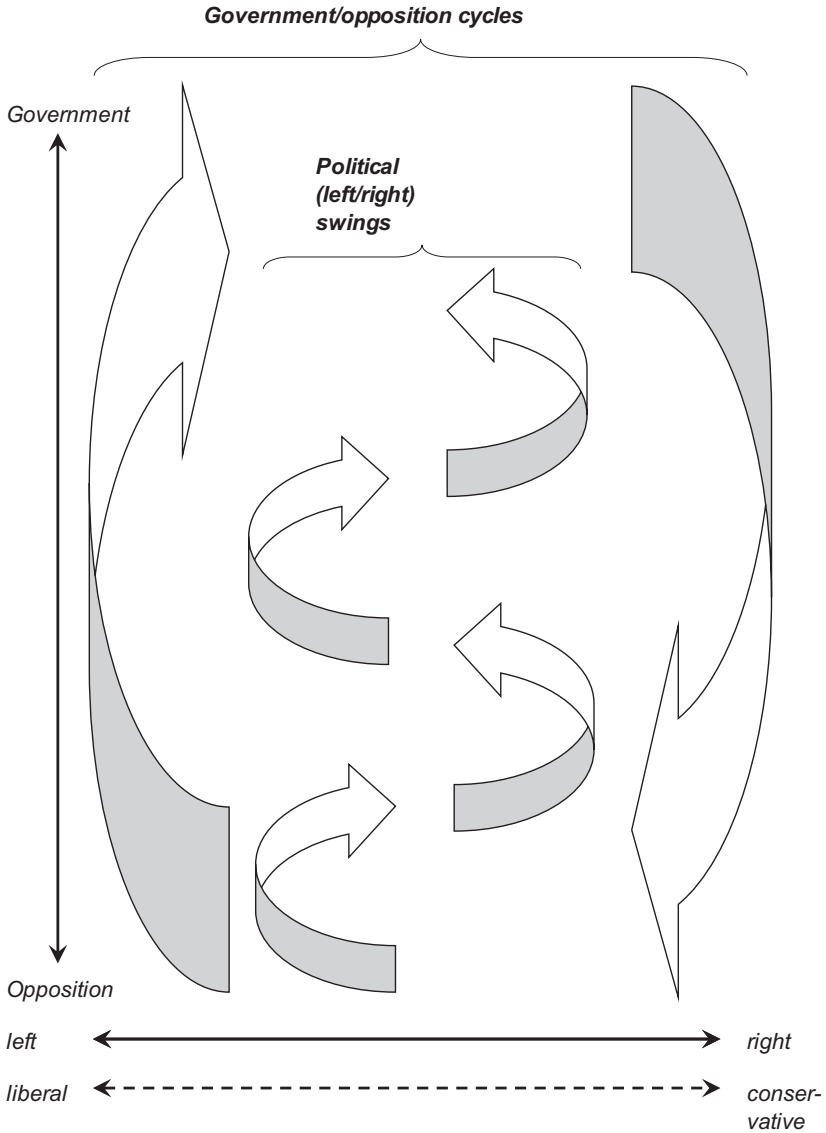


Fig. 6.2 The conceptual overlapping of government/opposition cycles and political (left/right) swings (Source Author's own conceptualization and visualization)

(see in the introduction also Fig. 1.10): in context of the analytical framework in our work, the decision was taken to assign government/opposition cycles to the dimension of self-organization. The left and right axis represents one of the main axes for structuring the political space, and by this also the political competition (Laponce 1981). In US politics, the main axis for political self-identification is the liberal/conservative axis (Niemi et al. 1989, pp. 19–21). This North American liberal/conservative axis, however, could be reinterpreted into a left/right axis (Harding et al. 1986, p. 87; see again Fig. 6.1). Left and right also could be understood as a “left/right dimension” (Harding et al. 1986, p. 81).

Government/opposition cycle means that (1) opposition parties have a chance to be elected by the voters into office and (2) that government parties also are elected by the voters out of office. So there is a permanent and constant fluctuation of parties into government office and out of government office. At the level of government, this creates change, for example a person change and a party change of the head of state or the head of government. *For the political system, this creates phenomena such as the political swings. Is there a cyclical or fluctuating iteration of power, where either by tendency political parties of the left (center-left) or of the right (center-right) control in an alternating sequence a majority of parliament and government (government coalitions), then political swings also take the form of political left/right swings.*¹

Government/opposition cycles (political swings) should be regarded as being crucial for democracies and their quality. The existence of government/opposition cycles does not automatically prove that a state or government is democratic. However, there is a high probability for the inverse conclusion: without government/opposition cycles, and without person change and party change of the head of government, it becomes rather unlikely that a government is democratic, so the political system does not represent a democracy. This would be particularly the case in the absence

¹For an analysis of political left/right swings at the national level of the political system in Austria, see Campbell (1992). For a long-term comparison of political left/right swings at the national and provincial level of Austrian democracy, see Campbell (2007). For a comparative international assessment of political left/right swings in North America and Western Europe, see Campbell (1996).

of government/opposition cycles over a longer period of time. Therefore, government/opposition cycles add also to the quality of a democracy. In practical empirical terms, this means: out of an interest to apply a formal criterion for identifying democracies (and contrasting democracies and semi-democracies vis-à-vis non-democracies), the rule would be to test and to verify, whether government/opposition cycles occurred, whether there was a change in person or in party of the head of government, perhaps not in a short-term perspective, but at least during a midterm perspective of time, and surely for a long-term period of time. *In case of empirical absence of government/opposition cycles, it would be difficult to argue, why or how a country should be regarded of still representing a democracy.*

There can be debates, what a good frequency for government/opposition cycles would or should be, whether there can be not enough, or perhaps even too much political change in governments, then perhaps leading to political instability. Therefore, it is not automatically predecided that a numerical increase in frequency of person or party change within a government necessarily adds to the quality in a democracy. On the other hand, it can be asserted convincingly that the frequency of government/opposition cycles is then good when it supports the political competitiveness within a political system. Longer periods of dominance or even hegemony of one political party (or party leader) should therefore be evaluated critically with respect to which impact this may have on the quality of a democracy. The impact can be negative. In case of younger established democracies, for example in context of Newly Industrialized Countries (NICs) or emerging countries, we may observe the phenomenon of existence of a political party that dominates in a hegemonic fashion for a longer period of time the political system. It would represent a trend and process of advancing maturity for that democracy should during the progress of time also opposition parties earn later a realistic chance of winning elections, and by this pushing an incumbent government party out of office. We may discuss the formation processes of democracy in India and Mexico by referring to such a conceptual framework of analysis and understanding. Other problematic scenarios are where a dominant political party within the political system is only challenged by a fragmented opposition.

It can be said that the Liberal Democratic Party, placing center-right or to the right, plays such a domineering role for the political system in Japan. *The ability of a political system, to engage via government/opposition cycles in political swings (political left/right swing), by this enabling and supporting a viable and sufficient degree of political competitiveness within the system, represents certainly an important indication for the extent, magnitude and unfolding of quality within a democracy.* For Western Europe, for the period 1945–1999, Wolfgang C. Müller and Kaare Strøm (2000a, p. 589) verify and demonstrate statistically and empirically that government parties face a higher chance and likeliness to loose (votes) in subsequent and succeeding elections (see also the other contributions to Müller and Strøm 2000b). To look at that observation from a different perspective: would this not be the case (that government parties loose with a higher probability in upcoming elections), then the general trend would be that government parties attract higher shares of votes with every election cycle, finally approximating a hundred percent share of votes and seats in parliament. Such a scenario, in its ultimate consequences, implies the end of democracy, with diminishing and eroding opportunities for quality of democracy. Therefore, the general behavioral patterns of voters to vote government parties out of office in regular intervals should be regarded to be really rational, representing a type of “homo politicus.” For Western Europe, we clearly experience a gradual increase in political competitiveness after 1945. For example, in the Scandinavian countries now non-socialist parties can win elections more easily, by this effectively challenging the dominance of social democracy there. Contrary to that, the chance for socialist (social democratic) parties to win in elections also has increased in several of the Continental European countries, for instance in Germany (for a more general summary of political trends in Europe, see Luther and Müller-Rommel 2005). In the tradition of the political system of the USA, the concepts of “realignment” and “dealignment” describe and capture the momentum of increased political competition. Realignment refers to a (consistent) political swing to the left or to the right across different levels or institutions of American politics (Schlesinger Jr. 1986). According to Clubb et al. (1990), there were three main realignment elections in the USA, in 1860, 1896 and 1932, leading to

the formation of three “stable” phases of a realigned American political system: 1862–1874, 1898–1910 and 1934–1946 (Clubb et al. 1990, p. 28). Dealignment, on the contrary, implies that there is not one major political swing trend, but that there are opposed and reversed political trends at the same time, where political swings are being neutralized by counter-swings across the different levels and institutions of the political system (see also Dalton and Wattenberg 2002). The general assertion for American politics is that until 1945 the realignment phenomena appear to be the rule, whereas political trends after 1945 behave more in terms of dealignment. In the context of the formation of the European party systems in a historical perspective, the phenomena of electoral waves and electoral swings across Europe also have been analyzed (Caramani 2015, pp. 118–148; compare also with Schmidt 1983).

This importance of government/opposition cycles for identifying democracy and quality of democracy is also acknowledged in principle by Przeworski et al. (2003). They assert: “Democracy is a regime in which government offices are filled by contested elections. The first part of this definition is easy to operationalize: it is relatively simple to observe which office, if any, is filled as a result of elections. But whether or not these elections are contested, in the sense defined earlier, is not always apparent. The existence of more than one independent party is a *sine qua non* of contestation, but it may not be sufficient” (Przeworski et al., p. 19). Therefore, Przeworski et al. (2003, pp. 19–20) apply three rules: “Rule 1: The chief executive must be elected”; “Rule 2: The legislature must be elected”; and “Rule 3: There must be more than one party.” Przeworski et al. (2003, p. 20) expand their argument by stressing: “We also extend this rule to disqualify as democratic those regimes in which incumbents used an electoral victory to establish (1) non-party rule or (2) one-party rule or (3) a permanent electoral domination. This is called the ‘consolidation’ rule.”

What drives government/opposition cycles, and by this political swings (political left/right swings), in political systems and in democracy? *In fact, it can and should be argued that the capability of a democracy to allow, encourage and unfold peacefully (without violent means) government/opposition cycles, thus enabling the political system to engage in political swings, should be viewed and assessed as a key characteristic of*

democracy that crucially contributes to the advancement and sustainable development of society and economy in a democracy. Several factors come into play for pushing government/opposition cycles. We will review three in more particular (see furthermore Campbell 2002, pp. 20–23)²:

1. *Balance of power*: Politicians and political parties should be driven by idealistic motives and the interest to better the people and society. However, this does not have to be the case, automatically. There is no assurance or warranty that politicians (political parties) will act altruistically. In fact, there are explicit models about politics that assume politicians to be selfish and egoistically acting. Anthony Downs (1957/1985, p. 28), for example, describes the motivation for party action as follows: “From the self-interest axiom springs our view of what motivates the political actions of party members. We assume that they act solely in order to attain the income, prestige and power which come from being in office.” Furthermore, Downs (1957/1985, p. 30) asserts: “Politicians in our model are motivated by the desire for power, prestige and income, and by the love of conflict, i.e., the ‘thrill of the game’ common to many actions involving risk.” There is the phrase of “Power corrupts; absolute power corrupts absolutely,” which allegedly was used in a letter by John Emerich Edward Dalberg Acton, first Baron Acton (1834–1902), to Bishop Mandell Creighton in 1887: “Power tends to corrupt, and absolute power corrupts absolutely. Great men are almost always bad men.”³ *The political institutions (of government) and the political system thus need mechanisms that constrain, contain and balance (neutralize) these egoistic and selfish desires and motivations of politicians. Without such balances, the misuse of power and political power would be the rule and norm, and there could be massive misuse.* Larry Diamond and Leonardo Morlino (2004, pp. 22–23; 2005, pp. xii, xiv–xxxi) identify “eight dimensions of democratic quality”.

²The factors discussed here that are interpreted to contribute to the phenomena of government/opposition cycles (political swings) in political systems (democracies) actually also address the “Why Question”: *Why are there political swings and government/opposition cycles?*

³See: <http://www.phrases.org.uk/meanings/absolute-power-corrupts-absolutely.html>.

Two specific dimensions are “vertical accountability” and “horizontal accountability.” *Government/opposition cycles (political swings) represent one manifestation for performing horizontal accountability. Because government/opposition cycles push politicians and political parties out of government office, this effectively imposes a balance against the misuse of political power.* The self-interest-based behavior of politicians and of political parties (Downs 1957/1985) requires a regular repetition and renewal of the cyclical replacement of politicians, by ousting them out of office, since there is no perfect politician or perfect political party, which may not be tempted by the privileges and opportunities of power in association with government office.

2. “Vote-seeking,” “office-seeking” and “policy-seeking” (“cycle of seeking”): Behavior of political parties can be explained in reference to the concept of vote-seeking, office-seeking and policy-seeking (Strøm and Müller 1999). *Vote-seeking* means: parties want to win elections and votes, in order to take over public offices (government functions) and/or to implement certain policies. *Office-seeking* means: this term implies that parties are primarily interested in the privileges of public offices, and therefore want to control government functions (compared with Downs 1957/1985). *Policy-seeking* finally means: it is emphasized here that parties try to attain government power in order to implement certain policies or an identified policy program. Idealized descriptions of democracies would want to assume that political parties and politicians (therefore governments) are primarily policy-seeking, interested in gaining election-based control over government (and the legislation, parliament), so that they can apply and implement a policy that does better the people and society. Viewed ideally, the parties strive to win elections and attain public offices in order to implement exactly that policy which they consider to be the best (optimal) policy for whole society. This policy should be derived from the ideology and/or programs of parties (values, party programs and electoral programs). The Downsian (Downs 1957/1985) modeling of politics, however, would propose the opposite, with the following implication: politicians and political parties are primarily office-seeking (with the interest of exploiting the privileges and advantages of office), for that purpose must also be vote-seeking, and

act “policy-promising” to win the necessary elections. *In addition, politicians and political parties may be exposed to the following “cycle of seeking”: as long as politicians and political parties are in opposition, the more they believe in their principles of policy-seeking. However, the longer politicians and political parties are in government and in power, then the self-logic of preserving this power may become domineering, thus pushing besides the original goals of policy-seeking. Earlier policy beliefs are sacrificed for the principle of staying in power.* There is at least some political science evidence that the longer a political party stays in government power, the more there is a tendency of shifting emphasis from policy-seeking to office-seeking (for example, see Share 1999). *Government/opposition cycles should and do help keeping the political system (politicians and political parties) sufficiently focused on policy-seeking, preventing politics of becoming too one-sidedly biased in favor of vote-seeking and office-seeking.*

3. *Policy-based governance of governments (“balance of policy”): The concept of policy-seeking implies that governments apply policy for the purpose of issue-addressing and problem-solving. Society, policy and economy (and the environmental context of society and economy) are constantly challenged by issues and by problems that seek solutions. Some issues and problems may be solved, but there are always new issues and problems, entering the agenda. So the stream of old and new problems appears “endless,” in metaphorical terms, but not only metaphorically speaking. Also, we should be aware of that every policy program has its implicit strengths and weaknesses in the sense that it addresses only specific issues and problems, by this ignoring other issues and other problems. Furthermore, the design and approach of a policy program will be better in solving certain issues and problems, but will not have the capacity to address all issues and all problems with the same quality. For example: Should economic policy focus on economic growth, control of inflation or reduction in unemployment? What is more important: economic growth, balanced public budgets, increases in income and gender equality or environmental protection? Should there be more of a “market rationale” or a “governance by the state” and a “welfare system”? What results is that every government and government policy must be interpreted as a trade-off, and*

trade-off here means in reference to the focus on problems and the applied means of problem-solving. We could assert that political parties (and politicians) specialize on certain policies and policy programs for the purpose of a betterment of society and economy (for a comparative empirical mapping of such policy preferences, see Budge et al. 2001; Klingemann et al. 2006). *Governments are caught constantly in the dilemma of defining a hierarchy (ranking) of priorities for their policy program: What should be addressed, with which priorities, and how with which means? Therefore, government policies are always suboptimal by design and structure.* How does the political system cope with this major challenge of being suboptimal in the application of government policy? Political swings via government/opposition offer here one systemic answer and solution. *Political swings, political left/right swings imply that constantly new parties and politicians enter government office, by this replacing incumbent parties and politicians. For government policy, this produces the effect that also policy programs change, reshifting the focus on new issues and problems to be resolved and on new policy means and policy approaches. In conclusion of this, there are “policy swings” and “policy transformations” at the government level.* Since also the new governments only apply a suboptimal governance, this feeds into a general cycle of government/opposition cycles for political swings. *Political swings, political left/right swings create the heterogeneity and pluralism so essential for policy programs, which appears to be necessary for a balanced government and governance and sustainable development in the long run.* Without political left/right swings and the connected policy swings, a political system and its governance would run the risk of becoming one-sidedly deadlocked in serious policy deficiencies, finally trapping the opportunities of development for a whole country. *Political swings (political left/right swings) endow a political system with a crucial flexibility in policy and policy-making. Because a political system is politically “swinging,” it is better enabled for policy learning and policy evolution. This exemplifies how a democracy can leverage its pluralism and diversity for key advances in governance and policy.* We can also construct how this may create a “meta-truth” for governance in a democracy: *every government policy is suboptimal, but by the cyclical coupling of differently swinging government policies*

these suboptimality are balanced over a longer period of time, by this supporting in principle a betterment of society and economy. Of course, there is not only a swinging of policies, but some policies indeed may become replaced by other policies. Therefore, policy swings and policy transformation coexist. Policy learning and policy evolution refer to both aspects. Based on the assertion that (at least in some cases) opposition parties are more policy-seeking and government parties more office-seeking (see again above Share 1999; Strøm and Müller 1999), this adds additional plausibility to the argument, why political swings and government/opposition cycles are necessary and crucial for maintaining and improving the flexibility, the degree of innovation and problem-solving capability of government policy. Overlong periods of governance by the same parties and politicians may reduce the innovativeness in government policy. *Therefore, political swings are also connected to innovations of and in government policy.* The interconnectedness of political swings and policy swings is additionally being explained (at least partially) by the so-called Saliency Theory (see Budge and Farlie 1983, pp. 21–56) in political science. This theory asserts that voters attribute specific competences for “issues” (and issue-solving and problem-solving) to the various parties (and politicians). Voters are of the opinion that the individual parties are differently competent for specific issues and government policies. Parties (and politicians) cannot easily or randomly change their competences in the perception of voters, so every reshuffling in issue competence by parties and politicians may require time and efforts in convincing the electorate. “Saliency Theory” argues why when there is a shift in issue priorities in the perception of voters, the voters then often vote new parties and new politicians into office (see Campbell 2002, p. 21).

In the context of our framework of analysis, the operationalization and empirical measurement of the political subdimension of political freedom is based on the aggregation of three indicators that are being provided by Freedom House: “political rights” (Freedom House 2013a), “civil liberties” (Freedom House 2013a) and “freedom of press”

(Freedom House 2013c).⁴ *How objective or how neutral are those freedom measures by Freedom House?* One could argue that Freedom House already achieved a high degree of methodic transparency (Freedom House 2012a, b), also by displaying and making public the survey team (Freedom House 2012b). Furthermore, the methodic transparency of Freedom House appears to be further developed than that of competing initiatives in the field of democracy measurement, for example the Democracy Index (Campbell et al. 2013, p. 6). When compared with earlier years (Gastil 1993), it is also obvious that Freedom House improved the transparency and quality of its methodology. For example, since 2003, Freedom House publishes the more detailed aggregate scores of “political rights” and “civil liberties” (Freedom House 2013a), and since 2006 even the more specific subcategory scores.⁵ Pickel and Pickel (2006, p. 210) assert the following strengths of Freedom House: regular release of data; good access ability of the data; and an acknowledgement of the need on reflecting on the conditions of practicability of democracy in day-to-day life of the surveyed countries. At the same time, however, Freedom House faces also criticism and is being challenged. One source of criticism refers to methodic and conceptual issues in reference to attempts of measuring democracy or liberal democracy (Bollen 1993a, b; Bollen and Paxton 2000; Munck and Verkuilen 2002). Also, Pickel and Pickel (2006, p. 221) provide an overview of the criticism against Freedom House and mention the one problem that freedom ratings are compared against US democracy, by this benchmarking the world with American democracy. In addition, authors generally underscore the potentiality that Freedom House may be too biased in favor of objectives of US foreign policy, with the implication that depending on whether or not other countries align with US interests, this may impose an effect on the freedom ratings of the different countries. For example, Manfred G. Schmidt (2006, pp. 407, 413)

⁴For a discussion of Freedom House, see also Rosenberger and Seeber (2008).

⁵See on the web: <http://www.freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores>.

underscores that the freedom ratings of Freedom House associate too closely with the priorities in US foreign policy.⁶ In a more critical statement based on academic reasoning, Bollen (1986, p. 586) argues in principle: “Regardless of the direction of distortions, it is highly likely that every set of indicators formed by a single author or organization contains systematic measurement error. The origin of this error lies in the common methodology of forming measures. Selectivity of information and various traits of the judges fuse into a distinct form of bias that is likely to characterize all indicators from a common publication. This does not mean that the bias is large or that the measures cannot be used. It does mean that the variance in measures can be explained by at least two components, the actual level of rights or liberties and a bias effect. The relative contribution of these components is not known.”

In our framework of analysis, freedom is introduced as one of the basic dimension (basic conceptual dimension) for democracy and the quality of democracy (see Fig. 1.7). *In that line of conceptual design, it then follows that political freedom represents a subdimension to freedom that is of crucial importance for democracy, quality of democracy and democracy measurement* (Fig. 1.10). However, the three indicators that we use to aggregate and estimate political freedom in the world are all based on Freedom House. These are: “political rights” (Freedom House 2013a), “civil liberties” (Freedom House 2013a) and “freedom of press” (Freedom House 2013c). The measurement of political freedom in our analysis relies therefore in methodic terms completely on data being provided by Freedom House. This allows in principle the formulation of the criticism that our conceptual and methodic design expresses a potential weakness and may be biased or may be too biased. Of course we should state that our analysis is still “explorative” in character, meaning that follow-up data improvement across a diversity of sources is always possible. However, in systematic terms we decided to

⁶Manfred G. Schmidt makes on Freedom House the methodic comment that “nicht alle Informationen über die Gewichtung der Beobachtungsergebnisse eindeutig und in allen Details nachvollziehbar” are (Schmidt 2006, p. 413). Also, the scores produced by this US institution may express “eine Schiefelage zugunsten des US-amerikanischen Regierungssystems” (Schmidt 2006, p. 407).

go a step further. *For having the opportunity of at least partially assessing and balancing the criticism that our construction of political freedom relies to one-sidedly on data by Freedom House, the decision was taken of introducing the concept of government/opposition cycles and of political swings (political left/right swings), but actually focusing on the government/opposition cycles. Government/opposition cycles are leveraged and analytically used for two purposes: (1) to validate the freedom scores by Freedom House; (2) to review empirically, whether democracies really can be characterized by a greater momentum of government/opposition cycles when put in contrast to non-democracies.*⁷ We did not identify in advance political freedom as “the most” important subdimension, dimension of democracy. Would this have been the case and would have been asserted here, it then even would be more evident, why political freedom needs to be “validated.” But of course, it is evident that political freedom represents a crucial key dimension for democracy and quality of democracy. Therefore, it is not possible to conceptualize and measure democracy by neglecting or not incorporating political freedom into such a model of measurement.

To be in a position of referring to government/opposition cycles so that they can qualify (at least in principle) as a measure of validation for political freedom and Freedom House, it appears necessary to build upon a source that is completely independent from Freedom House. *Political change and government/opposition cycles can occur at different levels and government institutions of the political system.* The political system allows here for different perspectives and approaches. *To simplify complexity, we decided to look only at government/opposition cycles (therefore blending out political left/right swings or other political swing phenomena), and again to concentrate on government change, focusing on two indicators: (1) peaceful person change of head of government, and (2) peaceful party change of head of government.* This has two implications: there can be an in-person change of the head of government, which may also or may not be a change of political party to which the head of government is affiliated.

⁷At the beginning of this section, we already discussed, why government/opposition cycles (political swings) can be regarded as an indication for democracy and advanced quality of democracy.

One pragmatic reason, why we focused on the “head of government” and not the “head of state” or “chief of state,” is that in several countries (also democratic countries) the head of state represents power more in symbolic terms, for example if there is a constitutional monarchy (such as in Scandinavia, the Benelux countries and the UK). In constitutional monarchies, there may not be a change of the monarch for several decades. However, for the concept of government/opposition cycles this does not pose a problem, because the focus of government power concentrates there on the government and head of government.

In our interpretation of the head of government, we also took the decision to refer to what we call the “de facto head of government”. This implies to assess where the real power of government concentrates, and this may deviate from the formal construction of the institutions of government. For example, in Russia the head of government is represented by the premier, who is Dmitriy Anatolyevich Medvedev (since May 8, 2012). The chief of state (head of state) in Russia (since May 7, 2012) is Vladimir Vladimirovich Putin. Concerning the power interaction and interferences in Russian government, Medvedev is in formal terms the head of government. However, in real terms, Putin (and by this the president) represents the de facto head of government. Also in France, to refer to another example, we decided to interpret the institution of the president as the de facto head of government (in-person this is Emmanuel Macron since May 14, 2017). *By this the “de facto head of government” already represents an “interpreted variable” of government that in some cases can deviate from the “formal” head of government (as constructed by a constitution and in context of a constitution). However, this adjustment appeared to us necessary to better analyze and assess real dynamics of government in the contemporary world.* In addition to country-specific assessment, possible general criteria for identification of the de facto head of government were, when we rated the president higher than the prime minister: no term limits or long (“overlong”) periods of governance of a president. *In conceptual terms, it also makes more sense to focus on government/oppositions cycles based on interpretation of the de facto head of government than the formal head of government, because what really matters is political change of the “real” government head.* In Table 6.1, we present the de facto head of government as we interpreted this political

government institution for 151 countries of our world model. The documentation in Table 6.1 displays only the status benchmarked toward mid-2018 (more precisely, as of April 30, 2018). This does not rule out the possibility that in our data base that we constructed and that underlies Table 6.1 there may not be a shift (in a few specific cases) from one government institution to another, during the whole time period of 1990–2017, when we seek to identify the de facto head of government.⁸ However, Table 6.1 represents a very good approximation for the whole-year duration from 1990 until 2017. Data input for Table 6.1 refers largely to the CIA World Factbook (Central Intelligence Agency 2013, 2018) and to subsequent volumes of “Political Handbook of the World” (for example, see Banks et al. 2006; Muller et al. 2012). We should assume that the formal representation of information on the head of government and head of state (chief of state) should be similar or approximate to each other in the different comparative sources and resources that are designed for a global audience for the purpose of further analysis.

In Tables 6.2 and 6.3, person changes and party changes of the head of government (de facto head of government) are presented. *More specifically, those years are documented, in which such changes occurred. In addition, the focus is on peaceful changes only.* Non-peaceful government changes, using coercion or military means, such as the overthrow of government in a coup d’état, are excluded. The reason for this is evident: violent changes of government are not an example for democratic government/opposition cycles (or democratic political left/right swings). The focus of Tables 6.2 and 6.3 is on the years 2002–2016. However, also additional time frames are represented: 1990–2017 and the first half or second half of 1990–2017 (1990–2003 and 2004–2017). Table 6.2 focuses on peaceful person change of the de facto head of government. Table 6.3 concentrates on the peaceful party change of the de facto head of government. *From the viewpoint of democratic theory or a democratic understanding, party change of head of government appears*

⁸One concrete example here is Iraq, where we reinterpreted the de facto head of government by moving the attention from the president to the prime minister during the 2000s.

Table 6.1 Head of government (de facto head of government) of 151 countries in mid-2018 (as of April 30, 2018)

| Country number | Country | Government institution | Name of person |
|----------------|--------------------------|-----------------------------|--------------------------------|
| 1 | Afghanistan | President | Ashraf GHANI Ahmadzai |
| 2 | Albania | Prime Minister | Edi RAMA |
| 3 | Algeria | President | Abdelaziz BOUTEFLIKA |
| 4 | Angola | President | Joao Manuel Goncalves LOURENCO |
| 5 | Argentina | President | Mauricio MACRI |
| 6 | Armenia | President | Armen SARKISSIAN |
| 7 | Australia | Prime Minister | Malcolm TURNBULL |
| 8 | Austria | Prime Minister (Chancellor) | Sebastian KURZ |
| 9 | Azerbaijan | President | Ilham ALIYEV |
| 10 | Bangladesh | Prime Minister | Sheikh HASINA |
| 11 | Belarus | President | Aleksandr LUKASHENKO |
| 12 | Belgium | Prime Minister | Charles MICHEL |
| 13 | Benin | President | Patrice TALON |
| 14 | Bolivia | President | Juan Evo MORALES |
| 15 | Bosnia and Herzegovina | | |
| 16 | Botswana | President | Mokgweetsa Eric MASISI |
| 17 | Brazil | President | Michel Miguel Elias TEMER |
| 18 | Bulgaria | Prime Minister | Boyko BORISSOV |
| 19 | Burkina Faso | President | Roch Marc Christian KABORE |
| 20 | Burundi | President | Pierre NKURUNZIZA |
| 21 | Cambodia | Prime Minister | HUN SEN |
| 22 | Cameroon | President | Paul BIYA |
| 23 | Canada | Prime Minister | James TRUDEAU |
| 24 | Central African Republic | President | Faustin-Archange TOUADERA |
| 25 | Chad | President | Idriss DEBY Itno |

(continued)

Table 6.1 (continued)

| Country number | Country | Government institution | Name of person |
|----------------|-----------------------------|-----------------------------|----------------------------------|
| 26 | Chile | President | Sebastian PINERA Echenique |
| 27 | China | Prime Minister (Premier) | Li Keqiang |
| 28 | Colombia | President | Juan Manuel SANTOS Calderon |
| 29 | Congo, Dem. Rep. (Kinshasa) | President | Joseph KABILA |
| 30 | Congo, Rep. (Brazzaville) | President | Denis SASSOU-Nguesso |
| 31 | Costa Rica | President | Luis Guillermo SOLIS Rivera |
| 32 | Cote d'Ivoire | President | Alassane Dramane OUATTARA |
| 33 | Croatia | Prime Minister | Andrej PLENKOVIC |
| 34 | Cuba | President | Miguel Mario Diaz-Canel Bermúdez |
| 35 | Czech Republic | Prime Minister | Andrej BABIS |
| 36 | Denmark | Prime Minister | Lars LOKKE RASMUSSEN |
| 37 | Dominican Republic | President | Daniilo MEDINA Sanchez |
| 38 | Ecuador | President | Lenin MORENO Garces |
| 39 | Egypt, Arab Rep. (Egypt) | President | Abdelfattah Said ELSISI |
| 40 | El Salvador | President | Salvador SANCHEZ CEREN |
| 41 | Eritrea | President | ISAIAS Afworki |
| 42 | Estonia | Prime Minister | Juri RATAS |
| 43 | Ethiopia | Prime Minister | ABIY Ahmed |
| 44 | Finland | Prime Minister | Juha SIPILA |
| 45 | France | President | Emmanuel MACRON |
| 46 | Gabon | President | Ali BONGO Ondimba |
| 47 | Gambia, The | President | Adama BARROW |
| 48 | Georgia | President | Giorgi MARGVELASHVILI |
| 49 | Germany | Prime Minister (Chancellor) | Angela MERKEL |

(continued)

Table 6.1 (continued)

| Country number | Country | Government institution | Name of person |
|----------------|--------------------------------|--|------------------------------------|
| 50 | Ghana | President | Nana Addo Dankwa AKUFO-ADDO |
| 51 | Greece | Prime Minister | Alexios TSIPRAS |
| 52 | Guatemala | President | Jimmy Ernesto MORALES Cabrera |
| 53 | Guinea | President | Alpha CONDE |
| 54 | Guinea-Bissau | President | Jose Mario VAZ |
| 55 | Haiti | President | Jovenel MOISE |
| 56 | Honduras | President | Juan Orlando HERNANDEZ Alvarado |
| 57 | Hungary | Prime Minister | Viktor ORBAN |
| 58 | India | Prime Minister | Narendra MODI |
| 59 | Indonesia | President | Joko WIDODO |
| 60 | Iran, Islamic Rep. (Iran) | President | Hasan Fereidun RUHANI |
| 61 | Iraq | Prime Minister | Haydar al-ABADI |
| 62 | Ireland | Prime Minister | Leo VARADKAR |
| 63 | Israel | Prime Minister | Binyamin NETANYAHU |
| 64 | Italy | Prime Minister | Paolo GENTILONI |
| 65 | Jamaica | Prime Minister | Andrew HOLNESS |
| 66 | Japan | Prime Minister | Shinzo ABE |
| 67 | Jordan | Prime Minister | Hani MULKI |
| 68 | Kazakhstan | President | Nursultan Abishuly NAZARBAYEV |
| 69 | Kenya | President | Uhuru KENYATTA |
| 70 | Korea, Dem. Rep. (North Korea) | Chief of State (Leader of North Korea) | KIM Jong Un |
| 71 | Korea, Rep. (South Korea) | President | MOON Jae-in |
| 72 | Kuwait | Prime Minister | JABIR AL-MUBARAK al-Hamad al-Sabah |
| 73 | Kyrgyz Republic | President | Sooronbay JEENBEKOV |

(continued)

Table 6.1 (continued)

| Country number | Country | Government institution | Name of person |
|----------------|-----------------|------------------------|-------------------------------------|
| 74 | Lao PDR (Laos) | Prime Minister | THONGLOUN Sisoulit |
| 75 | Latvia | Prime Minister | Maris KUCINSKIS |
| 76 | Lebanon | Prime Minister | Saad al-HARIRI |
| 77 | Lesotho | Prime Minister | Thomas Motsosahae THABANE |
| 78 | Liberia | President | George WEAH |
| 79 | Libya | Prime Minister | Fayiz al-SARAJ |
| 80 | Lithuania | Prime Minister | Saulius SKVERNELIS |
| 81 | Macedonia, FYR | Prime Minister | Zoran ZAEV |
| 82 | Madagascar | Prime Minister | Olivier Mahafaly SOLONDRASANA |
| 83 | Malawi | President | Arthur Peter MUTHARIKA |
| 84 | Malaysia | Prime Minister | Mohamed NAJIB bin Abdul Najib Razak |
| 85 | Mali | President | Ibrahim Boubacar KEITA |
| 86 | Mauritania | President | Mohamed Ould Abdel AZIZ |
| 87 | Mauritius | Prime Minister | Pravind JUGNAUTH |
| 88 | Mexico | President | Enrique PENA NIETO |
| 89 | Moldova | Prime Minister | Pavel FILIP |
| 90 | Mongolia | Prime Minister | Ukhnaa KHURELSUKH |
| 91 | Morocco | Prime Minister | Saad-Eddine al-OTHMANI |
| 92 | Mozambique | President | Filipe Jacinto NYUSI |
| 93 | Myanmar (Burma) | President | WIN MYINT |
| 94 | Namibia | Prime Minister | Hage GEINGOB |
| 95 | Nepal | Prime Minister | Khadga Prasad (KP) Sharma OLI |
| 96 | Netherlands | Prime Minister | Mark RUTTE |
| 97 | New Zealand | Prime Minister | Jacinda ARDERN |
| 98 | Nicaragua | President | Jose Daniel ORTEGA Saavedra |

(continued)

Table 6.1 (continued)

| Country number | Country | Government institution | Name of person |
|----------------|-----------------------------|--------------------------------|---|
| 99 | Niger | President | ISSOUFOU Mahamadou |
| 100 | Nigeria | President | Maj. Gen. (ret.) Muhammadu BUHARI |
| 101 | Norway | Prime Minister | Erna SOLBERG |
| 102 | Oman | Monarch (=also Prime Minister) | QABOOS bin Said Al-Said |
| 103 | Pakistan | Prime Minister | Shahid Khaqan ABBASI |
| 104 | Panama | President | Juan Carlos VARELA |
| 105 | Papua New Guinea | Prime Minister | Peter Paire O'NEILL |
| 106 | Paraguay | President | Horacio CARTES Jara |
| 107 | Peru | President | Martin Alberto VIZCARRA Cornejo |
| 108 | Philippines | President | Rodrigo DUTERTE |
| 109 | Poland | Prime Minister | Mateusz MORAWIECKI |
| 110 | Portugal | Prime Minister | Antonio Luis Santos da COSTA |
| 111 | Qatar | Prime Minister | ABDALLAH bin Nasir bin Khalifa Al Thani |
| 112 | Romania | Prime Minister | Viorica DANCILA |
| 113 | Russian Federation (Russia) | President | Vladimir Vladimirovich PUTIN |
| 114 | Rwanda | President | Paul KAGAME |
| 115 | Saudi Arabia | Monarch (=also Prime Minister) | King SALMAN bin Abd al-Aziz Al Saud |
| 116 | Senegal | President | Macky SALL |
| 117 | Serbia | Prime Minister | Ana BRNABIC |
| 118 | Sierra Leone | President | Julius Maada BIO |
| 119 | Singapore | Prime Minister | LEE Hsien Loong |
| 120 | Slovak Republic | Prime Minister | Peter PELLIGRINI |
| 121 | Slovenia | Prime Minister | Miro CERAR |
| 122 | Somalia | Prime Minister | Hassan Ali KHAYRE |
| 123 | South Africa | President | Matamela Cyril RAMAPHOSA |

(continued)

Table 6.1 (continued)

| Country number | Country | Government institution | Name of person |
|----------------|------------------------------|--|-------------------------------|
| 124 | Spain | Prime Minister (President of the Government) | Mariano RAJOY |
| 125 | Sri Lanka | President | Maitripala SIRISENA |
| 126 | Sudan | President | Umar Hassan Ahmad al-BASHIR |
| 127 | Swaziland | Prime Minister | Barnabas Sibusiso DLAMINI |
| 128 | Sweden | Prime Minister | Stefan LOFVEN |
| 129 | Switzerland | President | Alain BERSET |
| 130 | Syrian Arab Republic (Syria) | President | Bashar al-ASAD |
| 131 | Tajikistan | President | Emomali RAHMON |
| 132 | Tanzania | President | John MAGUFULI |
| 133 | Thailand | Prime Minister | Gen. PRAYUT Chan-ocha |
| 134 | Timor-Leste (East Timor) | President | Francisco GUTERRES |
| 135 | Togo | President | Faure GNASSINGBE |
| 136 | Trinidad and Tobago | Prime Minister | Keith ROWLEY |
| 137 | Tunisia | Prime Minister | Youssef CHAHED |
| 138 | Turkey | President | Recep Tayyip ERDOGAN |
| 139 | Turkmenistan | President | Gurbanguly BERDIMUHAMEDOW |
| 140 | Uganda | President | Yoweri Kaguta MUSEVENI |
| 141 | Ukraine | President | Petro POROSHENKO |
| 142 | United Arab Emirates | Prime Minister | MUHAMMAD BIN RASHID Al-Maktum |
| 143 | United Kingdom | Prime Minister | Theresa MAY |

(continued)

Table 6.1 (continued)

| Country number | Country | Government institution | Name of person |
|----------------|--|------------------------|-----------------------------|
| 144 | United States (United States of America) | President | Donald J. TRUMP |
| 145 | Uruguay | President | Tabare VAZQUEZ |
| 146 | Uzbekistan | President | Shavkat MIRZIYOYEV |
| 147 | Venezuela, RB | President | Nicolas MADURO Moros |
| 148 | Vietnam | Prime Minister | Nguyen Xuan PHUC |
| 149 | Yemen, Rep. | President | Abd Rabbuh Mansur HADI |
| 150 | Zambia | President | Edgar LUNGU |
| 151 | Zimbabwe | President | Emmerson Dambudzo MNANGAGWA |

Source Author's own interpretation based on: Central Intelligence Agency (2018). The CIA World Factbook 2018 (electronic data base) (<https://www.cia.gov/library/publications/the-world-factbook/>)

Table 6.2 Peaceful person change of head of government (de facto head of government): number of years with at least one peaceful person change (per year), 1990–2017

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 |
|----|--------------------------|-----------|-----------|-----------|
| 1 | | | | |
| 2 | Afghanistan | | | |
| 3 | Albania | 7 | 2 | 3 |
| 4 | Algeria | 2 | 0 | 0 |
| 5 | Angola | 1 | 1 | 0 |
| 6 | Argentina | 5 | 2 | 4 |
| 7 | Armenia | 2 | 1 | 1 |
| 8 | Australia | 6 | 4 | 4 |
| 9 | Austria | 6 | 4 | 4 |
| 10 | Azerbaijan | 3 | 0 | 1 |
| 11 | Bangladesh | 7 | 3 | 4 |
| 12 | Belarus | 2 | 0 | 0 |
| 13 | Belgium | 6 | 4 | 4 |
| 14 | Benin | 4 | 2 | 2 |
| 15 | Bolivia | 8 | 2 | 4 |
| 16 | Bosnia and Herzegovina | | | |
| 17 | Botswana | 2 | 1 | 1 |
| 18 | Brazil | 6 | 2 | 3 |
| 19 | Bulgaria | 12 | 5 | 5 |
| 20 | Burkina Faso | 1 | 1 | 1 |
| 21 | Burundi | 4 | 1 | 2 |
| 22 | Cambodia | 3 | 0 | 0 |
| 23 | Cameroon | 0 | 0 | 0 |
| 24 | Canada | 5 | 2 | 3 |
| 25 | Central African Republic | 4 | 3 | 3 |
| | Chad | 0 | 0 | 0 |

(continued)

Table 6.2 (continued)

| | 1990-2017 | 1990-2003 | 2004-2017 | 2002-2016 |
|----|-----------------------------|-----------|-----------|-----------|
| 26 | Chile | 6 | 3 | 3 |
| 27 | China | 3 | 2 | 2 |
| 28 | Colombia | 5 | 4 | 2 |
| 29 | Congo, Dem. Rep. (Kinshasa) | 1 | 1 | 0 |
| 30 | Congo, Rep. (Brazzaville) | 1 | 1 | 0 |
| 31 | Costa Rica | 7 | 4 | 4 |
| 32 | Cote d'Ivoire | 3 | 2 | 2 |
| 33 | Croatia | 8 | 5 | 5 |
| 34 | Cuba | 2 | 0 | 2 |
| 35 | Czech Republic | 10 | 2 | 7 |
| 36 | Denmark | 5 | 2 | 4 |
| 37 | Dominican Republic | 4 | 2 | 3 |
| 38 | Ecuador | 9 | 6 | 3 |
| 39 | Egypt, Arab Rep. (Egypt) | 2 | 0 | 2 |
| 40 | El Salvador | 5 | 2 | 3 |
| 41 | Eritrea | 0 | 0 | 0 |
| 42 | Estonia | 10 | 7 | 5 |
| 43 | Ethiopia | 3 | 2 | 1 |
| 44 | Finland | 7 | 3 | 5 |
| 45 | France | 4 | 1 | 2 |
| 46 | Gabon | 1 | 0 | 1 |
| 47 | Gambia, The | 1 | 0 | 0 |
| 48 | Georgia | 6 | 2 | 5 |
| 49 | Germany | 2 | 1 | 1 |
| 50 | Ghana | 4 | 1 | 3 |
| 51 | Greece | 8 | 3 | 5 |

(continued)

Table 6.2 (continued)

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 |
|----|--------------------------------|-----------|-----------|-----------|
| 52 | Guatemala | 9 | 4 | 6 |
| 53 | Guinea | 2 | 0 | 2 |
| 54 | Guinea-Bissau | 5 | 1 | 4 |
| 55 | Haiti | 10 | 5 | 5 |
| 56 | Honduras | 7 | 4 | 4 |
| 57 | Hungary | 7 | 4 | 4 |
| 58 | India | 6 | 2 | 2 |
| 59 | Indonesia | 5 | 3 | 3 |
| 60 | Iran, Islamic Rep. (Iran) | 4 | 2 | 2 |
| 61 | Iraq | | | |
| 62 | Ireland | 6 | 3 | 2 |
| 63 | Israel | 6 | 4 | 3 |
| 64 | Italy | 15 | 9 | 7 |
| 65 | Jamaica | 6 | 1 | 5 |
| 66 | Japan | 14 | 7 | 7 |
| 67 | Jordan | 16 | 10 | 8 |
| 68 | Kazakhstan | 0 | 0 | 0 |
| 69 | Kenya | 2 | 1 | 2 |
| 70 | Korea, Dem. Rep. (North Korea) | 3 | 1 | 2 |
| 71 | Korea, Rep. (South Korea) | 6 | 3 | 3 |
| 72 | Kuwait | 3 | 1 | 3 |
| 73 | Kyrgyz Republic | 4 | 0 | 3 |
| 74 | Lao PDR (Laos) | 6 | 3 | 4 |
| 75 | Latvia | 13 | 8 | 6 |
| 76 | Lebanon | | | |
| 77 | Lesotho | 5 | 2 | 2 |

(continued)

Table 6.2 (continued)

| | 1990-2017 | 1990-2003 | 2004-2017 | 2002-2016 |
|-----|-----------------|-----------|-----------|-----------|
| 78 | Liberia | 4 | 3 | 2 |
| 79 | Libya | | | |
| 80 | Lithuania | 11 | 7 | 5 |
| 81 | Macedonia, FYR | 7 | 3 | 4 |
| 82 | Madagascar | 12 | 6 | 7 |
| 83 | Malawi | 4 | 1 | 3 |
| 84 | Malaysia | 2 | 1 | 2 |
| 85 | Mali | 3 | 2 | 2 |
| 86 | Mauritania | 2 | 0 | 2 |
| 87 | Mauritius | 6 | 3 | 4 |
| 88 | Mexico | 4 | 2 | 2 |
| 89 | Moldova | 10 | 5 | 5 |
| 90 | Mongolia | 15 | 7 | 8 |
| 91 | Morocco | 7 | 4 | 3 |
| 92 | Mozambique | 2 | 0 | 2 |
| 93 | Myanmar (Burma) | 3 | 1 | 2 |
| 94 | Namibia | 3 | 1 | 3 |
| 95 | Nepal | 17 | 7 | 10 |
| 96 | Netherlands | 3 | 2 | 2 |
| 97 | New Zealand | 7 | 4 | 2 |
| 98 | Nicaragua | 4 | 3 | 2 |
| 99 | Niger | 3 | 2 | 1 |
| 100 | Nigeria | 4 | 1 | 3 |
| 101 | Norway | 6 | 4 | 2 |
| 102 | Oman | 0 | 0 | 0 |
| 103 | Pakistan | 12 | 6 | 6 |

(continued)

Table 6.2 (continued)

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 |
|-----|-----------|-----------|-----------|-----------|
| 104 | 6 | 3 | 3 | 3 |
| 105 | 7 | 5 | 2 | 3 |
| 106 | 6 | 3 | 3 | 4 |
| 107 | 6 | 3 | 3 | 3 |
| 108 | 5 | 3 | 2 | 2 |
| 109 | 15 | 8 | 7 | 6 |
| 110 | 6 | 2 | 4 | 5 |
| 111 | 3 | 1 | 2 | 2 |
| 112 | 11 | 6 | 5 | 4 |
| 113 | 3 | 1 | 2 | 2 |
| 114 | 1 | 1 | 0 | 0 |
| 115 | 2 | 0 | 2 | 2 |
| 116 | 2 | 1 | 1 | 1 |
| 117 | 4 | 4 | 4 | 3 |
| 118 | 2 | 1 | 1 | 1 |
| 119 | 2 | 1 | 1 | 1 |
| 120 | 6 | 3 | 3 | 3 |
| 121 | 7 | 2 | 5 | 6 |
| 122 | | | | |
| 123 | 5 | 3 | 2 | 2 |
| 124 | 3 | 1 | 2 | 2 |
| 125 | 4 | 2 | 2 | 2 |
| 126 | 0 | 0 | 0 | 0 |
| 127 | 5 | 4 | 1 | 2 |
| 128 | 5 | 3 | 2 | 2 |
| 129 | 28 | 14 | 14 | 15 |

(continued)

Table 6.2 (continued)

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 |
|-----|----------------------------------|------------|------------|------------|
| 130 | Syrian Arab Republic (Syria) | 1 | 1 | 0 |
| 131 | Tajikistan | 2 | 2 | 0 |
| 132 | Tanzania | 3 | 1 | 2 |
| 133 | Thailand | 8 | 5 | 3 |
| 134 | Timor-Leste (East Timor) | 3 | 0 | 2 |
| 135 | Togo | 1 | 0 | 1 |
| 136 | Trinidad and Tobago | 5 | 3 | 2 |
| 137 | Tunisia | 5 | 0 | 5 |
| 138 | Turkey | 10 | 9 | 3 |
| 139 | Turkmenistan | 1 | 0 | 1 |
| 140 | Uganda | 0 | 0 | 0 |
| 141 | Ukraine | 4 | 1 | 3 |
| 142 | United Arab Emirates | 2 | 1 | 1 |
| 143 | United Kingdom | 5 | 2 | 3 |
| 144 | United States | 4 | 2 | 1 |
| 145 | Uruguay | 6 | 3 | 3 |
| 146 | Uzbekistan | 1 | 0 | 1 |
| 147 | Venezuela, RB | 4 | 3 | 1 |
| 148 | Vietnam | 4 | 2 | 2 |
| 149 | Yemen, Rep. | 1 | 0 | 1 |
| 150 | Zambia | 6 | 2 | 5 |
| 151 | Zimbabwe | 1 | 0 | 0 |
| | Total (for all countries) | 745 | 375 | 409 |

Comment: Countries with difficulties to interpret were omitted

Source: Author's own interpretations and calculations based on respective volumes of "Political Handbook of the World" (e.g., see Muller et al. 2012) and the Central Intelligence Agency (2018). The CIA World Factbook 2018 (electronic data base) (<https://www.cia.gov/library/publications/the-world-factbook/>)

Table 6.3 Peaceful party change of head of government (de facto head of government): number of years with at least one peaceful party change (per year), 1990–2017

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 |
|----|--------------------------|-----------|-----------|-----------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |
| | Afghanistan | | | |
| | Albania | 4 | 2 | 2 |
| | Algeria | 0.5 | 0.5 | 0 |
| | Angola | 0 | 0 | 0 |
| | Argentina | 3 | 2 | 2 |
| | Armenia | 1 | 0.5 | 0.5 |
| | Australia | 3 | 1 | 2 |
| | Austria | 4 | 1 | 3 |
| | Azerbaijan | 1 | 1 | 0 |
| | Bangladesh | 4 | 3 | 2 |
| | Belarus | 0 | 0 | 0 |
| | Belgium | 4 | 1 | 3 |
| | Benin | 2.5 | 2 | 0.5 |
| | Bolivia | 5.5 | 4.5 | 2.5 |
| | Bosnia and Herzegovina | | | |
| | Botswana | 0 | 0 | 0 |
| | Brazil | 4 | 3 | 2 |
| | Bulgaria | 8.5 | 4.5 | 4 |
| | Burkina Faso | 0.5 | 0 | 0.5 |
| | Burundi | 2.5 | 2 | 1.5 |
| | Cambodia | 1 | 1 | 0 |
| | Cameroon | 0 | 0 | 0 |
| | Canada | 3 | 1 | 2 |
| | Central African Republic | 2 | 0.5 | 1.5 |
| | Chad | 0 | 0 | 0 |

(continued)

Table 6.3 (continued)

| | 1990-2017 | 1990-2003 | 2004-2017 | 2002-2016 |
|----|-----------------------------|-----------|-----------|-----------|
| 26 | Chile | 4.5 | 1.5 | 3 |
| 27 | China | 0 | 0 | 0 |
| 28 | Colombia | 2.5 | 1.5 | 1.5 |
| 29 | Congo, Dem. Rep. (Kinshasa) | 0.5 | 0.5 | 0 |
| 30 | Congo, Rep. (Brazzaville) | 0.5 | 0.5 | 0 |
| 31 | Costa Rica | 5 | 3 | 2 |
| 32 | Cote d'Ivoire | 2 | 1 | 2 |
| 33 | Croatia | 4 | 2 | 4 |
| 34 | Cuba | 0 | 0 | 0 |
| 35 | Czech Republic | 5 | 1 | 3 |
| 36 | Denmark | 4 | 2 | 3 |
| 37 | Dominican Republic | 3 | 2 | 2 |
| 38 | Ecuador | 6 | 5 | 2 |
| 39 | Egypt, Arab Rep. (Egypt) | 1 | 0 | 1 |
| 40 | El Salvador | 1 | 0 | 1 |
| 41 | Eritrea | 0 | 0 | 0 |
| 42 | Estonia | 7 | 5 | 4 |
| 43 | Ethiopia | 1 | 0 | 1 |
| 44 | Finland | 5 | 3 | 3 |
| 45 | France | 3 | 1 | 1 |
| 46 | Gabon | 0 | 0 | 0 |
| 47 | Gambia, The | 1 | 0 | 0 |
| 48 | Georgia | 1.5 | 0.5 | 1.5 |
| 49 | Germany | 2 | 1 | 1 |
| 50 | Ghana | 3 | 1 | 2 |
| 51 | Greece | 5.5 | 1 | 4.5 |

(continued)

Table 6.3 (continued)

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 | |
|----|--------------------------------|-----------|-----------|-----------|-----|
| 52 | Guatemala | 7 | 3 | 4 | 5 |
| 53 | Guinea | 1 | 0 | 1 | 1 |
| 54 | Guinea-Bissau | 2 | 1 | 1 | 2 |
| 55 | Haiti | 6.5 | 2.5 | 4 | 3.5 |
| 56 | Honduras | 6 | 3 | 3 | 4 |
| 57 | Hungary | 6 | 4 | 2 | 3 |
| 58 | India | 6 | 4 | 2 | 2 |
| 59 | Indonesia | 4 | 2 | 2 | 3 |
| 60 | Iran, Islamic Rep. (Iran) | 4 | 2 | 2 | 2 |
| 61 | Iraq | | | | |
| 62 | Ireland | 3 | 2 | 1 | 1 |
| 63 | Israel | 5 | 4 | 1 | 2 |
| 64 | Italy | 9 | 5 | 4 | 4.5 |
| 65 | Jamaica | 3 | 0 | 3 | 3 |
| 66 | Japan | 7 | 3 | 4 | 4 |
| 67 | Jordan | 0 | 0 | 0 | 0 |
| 68 | Kazakhstan | 0 | 0 | 0 | 0 |
| 69 | Kenya | 2 | 1 | 1 | 2 |
| 70 | Korea, Dem. Rep. (North Korea) | 0 | 0 | 0 | 0 |
| 71 | Korea, Rep. (South Korea) | 3.5 | 1 | 2.5 | 1.5 |
| 72 | Kuwait | 0 | 0 | 0 | 0 |
| 73 | Kyrgyz Republic | 1.5 | 0 | 1.5 | 1.5 |
| 74 | Lao PDR (Laos) | 0 | 0 | 0 | 0 |
| 75 | Latvia | 9 | 5 | 4 | 5 |
| 76 | Lebanon | | | | |
| 77 | Lesotho | 3.5 | 0.5 | 3 | 2 |

(continued)

Table 6.3 (continued)

| | 1990-2017 | 1990-2003 | 2004-2017 | 2002-2016 |
|-----|-----------------|-----------|-----------|-----------|
| 78 | Liberia | 1.5 | 0.5 | 2 |
| 80 | Lithuania | 6.5 | 4 | 3.5 |
| 81 | Macedonia, FYR | 4 | 2 | 2 |
| 82 | Madagascar | 4 | 2.5 | 2.5 |
| 83 | Malawi | 1 | 1 | 0 |
| 84 | Malaysia | 0 | 0 | 0 |
| 85 | Mali | 1.5 | 1 | 1 |
| 86 | Mauritania | 0 | 0 | 0 |
| 87 | Mauritius | 5 | 3 | 4 |
| 88 | Mexico | 2 | 1 | 1 |
| 89 | Moldova | 5.5 | 2.5 | 3 |
| 90 | Mongolia | 6 | 2 | 5 |
| 91 | Morocco | 3 | 1 | 2.5 |
| 92 | Mozambique | 0 | 0 | 0 |
| 93 | Myanmar (Burma) | 1.5 | 0 | 1.5 |
| 94 | Namibia | 0 | 0 | 0 |
| 95 | Nepal | 12.5 | 4.5 | 7 |
| 96 | Netherlands | 3 | 2 | 2 |
| 97 | New Zealand | 4 | 2 | 1 |
| 98 | Nicaragua | 3 | 2 | 1 |
| 99 | Niger | 1.5 | 1 | 0.5 |
| 100 | Nigeria | 1.5 | 0.5 | 1 |
| 101 | Norway | 5 | 3 | 2 |
| 102 | Oman | 0 | 0 | 0 |
| 103 | Pakistan | 5.5 | 3.5 | 2.5 |
| 104 | Panama | 6 | 3 | 3 |

(continued)

Table 6.3 (continued)

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 |
|------------------------------|-----------|-----------|-----------|-----------|
| 105 | 6 | 5 | 1 | 2 |
| Papua New Guinea | | | | |
| 106 | 3.5 | 0.5 | 3 | 3 |
| Paraguay | | | | |
| 107 | 6 | 3 | 3 | 3 |
| Peru | | | | |
| 108 | 5 | 3 | 2 | 2 |
| Philippines | | | | |
| 109 | 10 | 7 | 3 | 3 |
| Poland | | | | |
| 110 | 5 | 2 | 3 | 4 |
| Portugal | | | | |
| 111 | 0 | 0 | 0 | 0 |
| Qatar | | | | |
| 112 | 7.5 | 3 | 4.5 | 4 |
| Romania | | | | |
| 113 | 1.5 | 0 | 1.5 | 1.5 |
| Russian Federation (Russia) | | | | |
| 114 | 0 | 0 | 0 | 0 |
| Rwanda | | | | |
| 115 | 0 | 0 | 0 | 0 |
| Saudi Arabia | | | | |
| 116 | 2 | 1 | 1 | 1 |
| Senegal | | | | |
| 117 | 3 | 3 | 3 | 2 |
| Serbia | | | | |
| 118 | 1.5 | 0.5 | 1 | 1 |
| Sierra Leone | | | | |
| 119 | 0 | 0 | 0 | 0 |
| Singapore | | | | |
| 120 | 6 | 3 | 3 | 3 |
| Slovak Republic | | | | |
| 121 | 7 | 2 | 5 | 6 |
| Slovenia | | | | |
| 122 | | | | |
| Somalia | | | | |
| 123 | 1 | 1 | 0 | 0 |
| South Africa | | | | |
| 124 | 3 | 1 | 2 | 2 |
| Spain | | | | |
| 125 | 1 | 1 | 0 | 0 |
| Sri Lanka | | | | |
| 126 | 0 | 0 | 0 | 0 |
| Sudan | | | | |
| 127 | 0 | 0 | 0 | 0 |
| Swaziland | | | | |
| 128 | 4 | 2 | 2 | 2 |
| Sweden | | | | |
| 129 | 24 | 11 | 13 | 13 |
| Switzerland | | | | |
| 130 | 0 | 0 | 0 | 0 |
| Syrian Arab Republic (Syria) | | | | |

(continued)

Table 6.3 (continued)

| | 1990–2017 | 1990–2003 | 2004–2017 | 2002–2016 |
|-----|----------------------------------|------------|--------------|--------------|
| 131 | Tajikistan | 1 | 0 | 0 |
| 132 | Tanzania | 0 | 0 | 0 |
| 133 | Thailand | 7 | 4.5 | 2.5 |
| 134 | Timor-Leste (East Timor) | 2 | 0 | 2 |
| 135 | Togo | 0 | 0 | 0 |
| 136 | Trinidad and Tobago | 5 | 3 | 2 |
| 137 | Tunisia | 1 | 0 | 1 |
| 138 | Turkey | 6 | 6 | 2 |
| 139 | Turkmenistan | 0 | 0 | 0 |
| 140 | Uganda | 0 | 0 | 0 |
| 141 | Ukraine | 4 | 1 | 3 |
| 142 | United Arab Emirates | 0 | 0 | 0 |
| 143 | United Kingdom | 2 | 1 | 1 |
| 144 | United States | 4 | 2 | 1 |
| 145 | Uruguay | 5 | 2 | 3 |
| 146 | Uzbekistan | 0.5 | 0 | 0.5 |
| 147 | Venezuela, RB | 2 | 2 | 0 |
| 148 | Vietnam | 0 | 0 | 0 |
| 149 | Yemen, Rep. | 0 | 0 | 0 |
| 150 | Zambia | 2 | 1 | 1 |
| 151 | Zimbabwe | 0 | 0 | 0 |
| | Total (for all countries) | 433 | 217.5 | 215.5 |
| | | | | 242 |

Comment: Countries with difficulties to interpret were omitted

Comment: Years only with a change from a non-party to a party or a party to a non-party head of government are only counted as 0.5

Source Author's own interpretations and calculations based on respective volumes of "Political Handbook of the World" (e.g., see Muller et al. 2012) and the Central Intelligence Agency (2018). The CIA World Factbook 2018 (electronic data base) (<https://www.cia.gov/library/publications/the-world-factbook/>)

to be more important, because only a party change qualifies as a “real” government/opposition cycle. Person changes of head of government are also possible within authoritarian or totalitarian political regimes, where the same political party stays in power. In Table 6.2, every year (per country) with at least one peaceful person change of the de facto head of government is counted as “1.” In Table 6.3, again every year (per country), with at least one peaceful party change of the de facto head of governments, also is counted as “1.” Specifically for the party change, the additional rule was applied that those years, where there was only a shift from a “non-party” to a party or from a party to a “non-party” head of government, were counted as “0.5.” Per year, “1” represents always the possible maximum score for person change and party change. More than one person or party change in a given year does not push the score higher or beyond “1” (in context of our tabulations).

When we compare the empirical patterns for person and party change of the head of government (de facto head of government), we can provide the following short assessment (propositions) based on Tables 6.2 and 6.3:

1. *Person changes are more frequent than party changes:* For the whole covered country sample, there were 745 person changes and 433 party changes during the period 1990–2017. This means that on average only about every second person change is also associated with a party change. *For democracy and the quality of democracy, this may also imply that party change is even more important than person change, where party change represents the crucial reference (or “bottle neck”) for government/opposition cycles.* In the respectively shorter time period of 2002–2016 (to which our comparative multidimensional index-building applies), there were 409 person changes and 242 party changes.
2. *There is no tendency of an increase in person and party change:* When the periods 1990–2003 and 2004–2017 are being compared, we cannot identify an increase in person and party change. This result requires further assessment. However, it does not play in favor of a further gradual development of quality of democracy in a global format.

3. *There are countries with no changes of the head of government.* In our sample, we can identify countries with no (peaceful) person change and party change of head of government for the whole period of 1990–2017. Examples for this are: Cameroon, Chad, Eritrea, Kazakhstan, Oman, Sudan and Uganda. Such a situation is, of course, not compatible with standard ramifications of a democracy. Per definition, in every country without a person change there is also no party change of head of government. *Without having any additional information about a country and its political system, it is difficult to perceive how there can be a democracy or a “full democracy,” when there has been no person change or party change over a period of twenty-two years (1990–2017). Perhaps a “semi-democracy” is possible. But more likely, we should expect a concentration of “non-democracies” (authoritarian or totalitarian political regimes) among those countries with no person and party change. The absence of person change and party change of the head of government (de facto head of government) over a longer period of time (for example, more than two decades) provides for a political context, where balance of power appears unlikely to occur and to evolve, and where government and the political system will deviate to a concentration of power and a misuse of power.* The number of countries with no party change is higher than the number of countries with no person change. Again, “no party change” represents here the critical benchmark. In a non-democracy, there can be a person change, even though there has been no accompanying party change. *However, person changes, without an associated party change, represent only an “imperfect” government/opposition cycle: in a majority of cases (perhaps even all cases), this does not involve or manifest itself as a government/opposition cycle. While the absence of party change of head of government (absence of government/opposition cycle) rules out the presence of a democracy (full democracy or normal democracy), the opposite or inverse conclusion does not necessarily imply: the occurrence of a party change of head of government or of a government/opposition does not automatically imply the existence of a democracy.* Because of this, we should assume that the number of semi-democracies and non-democracies is even larger (particularly, when we are lacking additional information). *Therefore, the pool of countries with no party change plus some of*

the countries with party change of head of government represents the “set” (potential set) of semi-democracies and non-democracies.

Our analysis in this chapter is guided by two central research questions: (1) *How does political freedom relate to government/opposition cycles; and* (2) *how can the freedom ratings of Freedom House be validated?* Within our framework of analysis, “political freedom” represents the average score over three indicators that are being provided by Freedom House (2013a, c): political rights, civil liberties and freedom of press. To approach the indicated research questions more directly, we compare in Table 6.4 the 151 countries of our world model on the following basis: first, we rank all countries in accordance with their average scoring for political freedom in the years 2002–2016, and, second, we then document per country the frequency of person and party changes of head of government. In Table 6.5, we aggregate average scores for political freedom as well as person change and party change of the de facto head of government for three groups of countries that are based on a ranking of all countries in reference to their amount of political freedom: the top-third (ranks 1–50), medium-third (ranks 51–100) and bottom-third (101–151) of all countries. Figure 6.3 visualizes the results, only for the fifteen-year period 2002–2016.

Based on the empirical results that are arranged in Tables 6.4 and 6.5, we finally present for further discussion the following interpretations and propositions, also specifically in reply and in reference to the two research questions that underlie our analysis in this chapter:

1. *How does political freedom relate to government/opposition cycles?* When political freedom is approached as is being suggested here within the context of our framework of analysis, by aggregating together three indicators of Freedom House (political rights, civil liberties and freedom of press), then there appears to be a clear empirical evidence: *there is and there operates a certain congruence between political freedom and government/opposition cycles. Political freedom and government/opposition cycles encourage each other. Furthermore, it may be postulated that there operates even a coevolution between political freedom and government/opposition cycles. Government/opposition cycles require political freedom, and political freedom requires government/opposition cycles:*

Table 6.4 Comparison of political freedom (dimension) with person change and party change of head of government (de facto head of government): countries ranked by average (mean) of political freedom (2002–2016)

| | Political freedom (average) | Person change | | Party change | | Person change | | Party change | |
|----|--------------------------------|------------------|-----------|-----------------|-----------|------------------|-----------|-----------------|--|
| | | 2002–2016 | 1990–2017 | 1990–2017 | 2002–2016 | 2002–2016 | 2002–2016 | 2002–2016 | |
| 1 | Norway | 99.348 | 6 | 5 | 2 | 2 | 2 | 2 | |
| 2 | Sweden | 99.103 | 5 | 4 | 2 | 2 | 2 | 2 | |
| 3 | Finland | 99.074 | 7 | 5 | 5 | 5 | 3 | 3 | |
| 4 | Netherlands | 97.873 | 3 | 3 | 2 | 2 | 2 | 2 | |
| 5 | Denmark | 97.754 | 5 | 4 | 4 | 4 | 3 | 3 | |
| 6 | Belgium | 97.181 | 6 | 4 | 4 | 4 | 3 | 3 | |
| 7 | Switzerland | 97.086 | 28 | 24 | 15 | 15 | 13 | 13 | |
| 8 | New Zealand | 95.504 | 7 | 4 | 2 | 2 | 1 | 1 | |
| 9 | Portugal | 95.442 | 6 | 5 | 5 | 5 | 4 | 4 | |
| 10 | Canada | 95.213 | 5 | 3 | 3 | 3 | 2 | 2 | |
| 11 | Ireland | 95.056 | 6 | 3 | 2 | 2 | 1 | 1 | |
| 12 | Germany | 94.358 | 2 | 2 | 1 | 1 | 1 | 1 | |
| 13 | United Kingdom | 93.624 | 5 | 2 | 3 | 3 | 1 | 1 | |
| 14 | Austria | 93.388 | 6 | 4 | 4 | 4 | 3 | 3 | |
| 15 | Australia | 93.338 | 6 | 3 | 4 | 4 | 2 | 2 | |
| 16 | Estonia | 92.840 | 10 | 7 | 5 | 5 | 4 | 4 | |
| 17 | United States | 91.757 | 4 | 4 | 1 | 1 | 1 | 1 | |
| 18 | France | 91.408 | 4 | 3 | 2 | 2 | 1 | 1 | |
| 19 | Spain | 91.256 | 3 | 3 | 2 | 2 | 2 | 2 | |
| 20 | Czech Republic | 91.088 | 10 | 5 | 7 | 7 | 3 | 3 | |
| 21 | Costa Rica | 90.745 | 7 | 5 | 4 | 4 | 2 | 2 | |
| 22 | Uruguay | 90.433 | 6 | 5 | 3 | 3 | 3 | 3 | |
| 23 | Slovenia | 89.471 | 7 | 7 | 6 | 6 | 6 | 6 | |
| 24 | Chile | 89.194 | 6 | 4.5 | 3 | 3 | 3 | 3 | |

(continued)

Table 6.4 (continued)

| | Political freedom (average) | Person change | | Party change | | Person change | | Party change | |
|----|--------------------------------|------------------|-----------|-----------------|-----------|------------------|-----------|-----------------|-----------|
| | | 2002–2016 | 1990–2017 | 1990–2017 | 1990–2017 | 2002–2016 | 2002–2016 | 2002–2016 | 2002–2016 |
| 25 | Lithuania | 89.146 | 11 | 6.5 | 5 | 3.5 | | | |
| 26 | Poland | 89.092 | 15 | 10 | 6 | 3 | | | |
| 27 | Slovak Republic | 88.249 | 6 | 6 | 3 | 3 | | | |
| 28 | Japan | 88.196 | 14 | 7 | 7 | 4 | | | |
| 29 | Mauritius | 86.513 | 6 | 5 | 4 | 4 | | | |
| 30 | Hungary | 85.539 | 7 | 6 | 4 | 3 | | | |
| 31 | Latvia | 85.531 | 13 | 9 | 6 | 5 | | | |
| 32 | Italy | 85.419 | 15 | 9 | 7 | 4.5 | | | |
| 33 | Korea, Rep. (South Korea) | 82.171 | 6 | 3.5 | 3 | 1.5 | | | |
| 34 | South Africa | 81.908 | 5 | 1 | 2 | 0 | | | |
| 35 | Ghana | 81.707 | 4 | 3 | 3 | 2 | | | |
| 36 | Israel | 81.591 | 6 | 5 | 3 | 2 | | | |
| 37 | Greece | 81.505 | 8 | 5.5 | 5 | 4.5 | | | |
| 38 | Jamaica | 80.537 | 6 | 3 | 5 | 3 | | | |
| 39 | Trinidad and Tobago | 79.795 | 5 | 5 | 2 | 2 | | | |
| 40 | Bulgaria | 79.428 | 12 | 8.5 | 5 | 4 | | | |
| 41 | Mongolia | 79.268 | 15 | 6 | 8 | 5 | | | |
| 42 | Croatia | 78.879 | 8 | 4 | 5 | 4 | | | |
| 43 | Benin | 77.909 | 4 | 2.5 | 2 | 0.5 | | | |
| 44 | Panama | 76.061 | 6 | 6 | 3 | 3 | | | |
| 45 | Namibia | 75.980 | 3 | 0 | 3 | 0 | | | |
| 46 | Romania | 75.132 | 11 | 7.5 | 4 | 4 | | | |
| 47 | Botswana | 74.507 | 2 | 0 | 1 | 0 | | | |
| 48 | India | 74.074 | 6 | 6 | 2 | 2 | | | |

(continued)

Table 6.4 (continued)

| | Political freedom (average) | Person change | | Party change | | Party change | |
|----|--------------------------------|---------------|-----------|--------------|-----------|--------------|-----------|
| | | 2002–2016 | 1990–2017 | 1990–2017 | 2002–2016 | 2002–2016 | 2002–2016 |
| 49 | Serbia | 73.599 | 4 | 3 | 3 | 2 | |
| 50 | Dominican Republic | 73.487 | 4 | 3 | 3 | 2 | |
| 51 | Brazil | 73.158 | 6 | 4 | 3 | 2 | |
| 52 | El Salvador | 72.249 | 5 | 1 | 3 | 1 | |
| 53 | Argentina | 72.063 | 5 | 3 | 4 | 2 | |
| 54 | Peru | 70.378 | 6 | 6 | 3 | 3 | |
| 55 | Senegal | 69.245 | 2 | 2 | 1 | 1 | |
| 56 | Mali | 69.073 | 3 | 1.5 | 2 | 1 | |
| 57 | Papua New Guinea | 69.015 | 7 | 6 | 3 | 2 | |
| 58 | Bolivia | 68.147 | 8 | 5.5 | 4 | 2.5 | |
| 59 | Lesotho | 67.923 | 5 | 3.5 | 2 | 2 | |
| 60 | Timor-Leste (East Timor) | 67.871 | 3 | 2 | 2 | 1 | |
| 61 | Philippines | 65.885 | 5 | 5 | 2 | 2 | |
| 62 | Mexico | 65.118 | 4 | 2 | 2 | 1 | |
| 63 | Albania | 62.641 | 7 | 4 | 3 | 2 | |
| 64 | Ecuador | 61.859 | 9 | 6 | 3 | 2 | |
| 65 | Indonesia | 61.256 | 5 | 4 | 3 | 3 | |
| 66 | Mozambique | 60.563 | 2 | 0 | 2 | 0 | |
| 67 | Macedonia, FYR | 59.749 | 7 | 4 | 4 | 2 | |
| 68 | Sierra Leone | 59.247 | 2 | 1.5 | 1 | 1 | |
| 69 | Nicaragua | 59.192 | 4 | 3 | 2 | 1 | |
| 70 | Bosnia and Herzegovina | 58.932 | | | | | |
| 71 | Tanzania | 58.783 | 3 | 0 | 2 | 0 | |
| 72 | Paraguay | 57.917 | 6 | 3.5 | 4 | 3 | |

(continued)

Table 6.4 (continued)

| | Political freedom (average) | Person change | | Party change | | Person change | | Party change | |
|------------------|--------------------------------|---------------|-----------|--------------|-----------|---------------|-----------|--------------|-----------|
| | | 2002–2016 | 1990–2017 | 1990–2017 | 1990–2017 | 2002–2016 | 2002–2016 | 2002–2016 | 2002–2016 |
| 73 Turkey | 57.763 | 10 | 6 | 3 | 2 | | | | |
| 74 Ukraine | 57.642 | 4 | 4 | 3 | 3 | | | | |
| 75 Malawi | 57.141 | 4 | 1 | 3 | 0 | | | | |
| 76 Burkina Faso | 56.714 | 1 | 0.5 | 1 | 0.5 | | | | |
| 77 Colombia | 56.408 | 5 | 2.5 | 2 | 1.5 | | | | |
| 78 Moldova | 56.016 | 10 | 5.5 | 5 | 3 | | | | |
| 79 Georgia | 55.831 | 6 | 1.5 | 5 | 1.5 | | | | |
| 80 Honduras | 54.694 | 7 | 6 | 4 | 4 | | | | |
| 81 Niger | 54.219 | 3 | 1.5 | 1 | 0.5 | | | | |
| 82 Zambia | 53.751 | 6 | 2 | 5 | 1 | | | | |
| 83 Kenya | 53.527 | 2 | 2 | 2 | 2 | | | | |
| 84 Guatemala | 53.013 | 9 | 7 | 6 | 5 | | | | |
| 85 Madagascar | 51.712 | 12 | 4 | 7 | 2.5 | | | | |
| 86 Bangladesh | 50.968 | 7 | 4 | 4 | 2 | | | | |
| 87 Thailand | 50.465 | 8 | 7 | 3 | 2.5 | | | | |
| 88 Nigeria | 49.683 | 4 | 1.5 | 3 | 1 | | | | |
| 89 Sri Lanka | 48.333 | 4 | 1 | 2 | 0 | | | | |
| 90 Liberia | 47.790 | 4 | 1.5 | 2 | 2 | | | | |
| 91 Nepal | 47.155 | 17 | 12.5 | 10 | 7 | | | | |
| 92 Guinea-Bissau | 46.547 | 5 | 2 | 5 | 2 | | | | |
| 93 Uganda | 45.338 | 0 | 0 | 0 | 0 | | | | |
| 94 Kuwait | 45.326 | 3 | 0 | 3 | 0 | | | | |
| 95 Singapore | 45.249 | 2 | 0 | 1 | 0 | | | | |
| 96 Lebanon | 45.174 | | | | | | | | |

(continued)

Table 6.4 (continued)

| | Political freedom (average) | Person change | | Party change | | Person change | | Party change | |
|-----|--------------------------------|------------------|-----------|-----------------|-----------|------------------|-----------|-----------------|--|
| | | 2002–2016 | 1990–2017 | 1990–2017 | 2002–2016 | 1990–2017 | 2002–2016 | 2002–2016 | |
| 97 | Malaysia | 44.814 | 2 | 0 | 2 | 0 | 0 | | |
| 98 | Armenia | 43.033 | 2 | 1 | 1 | 0.5 | 0.5 | | |
| 99 | Morocco | 42.387 | 7 | 3 | 3 | 2.5 | 2.5 | | |
| 100 | Venezuela, RB | 41.728 | 4 | 2 | 1 | 0 | 0 | | |
| 101 | Haiti | 41.631 | 10 | 6.5 | 5 | 3.5 | 3.5 | | |
| 102 | Mauritania | 41.611 | 2 | 0 | 2 | 0 | 0 | | |
| 103 | Pakistan | 40.359 | 12 | 5.5 | 6 | 2.5 | 2.5 | | |
| 104 | Congo, Rep. (Brazzaville) | 38.859 | 1 | 0.5 | 0 | 0 | 0 | | |
| 105 | Jordan | 38.393 | 16 | 0 | 8 | 0 | 0 | | |
| 106 | Tunisia | 38.119 | 5 | 1 | 5 | 1 | 1 | | |
| 107 | Kyrgyz Republic | 38.029 | 4 | 1.5 | 3 | 1.5 | 1.5 | | |
| 108 | Algeria | 37.817 | 2 | 0.5 | 0 | 0 | 0 | | |
| 109 | Gabon | 37.648 | 1 | 0 | 1 | 0 | 0 | | |
| 110 | Togo | 37.326 | 1 | 0 | 1 | 0 | 0 | | |
| 111 | Guinea | 35.646 | 2 | 1 | 2 | 1 | 1 | | |
| 112 | Cambodia | 35.528 | 3 | 1 | 0 | 0 | 0 | | |
| 113 | Central African Republic | 35.485 | 4 | 2 | 3 | 1.5 | 1.5 | | |
| 114 | Gambia, The | 35.130 | 1 | 1 | 0 | 0 | 0 | | |
| 115 | Cote d'Ivoire | 34.295 | 3 | 2 | 2 | 2 | 2 | | |
| 116 | Burundi | 34.049 | 4 | 2.5 | 2 | 1.5 | 1.5 | | |
| 117 | Angola | 32.744 | 1 | 0 | 0 | 0 | 0 | | |
| 118 | Qatar | 31.537 | 3 | 0 | 2 | 0 | 0 | | |
| 119 | Egypt, Arab Rep. (Egypt) | 31.278 | 2 | 1 | 2 | 1 | 1 | | |
| 120 | Afghanistan | 31.058 | | | | | | | |

(continued)

Table 6.4 (continued)

| | Political freedom (average) | Person change | | Party change | | Person change | | Party change | |
|-----|--------------------------------|------------------|-----------|-----------------|-----------|------------------|-----------|-----------------|-----------|
| | | 2002–2016 | 1990–2017 | 1990–2017 | 1990–2017 | 2002–2016 | 2002–2016 | 2002–2016 | 2002–2016 |
| 121 | Russian Federation (Russia) | 30.174 | 3 | 1.5 | 2 | 1.5 | 0 | 0 | 1.5 |
| 122 | Cameroon | 29.774 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 123 | Oman | 29.548 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 124 | Yemen, Rep. | 28.477 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 125 | Ethiopia | 27.967 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 126 | United Arab Emirates | 27.556 | 2 | 0 | 1 | 0 | 1 | 0 | 0 |
| 127 | Azerbaijan | 27.410 | 3 | 1 | 1 | 1 | 1 | 0 | 0 |
| 128 | Kazakhstan | 27.081 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 129 | Iraq | 26.635 | | | | | | | |
| 130 | Tajikistan | 26.494 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 131 | Rwanda | 26.471 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 132 | Chad | 25.521 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 133 | Congo, Dem. Rep. (Kinshasa) | 23.793 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 |
| 134 | Swaziland | 23.742 | 5 | 0 | 2 | 0 | 2 | 0 | 0 |
| 135 | Zimbabwe | 21.685 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 136 | Iran, Islamic Rep. (Iran) | 20.711 | 4 | 4 | 2 | 2 | 2 | 2 | 2 |
| 137 | Vietnam | 19.446 | 4 | 0 | 2 | 0 | 2 | 0 | 0 |
| 138 | China | 17.675 | 3 | 0 | 2 | 0 | 2 | 0 | 0 |
| 139 | Libya | 17.570 | | | | | | | |
| 140 | Belarus | 16.411 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 141 | Lao PDR (Laos) | 15.502 | 6 | 0 | 4 | 0 | 4 | 0 | 0 |
| 142 | Saudi Arabia | 15.191 | 2 | 0 | 2 | 0 | 2 | 0 | 0 |
| 143 | Myanmar (Burma) | 13.756 | 3 | 1.5 | 2 | 1.5 | 2 | 1.5 | 1.5 |

Table 6.4 (continued)

| | Political freedom (average) | Person change | | Party change | | Person change | | Party change | |
|---------------------------------------|--------------------------------|------------------|-----------|-----------------|-----------|------------------|-----------|-----------------|-----------|
| | | 2002–2016 | 1990–2017 | 1990–2017 | 1990–2017 | 2002–2016 | 2002–2016 | 2002–2016 | 2002–2016 |
| 144 Sudan | 13.502 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145 Somalia | 12.766 | | | | | | | | |
| 146 Syrian Arab Republic (Syria) | 11.012 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147 Eritrea | 10.914 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 148 Cuba | 10.662 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 |
| 149 Uzbekistan | 8.643 | 1 | 0.5 | 0.5 | 1 | 1 | 1 | 0.5 | 0.5 |
| 150 Turkmenistan | 6.689 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 151 Korea, Dem. Rep. (North Korea) | 4.094 | 3 | 0 | 0 | 3 | 2 | 2 | 0 | 0 |

Source Author's own calculations based on Tables 6.2, 6.3 and Table A.3.1 in Appendix A.3

Table 6.5 Average frequency of person change and party change of head of government (de facto head of government) based on a ranking of countries in reference to political freedom (for the years 2002–2016)

| | Political freedom (average) 2002–2016 | Person change (average) 1990–2017 | Party change (average) 1990–2017 | Person change (average) 2002–2016 | Party change (average) 2002–2016 |
|---|---|---|--|---|--|
| <i>Averages (means) for countries based on their (average) ranking in political freedom (2002–2016)</i> | | | | | |
| Top-third country ranking (ranks 1–50) | 87.335 | 7.240 | 4.990 | 3.900 | 2.790 |
| Medium-third country ranking (ranks 51–100) | 56.854 | 5.250 | 3.052 | 2.958 | 1.677 |
| Bottom-third country ranking (ranks 101–151) | 26.341 | 2.787 | 0.787 | 1.532 | 0.468 |

Comment: This table also presents averages for person change and party change of head of government for the whole years 1990–2017, based on the ranking by political freedom in 2002–2016. Data for 1990–2017 are more experimental
Source Author's own calculations based on Table 6.4

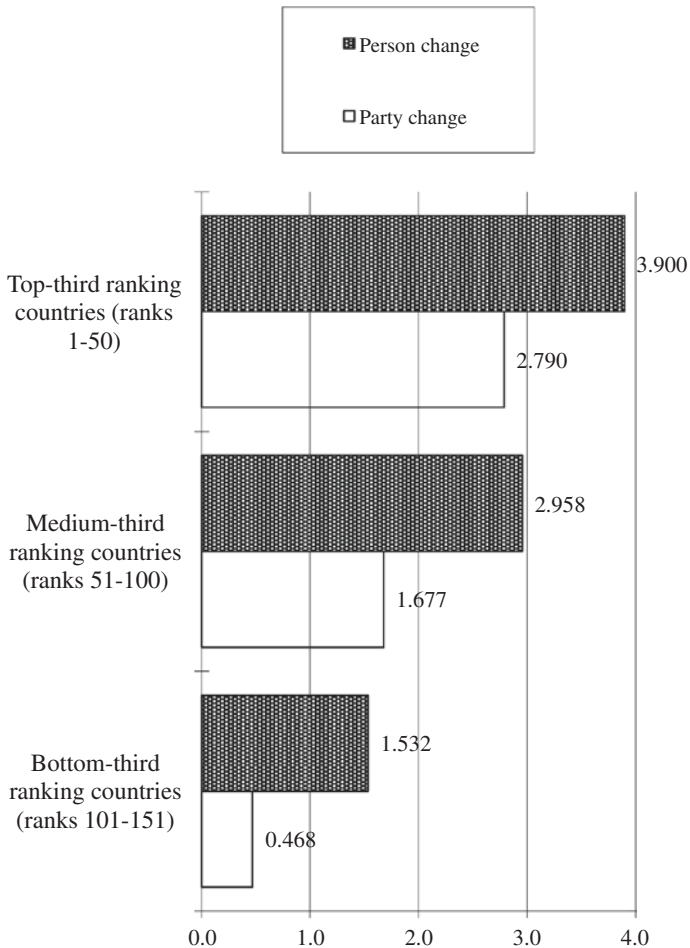


Fig. 6.3 Average frequency of person change and party change of head of government based on a ranking of countries (151 countries) in reference to political freedom (for the fifteen-year period 2002–2016) (Source Author's own calculations and visualization based on Table 6.5)

there cannot be the one without the other. Of course, there always is the question and challenge, what would be a good balance between the amount of political freedom and the amount (frequency) of government/opposition cycles. So a simple increase in government/opposition cycles does not automatically imply an increase

in quality of democracy. However, with practically no government/opposition cycles, a government or a political system cannot be democratic. *Therefore, the existence of government/opposition cycles draws a line of distinction between democracies and non-democracies, with possible “gray areas” for semi-democracies in a short-term (and midterm) perspective. Without government/opposition cycles (over a longer period of time), a political system cannot and does not qualify as a democracy. By this, government/opposition cycles should be regarded as an important structural characteristic as well as a process-related characteristic for attempting to identify democracies, and beyond democracies also semi-democracies and non-democracies.* Of course, government/opposition cycles alone do not make for a democracy. There may be (peaceful) government/opposition cycles a non-democratic setting. *But without government/opposition cycles, a “democracy cannot be a democracy,” meaning that a government regime and political system do not represent a democracy (even if this is the “official” political self-assertion of a regime). Party changes of head of government are here more important than person changes of head of government, because a peaceful person change of head of government is also possible (and thinkable) in authoritarian or totalitarian political regimes.* Put down in empirical figures and data, and based on a ranking of 151 countries in reference to their status of achieved political freedom and observed for the period 2002–2016, the top-third ranking countries (with regard to political freedom) realize on average a degree of peaceful person change of head of government about 2.55 times higher and a degree of peaceful party change of head of government about 5.96 times higher than when compared with the bottom-third of countries (see Table 6.5 and Fig. 6.3). In statistical terms, when political freedom, on the one hand, is correlated with peaceful person and party change (of the head of government) on the other, then a highly significant positive correlation results: this significant outcome can be reproduced for the Pearson correlation as well as for non-parametric correlation procedures (see Table 6.6). *This provides clear empirical evidence for the existence and performance of a coevolution between political freedom and government/opposition cycles, where political freedom and government/opposition cycles associate with each other and motivate*

Table 6.6 Correlation of “political freedom” with “person change of head of government” and “party change of head of government”

| | Person change | Party change |
|---------------------------------------|---------------|--------------|
| <i>Correlation</i> | | |
| Pearson Correlation | | |
| Political freedom | 0.450 (**) | 0.548 (**) |
| <i>Nonparametric Correlation (I)</i> | | |
| Kendall's tau_b | | |
| Political freedom | 0.375 (**) | 0.466 (**) |
| <i>Nonparametric Correlation (II)</i> | | |
| Spearman's rho | | |
| Political freedom | 0.516 (**) | 0.634 (**) |

(**): Correlation is significant at the 0.01 level (two-tailed)

Comment: For the computation SPSS (version 24) was used

Source Author's own calculations based on Table 6.4

and promote in mutual combination and interaction a democratic development and quality of democracy. Government/opposition cycles are equally important for democracies and semi-democracies in emerging markets, the NICs and developing countries: here, the “experiment” of engaging in a real (and peaceful) government/opposition cycle may mark the crucial unfolding of a process of democratization.

2. *How can the freedom ratings of Freedom House be validated?* In empirical terms, we demonstrated a positive correlation (and highly significant) between the degrees of achieved political freedom and the existence and frequencies of government/opposition cycles (see above). The sources that we used for political freedom and government/opposition cycles were different, which was necessary for our attempt of validation. Political freedom we referred completely to Freedom House (Freedom House 2013a, c). For government/opposition cycles, we referred to other standard sources (for example, Central Intelligence Agency 2013; Muller et al. 2012, as well as Banks et al. 2006). For government/opposition cycles, the use of alternative sources also would have produced basically the same results.⁹

⁹In the current literature, there is maximum consent, who the head of government of a specific country is (or was) and which party affiliation this head of government has (or had in the past).

*The positive correlation between these different sets of indicators (political freedom with government/opposition cycles) represents, in methodic terms, a crucial argument in favor of “validation” of the freedom ratings of Freedom House. By this it can be demonstrated that the aggregation of three indicators of Freedom House (political rights, civil liberties and freedom of press) associates in an amplifying mode and positively with the degree and frequency of government/opposition cycles, more specifically the peaceful person and party change of head of government. To turn this line of thinking around: in a situation of no observed correlation (positive correlation) between political freedom and government/opposition cycles, the validity of the freedom data of Freedom House could have been seriously questioned.¹⁰ In that sense, the quality of freedom data and freedom ratings of Freedom House may be on the whole and by tendency even better than in some of the assessments provided by scholars, where critical comments prevail. This does not exclude the possibility or also the need that for specific cases the freedom rating of a specific country by Freedom House should indeed be questioned or revised. Based on theory and concepts of democracy, we are in a good position of offering a good reasoning, why government/opposition cycles (to some extent also political left/right swings) are important for democracy and quality of democracy (see again the raised and discussed arguments at the beginning of this section). *Government/opposition cycles act as drivers for promoting and progressing democracy and quality of democracy world-wide and in a global format.* Other forms of political swings (for example, political left/right swings) also have the potential to contribute positively to democracy and quality of democracy.*

¹⁰Would (in a hypothetical scenario) the freedom ratings of Freedom House and the government/opposition cycles behaved to each other in a mutually negative statistical correlation, then this would have created a “puzzle,” not easy to interpret, perhaps fundamentally questioning our conventional wisdom.

References

- Banks, A. S., Muller, T. C., & Overstreet, W. R. (Eds.). (2006). *Political Handbook of the World 2005–2006*. Washington, DC: Congressional Quarterly Press (CQ Press).
- Bollen, K. A. (1986). Political Rights and Political Liberties in Nations: An Evaluation of Human Rights Measures, 1950 to 1984. *Human Rights Quarterly*, 8(4), 567–591.
- Bollen, K. A. (1993a). Liberal Democracy: Validity and Method Factors in Cross-National Measures. *American Journal of Political Science*, 37(4), 1207–1230.
- Bollen, K. A. (1993b). Political Democracy: Conceptual and Measurement Traps, 3–20. In A. Inkeles (Ed.), *On Measuring Democracy: Its Consequences and Concomitants*. New Brunswick, NJ: Transaction Publishers.
- Bollen, K. A., & Paxton, P. (2000). Subjective Measures of Liberal Democracy. *Comparative Political Studies*, 33(1), 58–86.
- Budge, I., & Farlie, D. J. (1983). *Explaining and Predicting Elections: Issue Effects and Party Strategies in Twenty-Three Democracies*. London: George Allen & Unwin.
- Budge, I., Klingemann, H.-D., Volken, A., Bara, J., & Tannenbaum, E. (2001). *Mapping Policy Preferences: Estimates for Parties, Electors, and Governments 1945–1998*. Oxford: Oxford University Press.
- Campbell, D. F. J. (1992). Die Dynamik der politischen Links-rechtsschwingungen in Österreich: Die Ergebnisse einer Expertenbefragung. *Österreichische Zeitschrift für Politikwissenschaft (ÖZP)*, 2, 165–179.
- Campbell, D. F. J. (1996). Links- und Rechtsschwingungen in den westlichen Demokratien ab 1945. Dissertation. Vienna: University of Vienna.
- Campbell, D. F. J. (2002). Zur Demokratiequalität von politischem Wechsel, Wettbewerb und politischem System in Österreich, 19–46. In D. F. J. Campbell & C. Schaller (Eds.), *Demokratiequalität in Österreich*. Opladen: Leske + Budrich.
- Campbell, D. F. J. (2007). Wie links oder wie rechts sind Österreichs Länder? Eine komparative Langzeitanalyse des parlamentarischen Mehrebenensystems Österreichs (1945–2007). *SWS-Rundschau*, 47(4), 381–404.
- Campbell, D. F. J., Carayannis, E. G., Barth, T. D., & Campbell, G. S. (2013). Measuring Democracy and the Quality of Democracy in a World-Wide Approach: Models and Indices of Democracy and the New Findings of the “Democracy Ranking”. *International Journal of Social Ecology and Sustainable Development*, 4(1), 1–16. <http://www.igi-global.com/article/measuring-democracy-quality-democracy-world/77344>.
- Caramani, D. (2015). *The Europeanization of Politics: The Formation of a European Electorate and Party System in Historical Perspective*. Cambridge: Cambridge University Press.

- Central Intelligence Agency. (2013). *The CIA World Factbook 2013*. (Electronic Data Base). Washington, DC: CIA. <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html>.
- Central Intelligence Agency. (2018). *The CIA World Factbook 2013* (Electronic Data Base). Washington, DC: CIA. <https://www.cia.gov/library/publications/the-world-factbook/>.
- Clubb, J. M., Flanigan, W. H., & Zingale, N. H. (1990). *Partisan Realignment: Voters, Parties, and Government in American History*. Boulder: Westview Press.
- Dalton, R. J., & Wattenberg, M. P. (Eds.). (2002). *Parties Without Partisans: Political Change in Advanced Industrial Democracies*. Oxford: Oxford University Press.
- Diamond, L., & Morlino, L. (2004). The Quality of Democracy: An Overview. *Journal of Democracy*, 15(4), 20–31.
- Diamond, L., & Morlino, L. (2005). *Assessing the Quality of Democracy*. Baltimore, MD: The Johns Hopkins University Press.
- Downs, A. (1957/1985). *An Economic Theory of Democracy*. Boston: Addison-Wesley.
- Freedom House. (2012a). *Freedom in the World 2012: Methodology*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2012/methodology>.
- Freedom House. (2012b). *Freedom in the World 2012: Survey Team*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2012/survey-team>.
- Freedom House. (2013a). *Freedom in the World: Aggregate Scores of Political Rights and Civil Liberties, 2003–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/AggregateScores_FIW2003-2013%20%28final%29.xls.
- Freedom House. (2013b). *Freedom in the World 2013: Methodology*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2013/methodology>.
- Freedom House. (2013c). *Freedom of the Press: Scores and Status Date 1980–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/FOTP%20Scores%20and%20Status%201980-2013_0.xls.
- Gastil, R. D. (1993). The Comparative Survey of Freedom: Experiences and Suggestions, 21–46. In A. Inkeles (Ed.), *On Measuring Democracy: Its Consequences and Concomitants*. New Brunswick, NJ: Transaction Publishers.
- Harding, S., Phillips, D., & Fogarty, M. (1986). *Contrasting Values in Western Europe: Unity, Diversity and Change. Studies in the Contemporary Values of Modern Society*. Houndmills: MacMillan.

- Klingemann, H.-D., Volken, A., Bara, J., Budge, I., & McDonald, M. (2006). *Mapping Policy Preferences II: Estimates for Parties, Electors, and Governments in Eastern Europe, European Union and OECD 1990–2003*. Oxford: Oxford University Press.
- Laponce, J. A. (1981). *Left and Right: The Topography of Political Perceptions*. Toronto: University of Toronto Press.
- Luther, K. R., & Müller-Rommel, F. (Eds.). (2005). *Political Parties in the New Europe: Political and Analytical Challenges*. Oxford: Oxford University Press.
- Muller, T. C., Isacoff, J. F., & Lansford, T. (Eds.). (2012). *Political Handbook of the World*. Washington, DC and London: CQ Press (Sage).
- Müller, W. C., & Strøm, K. (2000a). Conclusion: Coalition Governance in Western Europe. In W. C. Müller & K. Strøm (Eds.), *Coalition Governments in Western Europe* (pp. 559–592). Oxford: Oxford University Press.
- Müller, W. C., & Strøm, K. (Eds.). (2000b). *Coalition Governments in Western Europe*. Oxford: Oxford University Press.
- Munck, G. L., & Verkuilen, J. (2002). Conceptualizing and Measuring Democracy. *Evaluating Alternative Indices: Comparative Political Studies*, 35(1), 5–34.
- Niemi, R. G., Mueller, J., & Smith, T. W. (1989). *Trends in Public Opinion: A Compendium of Survey Data*. New York: Greenwood Press.
- Pickel, S., & Pickel, G. (2006). *Politische Kultur- und Demokratieforschung. Grundbegriffe, Theorie, Methoden. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Przeworski, A., Alvarez, M. E., Antonio Cheibub, J., & Limongi, F. (2003). *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990*. Cambridge: Cambridge University Press.
- Rosenberger, S., & Seeber, G. (2008). *Wählen*. Vienna: Facultas WUV (UTB).
- Schlesinger, M. A., Jr. (1986). *The Cycles of American History*. Boston: Houghton Mifflin.
- Schmidt, M. G. (1983). Politische Zusammensetzung der Regierungen. In M. G. Schmidt (Ed.), *Westliche Industriegesellschaften: Wirtschaft – Gesellschaft – Politik* (pp. 371–375). Munich: Piper Verlag.
- Schmidt, M. G. (2006). *Demokratiethorien. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Share, D. (1999). From Policy-Seeking to Office-Seeking: The Metamorphosis of the Spanish Socialist Workers Party, 89–111. In W. C. Müller & K. Strøm (Eds.), *Policy, Office, or Votes? How Political Parties in Western Europe Make Hard Decisions* (pp. 89–111). Cambridge: Cambridge University Press.
- Strøm, K., & Müller, W. C. (1999). Political Parties and Hard Choices, 1–35. In W. C. Müller & K. Strøm (Eds.), *Policy, Office, or Votes? How Political Parties in Western Europe Make Hard Decisions*. Cambridge: Cambridge University Press.



7

Conclusion: Summary and Formulation of Hypotheses for Further Research on Democracy, Quality of Democracy in Global Comparison and Democracy as Innovation Enabler

The analysis in this work was guided by the following two key research questions, which also structured the research and organization of research: *How to conceptualize and measure democracy and the quality of democracy in global comparison?* As third (and complementary) research question we referred to the proposition (hypothesis) of “*democracy as innovation enabler*.” This research interest resulted in *conceptualizing and measuring the quality of democracy* in a world wide approach. The empirical macromodel consisted of 160 countries that represented more than ninety-nine percent of the world population. This country reference included democracies and non-democracies (democracies, semi-democracies and non-democracies). The empirically covered years were the fifteen-year period of 2002–2016. For that purpose also a specific conceptualization was developed. The *basic quintuple-dimensional structure of democracy* identifies five basic dimensions (basic conceptual dimensions) for democracy and quality of democracy: freedom, equality, control, sustainable development and self-organization (political self-organization) (Sect. 1.2). Strictly indicator based on the country sample was referred to these dimensions. Particular emphasis was placed on the dimensions of freedom, equality, sustainable development and

self-organization (government/opposition cycles as a manifestation of political self-organization). The empirical outcome of this endeavor is documented in an indicator-and-data format for all countries, all years and all dimensions (subdimensions) in the tables followed in Appendix (Appendices A.1–A.3).

The work here demonstrates that already it is possible to measure quality of democracy systematically and in a global comparison with the existing and publically available data and indicators, at least when the covered year period is set to start after 2000. The analysis is not limited and bound to democracies only, but can address democracies and non-democracies (democracies, semi-democracies and non-democracies). In the case of non-democracies, the absence of quality of democracy can be demonstrated. With the comprehensive inclusion of non-democracies (in addition to democracies and semi-democracies), this attempt of measuring quality of democracy converts the applied model into a world model, which is only constrained in case of missing data.¹ But even these data imperfections cannot question in principle the raised assertion of a world model for measurement of democracy and quality of democracy. Conceptualizations of quality of democracy, well grounded in theory and in discourses on democracy, can be designed and can be applied for practical inquiry. As conceptualization, which was the reference for our research, we proposed to introduce the basic quintuple-dimensional structure of democracy. Democracy measurement, based on theories and concepts of quality of democracy, can be achieved in contemporary context. For the coming years, this provides the further opportunity of a further co-development (“co-evolution”) of theory of democracy and measurement of democracy, which appears to be necessary exactly in such an interlinked and cross-linked mode and approach. One practical aspect of the way how quality of democracy was conceptualized and measured in the framework of the work here is that it can be interpreted to result in a comparative multidimensional index-building for democracy (also degrees of

¹For example, the full model (macro-model) of 160 countries (territories) relates to more than 99% of the world population. Depending on data availability, always at least 122 countries (“World 122”) were covered, still representing between 92 and 94% of the world population (see Sects. 2.1, 2.4, and Fig. 2.2).

democratization for all countries) in the world. Despite this ability of a global democracy measurement in contemporary context, supported by a reasoning based on a conceptual design development rooted in theory of democracy, still a paradox prevails. *The consequences of democracy measurement also appear to present (to “produce”) ambiguities, puzzling empirical effects and trade-offs in the empirical results.* For the analytical interpretation of outcomes in democracy measurement, often different and conflicting propositions can be suggested, where no easy balance or “solution” at a “meta-level” is in near sight. Shifts in a “conceptual position” lead to shifts in assessment. This may mean that we still do not fully understand how the dynamics of democracy development is unfolding and evolving on a global scale. This also underscores, why it is so difficult to address “Why Questions” of democracy and quality of democracy in a meaningful (and non-trivial) way.

In the following, the conclusion is structured in three sections. In the first section, global trends for the dimensions of freedom and equality are summarized. Section two, in the format of an outlook, formulates hypotheses for further research on democracy and quality of democracy in a world wide format. Section three, finally, engages in a short resume.

7.1 Conclusion: Summary of Comparison of Countries and Country Groups Over the Dimensions of Freedom and Equality (2002–2016)

In this section, we again summarize in a focused approach the results when comparing the different countries and country groups across the dimension (basic dimensions) of freedom and equality. The dimension of freedom is being specified into the following two dimensions (subdimensions): political freedom and economic freedom. The dimension of equality (here) distinguishes between two dimensions (subdimensions): income equality and gender equality. There always can be (and probably always will be) a serious discussion and by this a (potentially) conflicting discourse, what the essential and underlying dimensions of democracy and quality of

democracy are. Depending on the specific theory or conceptual approach, there may be disagreement (for an overview of theories and models of democracy see: Cunningham 2002; Held 2006; Meyer 2009; Schmidt 2010; Sodaro 2004). For clarification in discussion, it may be appropriate to distinguish between basic and non-basic (so-called secondary) dimensions of democracy. Basic dimensions should be regarded as being essential for democracy, while in the case of non-basic (secondary) dimensions there can be a greater amount of discussion, but also higher degrees of dissent, whether these qualify or should qualify to be crucial for democracy, crucial for our understanding of democracy and crucial for the quality of democracy.² *There appears to be a widespread consensus (at least in discourses in Europe, the USA and North America) that freedom and equality represent two decisive basic dimensions of and for democracy and the quality of democracy. Without sufficient forms or degrees of freedom and equality, a political system does not qualify to represent a democracy.* This assertion and proposition becomes complicated by several additional considerations: (1) freedom as well as equality already are broad categories or dimensions. The challenges arises, how to define freedom and equality further, to support a more precise approach of analysis. Within the model and framework of analysis, being applied here, the decision was made to distinguish between political and economic freedom, and between income and gender equality (see Sect. 1.3 and Chapter 2). (2) Furthermore, there can be trade-offs and contrary trends, developments and movements between freedom and equality as a whole, or also between subdomains or subdimensions of freedom and equality. For example, economic freedom and gender equality may improve, political freedom may stagnate and income equality even decline. How should such possible trade-off developments be evaluated and assessed comprehensively, are there options to initiate and again create a more balanced picture at a meta-level, or does this create paradoxes and puzzles that cannot be solved (at least not with rational means)?

²In Sect. 1.2, we presented the concept of the quintuple-dimensional structure of democracy that identifies five dimensions as basic dimensions (basic conceptual dimensions) for democracy (see Fig. 1.7). Among these are freedom and equality. We decided not to discuss further what possible secondary (non-basic) dimensions of democracy there may be.

In Sect. 1.2, based on a review of the traditional (classical) as well as recent literature on democracy and democracy research, we proposed to speak of five basic dimensions that define, underlie and create democracy and quality of democracy. These dimensions are:

1. freedom;
2. equality;
3. control;
4. sustainable development;
5. and (political) self-organization.

The two most basic dimensions of democracy are freedom and equality. Freedom, equality and control represent an arrangement of dimensions, favored by several authors (see Lauth 2004, pp. 32–101; Democracy Barometer 2013).³ O’Donnell (2004, pp. 11–13, 42) draws the connection between human rights and human development. It can be convincingly argued that human development can be reinterpreted as a manifestation of sustainable development. The performance of the non-political dimensions, in context of the Democracy Ranking (Campbell 2008, pp. 32–34), serves as another example, which can be interpreted and reinterpreted in terms with sustainable development.⁴ An explicit reference to sustainable development as the fourth dimension of and for democracy and the quality of democracy was made by Campbell (2012, pp. 296, 301–302, 306). These four dimensions together (and put into interplay, combination and overlap) can be discussed as the “Basic Quadruple Dimensional Structure” of democracy and the quality of democracy, by this also producing a “Quadruple Helix Structure of the Basic Dimensions” of democracy (Campbell and Carayannis 2013).

³The Democracy Barometer follows conceptually a three-dimensional approach to democracy, by emphasizing: “In the understanding of the Democracy Barometer project, democracy rests on three principles: *freedom, control and equality*” (http://www.democracybarometer.org/concept_en.html).

⁴The Democracy Ranking initiative identifies five non-political dimensions: gender (socioeconomic, educational), economy, knowledge, health and the environment.

Should self-organization (political self-organization) be added as a fifth basic dimension to democracy, also for the purpose of explaining democracy and the quality of democracy, then the conceptual consequence for theory would be that the conceptual complexity of and for democracy would increase. *What results is a Basic Quintuple-Dimensional Structure of democracy and the quality of democracy, which again could be conceptually converted into a Quintuple Helix Structure of the Basic Dimensions of democracy and the quality of democracy.*⁵ One manifestation for political self-organization is political swings in form of government opposition cycles. In context of the framework of analysis being provided here, our applied model of conceptualization and measurement of democracy in global comparison focused on the dimensions (basic dimensions) of freedom, equality and sustainable development, and already to a lesser extent on political self-organization (political swings). No particular emphasis was placed on the dimension of control. However, we should add that the conceptual boundaries between these dimensions are not always sharp, but in fact overlap, and are furthermore subject to different and conflicting interpretations. Political swings, for example, can be assigned to the dimension of political self-organization, but also to the dimension of control.

In the previous chapters to the empirical model (Chapters 2–6), a major emphasis of analytical focus was placed on the basic dimension of sustainable development, and how countries (democracies, semi-democracies as well as non-democracies) perform and develop (have developed over time) in relation and relationship to this analytical reference. In this Sect. 7.1, we focus now on the dimension of freedom (political freedom and economic freedom)⁶ and the dimension of equality (income equality and gender equality) that define as well as represent

⁵See again our previous reasoning and analysis in Sect. 1.3 and Chapter 6.

⁶While there is a large consent that political freedom relates substantially to democracy and the quality of democracy, this is not necessarily the case for economic freedom. Critics may argue that economic freedom relates to the domain (system) of the economy, but does not convincingly qualify as a characteristic (attribute) for democracy. The decision here, however, was to introduce economic freedom as one dimensions (sub-dimension) for conceptualizing and measuring democracy and democracy progress in global comparison. This should invite a diversity of different possible perspectives.

the two basic dimensions of primary and pivotal importance for democracy and the quality of democracy. *By this we again engage in a more classical view or perspective, by this in accordance with a traditional understanding and theoretical understanding of democracy, which has been recently challenged by the importance of sustainable development. It is the global world perspective that has brought sustainable development into play.* For the comparison in this section, we rerun several of the countries and country groups to which we already referred to in our more detailed (year-specific) comparison in the previous chapters (and sections). In the following comparison here, we created averages (means) for the whole seven-year period 2002–2016. Thus, the now discussed data do not plot trends, but display, on the other hand, a more stable and robust picture of relationships.⁷ The following propositions are being supposed for further discussion:

1. *Comparison of the USA and the European Union (EU15, EU28) in relationship to the dimensions of freedom and equality (2002–2016):* The USA can be compared directly with individual European countries, also member states to the European Union. This certainly represents a legitimate procedure. Of course, there always can concerns be raised, what the proper level (unit of analysis) would be, when comparing the USA with the European Union: (1) USA versus European countries; (2) US states versus European countries; (3) or USA versus EU? This matrix of options even could be extended. Concerning the European Union, there also can always be a debate, whether the EU15 or EU28 would qualify as a better and fairer candidate for a comparison with the US regarding history, path trajectory and path-dependent development, the EU15 is more similar to the USA and has faced circumstances, which make a direct comparison easier. For example, Eastern-Central Europe, now a major region within the EU, had suffered for decades under insufficient communist policy

⁷One methodic effect of creating averages (means) across the whole period 2002–2016 is also that by this possibly distorting effects of missing data (“missings”) are being balanced, at least to a certain extent. For a year-by-year comparison, missing data can impose more of an impact on individual years and their interpretation.

regimes and limited sovereignty within the imperial sphere of influence of the Soviet Union. At the same time, however, it must be mentioned and underscored that the European Union (in its institutional manifestation) does not exist as EU15, but only as EU27. In that respect, the EU15 represents also an analytical narrowing-down, deviating from real-world institutional settings. When comparing the USA (alternatively) with the EU15 and EU27, the following impressions can be drawn:

- (1) *USA and EU15*: Concerning political freedom, the EU15 leads marginally, with regard to economic freedom, the USA has a substantial lead. Concerning again gender equality, the EU15 again leads marginally, with regard to income equality more substantially (see Fig. 7.1). Are the two freedom and equality dimensions being aggregated together into one freedom and equality dimension, then the USA leads in the sphere (domain) of freedom, and the European Union leads in the sphere (domain) of equality (see Fig. 7.2). *This means that the EU15 performs better with regard to equality, more so in reference to income equality, less so in reference to gender equality. So the comparative quality of democracy in the EU15 focuses more on equality, when compared with the USA.* The USA only achieves a split lead with regard to freedom. The USA leads in reference to economic freedom, but lags marginally behind the EU15 in reference to political freedom. Particularly this lagging behind EU15 with regard to political freedom is interesting.⁸ The more of equality in Europe (EU15) did not constrain a performance (good performance) in political freedom. *The non-lead in freedom by the USA is contrasted by the already-lead (yet-lead) of the European Union (EU15) in equality. All together, it appears that the EU15 mobilized a comparative aggregate advantage over the dimensions of freedom and equality, when placed into a direct*

⁸This can be used as an argument against the assertion that Freedom House-generated data or a Freedom House-based constructing and designing of a freedom dimensions is automatically biased in favor of a good positioning of the USA.

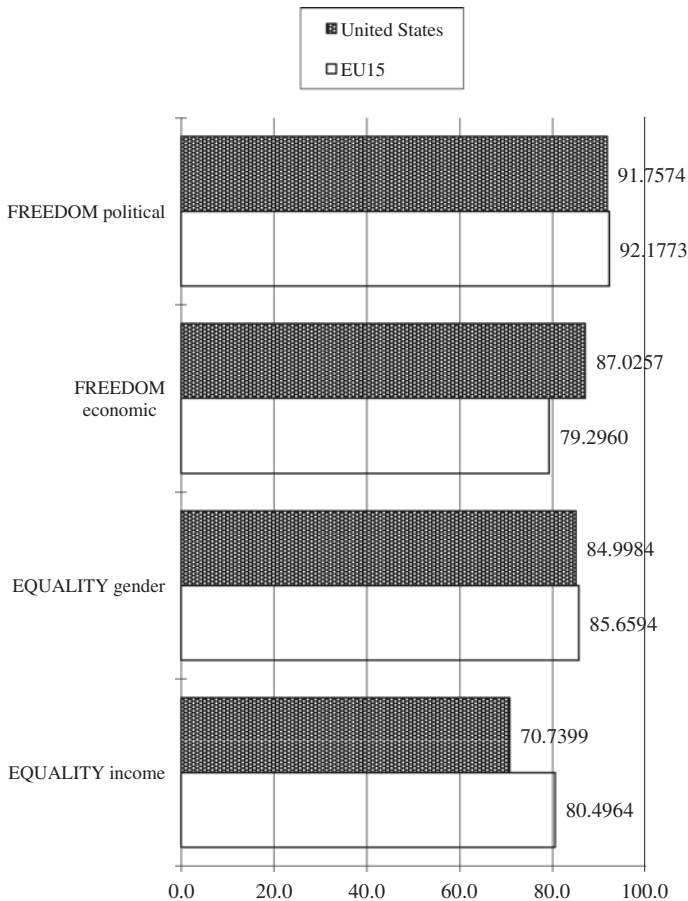


Fig. 7.1 Average means for the score values of the United States and the EU (EU15) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation)

comparison with the USA (and for the period of time of 2002–2016). In that sense, the American model of democracy and quality of democracy is being seriously challenged by the European model (models) of democracy and their quality. So it cannot be said that the comparative quality of American democracy, when compared

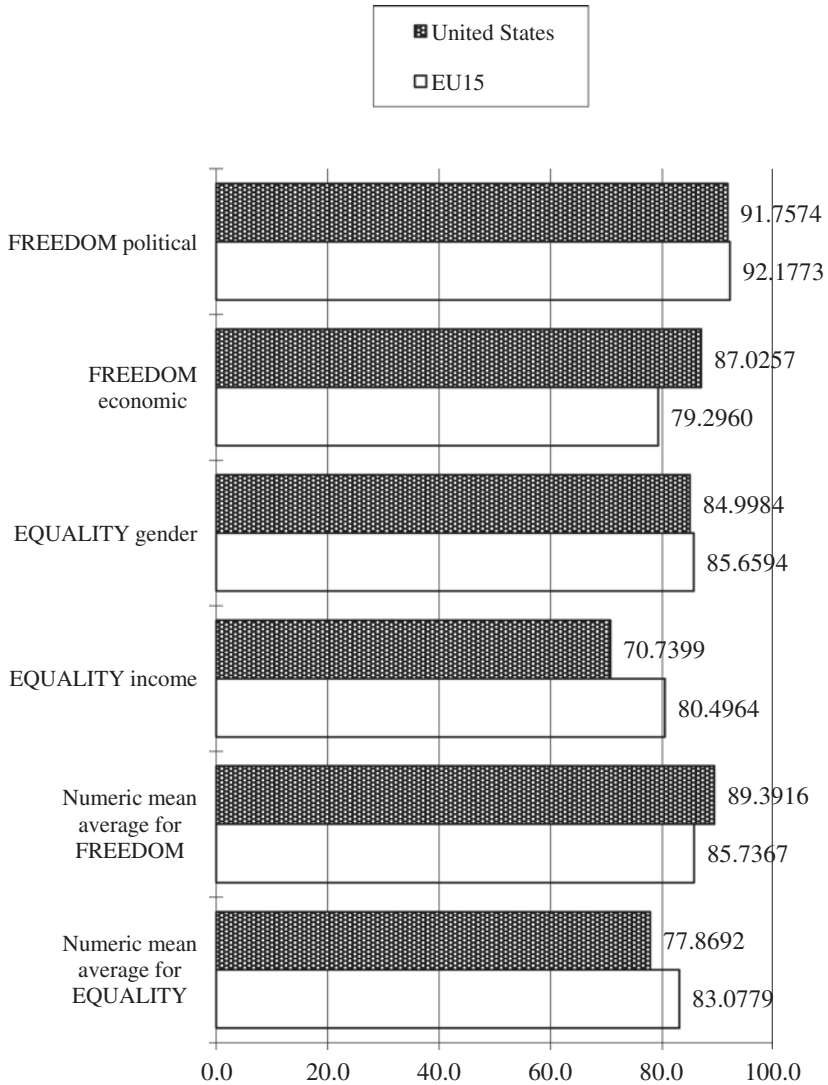


Fig. 7.2 Average means for the score values of the United States and the EU (EU15) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation)

with EU15, is per se freedom. However, it should be added that the lead of the EU15 over the USA is only very tight and thin in the dimensions (subdimensions) of political freedom and in gender equality, so we cannot really speak here of a hegemony in quality in favor of the European Union. *Despite the proposition that the EU15 realized competitive quality-of-democracy advantages in equality, there results also the (competing) picture of a deadlock or stalemate, when compared with the USA, because the progress of the EU15 is only marginal in two dimensions (subdimensions).* So the ambiguity and puzzling effect would be the assertion that there does not exist a clear-cut picture, whether the EU15 has advanced further than the USA with regard to quality of democracy. Patterns of lead are fragile, and perhaps (but not necessarily) may shift in future.

- (2) *USA and EU28:* For the comparison of the USA with EU15, the one (contested) conclusion was (is) that the EU15 leads in both dimensions (subdimensions) of equality, while with regard to freedom, there is a split situation: the (small) lead of EU15 in political freedom is being contrasted by a clearer lead of the USA in economic freedom. All together, however, it appears that the advantages (on grounds of quality of democracy) are more with EU15. *Is the focus of analysis extended and broadened from EU15 to EU28, then the advantages move and gravitate more in favor of the USA* (see Fig. 7.3). Within the framework of comparison of the USA versus EU28 (in the time frame 2002–2016), the following patterns are manifested: the USA leads marginally on political freedom and substantially on economic freedom, and the USA leads furthermore marginally on gender equality, while the EU28 lies ahead in income equality. *By this, income equality represents the only dimension (subdimension), where EU27 realizes an advantage, when put in contrast to the USA.* Are the two dimensions (subdimensions) of freedom (political freedom and economic freedom) as well as of equality (gender equality and income equality) aggregated together into one meta-dimension of freedom and equality, then the USA places ahead in context of freedom, but EU28 is in the

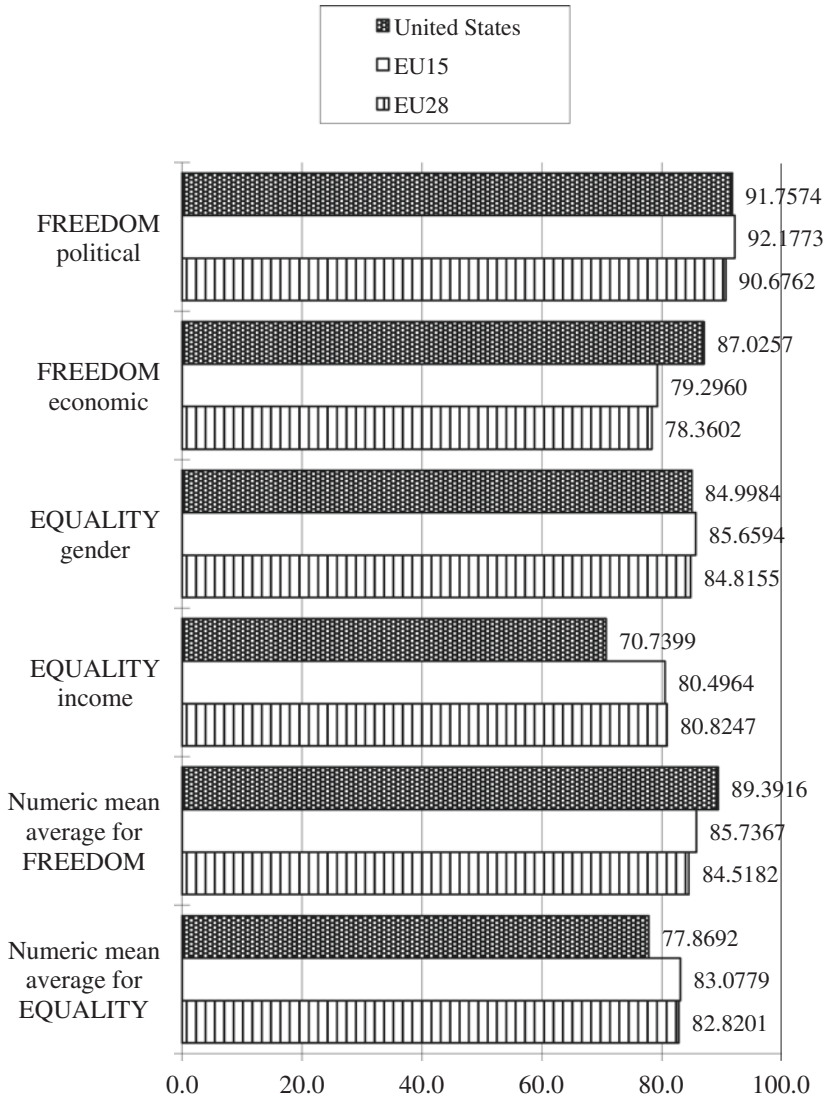


Fig. 7.3 Average means for the score values of the United States and the EU (EU15 and EU28) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation)

forefront of equality (see again Fig. 7.3). Summarized and summarizing propositions therefore are: (a) *is the conceptualization of democracy and quality of democracy being based on freedom and equality, then the overall advantage, competitive advantage, leans marginally in favor of the USA. This US lead is clearer in freedom, while in equality we are confronted with a split situation, with a slight advantage of the USA on gender equality, whereas the EU28 lies evidently ahead in income equality.* (b) By tendency, there are structural similarities in the dimensional profile of EU28 and EU15. But despite this asserted structural similarity, *the EU28 lags behind EU15 in all dimensions (subdimensions) of freedom and equality.* On these grounds, and when based on the dimensions of freedom and equality, it appears that quality of democracy has developed to a higher degree in EU15 than in EU28. Still, differences in scores between EU15 and EU28 are only minimal. This minimal drawback of EU28, however, is sufficient, to place EU28 behind the USA on several of the measured dimensions.

- (3) *USA versus EU15 or EU28:* The remaining ambiguity now of course is to decide or wanting to decide, whether EU15 or EU28 represents a better (fairer) comparison for the USA. The dilemma here however is that this cannot be decided on neutral grounds. The pros and cons arguments work in both ways or either ways. In one understanding, this even could have the consequence of going so far as to assert that it cannot be really decided, whether the USA or the European Union is leading or has realized a competitive advantage with regard to freedom and equality. Unquestionable is only that the USA is placing ahead in economic freedom, and the European Union leads in income equality. Political freedom and gender equality, on the contrary, do not allow for a final and stable comprehensive assessment. Differences in scores for political freedom and gender equality are so tight, by this making stable predictions for the coming years almost impossible. *In political (also ideological) terms, we are caught in the dilemma that an analytical reasoning*

cannot really prove, whether American or “European democracy”⁹ has developed or evolved to higher levels of quality of democracy. This bounces back as a puzzling effect into our discourses and theories on democracy and quality of democracy. The “neutral” and “really convincing” meta-perspective (point of reference) for a comparison of the USA and the European Union on the basis of freedom and equality was not found, not found in the sense of being able to make an ideologically neutral assessment and statement. Within the framework of analysis and model, being applied here, it cannot be verified whether quality of democracy in the USA or EU is on the winning side when pooling freedom and equality together as the decisive benchmark, at least a finally convincing statement is not possible, and would be premature (perhaps even be ideologically biased). What results (so far) is a situation, where propositions can be formulated that argue and reason in favor of the USA, but also in favor of the European Union. The spectrum of competing and contradictory interpretations is still wide, and there is enough room and space for divergent and deviating assessment. Ideology can use this “open space” of academic research and reasoning to emphasize interpretations in either way. Perhaps this open answer does not satisfy. Perhaps we reach here limits of our current concepts and theories about democracy, which were also not transcended by our research on advanced democracy.

2. *Comparison of the USA and the Nordic countries in relationship to the dimensions of freedom and equality (2002–2016):* When the USA is compared with the Nordic countries over the dimensions (subdimensions) of freedom and equality, then the USA is leading with regard to economic freedom (see Fig. 7.4). The Nordic countries lead in political freedom, gender equality and in income equality. The saliency and

⁹The term “European democracy” refers here more to an aggregation of the different individual member countries of the EU and not specifically to the supranational institutional framework of the EU. The same applies to the terms of “EU15” and “EU28” in our analysis (and when not being otherwise indicated). For further details, see the discussion of countries and country groups in Sect. 2.4.

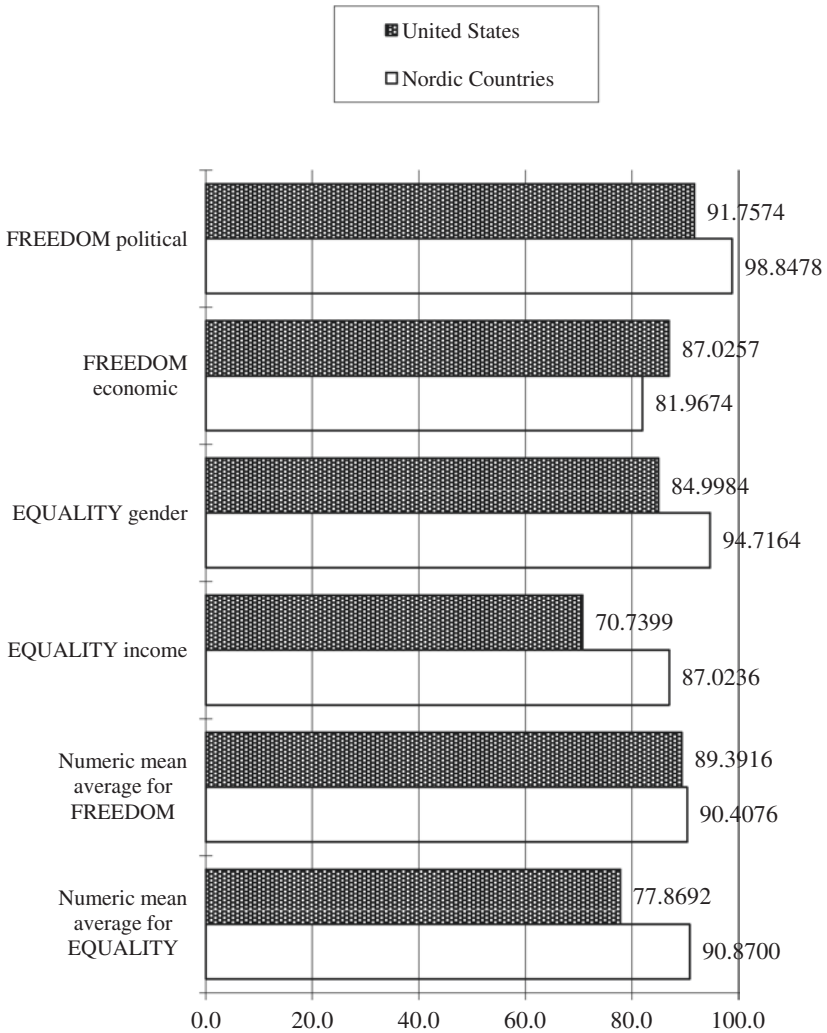


Fig. 7.4 Average means for the score values of the United States and Nordic Countries for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation)

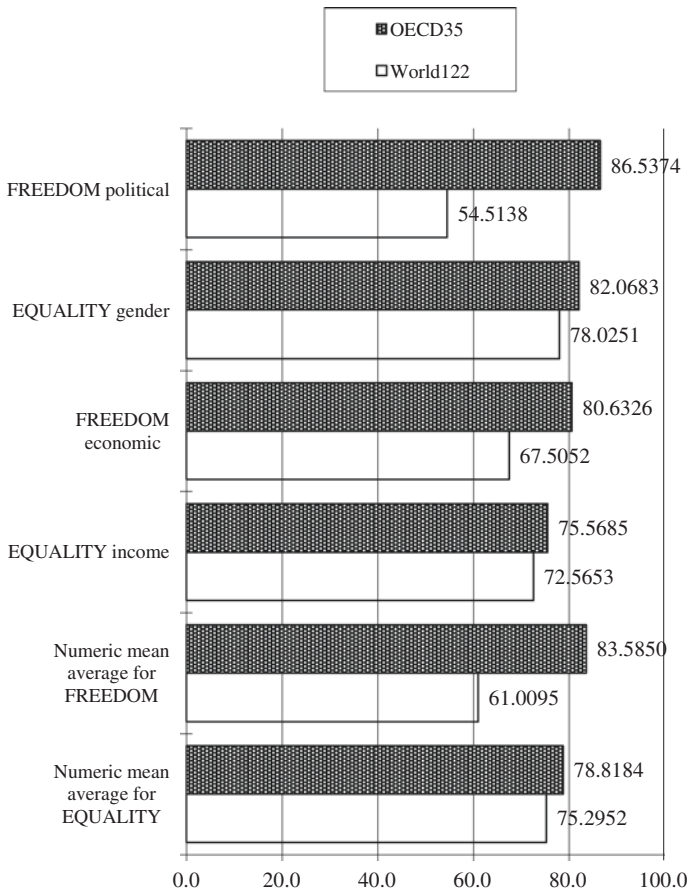


Fig. 7.5 Average means for the score values of the OECD (OECD35) and the world (world 122) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation)

advantage of the Nordic countries in income equality are substantive and paramount. The lead of the Nordic countries in political freedom and gender equality is not that dramatic anymore, but still clear, and in that sense also stable. Are the two dimensions (subdimensions) of freedom and equality being aggregated into one meta-dimensions of freedom and equality, then we are facing the following empirical situation: the USA is leading only marginally in freedom; however, the

Nordic countries express a substantial leadership in equality. Based on this empirical patterning, the following propositions are being offered as a guidance for interpretation (Fig. 7.5):

- (1) *When quality of democracy (the concept of quality of democracy) is being rooted primarily in freedom and equality, or the dimensions of freedom and equality, then it appears that quality of democracy has evolved to higher levels of quality in the Nordic countries than in the USA. Such an asserted lead of the Nordic countries over the USA in (freedom-based and equality-based) quality of democracy does not represent a biased ideological assertion, but can in fact be measured and displayed in empirical terms. This is particularly the case, should there be an aggregate understanding of quality of democracy, when the different dimensions (subdimensions) of freedom and equality are pooled and are aggregated into one comprehensive statement of assessment. The USA leads only with regard to economic freedom, but here concerns could be raised, whether economic freedom measures adequately the quality of a democracy. There is more of a consent that political freedom, gender equality and income equality associate more clearly with quality of democracy. Therefore, not the USA, but the Nordic countries represent a more advanced and competitive benchmark for quality of democracy in the world. The Nordic countries demonstrate to the world, which levels of quality of democracy already are possible, can already be realized in empirical terms (see also Campbell et al. 2012, pp. 172–173).*
- (2) *The lead and leadership of the Nordic countries over (ahead) of the USA is in the dimension (subdimensions) of equality even more pronounced than in the dimension (subdimensions) of freedom. The Nordic countries progressed furthest in equality, but also in combination with a lead in political freedom. The Nordic countries express a well-balanced progress in equality as well as in political freedom. Equality, particularly income equality, represents the most vulnerable “flank” of American democracy, while the USA could not realize an advantage in political freedom over the Nordic countries, or even the EU15. So what is the worth or value of economic freedom in democracy of the*

USA, when this does not yield more results or more progress in political freedom, gender equality and income equality?

- (3) *The proposition can be formulated and be put forward for discussion that the Nordic countries represent perhaps the highest developed and most advanced region world wide and globally in terms of freedom and equality and in terms of a combination of freedom and equality. Do the Nordic countries demonstrate the highest standards of a freedom-based and equality-based quality of democracy in the contemporary world?* Our analysis (in context of our framework of analysis and applied model) suggests this conclusion (see later also Figs. 7.6 and 7.7). In that sense, there exists a “Nordic model” (Carayannis and Kaloudis 2010, pp. 10–15), which should be carefully analyzed, with a need of careful evaluation what could be learned by other countries from the Nordic countries. There are other single countries that can compete in this respect with individual Nordic countries, for example Switzerland (Campbell et al. 2012, pp. 172–173). The emphasis here, however, is not so much placed on the individual Nordic countries, but on the Nordic region as a whole. Here the concept of a “region,” by definition, implies to incorporate several (neighboring) countries into one cluster. In that understanding, Switzerland is a country, but not a region. Our formulated proposition addresses the Nordic countries as a region and does not refer to the individual Nordic countries separately. Remaining challenges are: (a) What can the Nordic countries learn from the other countries? (b) How representative are the Nordic countries for developments in global context, or do the Nordic countries (out of which reasons whatsoever or whatever) represent a very privileged world region, with exceptional conditions, which do not allow comparisons (for strategy and policy learning) with other countries or world regions? (c) To which extent can the Nordic countries uphold and sustain their lead in freedom and equality, or are also scenarios of a decline possible?
- (4) *This lead of the Nordic countries, however, does not allow the conclusion or assertion of a lead of European democracy in general in freedom and equality over the democracy and quality of democracy*

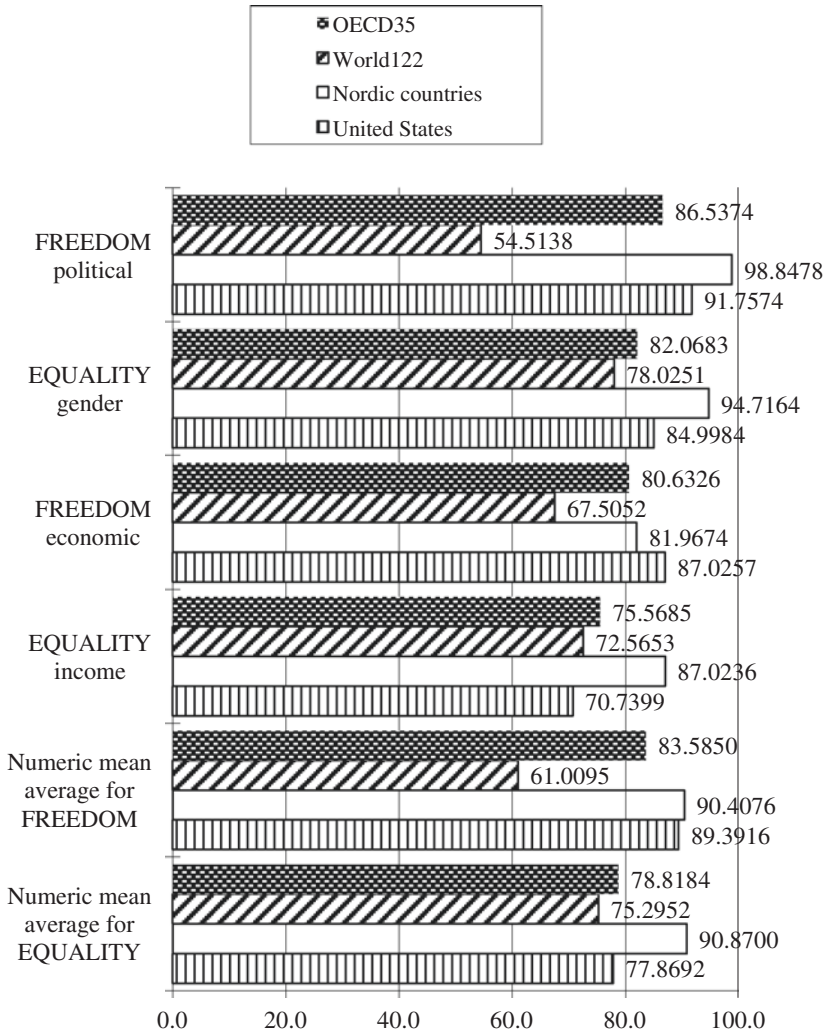


Fig. 7.6 Average means for the score values of the OECD, Nordic Countries, U.S., and the world (world 122) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation)

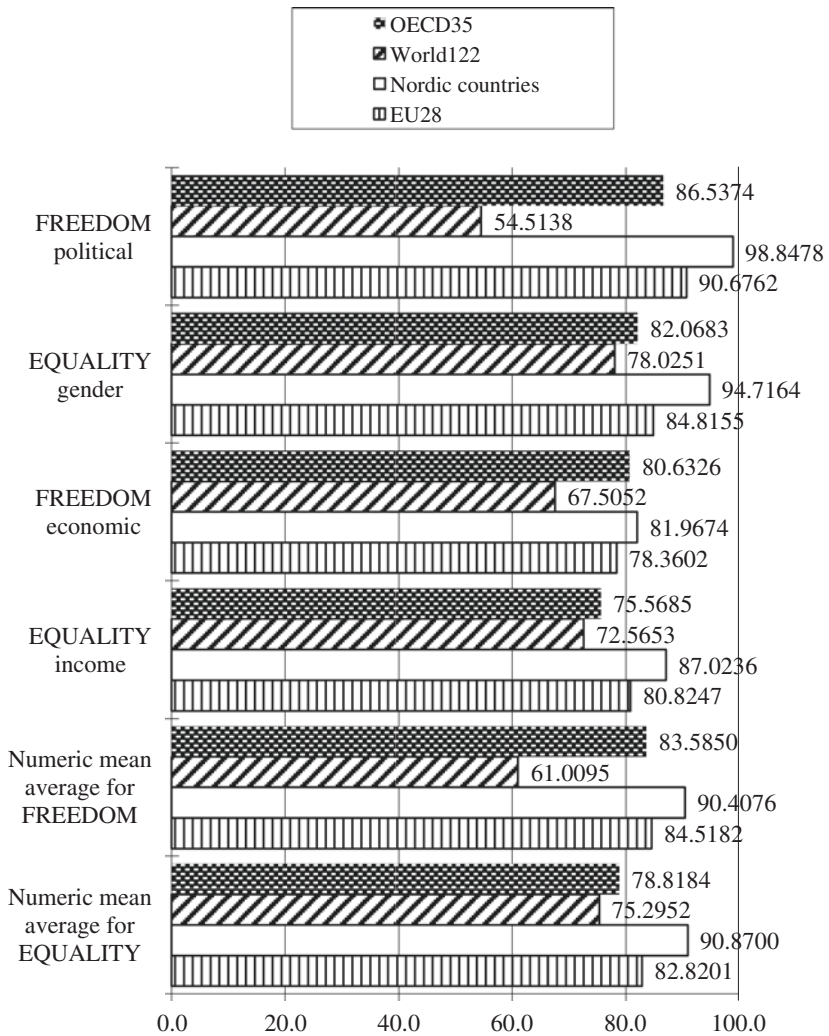


Fig. 7.7 Average means for the score values of the OECD, Nordic Countries, U.S., and the world (world 122) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation)

in the USA. Based on freedom and equality, the Nordic countries place ahead of the USA as well as ahead of the European Union (averages for EU15, but more so for EU28). The European Union, as well as the USA, lag here clearly behind the Nordic countries (see again later Figs. 7.6 and 7.7). American democracy and European democracy must learn from democracy in the Nordic countries. Therefore, not only the USA, but also most of the member countries of the European Union, should assess carefully, what lessons are to be learned from the Nordic countries, in order to improve their quality of democracy at home. In conceptual and methodic terms, this comparison between Nordic countries and the European Union (EU15, EU28) is complicated by the circumstance that with the exception of Norway, a majority of the Nordic countries (Denmark, Sweden and Finland) are also member countries to the European Union.

3. *Comparison of the OECD countries with the whole world (world average) in relationship to the dimensions of freedom and equality (2002–2016):* The OECD countries represent, by and large, the advanced (most advanced) economies in the world and represent furthermore (by and large) advanced societies and advanced democracies. By tendency, the OECD countries are also examples for knowledge economy, knowledge society and knowledge democracy, meaning that knowledge (knowledge and innovation) are important drivers for their performance and progressive evolving. For us, this should serve as a (simplified) point of departure for further analysis and discussion. *In all dimensions (subdimensions) of freedom and equality, the OECD (here OECD35) is leading ahead of the world, the world average (here World122).¹⁰ The lead of the OECD is the largest in freedom, in political freedom even larger than in economic freedom, but on the dimensions of equality, this OECD lead already is considerably smaller (see Fig. 7.5).* In context of our analysis, we proposed to interpret the Nordic countries as the most advanced world region in quality of democracy

¹⁰World and OECD averages are calculated as means across countries, but are weighted according to country populations. It should be added and mentioned that the OECD countries are integrated into the calculation of world averages.

in terms of freedom and equality. There is a gap world wide in favor of the OECD, when compared with the world average, and based on freedom and equality. This gap even is bigger and considerably even wider when the world average is being compared with the average of the Nordic countries (see Figs. 7.6 and 7.7). *By and large, the USA and the European Union (EU28) occupy an intermediate position between the Nordic countries and the average for the OECD countries, with a few exceptions. These exceptions are: the EU28 performs weaker in economic freedom, but still ahead of the world average. The USA performs dramatically weaker on income equality. In fact, the USA scores on income equality lower than the world average, which is quite unusual for an OECD country or an advanced economy, by this representing a case of under-performance even in global comparison and context* (see again specifically Fig. 7.6). Based on the comparison of the OECD with the whole world (average) across the dimensions (subdimensions) of freedom and equality, the ambiguity arises that we are confronted with some puzzling effects. In fact, two different interpretations, narratives can be suggested for further discussion (see again Fig. 7.5):

- (1) *In terms of freedom, the OECD countries lead clearly ahead of the world average. This is the case for economic freedom, and even more so for political freedom. This is an important empirical evidence for the proposition that there are patterns of an association and congruence between democracy (quality of democracy, political freedom) and advanced economies and advanced societies. This supports the assertion of a co-evolution between democracy, economy and society, or between advanced democracy, advanced economy and advanced society. The crucial key implication of this is that beyond a certain threshold a further development of economy and society is not possible (or is not likely), without the establishment and progress of a democracy. Co-evolution of democracy, economy and society should also be understood and conceptualized as a key expression and key manifestation of sustainable development: here, the concepts and basic dimensions of freedom, equality and sustainable development come together and overlap. Of course, what these thresholds are may not be clear in advance, there can be “fog” in that zone. Depending on a series of circumstances,*

there can be a variability of the width of that spectrum. For example, authoritarian or totalitarian regimes can learn and can try to implement innovations that were explored and developed by democracies, without establishing a democracy, by this attempting to bypass democracy and political freedom. In the long run, however, and so the proposition here, such a strategy of authoritarian or totalitarian regimes is doomed to fail, blocking progress and further development into higher and advanced stages. For example, it is difficult to perceive how China wants to continue its impressive track record of current economic development, without allowing and introducing more political freedom, and a process of democracy establishment and democratization as a final consequence and in final consequence of *ultimo ratio*.

- (2) *Despite this impressive lead in freedom (economic freedom, even more so in political freedom) of the OECD over the world (average), the OECD lead in equality (gender equality, but again more so for income equality) is already much smaller, to a certain extent perhaps surprisingly marginal.* This, of course, refers to a series of very critical question. Why did progress in freedom not align with more substantive progress in equality? The OECD countries (by and large) are also more advanced economically and socioeconomically than the world (average). Was it that progress (economic progress) aligned more clearly with freedom, to the disfavor of equality? Was there an uneven and unbalanced dynamics in development, with improvements in freedom, and stagnations or declines in equality? Is there a “negative correlation” between freedom (freedom and economic progress) and equality? Were gains in freedom and economic progress at the price of equality? Levels of wealth are clearly higher in the OECD countries than in the rest of the world. This shows up when indicators are being taken into consideration such as GDP per capita. However, degrees of equality are not necessarily higher, or much higher, when placed comparatively to the extent of leads that have been established in dimensions or domains of freedom. *The ambiguity and puzzling effect of course*

is: What counts more, what weighs more, levels of wealth or degrees of equality? Also: What are the thresholds, from where further declines in equality seriously can endanger progress in freedom and economy, can start eroding democracy or the base of democracy, pulling down quality of democracy? Within equality, we apparently are facing a particular pattern of equality or inequality: there may be more of a gender equality (also better prospects for future improvements in gender equality), but perhaps less in income equality, meaning that inequality is more based on income inequalities. Income inequality represents perhaps the bigger problem in context of equality. Here, we encounter a “vulnerable flank” of the advanced economies in the OECD countries and may touch upon the “Achilles tendon” of progress how it was established and practiced in the Western systems of capitalism or market economy. Our framework of analysis and applied model provided the capability and capacity to identify those sensitive questions and ambiguities and puzzling effects about the moving and dynamic relationship between freedom and equality (freedom, equality and economic progress); however, at least for the moment, we are not in a position to offer the final or further reaching answers. It may be that the relationship between freedom and equality (and progress) has been under-researched in the past, or that also the epistemic understanding of the underlying forces is under-developed or not sufficiently comprehended. Should there be an uneven development of freedom and equality in context of economic progress and economic advances, what are possible meta-references, for trying to foster a balanced (rebalanced) understanding and approach that could inform theory and practice?

- (3) In epistemic terms, there may also be the possibility that we still do not sufficiently understand what the differences are how indicators of freedom or of equality behave. It could be that (for whatsoever reasons) some indicators, subdimensions or dimensions of freedom express more of a variability (flexibility) than indicators or dimensions in equality. One consequence of this could be that countries place closer together in equality than in freedom. Would this pose analytical consequences on our reasoning about democracy and the quality of democracy?

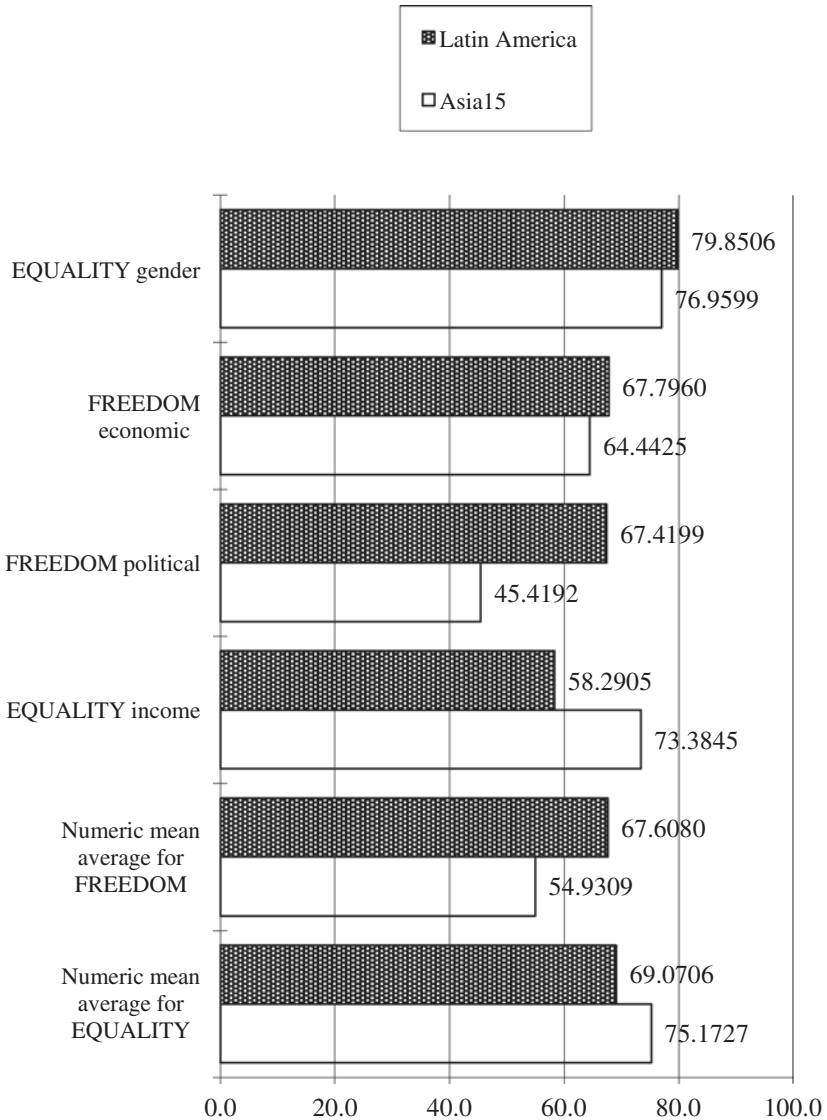


Fig. 7.8 Average means for the score values of Latin America and Asia (Asia 15) for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author's own calculation)

4. *Comparison of the Latin America with Asia (Asia15) in relationship to the dimensions of freedom and equality (2002–2016):* Latin America is leading ahead of Asia (Asia15) in both dimensions (subdimensions) of freedom, political freedom and economic freedom (see Fig. 7.8). The gap in political freedom, to the advantage of Latin America, is dramatic and considerable. Furthermore, Latin America places ahead of Asia in gender equality, but here the difference is more tightly in character and structure. Asia, on the other hand, leads ahead of Latin America in income equality, with a dramatic gap to the disadvantage of Latin America. Are both dimensions (subdimensions) of freedom and equality being aggregated together into one meta-dimension of freedom as well as equality, than an advantage results to the favor of Latin America in freedom, concerning equality, however, the advantage is with Asia. *Are democracy and the quality of democracy being conceptualized on the basis of freedom and equality, then the overall picture appears to be that democracy has evolved further in Latin America than in Asia (now assessed as whole world regions). Furthermore, it would have to be added that democracy is only possible, when “minimum” levels (minimum thresholds) of political freedom have been established. The lower scoring of Asia on political freedom, therefore, constitutes per se a problem for being typologized or for qualifying as democratic political systems or democratic regimes of governance.* Not only is Latin America leading in political freedom and economic freedom, but also in gender equality. *However, a major concern for Latin America appears to be the dramatically greater extent of income inequality, when compared with Asia. Income inequality poses a risk and threat for the futures prospects of development for Latin America, for the futures of democracy in Latin America. Sustainable development in Latin America would require that a greater concern and emphasis is being placed on issues in relation to income equality.* Lower levels of income equality mark in addition some structural similarities between Latin America and the USA (compare Fig. 7.8 with Fig. 7.6). *Asia, as a whole world region, is challenged to introduce or allowing to introduce more political freedom. Within Asia (Asia14), there is of course a very diversified and mixed picture, concerning the established degrees of political freedom. In several countries (or states) within Asia, levels of political freedom*

perform comparatively low, implying that these countries (states) do not represent democracies. The comparison of Latin America and Asia (Asia14) cumulates in the following ambiguity and puzzling effect: Latin America represents a region, where freedom and development co-evolve. Asia represents a region, where development frequently evolves without (with lower levels) of freedom. Does Asia, do some Asian countries (states) allow the assertion that there can be development (economic development) without democracy? If so, would this fundamentally challenge some of the underlying beliefs and assumptions in Western societies? *This creates the contradiction of development with freedom (political freedom) versus development without freedom (political freedom).* Which model, which model of development, will prevail in the long run? Is it that degrees of freedom (political freedom) are being systematically overestimated for Latin America and the individual countries in Latin America (by the sources used for the model in the applied framework or analysis here)? At the same time, there are certain expectations that in the long run, it would be difficult for Asia to continue its path and progress of development (economic development) without inviting more political freedom and political processes of democratization: this would be particularly the case, when individual Asia countries encounter specific levels of medium or more advanced development. However, may this be an assumption, rooting more in ideology than in academic research reasoning? But we also must be cautious in developing too simplified propositions about Asia, because within the whole region of Asia we are confronted with different models of development and relationships of development and political freedom. China expresses lower levels of political freedom, while India developed higher levels of political freedom. *Therefore, already within the context of Asia, we can observe this split and contradiction of development with political freedom versus development without political freedom (or development with lower levels of political freedom).* Beyond these ambiguities, of course, we

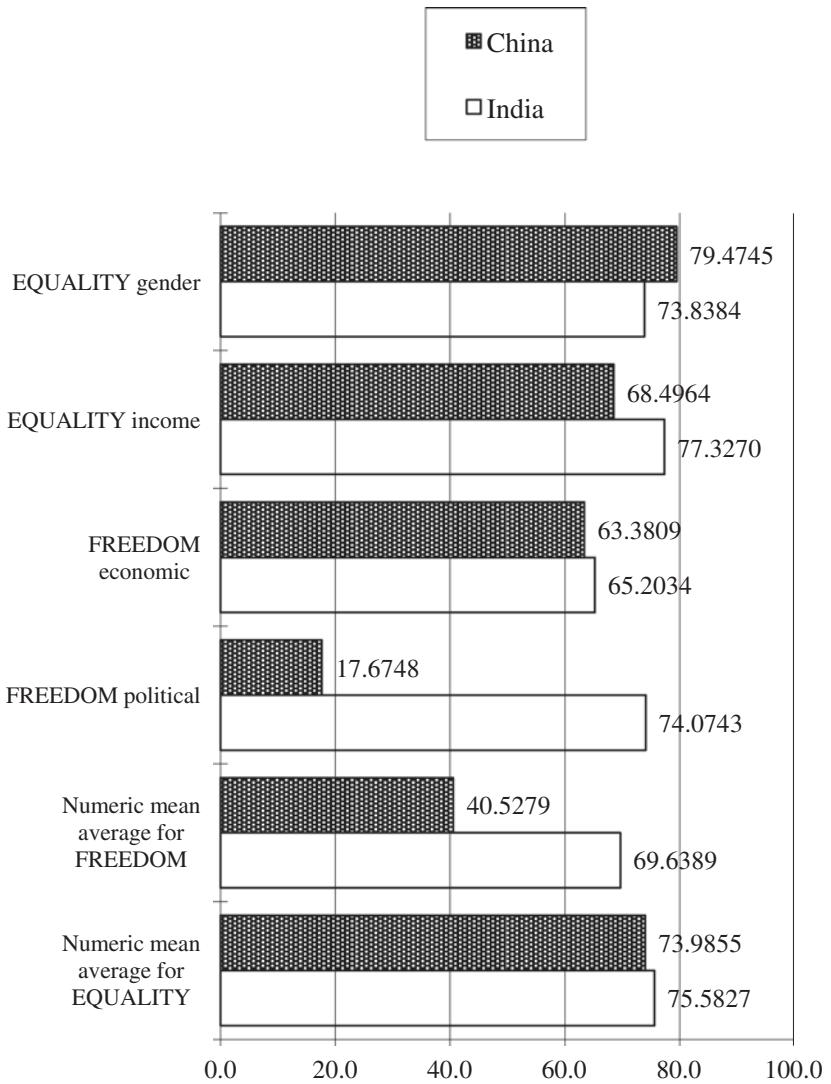


Fig. 7.9 Average means for the score values of China and India for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation)

should also ask, what is it that the regions of Asia and Latin America can learn from each other?¹¹

5. *Comparison of China, India and Russia (Russian Federation) in relationship to the dimensions of freedom and equality (2002–2016)*: Based on the dimensions (subdimensions) of freedom and equality, the biggest difference between China and India is manifest in the dimension (subdimension) of political freedom, with comparatively higher levels of political freedom in India, and comparatively lower levels of political freedom in China. This allows classifying India as a democracy, however, does not allow classifying China as a democracy. With regard to economic freedom, scoring in China and India is almost at equal levels. China has an advantage in gender equality, but India has an advantage in income equality (see Fig. 7.9). When being pooled together into one meta-dimension of freedom, and one meta-dimension of equality, the assessment would be: a split picture and situation for equality, but a gap in freedom to the advantage of India (see again Fig. 7.9). Therefore, an evaluation, based only on the dimensions (subdimensions) of freedom and equality (and leaving out other considerations such as performance and development in non-political dimensions or non-political indicators), could arrive at the following conclusion, or proposition for discussion: *a freedom-based and quality-based comparative assessment of India and China places India ahead of China. In that sense, democracy and quality of democracy in India have evolved to higher levels than in China.* Should this two-country comparison of India–China be extended to a three-country comparison of India–China–Russia (Russian Federation), then we can set up the following propositions for discussion (see Fig. 7.10)¹²:

- (1) *The greatest difference between these three countries focuses on the dimension (subdimension) of political freedom.* The comparatively much higher scoring for India is being contrasted by a

¹¹Also, of course, what can the OECD and non-OECD worlds learn from each other?

¹²We again should mention briefly that we did include India and China into our category and country group of Asia (Asia15), but not Russia. Asia here represents more East Asia, South Asia and Southeast Asia (see our definition of country groups in 2.4).

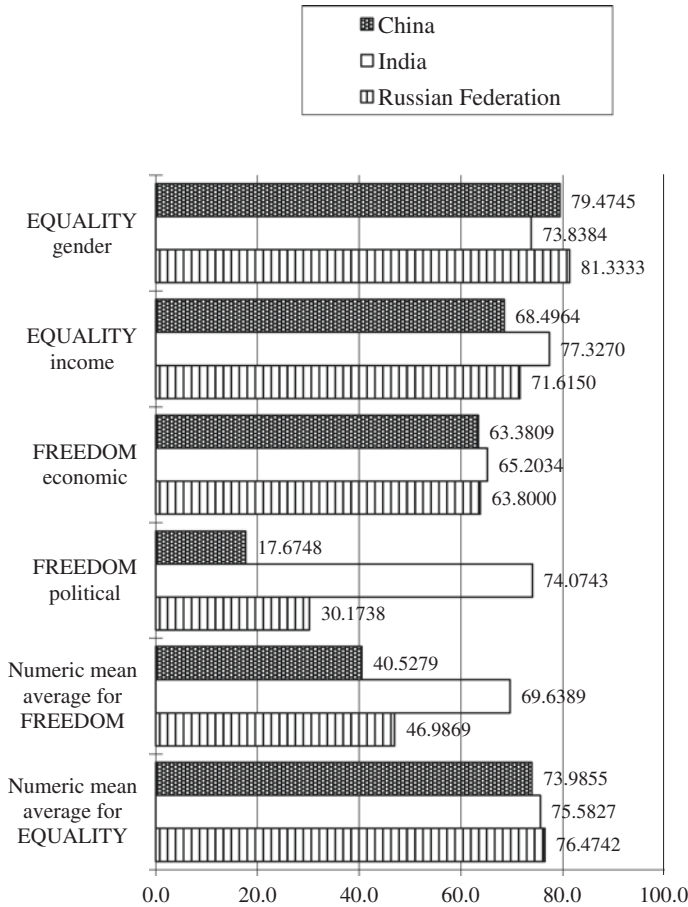


Fig. 7.10 Average means for the score values of China, India and Russia for the dimensions of Freedom and Equality (whole period 2002–2016). Scale range 0–100: 0=(theoretical) minimum, 100=empirical maximum (Source Author’s own calculation)

much lower scoring for China. Russia places itself in between, between India and China. Should the source (Freedom House), which was used here for constructing the dimension of political freedom, be acknowledged as trustworthy, then the implication of this would be to interpret India as a democracy, and

China as a non-democracy. The problem arises, how to categorize Russia? Russia may be qualified as a semi-democracy, or as a non-democracy.

- (2) *Scoring on economic freedom is remarkably similar between India, Russia and China. To a certain extent, it represents a puzzling effect that these greater differences in political freedom did not also translate into greater differences of economic freedom. Is economic freedom independent of the degree of political freedom or the degree of political authoritarianism? How is it possible to have economic freedom without political freedom?*
- (3) *Differences in equality are greater than differences in economic freedom, but still lesser than in the case of political freedom. In equality, Russia lies always ahead of China. In gender equality, Russia lies ahead of China and India. In income equality, India ranks first, Russia second and China third.*
- (4) *When both dimensions (subdimensions) of freedom and equality are being aggregated and being pooled together into one meta-dimension of freedom and equality, interpretations then are: concerning equality, Russia, China and India lie and position together quite closely. But there is more of a variation with regard to freedom. Differences between India, Russia and China, therefore, are not so much constituted by equality, but are being created by differences in freedom. To be more exact, it is the political freedom and varying levels of realization of political freedom that make the differences between India, China and Russia. Political freedom drives here the key cleavages and defines and draws the crucial lines of distinction. To use and employ a metaphor: greater equality in equality is being contrasted by greater inequality in freedom. Could this be developed further to a general statement about emerging economies and Newly Industrializing Countries, or what are the serious limitations (and falsifications) to such a proposition?*

7.2 Outlook: Formulation of Hypotheses for Further Research on Democracy and Quality of Democracy in Global Comparison

With our conceptualization and measurement of democracy and quality of democracy in global comparison, and their possible relationship to “democracy as innovation enabler,” we entered *new analytical territory*. Therefore, we proposed to suggest that our analysis is more “explorative” in character (see Fig. 1.3 in Sect. 1.1). Because of this, we did not develop “ex-ante” hypotheses that guided our research and were set in contrast to research results. There was the impression that this may be too early at that stage and on the basis of the conceptualization and framework that we wanted to employ (see Sects. 1.2 and 1.3). However, the idea was that in reference to the empirical results, finally and in an “ex post” approach, several hypotheses on democracy, democracy development and quality of democracy should be formulated, designed and put forward for discussion. This is exactly what we approached and intended to achieve in this section. *In the following, we formulate hypotheses for further research on democracy and quality of democracy in global comparison with possible ramifications for “democracy as innovation enabler.”* These hypotheses reflect on the outcome of our research carried out in the work here. These hypotheses we furthermore suggest to be discussed for the progressing democracy research. *By this, these hypotheses may be regarded to enter as possible “input”-propositions (input-hypotheses) the coming discourses on democracy and quality of democracy.* We cannot rule out that between some (several) of the following hypotheses there may be “tensions,” perhaps even the potential of an analytical conflict and analytical contradiction, depending on the referred to viewpoint. This has to do with the circumstance that (at least in our view) the approach of empirical democracy measurement in a world wide format also produced ambiguities, puzzling empirical effects and trade-offs in the empirical results. We still face the problem and challenge of creating an overall “consistent picture” of democracy, democracy development and quality of democracy at a

“meta-level,” when we want to assess democracy in global terms. There are chances that this “consistent picture” of democracy perhaps will never be achieved. *Democracy could imply to be accompanied by a pluralism of diverging and contradicting reflections on democracy.* Therefore, the following hypotheses were developed in a “fog of uncertainty.” Because of this, also these hypotheses should be regarded to be somehow “explorative” in character and must be exposed to serious discussion, whether or not they have potential for informing future democracy research.

The hypotheses refer to reflect on and interpret the results of the empirical macromodel,¹³ where we plotted and analytically arranged 160 countries (for the years 2002–2016) in accordance to the dimensions (and subdimensions) of conceptualization of the basic quintuple-dimensional structure of democracy (see Fig. 1.7 and Sect. 1.2). Our empirical macromodel has two specific limitations that we want to address here shortly: Particularly for the dimension of freedom, we referred to “freedom indices” that were provided, but also constructed, by specific sources. In the case of political freedom, we took “political rights,” “civil liberties” and “freedom of press” of Freedom House (2013a, c). For economic freedom, we averaged “Index of Economic Freedom” (Heritage Foundation 2013) with “Economic Freedom in the World” (Fraser Institute 2009). To a somewhat lesser extent, this index approach was also the case for gender equality, where we relied on the Global Gender Gap Index supplied by the World Economic Forum (Hausmann et al. 2009) (see Fig. 1.10 in Sect. 1.3). One underlying rationale here for our democracy measurement project was to use data (indicators) that already exist, are publicly accessible (via the internet) and represent something like an “official world view,” not in the sense that these data (indicators) are uncontroversial, but in the sense that there are frequent references (citations) of these data (indicators). Possibly critical research results, based on such “official” data

¹³Review again the analysis conducted in the chapters and sections on the empirical model (Chapters 2–6), where we focused on: *How to measure democracy and quality of democracy in global comparison?*

(indicators), would weigh then much heavier in discourse and public political debate. For empirical research, based on these indices, the implicit and inherent methodic problem here of course is: *Do differences in research outcome reflect differences in reality and/or are they the specific consequence of how these indices are being constructed?* Our dilemma is that we do not have a general and clear answer for that concern. We never can rule out for sure, not to have been captured by methodic particularities in the index construction (without even knowing or being aware of this). This poses a permanent ambiguity. Because political freedom represents such an important dimension (subdimension) for democracy and quality of democracy, we invested considerable efforts attempting to “validate” the freedom ratings of Freedom House (2013a, c), by comparing these with government/opposition cycles. We were successful in providing at least a partial validation of Freedom House (at least in our view). We could demonstrate that the higher the freedom rating by Freedom House, then the more of a likeliness there is that frequencies of a peaceful person and party change of the (de facto) head of government also will increase (see Fig. 6.3 and Table 6.6 in Chapter 6).

(2) The years we covered were the years 2002–2016. We started with the year 2002, because Freedom House (2013a) initiated only to publish the more differentiated “aggregate scores” of political rights and civil liberties exactly with the year 2002. We ended our time series in 2016, because this was the last year with available comprehensive data and indicator information, when we processed the major data retrieval in the fall of 2017. Therefore, all hypotheses that we have formulated refer specifically to the fifteen-year period of 2002–2016. We reflect on patterns and trends in that time interval. *Are there changes (will there be changes) in the global trends of democracy and quality of democracy after 2016?* Within the conceptual and methodic framework of our empirical macromodel in context of the work here, we cannot address this question sufficiently. Seen from a personal viewpoint, it would appear to be unlikely or at least surprising if everything would change in the years after 2016. However, we cannot rule out that there has been the one or other change or shift at least in some areas. This would have to be inquired by future research.

In the following, we formulate hypotheses (twenty hypotheses) for further research on democracy and quality of democracy in global comparison and want to propose these as input for the ongoing discussion:

1. *Hypothesis 01/Systematic and comprehensive democracy measurement in global comparison already is possible:* We are in a position that we already can carry out and perform in a systematic and comprehensive format an empirical democracy measurement in global comparison. This endeavor may be based on existing, even publicly available data and indicators. New in that respect is also that this endeavor can be conducted truly globally, addressing all countries (democracies, semi-democracies and non-democracies likewise). This global perspective is so important for trying to understand democracy development of quality of democracy, which again appears to be necessary for recognizing democracy comprehensively. There is more data and is more indicator information out there, then is often being realized. This richness in data and indicators allows and encourages creative designs and conceptualizations of democracy and quality of democracy, into which existing data and indicators may be fed into or be “in-puted.” Still, the quality of data is not the same for all indicators. In some areas, data quality and data availability are troublesome. For example, income equality (Gini index or Gini coefficient) is much less documented than GDP per capita (in its various forms). Comparative research on income equality (or income inequality), in a global format, is being seriously challenged because of the many data missings for the various Gini indices in the usual data sources and references. Why is it that data documentation for income equality is unfavorably incomplete when being compared with GDP per capita?¹⁴ Can GDP even be sufficiently represented, when income distributions are ignored? It appears that data-collecting or data-publishing institutions (at least in some cases) do not place the same emphasis on all indicators

¹⁴Our ad hoc impression is that the data documentation for wealth equality (wealth inequality) or distributions of wealth is even more problematic (non-transparent) than for income equality (income inequality).

(relevant for all dimensions or subdimensions of quality of democracy). At least this is a possible impression from the outside, when the behavior of institutions (international institutions) is being observed externally, without looking into these institutions (Should this be the case, so why is it?). This non-symmetric quality of different data and indicators has the potential of “bottlenecking” further progress in democracy research, because democracy measurement is not possible to the same extent in all the different dimensions and subdimensions of democracy and quality of democracy.

2. *Hypothesis 02/Multidimensional indexation or index-building of democracy as one practical aspect of democracy measurement*: Democracy measurement, in principle, can take different forms. Indexations represent one option (viable option). A practical result of democracy measurement may coincide with engaging in a comparative multidimensional index-building for democracy. By this the process of democracy measurement produces as output a scoring and plotting of democracies in reference to a designed structure of dimensions and subdimensions. This index-building for democracy can also set democracies in contrast to semi-democracies and non-democracies. Important here appears to be the aspect that the designing of these indices is multidimensional, allowing and inviting differentiated options for analysis.
3. *Hypothesis 03/Parallel codesign (co-development) of theory of democracy and measurement of democracy*: Our understanding of democracy would benefit particularly from a scenario, where (1) theory development or conceptualizations of democracy are conducted and performed in parallel to (2) a further democracy measurement, mutually interlinked and cross-connected, in various conceptual designs. Democracy measurement informs theory of democracy, and theory of democracy structures democracy measurement. Conceptualizing and measuring democracy and quality of democracy are to be seen as parallel processes. This would considerably support learning in theories about democracy. There is a certain impression that democracy theory and democracy measurement still are not sufficiently interlinked and

that a gap between theory and measurement continues to prevail.¹⁵ One thinker about democracy, who seriously engaged himself in cross-connecting theory and practice of democracy, was Guillermo O'Donnell (2004). In this respect, another example is Beetham (1994), Beetham et al. (2002), IDEA (2008).

4. *Hypothesis 04/The effects of a specific comparative design on interpretations of democracy and quality of democracy (for example, Latin America in comparison with Asia versus comparisons within Asia):* One standard procedure for comparing democracy (quality of democracy) is to perform such a comparison country-based, which means to set in contrast democracies (semi-democracies, non-democracies) of different countries. The specific comparative design must decide, what the specific country selection should be (few countries, several countries or the “whole” world). The dilemma now is that in dependence of the concrete country selection, somewhat opposite results may be “produced” or may appear to be evident. We want to refer to two examples within context of our work and the applied empirical macromodel. When Latin America and Asia (as aggregated regions) are being compared with each other (for the years 2002–2016), then Latin America is leading in a majority of dimensions and indicators, for example political freedom, gender equality, redesigned Human Development Index, non-political sustainable development, “Comprehensive sustainable development”, life expectancy, tertiary education, GDP per capita and lower CO₂ emissions per capita. However, China, as a single Asian country, is dramatically catching up, for example having reached in GDP per capita (in 2016) almost the levels of Latin America and having surpassed Brazil by that year. Latin America, therefore, could serve as an example, where political freedom and non-political sustainable development of society and economy co-evolve symmetrically and within a positive feedback loop and helix (they correlate positively

¹⁵Within the field of democracy measurement, the analogy would be that there is a lack in really “global” democracy comparison, because democracy comparison concentrates frequently on the OECD countries or a few particular world regions or specifically selected countries, but not the whole global spectrum.

with each other). We would have here a narrative of democracy, where political freedom associates closely with development and sustainable development. When we compare India and China within Asia, results of this comparison are far more ambiguous. India is leading with regard to political freedom; however, China is leading in non-political sustainable development of society and the economy. With considerably less political freedom, China achieved a higher level of non-political sustainable development. India, on the contrary (and when compared with China), could not transform its political freedom into a higher level of non-political sustainable development. So here we are facing a much more mixed narrative of democracy, meaning that more political freedom does not translate automatically into more development and sustainable development of society and economy. Which of these two comparisons can claim a higher extent of representativeness for global trends, the comparison of Latin America with Asia or within Asia the comparison of India and China? Latin America comprises more countries, but China and India clearly outnumber in terms of population the whole of Latin America (China and India aggregate a higher share of world population). These two examples of comparison illustrate, how and why the specific selection of countries for a specific comparative design can actually impact the concrete results of a comparison. Paradoxically formulated: Can a comparison “bias” a representative statement? It is difficult to control, on the “meta-level,” against possible non-representative effects because of case selection. The further dilemma is that we might not be aware of being actually trapped in a non-representative analytical perception. The challenge now is, how to derive from a specific and concrete comparison more general conclusions (propositions) that also are representative? How can we see the “general” picture, based on cases? This makes clear and emphasizes, why the interest in analyzing “global trends” in democracy, democracy development and quality of democracy actually requires a “broadly designed” framework of comparison. But of course, it is more than trivial (and not that ex-ante obvious), how the “whole” world could be captured

within one model. Here, again, is a contest between different possible conceptualizations at work and even necessary.

5. *Hypothesis 05/Economic freedom increases faster than political freedom*: Within context of our empirical macromodel, there are higher levels of economic than political freedom in the world. Economic freedom is more widespread, whereas political freedom appears to be more constrained, when referred to as global phenomena. Economic freedom not necessarily requires also political freedom, so there can be economic freedom without political freedom (or a coexistence of higher levels of economic and lower levels of political freedom). For example, Russia and China express lower political freedom, but achieved an economic freedom higher than in India and Brazil. As whole world regions, Latin America scores higher on political freedom than Asia. But in terms of economic freedom, Latin America lies already below of Asia (since 2016). In addition, when we talk about global trends, economic freedom also increased faster than political freedom (while political freedom currently stagnates at the global level). So there has been more progress in the world in economic freedom than in political freedom. Political freedom increased only modestly. In a worst-case scenario, the assertion would be that of a global “stagnation” of political freedom (if not even of a modest current decline in political freedom).
6. *Hypothesis 06/For the procedure of freedom measurement by Freedom House there is the challenge, how to measure and to demonstrate increases in high-level political freedom*: Freedom House calculates and publishes its freedom ratings on an annual basis, scores for previous years are not changed and adjusted in retrospect (at least not in a substantive way). The spectrum of possible scores remained also constant, at least in the recent years (Freedom House 2013b, 2018). Methodic considerations or implications of this are that when a country (democracy) receives top scores at one time, then the freedom scores of that country cannot increase in the following years anymore, even when there would have been real gains in political freedom. This creates a so-called ceiling effect or cap for measurement and the expression of political freedom in scores. For example, the Nordic countries scored top on political freedom during the

whole period of 2002–2016: we cannot effectively distinguish there anymore, whether there has been no more progress in political freedom in the Nordic countries, or whether we observe here a “ceiling effect” as consequence of a certain methodic procedure being applied. The overall methodic consequence of this may be that the freedom rating of Freedom House is good in capturing and indicating, whether basic standards have been achieved in political rights and civil liberties, necessary for an electoral democracy and essential to a liberal democracy, but that as problem remains, how to trace improvements in the higher levels (high-level spectrum) of political freedom.¹⁶ This could mean that there exists currently a problem of measurement of political freedom in democracies of a high or higher quality (see Fig. 1.4 in Sect. 1.2). But also in conceptual (and philosophical) terms, we want to refer to the argumentation that we are challenged by the problem, not to understand or comprehend political freedom sufficiently, when (if) political freedom exceeds certain basic standards. For the twenty-first century, this may indicate a need for rethinking and reinventing political freedom, calling for a continued discourse exactly on political freedom.¹⁷

7. *Hypothesis 07/Countries are more similar to each other with respect to economic freedom, but more dissimilar with respect to political freedom:* Concerning economic freedom, there is less variation in the world, concerning political freedom there is greater variation (and deviation). With regard to economic freedom (which also increases faster than political freedom), the different countries are more similar to each other, whereas with regard to political freedom

¹⁶Since the scope and range of our empirical macro-model was global in format, this potential limitation can be justified.

¹⁷In the case of Freedom House, but also of other institutions that provide ratings on the basis of expert assessment, there always can be a discussion about the “type of scale,” whether the scores represent a ratio scale (and by this are metric), or whether they are only an ordinal scale type of data. In that respect, the methodic documentation of Freedom House (2013b) on the Web site is not necessarily conclusive. However, we also suggested (in Sect. 2.2), which methodic innovations there are for transforming a methodic rating procedure (by experts or peers), so that the rating scores qualify as a ratio scale and thus are metric. These methodic innovations also could be applied by Freedom House (if not already being done so).

the countries are less similar. In global terms, the average level of economic freedom is also considerably higher than the average for political freedom. This is particularly the case in the non-OECD countries (representing a majority of the world population), but not so for the OECD countries (compare Figs. 5.4 and 5.6 in Chapter 5 with Figs. 3.1 and 3.2 in Chapter 3). In the non-OECD countries, not political freedom, but economic freedom constitutes the model and standard (and ideology), to which countries convert to (by tendency). There we experience empirically several examples of combinations of economic freedom with lower levels of political freedom (in semi-democracies and non-democracies), which in other circumstances and theoretical contexts could have been regarded to pose and represent a “contradiction.” This “conversion” to (more) economic freedom expresses a conversion to a practical standard in the economy, how to carry out and how to engage in economic affairs. One may also want to assert that the ideology of a free economy increasingly establishes a position of hegemony in the contemporary world. Democracy and political freedom, on the other hand, have not been equally successful in being implemented as a (politically) corresponding standard. From a philosophical viewpoint of conceptualization, also another argument appears to be possible here: greater similarity in economic freedom could also be interpreted as an indication that there is more of a consensus in economic thinking and acting about the relevant economic models to be applied. Greater dissimilarity in political freedom may mean that there is less of a consensus in political assessment on “good politics” (or even “good governance”). In that respect, political thinking would be more (is more) fragmented, and more controversial, caught in polarization between conflicting paradigms.

8. *Hypothesis 08/Gender equality increases faster than income equality:* As a global trend, gender equality increases. This apparently is the case for the world in general, but also for OECD and non-OECD countries more specifically. These increases in gender equality are being sharply contrasted by the developments in income equality. For the whole world, a scenario of stagnation in income equality must be stated, in context of the OECD countries (USA, EU15, but also the

Nordic countries) income equality even decreases and decreased.¹⁸ So there may be a troublesome tendency be spotted (and asserted), where higher levels of GDP per capita scores actually associate with a downward tendency in income equality. Should income equality fall below crucial and sensitive thresholds, then wealth and GDP per capita does not circulate sufficiently anymore in society and economy, and aggregated GDP per capita values and benchmarks do not translate into real incomes for a larger number of average people in the population. There are non-OECD countries, for example India, who are expressing higher levels of income equality than some of the OECD countries, such as the USA. With regard to gender equality, the countries are more similar to each other, with regard to income equality, countries are more dissimilar. This is the case for OECD as well as non-OECD countries, but more so even for the non-OECD countries (compare Figs. 3.3 and 3.4 in Chapter 3 with Figs. 4.4 and 4.5 in Chapter 4). Gender equality and income equality can be characterized by opposite trends. Increases in gender equality are confronted by a stagnation or even decline in income equality. To a certain extent, this is paradoxical, because inequalities in gender do also manifest themselves partially in gender-based income inequalities. This raises the challenging (and provoking) question, to which extent gender equality as an issue and theme, but also as a reference point for political competition in the political arena (of elections and voting), is gradually replacing income equality (as a theme) or is pushing income equality more to the sidelines of attention. In contemporary context, there may be more awareness and sensitivity for gender equality than for income equality. Data quality for income equality in global comparison (for example, on the basis of the Gini index or Gini coefficient) is furthermore poorer when contrasted with other indicators (also on gender equality). This creates a serious demand and clearly more need for more and better data on income equality. National and international institutions are being equally

¹⁸There are non-OECD countries, for example Nigeria, where income equality also dropped back and downturned markedly.

challenged here in their data collecting and reporting procedures. It is problematic, when GDP per capita can count on a more systematic documentation than income distribution. So why is there this “fog,” when we want to have more transparency on data on income equality? There should be more emphasis to establish data (indicators) on income equality (also wealth equality), also in context of Gini index measures, as a general standard in all regular data sources that refer to countries (see World Bank 2018; World Inequality Database 2018a, b).

9. *Hypotheses 09/There is a need for designing a “Median” GDP per capita benchmark indicator:* Stagnating or decreasing levels of income equality call for more data information in this area and respective field. In context of national accounts, GDP per capita represents an indicator based on aggregation and is to a considerable extent not sensitive (enough) for distributions of income and wealth within a country. There should be systematic contemplation, how a “Median” GDP per capita could be designed and implemented, reflecting the “real” average (median) income (or wealth) of a person within a specified and specific society. The comparison of countries in reference to a “Median” GDP per capita would probably reveal interesting results.
10. *Hypotheses 10/Freedom progresses in the world faster than equality:* When the OECD countries are being compared with the whole world (OECD and non-OECD countries, but with a focus on non-OECD), then the OECD is leading in the dimensions of freedom and equality. However, this lead is crucially unsymmetric. The lead is the greatest in the subdimensions of political freedom and economic freedom, but more marginal in gender equality and income equality (see Fig. 5.7 in Chapter 5 and Fig. 7.5 in Sect. 7.1). World and OECD increased their growth rates, with the greatest growth rates for gender equality and economic freedom, and the weakest growth rates (or even declines) for income equality and political freedom (see Figs. 5.8 and 5.9 in Chapter 5). When we are focusing now on the “levels,” this allows us to formulate the proposition that progress in OECD countries (when compared with the whole world or the non-OECD countries more specifically) benefitted primarily

freedom, whereas improvements in equality were more marginal (with the only exception of gender equality). Within the dimension of freedom, the more recent progress focused even more so on economic freedom. It is “more freedom,” which makes the difference between the OECD and non-OECD worlds, but not necessarily “more equality.” There has been more progress in gender equality, but considerably less progress or even a decline in income equality. Progress in the OECD countries was to the advantage of freedom, but less so to the advantage of equality, if at all. Gender equality has risen, but not income equality. This provokes the critical or cynical question, whether equality was “sacrificed” for gains in freedom? Advances during the course of economic development boosted freedom (and economic freedom) in the OECD countries, however, not to the same extent equality. Is this the one implication of having established the hegemonic model of a “free economy” as dominant economic paradigm in the advanced economies of the OECD? Indeed, it puzzles, how marginal increases in equality are (with the exception of gender equality), when we consider and factor in all the efforts of progress and development, which the OECD countries accumulated, and then compare the OECD countries with non-OECD countries. But what is the meaning of progress, should this only lead to more freedom, and not also to more equality? Stagnating or even declining income equality poses a serious challenge and problem for democracy and quality of democracy in the advanced OECD countries. Could this even have the potential of an eroding political freedom (and a feeding of radical populism) in a mid-term or long-term perspective? Probably we are still not fully aware, what the whole impact of this possibly is or may be. It seems clear and evident that there is a greater need for more research on equality, also income equality particularly (in that respect, for example, see Piketty 2015; Wilkinson and Pickett 2010).

11. *Hypothesis 11/There is a tendency that in world context and averaged as world means the non-political indicators grow (grew) faster and express a more dynamic profile of progress, progressing and advancement than the political indicators.* For example: the redesigned Human Development Index as well as non-political sustainable

development outperform the “Comprehensive sustainable development” (which includes political freedom). Also economic freedom progresses faster than political freedom. Furthermore, the more narrowly defined (in terms of used and integrated indicators) redesigned Human Development Index expanded faster than the more broadly defined non-political sustainable development. This creates puzzles and challenges. One proposition could assert that more modest improvements in the political sphere are being outpaced by more dynamic improvements in the non-political spheres. Therefore, are society and economy of a greater importance than politics? What does this tell us about democracy and the relevance of democracy (for growth)? Should democracy place a greater concern on non-political issues and characteristics? Different interpretations and implications are feasible or could be applied. In the following, we want to refer to a few possible conclusions: (1) In the case of some political indicators, such as political freedom, we may still face a conceptual problem of how to measure these adequately. What could result are minimum or minimalist definitions, for example for political freedom, with the consequence that only a passing of certain thresholds becomes evident and can be documented, whereas the measuring of higher levels of maturity still represents a real challenge. (2) Minimalist definitions of democracy, focusing and concentrating on fewer and limited political aspects and political characteristic, perhaps communicate and deliver the impression of a world wide tendency of a stagnation or only modest improvement for the endeavor of democracy. Broader conceptualizations of democracy that emphasize the importance of sustainable development for the quality of a democracy and that refer therefore to developments and improvements of society and economy (and in society and in economy) reveal (by tendency) perhaps a different picture: when such broader conceptualizations are being translated into attempts of empirical measurement (by this including also non-political indicators), then we may see in global context a more progressive development of society and economy (also of knowledge society and knowledge economy), and to a certain extent also of democracy or at least of the opportunities and prospects

for democracy (including the concept of knowledge democracy). In practical terms, what this can mean is (for example): should medium-high or very-high scores of political freedom stagnate, then democracies still can focus on improving their “non-political” sustainable development in society (and in economy). To raise for discussion, a radical proposition or at least a challenging question: Is there a certain plausibility to assert that also in theoretical terms the broader conceptualization of democracy and the quality of democracy is more dynamic (by referring also to development, also to non-political development) than minimalist conceptual approaches toward democracy and the quality of democracy (that only look on political freedom in a narrow sense)?

12. *Hypothesis 12/The whole world improved its score levels across a broad range, but the whole world (non-OECD countries) improved faster than the OECD countries (2002–2016)*: When we compare the score levels of the OECD and of the whole world in 2002 with 2016, then we can identify the following trend (see Figs. 5.7, 5.8, and 5.9 in Chapter 5): for eight indicators (dimensions), the gap became smaller, but for three indicators (dimensions) the gap even widened to the advantage of the OECD and to the disadvantage of the whole world (the non-OECD countries). Referring to other (already stated) empirical observations, we can conclude: During the fifteen-year period of 2002–2016, the whole world improved its score levels across a broad range, but the whole world (non-OECD countries) improved faster than the OECD countries. In that respect, it has become easier for the non-OECD countries (or for some of the non-OECD countries) to catch up with the OECD countries and to make the gap smaller. On a global scale, the world as a whole (by tendency) moves more into the direction of an increasingly equal status (from a cross-country comparative perspective, and now not looking at distributions within countries). The path of development accelerates for the non-OECD countries faster than for the OECD countries. Toward the end of the 2010s, the OECD expresses less of a lead of performance against the whole world (the rest of the world outside of the OECD) than was the situation at the beginning of the 2000s. The momentum

of development of the whole world progresses more balanced and more evenly distributed across the different countries in world context. Does this also slowly balance and “neutralize” the global divide between OECD countries and the non-OECD world? Are there any chances for the developing economies to reach levels of development that are or will be comparable (in the foreseeable future) to the levels of development of and in advanced economies? Of course, it should be critically mentioned that the gap of GDP per capita has not become smaller between the OECD countries and the whole world (non-OECD countries), but even has widened to some degrees. So, what is the essence of a gradual global socioeconomic balancing, if this does not also materialize in concrete terms such as GDP per capita? Of course, another critical question would have to be asked and raised here: Taking into account that political freedom has stagnated (modestly declined) during the period 2002–2016, so what was actually the role of democracy (and of democratization) for this general global improvement in socioeconomic development and in world wide socioeconomic development? The gap between the OECD and the means (averages) for the whole world is the largest in the domain of the following indicators: political freedom, tertiary education (tertiary gross school enrollment), “Comprehensive sustainable development”, GDP per capita (PPP, in constant 2011 international \$), and for the redesigned Human Development Index. The gap between the OECD and the world average is the smallest for: gender equality and income equality. Concerning lower CO₂ emissions (in metric tons per capita), the average for the whole world scores better than the average for the OECD.

13. *Hypothesis 13/The growth rates of scores and score levels across dimensions and indicators are (to a certain extent) structurally similar between OECD countries and the whole world.* In that respect, and to formulate here a proposition, we experience structural similarities or parallel trends (patterns of development) of the OECD as well as the non-OECD world (see and compare Figs. 5.8 and 5.9 in Chapter 5). This could add a certain plausibility to the assertion and proposition that the inner logic of development or of

sustainable development may be to some degree similar in context of the OECD countries (advanced economies), but also in context of the non-OECD countries (emerging and developing economies). Should this represent an accepted point of departure, then principles of knowledge and innovation of the knowledge economy and knowledge society would also apply to the emerging and developing economies and to the Newly Industrialized Countries. In that sense, the knowledge democracy could be seen as a universal principle. In that sense, the principle of “democracy as innovation enabler” could be loaded with a broader meaning. Despite these structural similarities in the growth patterns (across dimensions and indicators), however, there is one interesting aspect: by and large, the non-OECD countries are growing faster than the OECD countries. With the exception of four indicators,¹⁹ the gap between the OECD and non-OECD world, therefore, is becoming smaller, and this to the advantage of the non-OECD countries (for seven indicators). So the lead of the OECD countries has decreased somewhat. In that respect, the world has become more equal during the 2000s and 2010s, when non-OECD countries are being compared with the OECD countries (and now not referring to distributions within countries). The current (mid-term) trend is that the OECD and non-OECD countries developed and progressed during the years 2002–2016, but the non-OECD countries developed and progressed faster, while the OECD countries moved somewhat slower ahead. Should this be regarded now as a positive message on the prospects of development (further development) for the non-OECD countries? Certainly positively factors in that there was an aggregate development and upward-mobility of the non-OECD countries as a whole (at least it would be reasonable to argue in such a way). At least for a few of the non-OECD countries, it is now possible to continuously make the gap toward the OECD countries smaller, perhaps even to

¹⁹These four indicators are gender equality, non-political sustainable development and GDP per capita. Also, while CO₂ emissions in metric tons per capita are somewhat decreasing for the OECD countries, they increased for the whole of the world.

catch up with some of the OECD countries and to overtake them. At the same time, however, concerning the “absolute” score levels, the OECD countries still are leading substantially in a diversity of areas (for example, GDP per capita). So while in “relative terms,” the whole world is becoming more equal, in “absolute terms” the world still is substantially unequal in several of the important areas and domains. Furthermore, and this is equally important for the non-OECD countries, but also the OECD countries themselves, also the “internal equality” of countries and societies matters, and may even increasingly matter in the future (for example, concerning income equality or increasing income inequality). So there is continuously a mixed balance on equality in the world and on the equality of the global world developments.

14. *Hypothesis 14/There may be more of a comparative win-win situation in the OECD countries, but a comparative trade-off situation in non-OECD countries:* Perhaps this hypothesis is somewhat speculative, but it appears that on several occasions the OECD can more easily be in a comparatively advantageous “win-win” position across several dimensions (and subdimensions), whereas non-OECD are more often locked into a “trade-off” situation, meaning strong positions in some fields of indicators, but weaker positions in other areas. For example, OECD countries often score higher on political freedom as well as on economic freedom, whereas in the case of non-OECD countries the political freedom and economic freedom do not necessarily combine and associate with each other (compare Figs. 3.1 and 3.2 in Chapter 3 with Figs. 4.1 and 4.2 in Chapter 4). Additionally, OECD countries score on all subdimensions of freedom and of equality higher than the whole world, however, with the lead in income equality being the smallest. The Nordic countries score even further ahead of the whole world average across all subdimensions of freedom and equality (see Figs. 7.5 and 7.6 in Sect. 7.1). One basic (and crucial) idea of sustainable development stresses to achieve development and improvement not only in one area, but in different fields and domains, by this creating a cross-complementary win-win situation over a broader spectrum. Here, the non-OECD countries apparently are particularly

challenged in their strategies and policies. However, also the OECD countries are called upon, to learn further in this regard. Cross-country learning addresses always all countries in the world. The possible “trade-off situation” in context of the non-OECD countries perhaps may also explain, at least partially, why we are facing the coexistence of different political models in the emerging and developing economies: in some of the countries, economic development associates with political freedom, whereas in other countries, economic development is not being accompanied by political freedom. For the advanced economies, the opposite appears to be truer: here, economic growth and development, by tendency, do associate (co-evolve) with political freedom.

15. *Hypothesis 15/With the global spreading and increasing diversity of democracy, the “concept of quality of democracy” (theory of quality of democracy) gains continuously in importance.* From 1945 to the present, there has been a spreading of democracy in the world. In the middle of the twentieth century, often a “binary” or “dichotomous” distinction between democracies and non-democracies appeared to be reasonable and sufficient (Campbell and Barth 2009, p. 210). Toward the end of the twentieth century, we experience and see a spreading of democracy in the world, in Eastern Europe after the collapse of Soviet communism, but also in other world regions, such as Latin America. This was analytically captured in the concepts of the “Third Wave” (Huntington 1991, 1997) and of the “Fourth Wave” (McFaul 2002) of democratization.²⁰ Democracy no longer represents a privilege of the industrialized nations or advanced economies in the OECD, but converted to a fully global phenomenon, just as valid for the emerging and developing economies in the Newly Industrializing Countries (at least in principle). With the spreading and diffusion of democracy as a global phenomenon, also the need increased to distinguish between different

²⁰With the notion of the “end of history,” Francis Fukuyama (1989, 1992) did not actually want to mean an end of history as such, but asserted that the concept of “liberal democracy” is establishing itself as the new global standard in contemporary world (at least in the world of ideas).

types of democracy (electoral democracy versus liberal democracy), but also different “levels of quality” of democracy. To continue the dichotomous (binary) polarization between democracy and non-democracy, no longer was appropriate or plausible, because within the “world of democracy” the diversity increased, also the diversity in qualities, with a contest between democracies with a lower, medium or higher quality. Within the polarization of democracy and non-democracy, also in-between forms of semi-democracy evolved, and semi-democracy can overlap with democracy, but also non-democracy (authoritarianism). Furthermore, the level of quality of a democracy is not necessarily constant, it can increase (democracy reform and democracy innovation), but also decrease (democracy stagnation, democracy failure). In his famous book “Post-Democracy,” Colin Crouch reflects on the following (postulated) tendency: “Meanwhile, however, in the established democracies of Western Europe, Japan, the USA and other parts of the industrialized world, where more subtle indicators of its health could be used, matters are less optimistic” (Crouch 2010, pp. 1–2). Also, new forms or types of government emerged, for example the supra-national governance of the European Union institutions, linked to the question and challenge, how their quality could be assessed (Lord 2004)? This emphasizes why the concept of quality of democracy (in a global comparison) is so important, and why theories about the quality of democracy are crucial. Measuring democracy and different levels of quality of democracy (over time) represents one approach for opening and encouraging analytical opportunities for a more differentiated representation of democracy as an empirical phenomenon in the late twentieth and early twenty-first century (and beyond). The measurement of democracy relies necessarily on conceptualizations (models) of democracy. Measurement of democracy, independently and disconnected from an underlying concept or model, appears to be only difficult to achieve in a satisfying manner. With this idea of quality of democracy, the democracy and democratization in different world regions can be viewed and assessed more focused and conceptually better informed and guided (Levine and Molina 2011; Roberts 2010). Ideal-typically it could be further

discussed, whether there is a potential direction in “stages of democracy,” moving from “electoral democracy” to “liberal democracy” and “(liberal) democracy of a higher quality” (see Fig. 1.4 in Sect. 1.2). Empirically, of course, it is not precluded that this evolution of democracy actually must occur.²¹ Within the context of our empirical macromodel here, political freedom in the whole world increased only marginally in the period 2002–2016, even decreased in some world regions, for example Latin America.

16. *Hypothesis 16/In democracies the environmental policies may be of a higher quality, but (the industrialized) democracies frequently also cause more pollutions than non-democracies:* What is the relationship of quality of democracy with quality of environment? Social ecology refers to the interaction and interactions between society, economy and the environment or ecology (Fischer-Kowalski 1998; Fischer-Kowalski and Hüttler 1999; Fischer-Kowalski and Haberl 2007). The “Quintuple Helix innovation systems” are interested to translate ecological challenges into drivers for knowledge production and innovation (Carayannis and Campbell 2009, 2010, 2014). On the back cover side of a book by Winslow (2010), the following assertion is being formulated: “It shows that the level of democracy in a country is more closely related to environmental quality than is the level of income.” We may formulate the expectation (proposition) that in democracies the environmental policies are often of a higher quality than in non-democracies. However, at the same time the (industrialized) OECD countries cause more pollutions based on CO₂ emissions than the non-OECD countries (compare Fig. 3.11 in Chapter 3 with Fig. 4.12 in Chapter 4).²² This suggests to us the following two propositions: (1) The overall negative impact of

²¹Referring back to Francis Fukuyama (1989): should new types of democracy evolve, with higher qualities of democracy than in the conventional (model of) liberal democracy, by this also creating a new type (model) of democracy, this may imply then an “end to the end-of-history” notion of Fukuyama, falsifying his approach to reality (or contextualizing and binding his analysis to a specific historical phase).

²²Because of the way how the indicator of CO₂ emissions in metric tons per capita was designed and constructed by us in context of our model, higher “scores” actually imply lower CO₂ emissions.

the industrialized OECD countries on the environment may be worse than that of the (less industrialized) non-OECD countries. In that sense, and in terms of a global ecological scoreboard, the OECD is performing and “living” at costs of the non-OECD. (2) Environmental issues should even more so gain in importance on the political agenda of the coming years. “Social Ecology” represents here a key issue for further progress and progress opportunities of the world, being crucial for our survival, but also for future opportunities for human society and human civilization (Blunden et al. 2018; Carayannis and Campbell 2013; Carayannis et al. 2012; European Commission 2009; Lancet Commission 2017; Obama 2017; Steffen et al. 2018; World Meteorological Organization 2017).²³ (3) “Democracy as innovation enabler” is also important in the framework of the “Quadruple and Quintuple Helix innovations systems,” where the intention is to translate and to transform ecological and environmental challenges into drivers for knowledge, knowledge production and innovation (Carayannis and Campbell 2009, 2010, 2014).

17. *Hypothesis 17/Democracies are characterized by higher degrees of political swings and government/opposition cycles than non-democracies:* Peaceful political swings and government/opposition cycles mark a crucial distinction and line of division between democracy and non-democracy. Democracies are characterized by substantially higher frequencies of government/opposition cycles (in more particular) and political swings (in more general) than non-democracies (where they are less frequent or do not exist at all). In our empirical macromodel, we verified that probabilities of a “peaceful person and/or party change of the (de facto) head of government” increase with increasing degrees of political freedom.

²³As it is being said and stated in a released report: “Pollution is the largest environmental cause of disease and premature death in the world today. Diseases caused by pollution were responsible for an estimated 9 million premature deaths in 2015—16% of all deaths worldwide—three times more deaths than from AIDS, tuberculosis and malaria combined and 15 times more than from all wars and other forms of violence” (Lancet Commission 2017, p. 1).

Party change is here even more important than person change (see Fig. 6.3 in Chapter 6).²⁴ One conclusion (proposition) may be that democracy introduced to the world the innovation (the political innovation) of peaceful government/opposition cycles as a standard procedure for government institutions and for how a democracy is operating and performing. This defines an (evolutionary) advantage of democracy over non-democracy. Government/opposition cycles can initiate political swings, for example political left/right swings. Does a political system or system of governance not express any or not sufficiently regular government/opposition cycles, then we should wonder, whether this political system still can represent a democracy. Experience teaches us to be skeptical here, meaning that the nonexistence of government/opposition cycles almost rules out for certain the possibility of a democracy. In democracies, the government/opposition cycles or political swings fulfill the following functions: (1) to balance power; (2) to allow a “cycle of seeking,” by supporting policy-seeking in contrast to office-seeking and vote-seeking; (3) and to balance policy. Government/opposition cycles and political swings represent one form of manifestation of how “political self-organization” expresses itself and translates into a practice.²⁵ We could assert that political swings and government/opposition cycles were not that evident from the beginning in political science research or theory of democracy, but that this represents a pattern, toward which the behavior of democracies gravitated and still will gravitate furthermore. Advanced economies and societies often operate in a “fog of uncertainty” at new lines of an open frontier in flux, so for them experimental policy learning is essential in context of political swings. Ultimately, a comprehensively understood sustainable development also requires political swings and government/opposition cycles in the non-OECD

²⁴This relationship also helped us to (at least partially) validate the freedom ratings of Freedom House (see again Chapter 6).

²⁵Self-organization defines one dimension of the basic quintuple-dimensional structure of democracy and quality of democracy that underlies conceptually as a theoretical basis our empirical macro-model (see Fig. 1.7 in Sect. 1.2).

countries, even if there the contest and race between democracies, semi-democracies and non-democracies appears to be dynamic and open (Carayannis and Campbell 2014).²⁶

18. *Hypothesis 18/In empirical terms the Nordic countries represent a world region that achieved the highest level of quality of democracy in contemporary context:* Within the framework of our empirical macro-model, where we identified several countries and country groups more particularly for our analysis (see Sect. 2.4), clearly the Nordic countries (Denmark, Finland, Norway, and Sweden) are that country group that achieved empirically the highest level of quality of democracy during the period 2002–2016. “Country group” here implies that we speak of a region, preferably representing more than one (at least two) countries or at least a larger country.²⁷ The Nordic countries outperform in political freedom, gender equality and income equality the USA, European Union (EU15 and EU28), the OECD, and the world average (see Figs. 7.6 and 7.7 in Sect. 7.1 and Figs. 3.1, 3.3, and 3.4 in Chapter 3). Only in economic freedom, the USA and for some years Japan lie ahead of the Nordic countries, whereas also here the Nordic countries position themselves higher than the OECD and EU (see Fig. 3.2 in Chapter 3). With regard to non-political sustainable development and “Comprehensive sustainable development”, the Nordic countries also lead in comparison with the USA, European Union (EU15 and EU28), the OECD and the world (see Figs. 3.6 and 3.7 in Chapter 3). The Nordic countries and their democracies convincingly demonstrate that good and mutually benefitting combinations of political freedom, gender and income equalities and of sustainable development are possible at comparatively very high levels. In the case of economic freedom, it furthermore could be questioned, how important this subdimension actually is for a concept such as quality of democracy. Whether or not the level of quality of

²⁶For a further reading on political swings, see Campbell (1992, 1996, 2007).

²⁷As an individual country, Switzerland also scores high on quality of democracy (see Campbell 2010; also Campbell et al. 2012).

democracy in the Nordic countries should be regarded to be “high” from a theoretical viewpoint or a later (assumptive) perspective from the late twenty-first or early twenty-second century, remains a separate question (not to be further discussed here). However, the Nordic countries achieved the highest level of quality of democracy in empirical terms during the period 2002–2016, and this is truly remarkable. The Nordic lead does not only focus on one dimension of democracy measurement, but also cross-cuts and cross-connects several and by character very different dimensions (and subdimensions), which qualifies this Nordic lead as to be sustainable, and to a certain extent also as solid. In empirical terms, the Nordic countries represent a global benchmark for quality of democracy for the whole world, demonstrating and verifying, which levels of quality of democracy are not only theoretically, but actually empirically (and by this in reality) possible. Every country in the world, in principle, could already have achieved a level of quality of democracy, comparable to the already established standard and norm in the Nordic countries. How representative are the Nordic countries for the contemporary world and the trends there? With a share of the world population of only between 0.35 and 0.38% during the years 2002–2016 (see Fig. 2.3 in Sect. 2.1), critics could assert that the Nordic countries have more the status of a marginal exception, and that the Nordic countries have further profited from an advantageous niche position within the global system. In our opinion, this is a defensive way of thinking and arguing. On the contrary, we want to emphasize to focus closer on what exactly the pattern of development and of democracy development was in the Nordic countries, and that the world should assess what it could learn from this “Nordic model” of quality of democracy. The potentials of learning for quality of democracy world wide are high. Of course, also the Nordic countries must learn continuously from experience and trends in other world regions. It is not precluded that this Nordic lead must continuously and necessarily prevail throughout the whole twenty-first century.

19. *Hypothesis 19/With regard to quality of democracy, neither the USA nor the European Union lead clearly, when being compared with each*

other on empirical grounds: In political discourse, there is sometimes the discussion about the American (Kagan 2003) and the European model (Rifkin 2004) of democracy, connected to conflicting assumptions, who is actually leading or achieved a better positioning in global context. When we do not want to rely on ideology: Which evidence can be provided from an empirical perspective of actual democracy measurement? Earlier we already had asked the question, addressing the USA and the European Union²⁸ in comparative format: “Who is more free, more equal or better developed: the USA or the EU” (see Sect. 2.4). When we refer specifically to the conceptualization, which was underlying our empirical macromodel, we arrive at a somewhat paradoxical (and perhaps unsatisfying) answer. In empirical terms, neither the USA nor the European Union express or demonstrate a clear lead in quality of democracy. In political freedom, the EU15 leads marginally over the USA, but the USA leads over EU28. In economic freedom, the USA is generally leading. In gender equality, the EU15 again leads marginally over the USA, but the USA again leads (marginally) over the EU28. In income equality, however, the European Unions (EU15 and EU28) lie considerably ahead of the USA (see Fig. 7.3 in Sect. 7.1). Are the two subdimensions of freedom being aggregated (numerically) to one dimension of freedom, and is the same done for the two subdimensions of equality, creating by this one aggregated (numerical) dimension of equality, then we experience a lead of the USA in freedom, but a lead of EU15 and EU28 in equality (see Figs. 7.1 and 7.2 in Sect. 7.1). By this, income equality defines the one great disadvantage (and problem) of the USA. On the other hand, there is clearly more economic freedom in the USA. In non-political sustainable development and “Comprehensive sustainable development”, the USA is lying ahead of the EU15 and EU28, however, EU15 has been rapidly catching up in

²⁸European Union or European democracy we understand here primarily as an (indicator-based) aggregation of the individual member countries to the European Union, and not as a particular assessment of the supranational institutions of government and governance of the European Union.

“Comprehensive sustainable development” and has reached levels almost as high as those of the USA (see Figs. 3.6 and 3.7 in Chapter 3): this also resembles and defines a situation of deadlock of advantage and opportunities, making a stable forecast on comparative advantage almost impossible for the coming years. Concerning the specific indicators for non-political sustainable development, conditions again are particular: the USA leads with regard to tertiary education and GDP per capita, whereas the EU leads in life expectancy and lower CO₂ emissions (in metric tons per capita) (see Figs. 3.8–3.11 in Chapter 3). Interestingly, higher GDP per capita did not translate into higher life expectancy for the USA. When the USA is contrasted with EU15, there may be a small advantage to the favor of the EU. However, is the USA contrasted with the EU28, the overall advantage may be instead (and narrowly) with the USA. The paradox and puzzling outcome therefore is that our whole conceptualization and comparative measurement of democracy arrives at the conclusion that it cannot be said convincingly or uncontested, whether the quality of democracy is higher in the USA or in the European Union. American democracy and European democracy have reached here similar (almost equal) levels of quality of democracy (besides clear differences in structure). Based on a rational reasoning and in reference to the empirical indicators identified here, it would be arbitrary, asserting a lead of either the USA or of European Union in quality of democracy. The USA and the European Union established a competitive lead only in particular (and differing) subdimensions and for specific areas, but in the whole we are faced with a picture of stalemate. Ideologies and ideological controversies should be here more sensitive for empirical evidence in the coming debates. For the USA and the European Union, this creates a permanent necessity for continuously learning mutually from each other, but also from other world regions. The Nordic countries mark an important reference point for discourse on development and quality of democracy for the USA, but in the European Union as well.

20. *Hypothesis 20/Quality of Democracy, Knowledge Democracy and “Democracy as Innovation Enabler”*: Quality of democracy can

also be associated with knowledge democracy (Carayannis and Campbell 2012, p. 55; Veld 2010a, b). Knowledge democracy emphasizes the importance of knowledge and innovation for the quality of democracy and the sustainable development of democracy, society and economy. This also is being emphasized by the theory, concept and model of the “Quadruple and Quintuple Helix Innovation Systems” (Carayannis and Campbell 2009, 2010, 2014). Expectations are that democracies with a higher quality of democracy also will be knowledge democracies. “Democracy as Innovation Enabler” has here at least the following meanings: (1) political pluralism in a democracy encourages also a diversity of knowledge and innovation (“Democracy of Knowledge,” Carayannis and Campbell 2009) that is necessary for development (also economic development and economic growth); (2) advanced economies are driven by knowledge and innovation, so they require a democracy (but in principle this also should refer to emerging and developing economies); (3) therefore, at least in principle, “democracy as innovation enabler” also applies (should apply) to emerging and developing economies, but may not always be realized and applied; (4) the diversity (political diversity, by this also knowledge and innovation diversity) within democracies may feed effectively into the next-generation creations of knowledge production an innovation system evolution, which will be necessary for progress and further advances of knowledge society, knowledge economy and knowledge democracy in a global format; (5) finally, as a last note and thought: perhaps the economic successes of non-democracies or autocracies (authoritarian and semi-authoritarian regimes) are being overestimated anyway, because autocracies are also benefitting from the knowledge production and innovation systems of democracies and semi-democracies, *so in that sense autocracy is depending on democracy and the knowledge and innovation of democracy in a global system.*

7.3 Resume of the Conclusion

The approach of conceptualizing and measuring democracy and quality of democracy in global context reveals the full complexity of patterns of democracy and of trends in further democracy development.²⁹ This world wide perspective appears to be necessary, for trying to understand democracy comprehensively, because the constrained view of only looking on democracies in OECD countries generates no more than a particular perspective on democracy. By integrating also democracies in non-OECD countries into the scope of analysis, also the additional patterns and trends are being made visible, which otherwise would not have been recognized. Therefore, the challenge is to design and to design further global concepts, global models and global theories of democracy. Within the idea of quality of democracy, there is also the notion that there can be different levels or different types of quality of democracy, by this emphasizing to see the differences (or similarities) between democracies, wherever being identified as to be relevant. Further conceptualization and further measurement of democracy depend on each other mutually and interconnected, so next-stage democracy theory development is challenged to be designed in parallel with measuring democracy. The global perspective ultimately implies also to contrast democracy with non-democracy or to look at democracies, semi-democracies and non-democracies³⁰ comparatively, confronted by empirical ambiguities, where in some cases it may be difficult to draw clear distinctions between types of democracy and types of non-democracy.

Democracy and the evolution of quality of democracy are facing challenges, calling for creative innovations, so that quality of democracy continues to progress for a betterment. Will there also be “new trends” for democracy and quality of democracy in the world? Levels

²⁹See again the hypotheses on democracy and quality of democracy in Chapter C.2 (these hypotheses summarize our empirical findings and translate them into propositions for continued democracy research).

³⁰Possible empirical definitions for democracy, semi-democracy and non-democracy are discussed in Sect. 2.3.

of quality of democracy in the advanced economies of the OECD countries, but also in the developing and emerging economies in non-OECD countries, could stagnate or even decline. Therefore, there is this permanent need for democracy reform, democracy innovation and democracy discourse, indicating and unlocking and opening up routes of development that drive democracy quality advancement further. We should expect and be prepared that our concepts and theories of democracy and quality of democracy also continue to develop during the course of the twenty-first century, so there will be democracy evolution and democracy theory evolution. Our analysis indicated that particularly within non-OECD there appears to be an “open” contest, how closely degrees of political freedom actually associate with stages of development. Is democracy necessary for successful development? Can there be sustainable development (or economic growth) without democracy? In the short run, there is no automatic co-development of economic progress or economic growth and democratic advancement. Therefore: “The current world appears to be challenged by a race between developing democracies versus emerging autocracies over knowledge production and innovation” (Carayannis and Campbell 2014, p. 19). There are empirical examples of authoritarian (semi-authoritarian, semi-democratic) regimes that have realized successfully economic growth, without enforcing (or implementing) democracy. In that context also the term of a “managed democracy” is being used, such as of a “Managed Democracy in Russia” (see Krastev and Holmes 2012; Wegren and Konitzer 2008; compare also with Segert and Machos 1995; Schedler 2006). Based on the analytical tools, employed by our analytical framework of analysis, the empirical answers (and trends) still are not that clear here. In fact, there may even emerge and develop forms of democracy, semi-democracy or non-democracy, which cannot be mapped that easily in reference to some of our established and conventional concepts of democracy.

Democracies are characterized by a higher probability and higher degrees of frequency of political swings and of government/opposition

cycles than non-democracy.³¹ Democracies introduced the innovation of peaceful person and party change in political power and of government executive as a standard political procedure, by this also dramatically altering and innovating how government functions. Political swings and government/opposition cycles represent one way, how (political) self-organization manifests itself in a democracy. Political swings and government/opposition cycles (on the basis of civil and non-violent means and measures) place democracies into a crucial advantage against non-democracies, because it provides democracies with flexibility in policy-making and policy-application, and also helps democracies to balance political power and government power, which is necessary for sustainable governance (good governance) in the long run.

In addition, current democracy research is constrained (at least to some extent), because data and indicators are not of the same quality in all dimensions that are relevant for democracy and democracy quality. For example, comparative data on income equality (or wealth equality) still behave fragmentarily. There are several indices in the world that report on freedom, but there clearly is a need for creating more “comprehensive equality indices” that also reflects systematically on income equality (wealth equality). Currently, in the “world of indices,” there appears to be an unbalance to the favor of freedom, but to the disadvantage of equality. This could bias democracy research (and democracy discourse, democracy innovation) and disfavor equality (as a concept and as a research field). But conceptually, there is also a need of developing the concept of political freedom further, to reflect what advanced political freedom could be and should be or ought to mean, when freedom should contribute to advanced qualities of democracy.

Arguments can be developed that the higher the degrees of economic development are, then the more likely it is that advanced economic development also requires the development of a democracy. *In that respect, we can expect certain associations (or also a co-evolution) between quality of democracy, knowledge democracy and knowledge economy. So there is also a type of plausibility for the assertion of “democracy as innovation*

³¹See and review our analysis in Chapter 6.

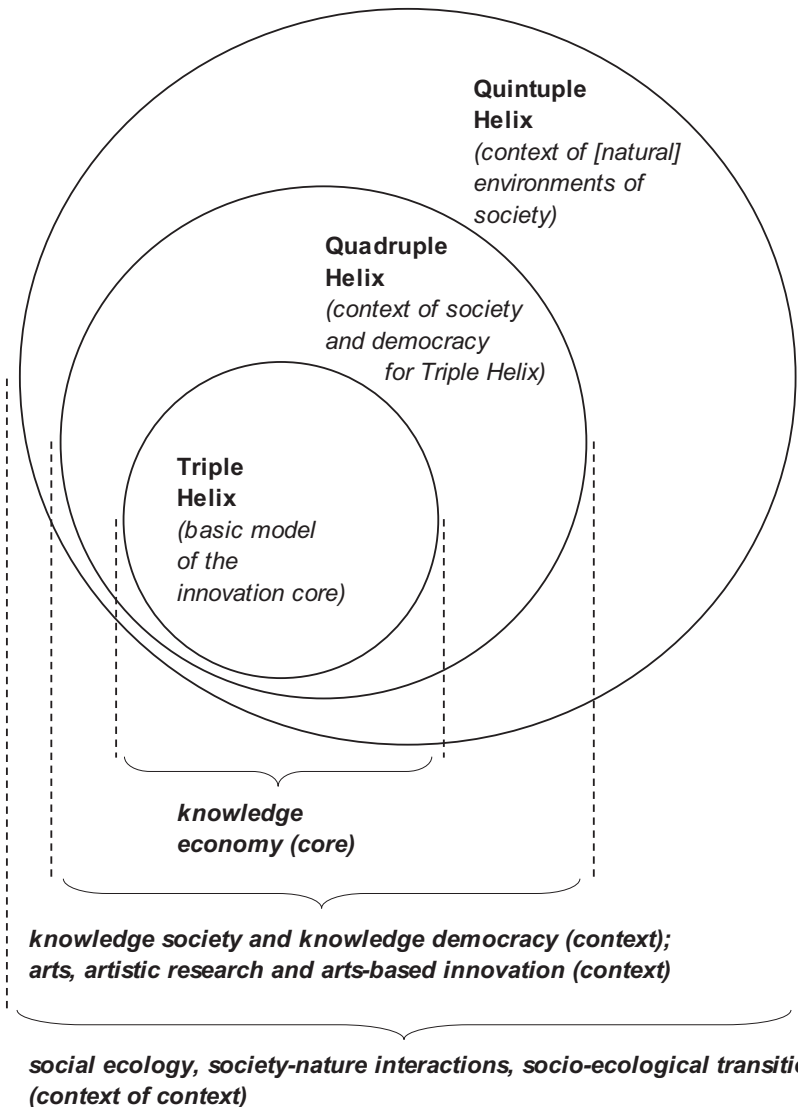


Fig. 7.11 The Quadruple and Quintuple Helix innovation systems in relation to society, economy, democracy and social ecology (Source Author's own conceptualization based on Carayannis and Campbell [2014, p. 15], Carayannis et al. [2012, p. 4], and adapted from Carayannis and Campbell [2009, p. 207]. See also Etzkowitz and Leydesdorff [2000])

enabler” (see Fig. 7.11). Here, political pluralism and a heterogeneity and diversity of different knowledge and innovation modes should mutually support and reinforce each other. Would this then be a co-evolution of democracy and a “democracy of knowledge” and of “democracy as innovation enabler”?

In the previous Sect. 7.2, we raised the following sentence: “Democracy could imply to be accompanied by a pluralism of diverging and contradicting reflections on democracy.” The underlying idea here is that pluralism and diversity within democracy mirror themselves also in a pluralism and diversity of concepts about democracy. This may indicate another approach for defining democracy at a “meta-level,” and provides a further point of reference for democracy and quality of democracy. The metaphorical expression of this was attempted in the “Poem on Democracy” at the very beginning of our work, when asking: *What is Democracy?* There we metaphorically extended “pluralism” by translating the poem into different languages. Are there also aesthetic and art-based expressions of quality of democracy?

The history of democracy has not come to an end. The future of the history of democracy and the future of democracy only are beginning.

References

- Beetham, D. (Ed.). (1994). *Defining and Measuring Democracy*. London: Sage.
- Beetham, D., Byrne, I., Ngan, P., & Weir, S. (Eds.). (2002). *Democracy Under Blair: A Democratic Audit of the United Kingdom*. London: Politico’s Publishing.
- Blunden, J., Arndt, D. S., & Hartfield, G. (Eds.). (2018). State of the Climate in 2017. *Special Supplement to the Bulletin of the American Meteorological Society*, 99(8), Si–S332. <https://doi.org/10.1175/2018BAMSStateoftheClimate.1> and <https://www.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/state-of-the-climate/>.
- Campbell, D. F. J. (1992). Die Dynamik der politischen Links-rechtsschwingungen in Österreich: Die Ergebnisse einer Expertenbefragung. *Österreichische Zeitschrift für Politikwissenschaft (ÖZP)*, 2, 165–179.
- Campbell, D. F. J. (1996). *Links- und Rechtsschwingungen in den westlichen Demokratien ab 1945*. Dissertation, University of Vienna, Vienna.

- Campbell, D. F. J. (2007). Wie links oder wie rechts sind Österreichs Länder? Eine comparative Langzeitanalyse des parlamentarischen Mehrebenensystems Österreichs (1945–2007). *SWS-Rundschau*, 47(4), 381–404.
- Campbell, D. F. J. (2008). *The Basic Concept for the Democracy Ranking of the Quality of Democracy*. Vienna: Democracy Ranking. <http://www.ssoar.info/ssoar/handle/document/29063> and http://democracyranking.org/wordpress/ranking/basic_concept.pdf.
- Campbell, D. F. J. (2010). *Key Findings (Summary Abstract) of the Democracy Ranking 2010 and the Democracy Improvement Ranking 2010*. Vienna: Democracy Ranking. http://democracyranking.org/wordpress/ranking/2010/data/Key%20findings%20of%20the%20Democracy%20Ranking%202010_A4.pdf.
- Campbell, D. F. J. (2012). Die österreichische Demokratiequalität in Perspektive [The Quality of Democracy in Austria in Perspective]. In L. Helms & D. M. Wineroither (Eds.), *Die österreichische Demokratie im Vergleich* [Austrian Democracy in Comparison] (pp. 293–315). Baden-Baden: Nomos. http://www.uni-klu.ac.at/wiho/downloads/QoD-Text_12.pdf.
- Campbell, D. F. J., & Barth, T. D. (2009). Wie können Demokratie und Demokratiequalität gemessen werden? Modelle, Demokratie-Indices und Länderbeispiele im globalen Vergleich [How Can Democracy and the Quality of Democracy be Measured? Models, Democracy Indices and Country-Based Case Studies in Global Comparison]. *SWS-Rundschau* [Social Scientific Review], 49(2), 208–233.
- Campbell, D. F. J., Barth, T. D., Pözlbauer, P., & Pözlbauer, G. (2012). *Democracy Ranking (Edition 2012): The Quality of Democracy in the World*. Norderstedt: Books on Demand (Democracy Ranking Association).
- Campbell, D. F. J., & Carayannis, E. G. (2013). Quality of Democracy and Innovation. In E. G. Carayannis, I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Eds.), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1527–1534). New York: Springer. http://link.springer.com/referenceworkentry/10.1007%2F978-1-4614-3858-8_509#.
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix Innovation Model: Global Warming as a Challenge and Driver for Innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 1–12. <http://www.innovation-entrepreneurship.com/content/pdf/2192-5372-1-2.pdf>.
- Carayannis, E. G., & Campbell, D. F. J. (2009). “Mode 3” and “Quadruple Helix”: Toward a 21st Century Fractal Innovation Ecosystem. *International Journal of Technology Management*, 46(3/4), 201–234.

- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate to Each Other? A Proposed Framework for a Transdisciplinary Analysis of Sustainable Development and Social Ecology. *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69.
- Carayannis, E. G., & Campbell, D. F. J. (2012). *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems: 21st-Century Democracy, Innovation, and Entrepreneurship for Development* (SpringerBriefs in Business). New York: Springer. <http://www.springer.com/business+%26+management/book/978-1-4614-2061-3>.
- Carayannis, E. G., & Campbell, D. F. J. (2013). Mode 3 Knowledge Production in Quadruple Helix Innovation Systems: Quintuple Helix and Social Ecology. In E. G. Carayannis, I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Eds.), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1293–1300). New York: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_310.
- Carayannis, E. G., & Campbell, D. F. J. (2014). Developed Democracies Versus Emerging Autocracies: Arts, Democracy, and Innovation in Quadruple Helix Innovation Systems. *Journal of Innovation and Entrepreneurship*, 3(12). <http://www.innovation-entrepreneurship.com/content/pdf/s13731-014-0012-2.pdf> and <http://www.innovation-entrepreneurship.com/content/3/1/12>.
- Carayannis, E. G., & Kaloudis, A. (2010). A Time for Action and a Time to Lead: Democratic Capitalism and a New “New Deal” for the US and the World in the Twenty-first Century. *Journal of the Knowledge Economy*, 1(1), 4–17. <https://link.springer.com/article/10.1007/s13132-009-0002-y>.
- Crouch, C. (2010). *Post-democracy*. Cambridge: Polity Press.
- Cunningham, F. (2002). *Theories of Democracy: A Critical Introduction*. New York: Routledge.
- Democracy Barometer. (2013). *Democracy Barometer at a Glance*. Aarau: Democracy Barometer. <http://www.democracybarometer.org/>.
- Etzkowitz, H., & Leydesdorff, L. (2000). The Dynamics of Innovation: From National Systems and “Mode 2” to a Triple Helix of University-Industry-Government Relations. *Research Policy*, 29, 109–123.
- European Commission. (2009). *The World in 2025: Rising Asia and Socio-Ecological Transition*. Brussels: European Commission. http://ec.europa.eu/research/social-sciences/pdf/the-world-in-2025-report_en.pdf.
- Fischer-Kowalski, M. (1998). Society’s Metabolism: The Intellectual History of Materials Flow Analysis, Part I, 1860–1970. *Journal of Industrial Ecology*, 2(1), 61–78.

- Fischer-Kowalski, M., & Haberl, H. (Eds.). (2007). *Socioecological Transitions and Global Change: Trajectories of Social Metabolism and Land Use*. Cheltenham: Edward Elgar.
- Fischer-Kowalski, M., & Hüttler, W. (1999). Society's Metabolism: The Intellectual History of Materials Flow Analysis, Part II, 1970–1998. *Journal of Industrial Ecology*, 2(4), 107–136.
- Fraser Institute. (2009). *Summary Index of the Economic Freedom in the World: 2009 Data Set*. Vancouver, BC: The Fraser Institute. <http://www.free-the-world.com/2009/reports/world/EFWdataset2009.xls> and http://www.free-the-world.com/datasets_efw.html.
- Freedom House. (2013a). *Freedom in the World: Aggregate Scores of Political Rights and Civil Liberties, 2003–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/AggregateScores_FIW2003-2013%20%28final%29.xls.
- Freedom House. (2013b). *Freedom in the World 2013. Methodology*. Washington, DC: Freedom House (<http://www.freedomhouse.org/report/freedom-world-2013/methodology>).
- Freedom House. (2013c). *Freedom of the Press. Scores and Status Date 1980–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/FOTP%20Scores%20and%20Status%201980-2013_0.xls.
- Freedom House. (2018). *Freedom in the World: Aggregate and Subcategory Scores*. Washington, DC: Freedom House. <https://freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores#.UuErFLQo71I>.
- Fukuyama, F. (1989). The End of History? *The National Interest* (Summer 1989), 3–18. <http://www.cla.wayne.edu/polisci/kdk/Comparative/SOURCES/fukuyama.htm>.
- Fukuyama, F. (1992). *The End of History and the Last Man*. London: Penguin Books.
- Hausmann, R., Tyson, L. D., & Zahidi, S. (Eds.). (2009). *The Global Gender Gap Report 2009*. Geneva: World Economic Forum. http://www3.weforum.org/docs/WEF_GenderGap_Report_2009.pdf; http://www3.weforum.org/docs/WEF_GenderGap_Report_2008.pdf; http://www3.weforum.org/docs/WEF_GenderGap_Report_2007.pdf; and http://www3.weforum.org/docs/WEF_GenderGap_Report_2006.pdf.
- Held, D. (2006). *Models of Democracy*. Stanford: Stanford University Press.
- Heritage Foundation. (2013). *2013 Index of Economic Freedom*. Washington, DC: Heritage Foundation. <http://www.heritage.org/index/> and <http://www.heritage.org/index/explore>.

- Huntington, S. P. (1991). *The Third Wave: Democratization in the Late Twentieth Century*. Norman: University of Oklahoma Press.
- Huntington, S. P. (1997). After Twenty Years: The Future of the Third Wave. *Journal of Democracy*, 8(4), 3–12.
- IDEA/International Institute for Democracy and Electoral Assistance (Beetham, D., Carvalho, E., Landman, T., & Weir, S.). (2008). *Assessing the Quality of Democracy: A Practical Guide*. Stockholm: International IDEA. <http://www.idea.int/publications/aqd/index.cfm>.
- Kagan, R. (2003). *Of Paradise and Power: America and Europe in the New World Order*. New York: Knopf.
- Krastev, I., & Holmes, S. (2012). Putinism Under Siege: An Autopsy of Managed Democracy. *Journal of Democracy*, 23(3), 33–45.
- Lancet Commission. (2017, October 19). The Lancet Commission on Pollution and Health. *The Lancet*. <http://societyforindoorenvironment.net/sites/default/files/pdf/Landriganetal2017TheLancetComissionsHealthAsiaReview.pdf> and http://gahp.net/wp-content/uploads/2017/03/PE_InfoLancetSummary.pdf.
- Lauth, H.-J. (2004). *Demokratie und Demokratiemessung. Eine konzeptionelle Grundlegung für den interkulturellen Vergleich*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Levine, D. H., & Molina, J. E. (2011). *The Quality of Democracy in Latin America*. Boulder, CO: Lynne Rienner Publishers.
- Lord, C. (2004). *A Democratic Audit of the European Union*. Basingstoke: Palgrave Macmillan.
- McFaul, M. (2002). The Fourth Wave of Democracy and Dictatorship: Non-cooperative Transitions in the Post-Communist World. *World Politics*, 54(2), 212–244.
- Meyer, T. (2009). *Was ist Demokratie? Eine discursive Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Obama, B. (2017, January 9). The Irreversible Momentum of Clean Energy. *Science, Policy Forum*. <https://doi.org/10.1126/science.aam6284> and <http://science.sciencemag.org/content/early/2017/01/06/science.aam6284.full>.
- O'Donnell, G. (2004). Human Development, Human Rights, and Democracy. In G. O'Donnell, J. V. Cullell, & O. M. Iazzetta (Eds.), *The Quality of Democracy: Theory and Applications* (pp. 9–92). Notre Dame, IN: University of Notre Dame Press.
- Piketty, T. (2015). *The Economics of Inequality*. Cambridge, MA: Harvard University Press.
- Roberts, A. L. (2010). *The Quality of Democracy in Eastern Europe: Public Preferences and Policy Reforms*. Cambridge: Cambridge University Press.

- Rifkin, J. (2004). *The European Dream: How Europe's Vision of the Future Is Quietly Eclipsing the American Dream*. Cambridge: Polity Press.
- Schedler, A. (2006). *Electoral Authoritarianism: The Dynamics of Unfree Competition*. Boulder, CO: L. Rienner Publishers.
- Schmidt, M. G. (2010). *Demokratiethorien. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Segert, D., & Machos, C. (1995). *Parteien in Osteuropa. Kontext und Akteure*. Opladen: Westdeutscher Verlag.
- Sodaro, M. J. (2004). *Comparative Politics: A Global Introduction*. With Contributions by D. W. Collinwood, B. J. Dickson, J. L. Klesner, and T. D. Sisk (2nd ed.). New York: Mc Graw Hill.
- Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., Summerhayes, C. P., Barnosky, A. D., Cornell, S. E., Crucifix, M., Donges, J. F., Fetzer, I., Lade, S. J., Scheffer, M., Winkelmann, R., Schellnhuber, H. J. (2018, August 9). Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), 1–8. <https://doi.org/10.1073/pnas.1810141115> and <http://www.pnas.org/content/early/2018/08/07/1810141115/tab-article-info> and <http://www.pnas.org/content/pnas/early/2018/08/07/1810141115.full.pdf>.
- Veld, R. J. in't. (2010a). *Knowledge Democracy: Consequences for Science, Politics, and Media*. Heidelberg: Springer. <https://link.springer.com/book/10.1007/978-3-642-11381-9>.
- Veld, R. J. in't. (2010b). Towards Knowledge Democracy. In R. J. in't Veld (Ed.), *Knowledge Democracy: Consequences for Science, Politics, and Media* (pp. 1–11). Heidelberg: Springer. https://link.springer.com/chapter/10.1007/978-3-642-11381-9_1.
- Wegren, S. K., & Konitzer, A. (2008). Prospects for Managed Democracy in Russia. *Europe-Asia Studies*, 59(6), 1025–1047.
- Wilkinson, R. G., & Pickett, K. (2010). *The Spirit Level: Why Equality Is Better for Everyone*. London: Penguin Books.
- Winslow, M. (2010). *Environmental Quality, Economic Growth, and Democracy. An Empirical and Theoretical Examination of the Linkages*. Saarbruck (Saarbrücken): Lambert Academic Publishing.
- World Bank. (2018). *World Development Indicators (Web-based Online Database)*. Washington, DC: World Bank. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>.
- World Inequality Database. (2018a). *World Inequality Database*. WID. <http://wid.world/>.

World Inequality Database. (2018b). *World Inequality Report 2018*. WID. <http://wir2018.wid.world/>.

World Meteorological Organization. (2017, October 30). The State of Greenhouse Gases in the Atmosphere Based on Global Observations through 2016. *WMO Greenhouse Gas Bulletin*, 13. https://ane4bf-datap1.s3-eu-west-1.amazonaws.com/wmocms/s3fs-public/ckeditor/files/GHG_Bulletin_13_EN_final_1_1.pdf.

Appendix to the Conceptualization and Measurement of Democracy and Quality of Democracy in Global Comparison/Indicators and Dimensions

**Documentation of Scores for Indicators and Dimensions
(Subdimensions): Scores Transformed (Rescaled) to Value Ranges of
0–100**

Appendix A.1 Documentation of the Complete Country Sample: 160 Countries (Years 2002–2016)

The empirical model and analysis (for the years 2002–2016) refers to a complete country sample of 160 countries (and territories), addressing democracies, semi-democracies and non-democracies. In Table A.1, these countries (and territories) are documented.

Table A.1 The complete marcrolist of 160 covered countries (and territories)

| | | | | | |
|----|-------------|----|-------------------------|-----|--------------------|
| 1 | Afghanistan | 54 | Greece | 107 | Oman |
| 2 | Albania | 55 | Guatemala | 108 | Pakistan |
| 3 | Algeria | 56 | Guinea | 109 | Panama |
| 4 | Angola | 57 | Guinea-Bissau | 110 | Papua New Guinea |
| 5 | Argentina | 58 | Haiti | 111 | Paraguay |
| 6 | Armenia | 59 | Honduras | 112 | Peru |
| 7 | Australia | 60 | Hong Kong SAR, China | 113 | Philippines |
| 8 | Austria | 61 | Hungary | 114 | Poland |
| 9 | Azerbaijan | 62 | India | 115 | Portugal |
| 10 | Bahrain | 63 | Indonesia | 116 | Puerto Rico |
| 11 | Bangladesh | 64 | Iran, Islamic Rep. | 117 | Qatar |
| 12 | Belarus | 65 | Iraq | 118 | Romania |
| 13 | Belgium | 66 | Ireland | 119 | Russian Federation |
| 14 | Benin | 67 | Israel | 120 | Rwanda |
| 15 | Bolivia | 68 | Italy | 121 | Saudi Arabia |

(continued)

Table A.1 (continued)

| | | | | | |
|----|--------------------------|-----|---------------------------|-----|----------------------|
| 16 | Bosnia and Herzegovina | 69 | Jamaica | 122 | Senegal |
| 17 | Botswana | 70 | Japan | 123 | Serbia |
| 18 | Brazil | 71 | Jordan | 124 | Sierra Leone |
| 19 | Bulgaria | 72 | Kazakhstan | 125 | Singapore |
| 20 | Burkina Faso | 73 | Kenya | 126 | Slovak Republic |
| 21 | Burundi | 74 | Korea, Dem. People's Rep. | 127 | Slovenia |
| 22 | Cambodia | 75 | Korea, Rep. | 128 | Somalia |
| 23 | Cameroon | 76 | Kosovo | 129 | South Africa |
| 24 | Canada | 77 | Kuwait | 130 | South Sudan |
| 25 | Central African Republic | 78 | Kyrgyz Republic | 131 | Spain |
| 26 | Chad | 79 | Lao PDR | 132 | Sri Lanka |
| 27 | Chile | 80 | Latvia | 133 | Sudan |
| 28 | China | 81 | Lebanon | 134 | Suriname |
| 29 | Colombia | 82 | Lesotho | 135 | Swaziland |
| 30 | Congo, Dem. Rep. | 83 | Liberia | 136 | Sweden |
| 31 | Congo, Rep. | 84 | Libya | 137 | Switzerland |
| 32 | Costa Rica | 85 | Lithuania | 138 | Syrian Arab Republic |
| 33 | Cote d'Ivoire | 86 | Macedonia, FYR | 139 | Tajikistan |
| 34 | Croatia | 87 | Madagascar | 140 | Tanzania |
| 35 | Cuba | 88 | Malawi | 141 | Thailand |
| 36 | Cyprus | 89 | Malaysia | 142 | Timor-Leste |
| 37 | Czech Republic | 90 | Mali | 143 | Togo |
| 38 | Denmark | 91 | Mauritania | 144 | Trinidad and Tobago |
| 39 | Dominican Republic | 92 | Mauritius | 145 | Tunisia |
| 40 | Ecuador | 93 | Mexico | 146 | Turkey |
| 41 | Egypt, Arab Rep. | 94 | Moldova | 147 | Turkmenistan |
| 42 | El Salvador | 95 | Mongolia | 148 | Uganda |
| 43 | Equatorial Guinea | 96 | Morocco | 149 | Ukraine |
| 44 | Eritrea | 97 | Mozambique | 150 | United Arab Emirates |
| 45 | Estonia | 98 | Myanmar | 151 | UK |
| 46 | Ethiopia | 99 | Namibia | 152 | USA |
| 47 | Finland | 100 | Nepal | 153 | Uruguay |
| 48 | France | 101 | Netherlands | 154 | Uzbekistan |
| 49 | Gabon | 102 | New Zealand | 155 | Venezuela, RB |
| 50 | Gambia, The | 103 | Nicaragua | 156 | Vietnam |
| 51 | Georgia | 104 | Niger | 157 | West Bank and Gaza |
| 52 | Germany | 105 | Nigeria | 158 | Yemen, Rep. |
| 53 | Ghana | 106 | Norway | 159 | Zambia |
| | | | | 160 | Zimbabwe |

Source Author's own compilation

Appendix A.2 Documentation of the Indicators: Transformed Scores (Rescaled to 0–100) of the 160 Countries (years 2002–2016)

In the following Tables [A.2.1–A.2.11](#) of Appendix [A.2](#), all transformed (rescaled) indicators (dimensions, subdimensions) are documented that represent the empirical data input for our model (macro-model) of empirical measurement of democracy and quality of democracy in global comparison.¹ *Transformed* here means that all indicators were rescaled to 0–100, where “0” means the lowest possible and “100” the empirically highest value (score) that was observed for the period 2002–2016 (see Chapter [2](#) for further clarification and specification). The direction of the scores has the following meaning or implication: *the higher the scoring, the better the contribution for democracy and quality of democracy*. On the basis of these data, also the dimensions (and subdimensions) were constructed (see later also Appendix [A.3](#)).

¹The indicators for government/opposition cycles (political swings) are documented in the Tables 6.2–6.4 in Chapter 6.

Table A.2.1 Political freedom. Scores transformed (rescaled) to 0–100:
 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|---------------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Afghanistan | FREE | 26.281 | 27.005 | 28.674 | 31.413 | 36.516 | 36.011 | 34.369 | 32.313 | 28.800 | 27.831 | 29.256 | 32.060 | 31.143 | 31.843 | 32.348 |
| | pol | | | | | | | | | | | | | | | |
| 2 Albania | FREE | 63.930 | 64.292 | 63.568 | 62.819 | 60.932 | 61.708 | 62.263 | 62.819 | 62.263 | 62.456 | 61.075 | 63.956 | 63.232 | 63.232 | |
| | pol | | | | | | | | | | | | | | | |
| 3 Algeria | FREE | 36.843 | 36.481 | 36.118 | 38.097 | 38.510 | 38.510 | 37.785 | 38.510 | 38.510 | 38.510 | 38.316 | 39.041 | 37.761 | 37.399 | 36.867 |
| | pol | | | | | | | | | | | | | | | |
| 4 Angola | FREE | 30.894 | 33.068 | 32.293 | 33.431 | 33.962 | 33.600 | 34.324 | 36.287 | 34.788 | 33.701 | 32.227 | 32.640 | 31.722 | 30.585 | 27.638 |
| | pol | | | | | | | | | | | | | | | |
| 5 Argentina | FREE | 65.809 | 67.259 | 76.390 | 76.052 | 74.938 | 73.777 | 72.277 | 72.277 | 71.552 | 71.914 | 71.745 | 71.332 | 71.332 | 71.695 | 72.588 |
| | pol | | | | | | | | | | | | | | | |
| 6 Armenia | FREE | 49.400 | 49.762 | 48.651 | 43.328 | 41.002 | 40.277 | 40.328 | 38.172 | 39.089 | 39.089 | 41.094 | 42.282 | 43.420 | 44.801 | 44.801 |
| | pol | | | | | | | | | | | | | | | |
| 7 Australia | FREE | 95.384 | 95.384 | 93.935 | 93.573 | 92.848 | 92.848 | 92.486 | 92.486 | 92.848 | 92.848 | 92.848 | 93.041 | 93.041 | 92.679 | 93.816 |
| | pol | | | | | | | | | | | | | | | |
| 8 Austria | FREE | 93.454 | 93.454 | 94.734 | 94.734 | 94.179 | 94.179 | 94.179 | 93.404 | 93.404 | 93.404 | 93.404 | 92.628 | 92.266 | 91.904 | 91.491 |
| | pol | | | | | | | | | | | | | | | |
| 9 Azerbaijan | FREE | 33.969 | 34.693 | 34.331 | 33.220 | 31.913 | 30.633 | 29.715 | 27.802 | 27.802 | 26.665 | 22.943 | 22.218 | 20.576 | 18.740 | 15.936 |
| | pol | | | | | | | | | | | | | | | |
| 10 Bahrain | FREE | 35.664 | 34.939 | 33.802 | 33.440 | 35.908 | 36.347 | 36.683 | 34.577 | 32.664 | 27.205 | 20.266 | 18.354 | 17.242 | 16.467 | 15.692 |
| | pol | | | | | | | | | | | | | | | |
| 11 Bangladesh | FREE | 49.619 | 48.532 | 48.532 | 48.752 | 48.921 | 48.196 | 40.589 | 51.989 | 57.481 | 58.761 | 57.068 | 55.594 | 53.708 | 48.846 | 47.928 |
| | pol | | | | | | | | | | | | | | | |
| 12 Belarus | FREE | 24.157 | 23.433 | 20.602 | 18.327 | 15.743 | 14.243 | 13.468 | 14.436 | 14.074 | 14.074 | 13.518 | 13.518 | 14.243 | 18.808 | |
| | pol | | | | | | | | | | | | | | | |
| 13 Belgium | FREE | 96.640 | 96.640 | 98.357 | 97.582 | 97.027 | 97.802 | 96.664 | 96.664 | 97.440 | 97.027 | 97.802 | 97.246 | 97.246 | 96.329 | |
| | pol | | | | | | | | | | | | | | | |
| 14 Benin | FREE | 76.009 | 75.285 | 78.166 | 78.166 | 77.610 | 80.129 | 80.129 | 78.074 | 78.074 | 79.598 | 78.267 | 78.098 | 76.262 | 76.818 | 77.955 |
| | pol | | | | | | | | | | | | | | | |
| 15 Bolivia | FREE | 75.608 | 73.072 | 70.915 | 72.970 | 70.746 | 70.021 | 68.598 | 66.905 | 65.818 | 64.125 | 63.983 | 65.869 | 65.120 | 64.951 | 63.502 |
| | pol | | | | | | | | | | | | | | | |
| 16 Bosnia and Herzegovina | FREE | 52.755 | 53.117 | 58.196 | 59.863 | 61.749 | 63.300 | 61.025 | 60.107 | 60.107 | 59.551 | 59.189 | 60.377 | 59.239 | 58.827 | 56.578 |
| | pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | |
|----|--------------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 17 | Botswana | FREE | 80.711 | 80.711 | 80.711 | 78.900 | 76.018 | 75.656 | 75.849 | 74.350 | 72.101 | 72.101 | 71.739 | 70.963 | 69.876 | 68.959 | 68.959 |
| | | pol | | | | | | | | | | | | | | | |
| 18 | Brazil | FREE | 72.373 | 73.098 | 72.204 | 73.122 | 73.146 | 72.371 | 72.371 | 72.784 | 72.422 | 72.977 | 73.583 | 74.501 | 74.501 | 74.139 | 73.777 |
| | | pol | | | | | | | | | | | | | | | |
| 19 | Bulgaria | FREE | 83.373 | 81.561 | 81.561 | 82.479 | 82.479 | 82.286 | 80.643 | 79.482 | 79.119 | 78.757 | 77.619 | 76.895 | 74.931 | 75.202 | 75.033 |
| | | pol | | | | | | | | | | | | | | | |
| 20 | Burkina Faso | FREE | 58.820 | 58.820 | 57.127 | 56.857 | 57.605 | 56.881 | 56.881 | 56.325 | 56.325 | 56.518 | 55.188 | 55.794 | 55.794 | 50.679 | 61.093 |
| | | pol | | | | | | | | | | | | | | | |
| 21 | Burundi | FREE | 27.998 | 28.360 | 30.493 | 30.493 | 43.372 | 41.578 | 41.216 | 40.390 | 41.578 | 34.770 | 34.770 | 33.270 | 33.270 | 29.766 | 19.414 |
| | | pol | | | | | | | | | | | | | | | |
| 22 | Cambodia | FREE | 35.007 | 35.370 | 35.848 | 37.761 | 39.403 | 38.679 | 38.316 | 37.761 | 35.925 | 33.819 | 33.288 | 32.732 | 32.421 | 33.196 | 33.389 |
| | | pol | | | | | | | | | | | | | | | |
| 23 | Cameroon | FREE | 28.766 | 28.042 | 27.124 | 32.423 | 31.698 | 32.423 | 30.872 | 29.179 | 29.373 | 28.235 | 28.960 | 28.960 | 29.735 | 30.872 | 29.954 |
| | | pol | | | | | | | | | | | | | | | |
| 24 | Canada | FREE | 94.297 | 95.022 | 96.184 | 95.046 | 95.408 | 95.821 | 95.459 | 94.128 | 95.459 | 95.459 | 95.097 | 94.903 | 95.046 | 95.046 | 95.821 |
| | | pol | | | | | | | | | | | | | | | |
| 25 | Central African Republic | FREE | 40.238 | 41.325 | 33.496 | 36.766 | 45.721 | 44.079 | 42.412 | 42.412 | 41.857 | 39.944 | 41.494 | 33.618 | 15.804 | 16.166 | 16.941 |
| | | pol | | | | | | | | | | | | | | | |
| 26 | Chad | FREE | 30.484 | 27.947 | 28.310 | 28.310 | 27.947 | 25.286 | 23.231 | 22.868 | 23.593 | 24.148 | 23.786 | 24.148 | 24.511 | 24.511 | 23.736 |
| | | pol | | | | | | | | | | | | | | | |
| 27 | Chile | FREE | 86.387 | 86.025 | 88.880 | 89.706 | 89.587 | 90.143 | 90.505 | 90.143 | 90.505 | 89.780 | 89.780 | 89.225 | 88.669 | 89.394 | 89.174 |
| | | pol | | | | | | | | | | | | | | | |
| 28 | China | FREE | 18.564 | 18.564 | 16.728 | 18.369 | 18.006 | 18.006 | 18.200 | 17.451 | 17.424 | 17.644 | 17.813 | 18.006 | 17.282 | 16.919 | 16.144 |
| | | pol | | | | | | | | | | | | | | | |
| 29 | Colombia | FREE | 51.339 | 51.339 | 52.450 | 53.174 | 56.510 | 57.336 | 56.780 | 55.862 | 56.756 | 58.449 | 59.174 | 58.811 | 59.224 | 59.637 | 59.275 |
| | | pol | | | | | | | | | | | | | | | |
| 30 | Congo, Dem. Rep. | FREE | 20.165 | 20.890 | 22.633 | 22.633 | 22.440 | 26.729 | 25.954 | 23.848 | 23.292 | 22.568 | 21.573 | 23.022 | 30.269 | 26.162 | 24.713 |
| | | pol | | | | | | | | | | | | | | | |
| 31 | Congo, Rep. | FREE | 42.713 | 43.075 | 46.048 | 46.048 | 43.270 | 41.940 | 38.889 | 39.302 | 36.641 | 36.279 | 35.916 | 35.554 | 28.138 | 35.385 | 33.692 |
| | | pol | | | | | | | | | | | | | | | |
| 32 | Costa Rica | FREE | 91.831 | 90.020 | 90.020 | 91.493 | 90.768 | 90.575 | 90.575 | 90.575 | 90.938 | 90.575 | 90.938 | 90.938 | 90.525 | 90.525 | 90.887 |
| | | pol | | | | | | | | | | | | | | | |
| 33 | Cote d'Ivoire | FREE | 30.780 | 31.867 | 33.196 | 27.991 | 26.904 | 27.409 | 28.714 | 29.851 | 29.682 | 25.185 | 32.205 | 40.374 | 48.088 | 49.369 | 52.805 |
| | | pol | | | | | | | | | | | | | | | |
| 34 | Croatia | FREE | 77.854 | 76.405 | 75.849 | 77.450 | 79.506 | 80.424 | 79.699 | 78.419 | 79.387 | 79.749 | 79.749 | 79.749 | 79.749 | 79.025 | 80.162 |
| | | pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | |
|----|--------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 35 | Cuba | FREE | 10.714 | 9.989 | 9.214 | 8.439 | 8.439 | 8.608 | 8.608 | 10.081 | 10.444 | 11.362 | 11.555 | 12.280 | 12.473 | 13.584 | 14.139 |
| | | pol | | | | | | | | | | | | | | | |
| 36 | Cyprus | FREE | 93.935 | 93.935 | 92.486 | 91.710 | 91.710 | 91.710 | 91.710 | 91.710 | 91.155 | 91.155 | 89.512 | 89.512 | 88.737 | 89.655 | 90.793 |
| | | pol | | | | | | | | | | | | | | | |
| 37 | Czech Republic | FREE | 85.017 | 85.017 | 88.158 | 91.104 | 91.273 | 93.160 | 93.160 | 93.160 | 92.797 | 92.797 | 92.797 | 92.435 | 91.298 | 92.073 | 92.073 |
| | | pol | | | | | | | | | | | | | | | |
| 38 | Denmark | FREE | 98.357 | 99.444 | 98.720 | 98.720 | 97.802 | 98.164 | 97.802 | 97.246 | 95.966 | 96.884 | 97.440 | 97.440 | 97.440 | 97.440 | 97.440 |
| | | pol | | | | | | | | | | | | | | | |
| 39 | Dominican Republic | FREE | 76.523 | 74.350 | 71.275 | 75.513 | 74.426 | 76.120 | 75.757 | 76.675 | 74.646 | 72.733 | 72.540 | 72.178 | 70.485 | 70.485 | 68.598 |
| | | pol | | | | | | | | | | | | | | | |
| 40 | Ecuador | FREE | 64.529 | 64.167 | 66.855 | 67.410 | 67.410 | 68.186 | 66.879 | 66.231 | 63.864 | 60.915 | 57.386 | 54.698 | 53.974 | 52.694 | 52.694 |
| | | pol | | | | | | | | | | | | | | | |
| 41 | Egypt, Arab Rep. | FREE | 24.250 | 25.336 | 28.235 | 31.882 | 34.517 | 33.718 | 32.245 | 32.245 | 31.544 | 33.112 | 37.954 | 38.325 | 31.307 | 26.860 | 27.636 |
| | | pol | | | | | | | | | | | | | | | |
| 42 | El Salvador | FREE | 73.484 | 72.035 | 70.847 | 70.122 | 72.035 | 71.699 | 71.144 | 70.781 | 71.919 | 73.199 | 73.612 | 74.892 | 74.892 | 73.781 | 69.284 |
| | | pol | | | | | | | | | | | | | | | |
| 43 | Equatorial Guinea | FREE | 19.313 | 16.414 | 16.777 | 15.446 | 12.086 | 12.086 | 11.724 | 10.613 | 10.613 | 10.251 | 10.251 | 10.613 | 10.613 | 10.251 | 10.251 |
| | | pol | | | | | | | | | | | | | | | |
| 44 | Eritrea | FREE | 17.477 | 15.303 | 14.579 | 14.023 | 12.936 | 12.381 | 12.381 | 12.381 | 9.603 | 8.828 | 8.272 | 6.386 | 6.386 | 6.386 | 6.386 |
| | | pol | | | | | | | | | | | | | | | |
| 45 | Estonia | FREE | 88.858 | 88.858 | 89.969 | 92.773 | 94.104 | 94.104 | 93.691 | 93.742 | 93.379 | 93.379 | 94.104 | 94.104 | 94.104 | 94.104 | 93.329 |
| | | pol | | | | | | | | | | | | | | | |
| 46 | Ethiopia | FREE | 35.782 | 35.058 | 34.333 | 32.353 | 33.953 | 32.985 | 32.210 | 31.485 | 30.374 | 22.633 | 20.940 | 20.747 | 20.022 | 20.022 | 16.610 |
| | | pol | | | | | | | | | | | | | | | |
| 47 | Finland | FREE | 98.720 | 99.082 | 98.087 | 99.638 | 99.638 | 99.638 | 99.275 | 99.275 | 99.275 | 99.275 | 98.913 | 98.913 | 98.913 | 98.913 | 98.551 |
| | | pol | | | | | | | | | | | | | | | |
| 48 | France | FREE | 93.742 | 93.017 | 92.435 | 92.073 | 90.962 | 91.155 | 90.599 | 91.904 | 91.904 | 90.986 | 91.710 | 91.710 | 91.348 | 89.537 | 88.039 |
| | | pol | | | | | | | | | | | | | | | |
| 49 | Gabon | FREE | 48.835 | 47.386 | 42.500 | 41.582 | 37.976 | 36.309 | 36.309 | 35.029 | 34.423 | 34.061 | 33.698 | 34.061 | 34.061 | 34.785 | 33.698 |
| | | pol | | | | | | | | | | | | | | | |
| 50 | Gambia, The | FREE | 49.400 | 50.124 | 47.083 | 47.276 | 41.615 | 40.335 | 40.335 | 36.613 | 34.171 | 33.615 | 23.356 | 22.800 | 22.414 | 19.684 | 18.134 |
| | | pol | | | | | | | | | | | | | | | |
| 51 | Georgia | FREE | 51.499 | 51.499 | 52.324 | 55.761 | 57.065 | 56.754 | 51.211 | 49.467 | 53.023 | 55.221 | 57.858 | 60.133 | 61.657 | 62.070 | 61.927 |
| | | pol | | | | | | | | | | | | | | | |
| 52 | Germany | FREE | 93.691 | 93.329 | 95.990 | 96.546 | 95.215 | 94.660 | 94.660 | 94.297 | 94.297 | 94.297 | 94.297 | 94.297 | 93.935 | 93.210 | 92.655 |
| | | pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | |
|----|----------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 53 | Ghana | FREE | 74.497 | 75.221 | 79.163 | 81.655 | 83.930 | 83.568 | 83.930 | 83.930 | 83.930 | 83.206 | 83.206 | 83.206 | 83.206 | 82.119 | 80.839 |
| | | pol | | | | | | | | | | | | | | | |
| 54 | Greece | FREE | 81.320 | 81.320 | 84.097 | 85.984 | 86.515 | 86.346 | 85.621 | 85.066 | 83.373 | 83.373 | 83.373 | 78.612 | 75.689 | 73.878 | 74.965 |
| | | pol | | | | | | | | | | | | | | | |
| 55 | Guatemala | FREE | 52.931 | 51.481 | 50.489 | 51.264 | 52.568 | 54.481 | 53.756 | 53.756 | 53.343 | 53.537 | 54.674 | 53.756 | 53.201 | 53.370 | 52.595 |
| | | pol | | | | | | | | | | | | | | | |
| 56 | Guinea | FREE | 32.495 | 33.582 | 34.524 | 33.481 | 34.037 | 34.399 | 35.174 | 29.487 | 25.953 | 39.169 | 38.058 | 40.330 | 41.881 | 41.518 | 40.600 |
| | | pol | | | | | | | | | | | | | | | |
| 57 | Guinea-Bissau | FREE | 46.986 | 45.899 | 38.837 | 53.699 | 59.435 | 54.742 | 52.663 | 51.382 | 49.184 | 46.859 | 43.960 | 32.486 | 36.935 | 42.774 | 42.362 |
| | | pol | | | | | | | | | | | | | | | |
| 58 | Haiti | FREE | 25.800 | 25.800 | 28.288 | 25.574 | 29.946 | 45.994 | 50.298 | 51.747 | 49.834 | 50.197 | 48.504 | 48.284 | 46.229 | 46.229 | 46.229 |
| | | pol | | | | | | | | | | | | | | | |
| 59 | Honduras | FREE | 63.787 | 63.425 | 62.456 | 62.094 | 62.456 | 60.015 | 59.097 | 56.005 | 48.743 | 49.156 | 49.156 | 47.656 | 46.646 | 45.897 | 43.818 |
| | | pol | | | | | | | | | | | | | | | |
| 60 | Hong Kong SAR, China | FREE | 59.089 | 59.089 | 65.480 | 67.120 | 68.424 | 68.424 | 67.337 | 67.893 | 68.255 | 67.337 | 66.613 | 65.888 | 64.439 | 64.052 | 61.854 |
| | | pol | | | | | | | | | | | | | | | |
| 61 | Hungary | FREE | 87.795 | 88.882 | 88.520 | 90.186 | 90.742 | 90.186 | 90.186 | 89.462 | 86.370 | 83.641 | 82.310 | 82.672 | 81.948 | 76.649 | 73.533 |
| | | pol | | | | | | | | | | | | | | | |
| 62 | India | FREE | 68.506 | 69.956 | 73.149 | 74.842 | 75.566 | 75.566 | 75.204 | 76.291 | 75.566 | 74.842 | 75.035 | 74.117 | 74.310 | 74.723 | 73.443 |
| | | pol | | | | | | | | | | | | | | | |
| 63 | Indonesia | FREE | 56.200 | 56.563 | 55.812 | 58.912 | 61.693 | 61.693 | 62.804 | 62.973 | 62.055 | 63.504 | 63.504 | 63.504 | 62.949 | 62.949 | 63.724 |
| | | pol | | | | | | | | | | | | | | | |
| 64 | Iran, Islamic Rep. | FREE | 27.662 | 26.575 | 25.657 | 24.208 | 23.433 | 22.735 | 23.290 | 20.510 | 18.235 | 15.986 | 15.431 | 16.155 | 16.931 | 16.931 | 16.931 |
| | | pol | | | | | | | | | | | | | | | |
| 65 | Iraq | FREE | 3.142 | 13.650 | 27.071 | 27.264 | 30.727 | 28.196 | 29.476 | 30.756 | 31.000 | 30.082 | 30.807 | 29.307 | 28.995 | 28.582 | 30.468 |
| | | pol | | | | | | | | | | | | | | | |
| 66 | Ireland | FREE | 92.773 | 92.773 | 96.353 | 96.353 | 95.990 | 95.577 | 95.577 | 95.577 | 95.215 | 95.215 | 95.215 | 95.215 | 95.215 | 94.853 | 93.935 |
| | | pol | | | | | | | | | | | | | | | |
| 67 | Israel | FREE | 83.671 | 83.309 | 81.759 | 81.759 | 82.288 | 83.206 | 82.119 | 82.844 | 81.513 | 81.706 | 80.233 | 80.595 | 80.595 | 79.315 | 78.952 |
| | | pol | | | | | | | | | | | | | | | |
| 68 | Italy | FREE | 87.870 | 86.058 | 85.334 | 84.778 | 87.727 | 87.508 | 86.421 | 84.947 | 83.810 | 84.172 | 83.952 | 83.902 | 85.452 | 84.677 | 84.677 |
| | | pol | | | | | | | | | | | | | | | |
| 69 | Jamaica | FREE | 78.456 | 79.543 | 80.267 | 78.987 | 81.043 | 81.043 | 83.368 | 81.895 | 81.170 | 79.839 | 79.839 | 80.202 | 80.977 | 80.615 | 80.808 |
| | | pol | | | | | | | | | | | | | | | |
| 70 | Japan | FREE | 89.194 | 88.832 | 88.107 | 88.882 | 87.964 | 87.964 | 87.964 | 87.964 | 87.964 | 87.602 | 86.877 | 86.515 | 87.626 | 88.595 | 90.894 |
| | | pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | |
|----|---------------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 71 | Jordan | FREE | 36,648 | 37,372 | 39,285 | 40,758 | 43,084 | 42,140 | 41,002 | 39,698 | 36,817 | 36,817 | 37,372 | 35,005 | 36,505 | 37,060 | 36,336 |
| | | pol | | | | | | | | | | | | | | | |
| 72 | Kazakhstan | FREE | 29,976 | 29,614 | 28,696 | 30,583 | 30,995 | 30,271 | 28,720 | 28,501 | 26,665 | 26,083 | 24,441 | 23,523 | 22,967 | 22,774 | 22,412 |
| | | pol | | | | | | | | | | | | | | | |
| 73 | Kenya | FREE | 44,540 | 47,438 | 58,278 | 59,920 | 59,558 | 57,865 | 53,433 | 52,078 | 52,054 | 55,440 | 55,634 | 53,073 | 52,182 | 50,708 | 50,708 |
| | | pol | | | | | | | | | | | | | | | |
| 74 | Korea, Dem. People's Rep. | FREE | 3,775 | 3,050 | 3,413 | 3,413 | 3,413 | 3,606 | 4,161 | 3,799 | 3,968 | 3,968 | 4,886 | 5,079 | 5,079 | 5,079 | 4,717 |
| | | pol | | | | | | | | | | | | | | | |
| 75 | Korea, Rep. | FREE | 81,190 | 81,190 | 80,854 | 82,817 | 82,817 | 83,928 | 83,373 | 83,373 | 82,648 | 82,648 | 83,010 | 82,648 | 81,511 | 80,735 | 79,817 |
| | | pol | | | | | | | | | | | | | | | |
| 76 | Kosovo | FREE | 35,775 | 35,775 | 36,609 | 29,787 | 30,950 | 35,446 | 35,446 | 41,215 | 45,376 | 46,876 | 46,876 | 47,651 | 48,427 | 54,744 | 55,326 |
| | | pol | | | | | | | | | | | | | | | |
| 77 | Kuwait | FREE | 46,279 | 45,192 | 44,830 | 45,554 | 46,110 | 48,721 | 48,359 | 48,359 | 47,634 | 46,523 | 45,798 | 43,692 | 42,362 | 40,811 | 39,674 |
| | | pol | | | | | | | | | | | | | | | |
| 78 | Kyrgyz Republic | FREE | 33,582 | 33,582 | 34,693 | 37,010 | 43,907 | 42,265 | 40,985 | 36,630 | 35,611 | 36,968 | 39,849 | 39,386 | 39,024 | 38,468 | 38,468 |
| | | pol | | | | | | | | | | | | | | | |
| 79 | Lao PDR | FREE | 16,898 | 16,173 | 16,147 | 16,651 | 16,651 | 15,927 | 14,840 | 15,565 | 15,202 | 14,789 | 14,789 | 14,234 | 15,009 | 15,009 | 14,647 |
| | | pol | | | | | | | | | | | | | | | |
| 80 | Latvia | FREE | 87,720 | 88,083 | 88,083 | 87,914 | 89,025 | 87,938 | 86,800 | 84,938 | 84,163 | 83,245 | 82,327 | 82,690 | 82,327 | 83,102 | 84,602 |
| | | pol | | | | | | | | | | | | | | | |
| 81 | Lebanon | FREE | 30,817 | 32,629 | 34,803 | 36,909 | 46,250 | 50,697 | 48,784 | 50,697 | 51,977 | 52,702 | 51,422 | 50,311 | 48,811 | 45,787 | 45,012 |
| | | pol | | | | | | | | | | | | | | | |
| 82 | Lesotho | FREE | 69,374 | 70,098 | 70,149 | 70,149 | 71,260 | 69,036 | 67,200 | 67,200 | 66,425 | 66,062 | 65,287 | 68,337 | 67,975 | 66,837 | 63,451 |
| | | pol | | | | | | | | | | | | | | | |
| 83 | Liberia | FREE | 24,133 | 25,583 | 25,648 | 40,227 | 51,170 | 51,945 | 54,000 | 54,725 | 54,674 | 54,312 | 57,312 | 56,587 | 55,307 | 54,365 | 56,857 |
| | | pol | | | | | | | | | | | | | | | |
| 84 | Libya | FREE | 11,195 | 9,383 | 8,465 | 7,883 | 9,164 | 9,164 | 9,164 | 9,164 | 9,164 | 21,482 | 27,284 | 44,815 | 39,498 | 25,918 | 23,088 |
| | | pol | | | | | | | | | | | | | | | |
| 85 | Lithuania | FREE | 89,826 | 89,826 | 90,382 | 88,056 | 89,943 | 89,943 | 89,943 | 89,631 | 88,713 | 88,351 | 87,988 | 87,988 | 87,626 | 89,126 | 89,851 |
| | | pol | | | | | | | | | | | | | | | |
| 86 | Macedonia, FYR | FREE | 61,927 | 60,840 | 62,121 | 61,514 | 61,633 | 60,133 | 60,133 | 60,495 | 61,657 | 61,370 | 60,089 | 59,171 | 58,809 | 54,479 | 51,868 |
| | | pol | | | | | | | | | | | | | | | |
| 87 | Madagascar | FREE | 62,283 | 61,196 | 60,377 | 59,964 | 59,046 | 58,996 | 57,133 | 53,510 | 40,124 | 38,936 | 37,849 | 36,713 | 44,364 | 51,264 | 53,925 |
| | | pol | | | | | | | | | | | | | | | |
| 88 | Malawi | FREE | 53,513 | 55,324 | 56,150 | 55,348 | 56,073 | 55,904 | 54,986 | 54,986 | 57,674 | 55,862 | 56,512 | 59,123 | 59,848 | 62,072 | 63,739 |
| | | pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | | |
|-----|-------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 89 | Malaysia | FREE | 39.900 | 40.625 | 42.291 | 46.402 | 45.871 | 45.847 | 44.735 | 46.984 | 46.984 | 46.984 | 47.346 | 46.984 | 46.428 | 45.291 | 44.011 | 42.511 |
| | | pol | | | | | | | | | | | | | | | | |
| 90 | Mali | FREE | 77.007 | 75.920 | 78.480 | 78.337 | 77.562 | 76.475 | 75.726 | 74.978 | 76.115 | 76.671 | 68.700 | 39.583 | 53.330 | 53.330 | 53.330 | 53.886 |
| | | pol | | | | | | | | | | | | | | | | |
| 91 | Mauritania | FREE | 42.748 | 41.661 | 36.867 | 38.435 | 42.157 | 47.557 | 51.264 | 38.022 | 40.659 | 41.022 | 42.278 | 42.471 | 41.746 | 39.278 | 37.998 | |
| | | pol | | | | | | | | | | | | | | | | |
| 92 | Mauritius | FREE | 86.658 | 85.933 | 85.208 | 86.489 | 88.039 | 86.708 | 87.483 | 87.121 | 86.759 | 86.396 | 86.034 | 86.034 | 86.034 | 86.396 | 86.396 | |
| | | pol | | | | | | | | | | | | | | | | |
| 93 | Mexico | FREE | 74.815 | 75.540 | 73.366 | 70.417 | 73.298 | 69.549 | 66.214 | 62.516 | 61.016 | 59.130 | 59.492 | 58.717 | 57.992 | 57.074 | 57.630 | |
| | | pol | | | | | | | | | | | | | | | | |
| 94 | Moldova | FREE | 56.664 | 55.215 | 54.490 | 51.945 | 51.945 | 51.582 | 51.220 | 50.394 | 56.343 | 59.922 | 61.616 | 61.835 | 60.555 | 59.417 | 57.092 | |
| | | pol | | | | | | | | | | | | | | | | |
| 95 | Mongolia | FREE | 78.537 | 78.537 | 79.455 | 79.042 | 79.093 | 77.593 | 76.506 | 77.450 | 79.337 | 80.061 | 80.061 | 80.836 | 80.836 | 80.836 | 80.836 | |
| | | pol | | | | | | | | | | | | | | | | |
| 96 | Morocco | FREE | 44.417 | 42.968 | 42.243 | 44.634 | 43.716 | 44.103 | 43.328 | 42.603 | 40.328 | 40.328 | 41.828 | 42.048 | 41.272 | 41.272 | 40.717 | |
| | | pol | | | | | | | | | | | | | | | | |
| 97 | Mozambique | FREE | 59.797 | 60.522 | 60.522 | 61.246 | 60.667 | 61.778 | 62.527 | 62.720 | 60.445 | 60.807 | 61.170 | 60.083 | 59.889 | 59.165 | 57.109 | |
| | | pol | | | | | | | | | | | | | | | | |
| 98 | Myanmar | FREE | 9.383 | 9.021 | 7.664 | 6.333 | 6.333 | 5.195 | 5.002 | 4.589 | 4.952 | 10.538 | 21.127 | 29.616 | 28.529 | 27.974 | 30.080 | |
| | | pol | | | | | | | | | | | | | | | | |
| 99 | Namibia | FREE | 74.622 | 75.709 | 77.521 | 75.827 | 77.274 | 77.274 | 74.494 | 75.050 | 75.219 | 76.137 | 76.137 | 76.137 | 75.412 | 75.412 | 76.330 | |
| | | pol | | | | | | | | | | | | | | | | |
| 100 | Nepal | FREE | 47.397 | 47.397 | 42.291 | 36.951 | 35.075 | 46.639 | 47.195 | 49.571 | 49.571 | 49.689 | 48.822 | 49.134 | 51.459 | 52.597 | 53.541 | |
| | | pol | | | | | | | | | | | | | | | | |
| 101 | Netherlands | FREE | 96.353 | 97.440 | 98.913 | 98.357 | 97.633 | 97.633 | 97.633 | 97.271 | 97.271 | 97.440 | 98.357 | 98.720 | 98.357 | 98.357 | 98.357 | |
| | | pol | | | | | | | | | | | | | | | | |
| 102 | New Zealand | FREE | 98.114 | 97.389 | 96.109 | 95.747 | 95.747 | 95.747 | 95.384 | 95.384 | 95.577 | 94.853 | 95.215 | 94.491 | 94.128 | 93.766 | 94.903 | |
| | | pol | | | | | | | | | | | | | | | | |
| 103 | Nicaragua | FREE | 66.778 | 67.865 | 63.275 | 63.106 | 63.831 | 66.350 | 63.739 | 58.027 | 55.921 | 55.197 | 52.146 | 51.784 | 53.890 | 53.165 | 52.803 | |
| | | pol | | | | | | | | | | | | | | | | |
| 104 | Niger | FREE | 53.295 | 52.208 | 55.517 | 58.642 | 57.918 | 57.656 | 54.852 | 52.292 | 43.369 | 46.773 | 57.263 | 56.539 | 56.901 | 56.176 | 53.877 | |
| | | pol | | | | | | | | | | | | | | | | |
| 105 | Nigeria | FREE | 47.972 | 47.972 | 48.890 | 48.165 | 50.465 | 52.300 | 50.168 | 48.837 | 48.231 | 51.281 | 51.914 | 50.028 | 49.303 | 47.922 | 51.798 | |
| | | pol | | | | | | | | | | | | | | | | |
| 106 | Norway | FREE | 99.638 | 99.638 | 99.275 | 99.275 | 98.913 | 99.275 | 99.275 | 99.275 | 99.275 | 99.275 | 99.275 | 99.275 | 99.275 | 99.275 | 99.638 | 100.000 |
| | | pol | | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | | | |
|-----|--------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 107 | Oman | FREE | 29.305 | 28.942 | 26.566 | 30.392 | 30.585 | 30.585 | 30.585 | 30.585 | 29.810 | 29.810 | 29.810 | 29.810 | 29.810 | 29.254 | 29.254 | 29.254 | 28.479 |
| | | pol | | | | | | | | | | | | | | | | | |
| 108 | Pakistan | FREE | 38.292 | 37.930 | 38.316 | 37.761 | 37.592 | 36.505 | 32.295 | 42.632 | 44.518 | 44.569 | 43.651 | 43.095 | 42.952 | 43.095 | 43.095 | 43.095 | 42.177 |
| | | pol | | | | | | | | | | | | | | | | | |
| 109 | Panama | FREE | 79.701 | 75.716 | 74.967 | 75.329 | 76.996 | 76.634 | 76.634 | 76.634 | 76.634 | 75.909 | 75.184 | 73.904 | 74.047 | 75.134 | 75.134 | 75.134 | 77.501 |
| | | pol | | | | | | | | | | | | | | | | | |
| 110 | Papua New Guinea | FREE | 77.419 | 77.419 | 73.645 | 69.316 | 68.954 | 68.568 | 67.742 | 67.691 | 67.329 | 66.604 | 66.242 | 65.880 | 66.655 | 65.880 | 65.880 | 65.880 | 65.880 |
| | | pol | | | | | | | | | | | | | | | | | |
| 111 | Paraguay | FREE | 55.800 | 56.163 | 59.534 | 58.396 | 57.309 | 57.529 | 57.336 | 58.886 | 58.524 | 58.524 | 58.161 | 57.555 | 56.780 | 59.584 | 59.584 | 59.584 | 58.666 |
| | | pol | | | | | | | | | | | | | | | | | |
| 112 | Peru | FREE | 74.571 | 74.934 | 71.429 | 72.011 | 71.480 | 70.199 | 70.199 | 70.199 | 69.787 | 69.424 | 69.011 | 68.649 | 67.562 | 67.924 | 67.924 | 67.924 | 68.287 |
| | | pol | | | | | | | | | | | | | | | | | |
| 113 | Philippines | FREE | 75.052 | 73.603 | 73.241 | 72.204 | 68.260 | 66.736 | 61.194 | 59.332 | 58.170 | 62.720 | 63.133 | 63.326 | 63.326 | 63.326 | 63.326 | 63.326 | 64.657 |
| | | pol | | | | | | | | | | | | | | | | | |
| 114 | Poland | FREE | 89.051 | 88.689 | 88.882 | 90.406 | 90.044 | 88.764 | 89.875 | 89.875 | 89.512 | 89.512 | 89.150 | 88.788 | 89.150 | 88.425 | 88.425 | 88.425 | 86.252 |
| | | pol | | | | | | | | | | | | | | | | | |
| 115 | Portugal | FREE | 96.353 | 96.715 | 96.715 | 96.159 | 96.159 | 95.435 | 95.990 | 95.215 | 94.853 | 94.853 | 94.853 | 94.491 | 94.491 | 94.491 | 94.491 | 94.491 | 94.853 |
| | | pol | | | | | | | | | | | | | | | | | |
| 116 | Puerto Rico | FREE | 89.845 | 89.845 | 89.845 | 89.845 | 92.345 | 92.345 | 92.345 | 92.345 | 92.345 | 90.678 | 89.845 | 89.845 | 89.845 | 89.845 | 89.845 | 89.845 | 90.678 |
| | | pol | | | | | | | | | | | | | | | | | |
| 117 | Qatar | FREE | 29.441 | 29.441 | 29.853 | 32.102 | 32.708 | 32.346 | 32.759 | 32.396 | 32.396 | 32.034 | 32.034 | 32.034 | 32.034 | 31.309 | 31.309 | 31.309 | 30.172 |
| | | pol | | | | | | | | | | | | | | | | | |
| 118 | Romania | FREE | 75.151 | 71.890 | 72.446 | 68.765 | 71.596 | 74.644 | 74.644 | 76.557 | 76.919 | 77.281 | 76.919 | 75.731 | 77.694 | 78.368 | 78.368 | 78.368 | 78.368 |
| | | pol | | | | | | | | | | | | | | | | | |
| 119 | Russian Federation | FREE | 41.712 | 41.349 | 40.212 | 34.111 | 33.244 | 31.602 | 29.326 | 28.189 | 25.747 | 26.109 | 26.303 | 25.192 | 24.467 | 22.800 | 22.800 | 22.800 | 22.245 |
| | | pol | | | | | | | | | | | | | | | | | |
| 120 | Rwanda | FREE | 22.673 | 21.948 | 26.986 | 27.399 | 28.316 | 28.652 | 29.065 | 29.790 | 29.208 | 25.604 | 25.218 | 25.025 | 26.355 | 25.800 | 25.800 | 25.800 | 25.025 |
| | | pol | | | | | | | | | | | | | | | | | |
| 121 | Saudi Arabia | FREE | 15.231 | 15.231 | 13.680 | 15.038 | 16.393 | 17.310 | 16.948 | 15.811 | 15.811 | 15.448 | 14.337 | 14.699 | 14.699 | 13.613 | 13.613 | 13.613 | 13.613 |
| | | pol | | | | | | | | | | | | | | | | | |
| 122 | Senegal | FREE | 69.376 | 69.738 | 74.286 | 72.305 | 71.361 | 70.274 | 66.499 | 64.275 | 65.362 | 64.224 | 65.311 | 69.861 | 72.303 | 71.385 | 71.385 | 71.385 | 72.110 |
| | | pol | | | | | | | | | | | | | | | | | |
| 123 | Serbia | FREE | 73.212 | 73.212 | 70.331 | 72.656 | 73.019 | 73.019 | 73.019 | 74.468 | 76.523 | 75.799 | 75.436 | 75.074 | 73.987 | 73.506 | 73.506 | 73.506 | 70.726 |
| | | pol | | | | | | | | | | | | | | | | | |
| 124 | Sierra Leone | FREE | 53.174 | 54.261 | 55.010 | 54.455 | 56.653 | 55.566 | 58.978 | 60.116 | 60.840 | 62.290 | 64.176 | 66.282 | 64.033 | 61.616 | 61.616 | 61.616 | 61.253 |
| | | pol | | | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | | |
|-----|----------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 125 | Singapore | FREE | 42.267 | 42.992 | 43.934 | 46.712 | 45.069 | 44.514 | 44.876 | 44.320 | 44.320 | 44.683 | 47.344 | 47.344 | 46.789 | 46.789 | 46.789 | 46.789 |
| | | pol | | | | | | | | | | | | | | | | |
| 126 | Slovak Republic | FREE | 84.967 | 84.967 | 87.189 | 89.438 | 89.993 | 89.269 | 88.906 | 88.906 | 88.713 | 89.075 | 89.824 | 89.462 | 88.544 | 87.988 | 86.489 | 86.489 |
| | | pol | | | | | | | | | | | | | | | | |
| 127 | Slovenia | FREE | 91.131 | 91.131 | 91.131 | 90.213 | 90.406 | 89.126 | 88.764 | 88.401 | 88.401 | 88.401 | 88.764 | 88.764 | 88.401 | 89.126 | 89.901 | 89.901 |
| | | pol | | | | | | | | | | | | | | | | |
| 128 | Somalia | FREE | 19.662 | 19.662 | 17.800 | 17.800 | 17.851 | 10.565 | 9.789 | 9.234 | 8.678 | 8.678 | 8.678 | 9.958 | 11.045 | 11.045 | 11.045 | 11.045 |
| | | pol | | | | | | | | | | | | | | | | |
| 129 | South Africa | FREE | 86.295 | 86.658 | 85.933 | 85.571 | 85.208 | 83.878 | 83.153 | 81.873 | 80.955 | 80.037 | 78.900 | 79.069 | 77.400 | 77.762 | 75.926 | 75.926 |
| | | pol | | | | | | | | | | | | | | | | |
| 130 | South Sudan | FREE | | | | | | | | | | | 37.568 | 35.732 | 29.010 | 23.417 | 21.412 | 21.412 |
| | | pol | | | | | | | | | | | | | | | | |
| 131 | Spain | FREE | 92.437 | 91.350 | 89.488 | 89.851 | 91.710 | 92.123 | 91.761 | 92.536 | 92.899 | 92.536 | 91.449 | 90.312 | 90.312 | 90.312 | 89.756 | 89.756 |
| | | pol | | | | | | | | | | | | | | | | |
| 132 | Sri Lanka | FREE | 58.205 | 57.843 | 58.203 | 56.923 | 53.780 | 49.114 | 46.696 | 45.972 | 46.554 | 41.204 | 40.480 | 38.424 | 37.869 | 41.661 | 52.063 | 52.063 |
| | | pol | | | | | | | | | | | | | | | | |
| 133 | Sudan | FREE | 9.789 | 9.427 | 12.062 | 11.094 | 13.318 | 16.511 | 16.511 | 17.236 | 15.956 | 17.506 | 13.345 | 13.538 | 13.538 | 11.533 | 11.171 | 11.171 |
| | | pol | | | | | | | | | | | | | | | | |
| 134 | Suriname | FREE | 82.600 | 85.498 | 84.774 | 84.242 | 81.168 | 80.030 | 80.806 | 80.806 | 80.806 | 80.806 | 80.443 | 78.438 | 78.076 | 78.438 | 78.658 | 78.658 |
| | | pol | | | | | | | | | | | | | | | | |
| 135 | Swaziland | FREE | 31.836 | 30.749 | 22.040 | 21.990 | 22.908 | 24.458 | 24.458 | 24.458 | 25.013 | 24.458 | 22.545 | 22.183 | 21.265 | 19.067 | 18.705 | 18.705 |
| | | pol | | | | | | | | | | | | | | | | |
| 136 | Sweden | FREE | 99.444 | 99.444 | 99.638 | 99.275 | 98.913 | 98.913 | 98.913 | 99.275 | 98.913 | 99.275 | 99.275 | 99.275 | 98.720 | 98.357 | 98.913 | 98.913 |
| | | pol | | | | | | | | | | | | | | | | |
| 137 | Switzerland | FREE | 99.275 | 99.638 | 98.913 | 98.913 | 97.995 | 97.633 | 96.302 | 96.302 | 95.747 | 96.109 | 96.109 | 96.109 | 95.747 | 95.747 | 95.747 | 95.747 |
| | | pol | | | | | | | | | | | | | | | | |
| 138 | Syrian Arab Republic | FREE | 13.125 | 13.125 | 12.594 | 12.787 | 13.149 | 13.705 | 13.705 | 13.705 | 13.342 | 11.531 | 10.007 | 8.869 | 6.065 | 4.734 | 4.734 | 4.734 |
| | | pol | | | | | | | | | | | | | | | | |
| 139 | Tajikistan | FREE | 28.773 | 29.860 | 30.053 | 29.665 | 29.665 | 27.972 | 27.829 | 27.054 | 27.054 | 26.136 | 26.136 | 24.662 | 23.938 | 22.245 | 16.364 | 16.364 |
| | | pol | | | | | | | | | | | | | | | | |
| 140 | Tanzania | FREE | 58.583 | 57.496 | 57.133 | 57.496 | 57.133 | 58.220 | 57.496 | 57.496 | 57.445 | 62.509 | 61.785 | 61.446 | 60.917 | 59.780 | 56.807 | 56.807 |
| | | pol | | | | | | | | | | | | | | | | |
| 141 | Thailand | FREE | 72.103 | 71.016 | 70.485 | 65.364 | 60.772 | 39.146 | 41.329 | 44.623 | 43.174 | 42.787 | 49.595 | 49.646 | 46.216 | 30.749 | 29.974 | 29.974 |
| | | pol | | | | | | | | | | | | | | | | |
| 142 | Timor-Leste | FREE | 75.289 | 72.753 | 71.060 | 65.913 | 66.932 | 63.278 | 65.746 | 66.471 | 66.471 | 66.471 | 66.471 | 67.246 | 67.246 | 68.357 | 68.357 | 68.357 |
| | | pol | | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | |
|-----|----------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 143 | Togo | FREE | 32,056 | 30,607 | 31,643 | 30,387 | 27,172 | 29,614 | 36,657 | 36,487 | 39,511 | 40,405 | 41,373 | 42,410 | 46,158 | 46,883 | 48,525 |
| | | pol | | | | | | | | | | | | | | | |
| 144 | Trinidad and Tobago | FREE | 75,869 | 75,869 | 76,231 | 74,731 | 77,123 | 81,477 | 82,253 | 82,253 | 81,890 | 82,303 | 81,385 | 81,748 | 81,023 | 81,023 | 81,748 |
| 145 | Tunisia | FREE | 27,609 | 26,885 | 26,329 | 24,687 | 23,136 | 23,861 | 22,723 | 21,636 | 21,636 | 33,955 | 57,430 | 57,287 | 62,096 | 71,513 | 71,008 |
| | | pol | | | | | | | | | | | | | | | |
| 146 | Turkey | FREE | 53,346 | 54,433 | 59,655 | 63,208 | 63,065 | 62,340 | 63,478 | 62,560 | 59,922 | 59,560 | 59,417 | 56,132 | 54,490 | 49,099 | 45,737 |
| | | pol | | | | | | | | | | | | | | | |
| 147 | Turkmenistan | FREE | 7,446 | 6,359 | 4,886 | 4,886 | 4,330 | 4,330 | 6,553 | 7,690 | 8,439 | 8,439 | 7,883 | 8,246 | 8,246 | 7,328 | 5,272 |
| | | pol | | | | | | | | | | | | | | | |
| 148 | Uganda | FREE | 46,116 | 46,478 | 48,584 | 46,461 | 47,067 | 48,205 | 47,649 | 47,287 | 47,287 | 46,200 | 44,819 | 42,401 | 41,239 | 40,321 | 39,959 |
| | | pol | | | | | | | | | | | | | | | |
| 149 | Ukraine | FREE | 47,783 | 47,421 | 49,351 | 54,083 | 65,285 | 66,060 | 65,555 | 66,060 | 64,973 | 60,333 | 55,203 | 52,010 | 52,491 | 59,290 | 58,734 |
| | | pol | | | | | | | | | | | | | | | |
| 150 | United Arab Emirates | FREE | 29,394 | 29,032 | 26,786 | 28,766 | 27,679 | 29,566 | 29,979 | 30,365 | 29,590 | 29,228 | 26,836 | 25,001 | 24,445 | 23,720 | 22,945 |
| | | pol | | | | | | | | | | | | | | | |
| 151 | UK | FREE | 94,710 | 94,348 | 94,491 | 94,128 | 93,573 | 95,266 | 94,348 | 94,348 | 93,792 | 93,623 | 93,068 | 92,899 | 92,536 | 92,174 | 91,063 |
| | | pol | | | | | | | | | | | | | | | |
| 152 | USA | FREE | 91,636 | 93,085 | 92,191 | 92,773 | 92,554 | 92,411 | 92,604 | 92,604 | 92,967 | 92,604 | 92,049 | 90,742 | 89,824 | 90,186 | 88,131 |
| | | pol | | | | | | | | | | | | | | | |
| 153 | Uruguay | FREE | 85,595 | 87,044 | 85,957 | 88,425 | 90,143 | 90,143 | 91,592 | 91,954 | 91,954 | 91,592 | 91,592 | 91,592 | 93,092 | 92,729 | 93,092 |
| | | pol | | | | | | | | | | | | | | | |
| 154 | Uzbekistan | FREE | 14,724 | 15,448 | 15,086 | 12,499 | 7,253 | 6,891 | 6,528 | 6,891 | 6,722 | 6,359 | 6,359 | 6,359 | 6,359 | 6,359 | 5,804 |
| | | pol | | | | | | | | | | | | | | | |
| 155 | Venezuela, RB | FREE | 51,853 | 51,853 | 50,403 | 50,739 | 46,798 | 44,472 | 42,392 | 40,893 | 38,424 | 38,088 | 37,533 | 35,258 | 33,396 | 31,872 | 31,949 |
| | | pol | | | | | | | | | | | | | | | |
| 156 | Vietnam | FREE | 16,509 | 16,509 | 17,064 | 19,818 | 21,654 | 20,953 | 20,591 | 21,509 | 20,591 | 19,673 | 19,118 | 19,118 | 19,168 | 19,530 | 19,893 |
| | | pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.1 (continued)

| | | | | | | | | | | | | | | | | | |
|-----|--------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 157 | West Bank and Gaza | FREE | 20.942 | 27.140 | 25.758 | 25.034 | 29.970 | 30.965 | 25.253 | 24.647 | 24.790 | 32.461 | 31.628 | 30.465 | 31.628 | 31.298 | 30.465 |
| | | pol | | | | | | | | | | | | | | | |
| 158 | Yemen, Rep. | FREE | 30.754 | 31.478 | 33.101 | 31.509 | 29.649 | 31.705 | 31.898 | 32.311 | 27.012 | 27.012 | 24.469 | 26.887 | 26.937 | 24.351 | 18.083 |
| | | pol | | | | | | | | | | | | | | | |
| 159 | Zambia | FREE | 49.569 | 49.569 | 51.170 | 52.087 | 51.312 | 53.638 | 54.051 | 54.969 | 55.500 | 54.532 | 58.188 | 57.050 | 54.362 | 55.500 | 54.775 |
| | | pol | | | | | | | | | | | | | | | |
| 160 | Zimbabwe | FREE | 19.658 | 19.296 | 18.740 | 17.603 | 15.743 | 14.412 | 15.549 | 15.668 | 20.192 | 22.996 | 23.527 | 28.413 | 31.386 | 29.937 | 32.159 |
| | | pol | | | | | | | | | | | | | | | |

Source: Author's own calculations based on Freedom House (2018a, b)

See Freedom House (2018a)

Methodic note for CL aggregate scores: index year 2017 = calendar year 2016 (estimation)

<https://freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores#UuErFLQo71I>

See Freedom House (2018b)

Methodic note for FOTP total scores: index year 2017 = calendar year 2016 (estimation)

<https://freedomhouse.org/report-types/freedom-press>

Methodic note:

Freedom of the Press was turned, higher scores with the Freedom of the Press are lower scores in the tabulation here (see Chapter 2)

Aggregation measures of the indicators used:

33.33%: Political Rights (FH)

33.33%: Civil Liberties (FH)

33.33%: Freedom of the Press (FH)

Status: April 30, 2018

Table A.2.2 Economic freedom. Scores transformed (rescaled) to 0–100:
 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Afghanistan | FREE eco | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 | 54.273 |
| 2 Albania | FREE eco | 71.618 | 70.386 | 69.943 | 72.309 | 73.301 | 73.910 | 75.121 | 76.615 | 74.907 | 75.300 | 75.573 | 77.822 | 77.482 | 77.593 |
| 3 Algeria | FREE eco | 58.951 | 59.663 | 60.154 | 61.813 | 59.906 | 59.262 | 59.592 | 59.160 | 56.609 | 55.233 | 54.946 | 55.449 | 53.469 | 54.135 |
| 4 Angola | FREE eco | 44.869 | 44.869 | 44.869 | 48.297 | 49.670 | 50.020 | 54.047 | 55.695 | 53.712 | 54.643 | 54.812 | 54.381 | 55.961 | 56.294 |
| 5 Argentina | FREE eco | 64.812 | 64.351 | 61.280 | 62.713 | 63.645 | 62.450 | 61.232 | 58.826 | 59.049 | 54.058 | 52.303 | 49.179 | 51.023 | 50.857 |
| 6 Armenia | FREE eco | 77.391 | 79.056 | 78.506 | 79.712 | 78.439 | 80.085 | 79.867 | 79.533 | 80.627 | 80.345 | 80.352 | 80.129 | 78.586 | 80.362 |
| 7 Australia | FREE eco | 86.695 | 86.810 | 87.747 | 88.627 | 89.510 | 89.577 | 89.200 | 89.472 | 89.362 | 89.423 | 88.928 | 89.139 | 88.643 | 88.421 |
| 8 Austria | FREE eco | 80.659 | 80.495 | 80.889 | 82.166 | 82.225 | 81.516 | 81.187 | 81.192 | 81.521 | 80.470 | 81.194 | 81.962 | 81.187 | 81.465 |
| 9 Azerbaijan | FREE eco | 63.700 | 63.312 | 62.887 | 62.711 | 63.542 | 64.148 | 65.157 | 65.111 | 66.590 | 67.071 | 66.862 | 68.838 | 68.563 | 68.119 |
| 10 Bahrain | FREE eco | 81.515 | 79.870 | 76.998 | 79.723 | 80.426 | 80.437 | 81.172 | 82.984 | 83.870 | 81.612 | 81.724 | 81.719 | 80.885 | 81.384 |
| 11 Bangladesh | FREE eco | 58.915 | 58.868 | 59.113 | 62.980 | 58.886 | 57.553 | 60.636 | 62.906 | 63.906 | 63.473 | 63.684 | 64.299 | 64.296 | 63.963 |
| 12 Belarus | FREE eco | 44.062 | 47.836 | 51.831 | 52.719 | 52.164 | 50.277 | 49.945 | 54.051 | 53.163 | 54.384 | 53.274 | 55.605 | 55.272 | 54.162 |
| 13 Belgium | FREE eco | 78.651 | 78.766 | 78.606 | 80.051 | 80.385 | 79.506 | 79.619 | 79.109 | 78.280 | 78.336 | 80.085 | 78.659 | 78.437 | 78.104 |
| 14 Benin | FREE eco | 63.274 | 62.454 | 61.667 | 64.134 | 63.983 | 63.222 | 63.932 | 63.660 | 63.721 | 62.140 | 64.500 | 64.005 | 64.023 | 64.301 |
| 15 Bolivia | FREE eco | 71.210 | 70.886 | 66.902 | 66.733 | 63.484 | 62.601 | 64.021 | 61.962 | 62.078 | 62.570 | 61.402 | 60.646 | 58.779 | 59.112 |
| 16 Bosnia and Herzegovina | FREE eco | 56.154 | 58.429 | 60.705 | 66.110 | 66.152 | 65.602 | 65.158 | 67.259 | 68.362 | 68.740 | 69.393 | 69.351 | 68.704 | 68.482 |
| 17 Botswana | FREE eco | 76.208 | 77.419 | 77.032 | 76.210 | 76.529 | 75.116 | 75.458 | 77.206 | 77.462 | 78.069 | 78.515 | 79.673 | 78.833 | 79.554 |
| 18 Brazil | FREE eco | 68.643 | 67.866 | 67.863 | 67.256 | 64.757 | 65.518 | 65.415 | 66.002 | 66.336 | 66.081 | 64.719 | 63.839 | 62.694 | 62.638 |
| 19 Bulgaria | FREE eco | 68.900 | 69.904 | 72.386 | 74.092 | 73.424 | 74.359 | 75.512 | 74.290 | 76.113 | 76.002 | 75.788 | 76.557 | 77.277 | 76.777 |
| 20 Burkina Faso | FREE eco | 64.514 | 64.015 | 63.238 | 62.739 | 63.167 | 63.282 | 65.119 | 65.227 | 66.001 | 65.240 | 65.504 | 65.439 | 64.456 | 64.734 |
| 21 Burundi | FREE eco | 53.250 | 53.576 | 54.555 | 57.113 | 55.733 | 52.896 | 56.624 | 54.542 | 55.980 | 55.093 | 59.619 | 61.005 | 62.880 | 62.602 |
| 22 Cambodia | FREE eco | 73.870 | 72.427 | 71.816 | 69.985 | 69.541 | 69.541 | 69.930 | 69.930 | 70.107 | 69.614 | 71.474 | 70.809 | 71.136 | 72.246 |
| 23 Cameroon | FREE eco | 60.801 | 60.525 | 60.696 | 61.312 | 61.214 | 60.166 | 60.587 | 62.701 | 62.533 | 62.641 | 62.375 | 61.997 | 61.010 | 62.287 |
| 24 Canada | FREE eco | 86.286 | 86.237 | 86.243 | 87.185 | 87.300 | 88.249 | 88.253 | 88.197 | 88.093 | 87.811 | 87.588 | 89.120 | 87.095 | 86.484 |
| 25 Central African Republic | FREE eco | 62.839 | 60.690 | 57.143 | 56.900 | 56.317 | 55.153 | 55.095 | 54.280 | 54.236 | 54.736 | 56.424 | 53.065 | 50.608 | 50.219 |
| 26 Chad | FREE eco | 59.712 | 59.010 | 57.041 | 55.875 | 54.843 | 52.859 | 54.434 | 55.957 | 52.179 | 50.541 | 52.178 | 51.735 | 54.090 | 54.312 |
| 27 Chile | FREE eco | 84.450 | 84.623 | 85.285 | 85.505 | 85.937 | 86.056 | 86.270 | 85.768 | 85.988 | 85.944 | 86.495 | 86.329 | 85.837 | 85.393 |
| 28 China | FREE eco | 62.868 | 61.561 | 62.716 | 63.205 | 63.024 | 63.526 | 63.690 | 62.252 | 63.133 | 63.016 | 63.459 | 63.846 | 64.066 | 63.677 |
| 29 Colombia | FREE eco | 67.782 | 66.334 | 65.392 | 66.761 | 67.844 | 68.794 | 69.937 | 71.931 | 73.753 | 73.753 | 74.587 | 74.381 | 74.610 | 73.500 |

(continued)

Table A.2.2 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 30 Congo, Dem. Rep. | FREE eco 50.628 | 48.996 | 48.833 | 51.390 | 51.934 | 51.825 | 52.478 | 51.756 | 51.258 | 51.208 | 50.104 | 49.897 | 54.624 | 55.401 | 60.950 |
| 31 Congo, Rep. | FREE eco 52.151 | 50.227 | 50.339 | 49.497 | 49.286 | 50.656 | 51.854 | 49.218 | 48.352 | 48.245 | 49.004 | 49.387 | 49.866 | 49.921 | 48.367 |
| 32 Costa Rica | FREE eco 77.442 | 76.130 | 77.813 | 78.790 | 76.811 | 75.725 | 76.946 | 76.179 | 78.533 | 78.704 | 77.714 | 77.931 | 78.206 | 78.317 | 76.985 |
| 33 Cote d'Ivoire | FREE eco 62.531 | 63.359 | 63.346 | 61.111 | 60.064 | 59.835 | 61.479 | 60.980 | 61.756 | 60.819 | 62.068 | 64.610 | 64.455 | 65.288 | 66.952 |
| 34 Croatia | FREE eco 63.746 | 63.961 | 64.003 | 65.327 | 65.597 | 66.584 | 67.465 | 69.196 | 71.448 | 71.500 | 71.395 | 71.658 | 72.322 | 70.991 | 71.157 |
| 35 Cuba | FREE eco 38.957 | 38.180 | 39.401 | 32.519 | 31.743 | 30.522 | 30.966 | 29.634 | 30.744 | 31.410 | 31.632 | 31.853 | 32.852 | 33.074 | 37.625 |
| 36 Cyprus | FREE eco 78.816 | 82.742 | 81.032 | 80.650 | 82.063 | 81.678 | 81.564 | 81.402 | 82.407 | 80.487 | 76.593 | 77.993 | 80.063 | 80.507 | 80.063 |
| 37 Czech Republic | FREE eco 75.489 | 74.939 | 73.825 | 75.096 | 76.413 | 77.019 | 77.523 | 78.017 | 78.567 | 79.160 | 79.280 | 80.654 | 80.821 | 81.209 | 81.205 |
| 38 Denmark | FREE eco 84.093 | 83.703 | 84.714 | 85.205 | 86.093 | 86.824 | 85.949 | 85.504 | 85.566 | 83.418 | 83.852 | 84.668 | 84.616 | 84.061 | 83.955 |
| 39 Dominican Republic | FREE eco 66.243 | 61.801 | 66.050 | 66.227 | 66.885 | 67.167 | 70.665 | 72.418 | 72.361 | 71.655 | 72.357 | 73.572 | 73.079 | 73.079 | 74.133 |
| 40 Ecuador | FREE eco 64.135 | 61.092 | 61.674 | 62.889 | 62.407 | 62.297 | 60.799 | 58.751 | 57.585 | 59.067 | 58.290 | 57.431 | 59.294 | 58.961 | 59.350 |
| 41 Egypt, Arab Rep. | FREE eco 62.679 | 63.334 | 65.188 | 64.343 | 66.043 | 67.448 | 65.973 | 67.290 | 66.420 | 65.537 | 63.000 | 60.967 | 61.808 | 62.252 | 60.365 |
| 42 El Salvador | FREE eco 80.701 | 81.079 | 80.320 | 79.810 | 79.748 | 78.982 | 78.996 | 78.018 | 77.026 | 76.699 | 75.970 | 76.672 | 75.252 | 74.919 | 74.364 |
| 43 Equatorial Guinea | FREE eco 58.935 | 59.156 | 59.156 | 57.159 | 59.046 | 57.270 | 56.937 | 53.940 | 52.719 | 47.503 | 46.948 | 49.279 | 44.839 | 48.502 | 49.945 |
| 44 Eritrea | FREE eco 42.730 | 42.730 | 42.730 | 42.730 | 42.730 | 42.730 | 42.730 | 39.179 | 40.733 | 40.178 | 40.289 | 42.730 | 43.174 | 47.392 | 46.837 |
| 45 Estonia | FREE eco 86.155 | 86.369 | 85.039 | 84.927 | 85.995 | 85.504 | 84.291 | 84.000 | 83.842 | 82.406 | 83.463 | 84.557 | 85.873 | 86.095 | 87.149 |
| 46 Ethiopia | FREE eco 57.222 | 60.386 | 58.499 | 59.150 | 60.974 | 58.242 | 60.859 | 58.881 | 56.098 | 59.216 | 57.501 | 57.453 | 58.666 | 58.666 | 59.332 |
| 47 Finland | FREE eco 83.935 | 83.551 | 82.165 | 83.328 | 84.101 | 83.890 | 83.291 | 83.338 | 83.884 | 82.614 | 82.796 | 83.116 | 82.898 | 82.454 | 83.231 |
| 48 France | FREE eco 72.624 | 73.948 | 73.345 | 73.733 | 75.267 | 76.275 | 75.552 | 75.997 | 75.729 | 74.626 | 74.745 | 75.282 | 74.564 | 74.453 | 75.008 |
| 49 Gabon | FREE eco 62.336 | 62.645 | 61.477 | 63.178 | 62.021 | 61.906 | 62.078 | 60.885 | 61.062 | 60.515 | 61.564 | 62.380 | 63.691 | 64.080 | 63.858 |
| 50 Gambia, The | FREE eco 70.634 | 70.079 | 70.745 | 71.189 | 71.411 | 70.967 | 70.356 | 69.968 | 70.156 | 70.008 | 72.239 | 73.008 | 71.300 | 71.078 | 69.024 |
| 51 Georgia | FREE eco 71.203 | 70.553 | 72.957 | 77.143 | 79.045 | 79.588 | 79.050 | 79.873 | 80.635 | 80.678 | 82.667 | 83.923 | 84.091 | 83.869 | 85.755 |
| 52 Germany | FREE eco 80.845 | 80.462 | 79.957 | 81.183 | 80.530 | 79.984 | 80.200 | 80.751 | 81.629 | 80.968 | 81.912 | 82.463 | 82.793 | 83.126 | 82.793 |
| 53 Ghana | FREE eco 67.608 | 68.433 | 66.283 | 68.504 | 69.396 | 68.737 | 69.620 | 70.132 | 69.742 | 68.723 | 69.600 | 70.502 | 70.489 | 70.489 | 66.715 |
| 54 Greece | FREE eco 72.456 | 72.296 | 72.894 | 72.906 | 72.401 | 72.258 | 71.608 | 71.846 | 69.861 | 67.033 | 68.230 | 67.961 | 64.570 | 64.126 | 65.124 |
| 55 Guatemala | FREE eco 73.147 | 72.356 | 72.301 | 72.677 | 73.509 | 72.413 | 71.864 | 72.752 | 73.633 | 74.111 | 74.754 | 75.584 | 75.357 | 76.134 | 76.800 |
| 56 Guinea | FREE eco 60.985 | 61.818 | 62.539 | 59.986 | 60.930 | 59.986 | 58.987 | 59.431 | 59.376 | 58.876 | 59.098 | 60.266 | 60.196 | 60.862 | 57.699 |

(continued)

Table A.2.2 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 57 Guinea-Bissau | FREE eco 50.795 | 49.973 | 51.643 | 53.280 | 51.589 | 50.809 | 53.431 | 51.671 | 56.381 | 60.229 | 59.750 | 58.066 | 59.597 | 59.486 | 61.872 |
| 58 Haiti | FREE eco 64.097 | 65.029 | 63.094 | 63.810 | 64.596 | 63.971 | 64.967 | 61.978 | 63.134 | 60.780 | 61.295 | 62.936 | 63.996 | 63.996 | 63.053 |
| 59 Honduras | FREE eco 71.168 | 68.555 | 68.936 | 71.843 | 73.004 | 72.294 | 71.530 | 71.580 | 72.128 | 71.586 | 71.037 | 70.860 | 71.571 | 71.737 | 72.347 |
| 60 Hong Kong SAR, China | FREE eco 97.929 | 97.877 | 98.905 | 98.732 | 99.726 | 99.778 | 99.400 | 98.853 | 98.690 | 98.638 | 98.196 | 98.912 | 98.526 | 97.971 | 98.637 |
| 61 Hungary | FREE eco 74.080 | 74.077 | 74.412 | 74.863 | 74.861 | 76.687 | 76.624 | 76.453 | 77.111 | 77.117 | 77.064 | 77.224 | 76.787 | 76.343 | 76.232 |
| 62 India | FREE eco 62.907 | 63.073 | 66.585 | 64.441 | 65.385 | 65.224 | 64.955 | 64.622 | 66.045 | 65.882 | 65.235 | 64.806 | 66.371 | 67.259 | 65.262 |
| 63 Indonesia | FREE eco 64.371 | 61.774 | 63.905 | 63.622 | 64.452 | 64.289 | 65.270 | 68.068 | 68.454 | 68.513 | 69.552 | 70.658 | 70.327 | 71.048 | 72.436 |
| 64 Iran, Islamic Rep. | FREE eco 56.019 | 56.450 | 61.158 | 57.834 | 57.725 | 57.943 | 56.905 | 56.239 | 53.994 | 50.460 | 52.809 | 49.459 | 52.087 | 53.030 | 56.915 |
| 65 Iraq | FREE eco | | | | | | | | | | | | | | |
| 66 Ireland | FREE eco 87.930 | 88.794 | 89.562 | 89.740 | 89.418 | 88.601 | 87.836 | 86.847 | 86.274 | 86.092 | 85.589 | 86.302 | 87.068 | 87.456 | 87.123 |
| 67 Israel | FREE eco 72.608 | 73.409 | 74.456 | 75.074 | 75.242 | 75.965 | 76.360 | 77.395 | 78.002 | 77.723 | 77.278 | 78.545 | 79.874 | 79.985 | 79.430 |
| 68 Italy | FREE eco 74.856 | 75.290 | 76.113 | 73.851 | 73.751 | 73.205 | 71.995 | 73.913 | 72.745 | 71.912 | 72.585 | 73.241 | 73.957 | 73.679 | 74.401 |
| 69 Jamaica | FREE eco 77.769 | 78.092 | 78.041 | 77.653 | 76.174 | 76.013 | 75.681 | 74.270 | 74.544 | 74.973 | 76.733 | 76.079 | 77.286 | 77.175 | 78.285 |
| 70 Japan | FREE eco 80.223 | 77.957 | 79.948 | 83.386 | 82.673 | 82.132 | 81.314 | 81.750 | 81.150 | 81.409 | 80.704 | 81.255 | 81.319 | 81.208 | 79.266 |
| 71 Jordan | FREE eco 74.050 | 74.331 | 76.732 | 74.631 | 76.055 | 74.581 | 75.629 | 77.215 | 78.932 | 79.922 | 80.689 | 79.425 | 79.099 | 78.544 | 77.656 |
| 72 Kazakhstan | FREE eco 66.455 | 65.012 | 67.343 | 71.383 | 71.975 | 72.209 | 71.818 | 71.610 | 72.383 | 74.141 | 73.699 | 74.631 | 74.192 | 74.358 | 77.355 |
| 73 Kenya | FREE eco 70.223 | 68.690 | 71.032 | 71.378 | 71.703 | 69.741 | 70.116 | 69.559 | 69.612 | 70.484 | 69.650 | 70.316 | 69.538 | 70.592 | 68.373 |
| 74 Korea, Dem. People's Rep. | FREE eco 9.878 | 9.878 | 8.879 | 4.440 | 3.330 | 3.330 | 2.220 | 1.110 | 1.110 | 1.110 | 1.665 | 1.110 | 1.443 | 2.553 | 5.438 |
| 75 Korea, Rep. | FREE eco 77.837 | 78.267 | 77.436 | 79.189 | 79.409 | 78.656 | 77.780 | 79.650 | 79.649 | 79.323 | 78.947 | 80.589 | 80.701 | 80.812 | 82.255 |
| 76 Kosovo | FREE eco 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 68.147 | 75.361 |
| 77 Kuwait | FREE eco 77.874 | 73.869 | 74.369 | 76.022 | 76.728 | 76.039 | 75.033 | 75.382 | 73.720 | 72.388 | 72.068 | 71.624 | 70.701 | 70.812 | 72.144 |
| 78 Kyrgyz Republic | FREE eco 67.103 | 67.769 | 66.992 | 71.392 | 71.547 | 71.012 | 71.890 | 69.981 | 69.924 | 69.697 | 69.636 | 71.883 | 71.504 | 70.561 | 71.393 |
| 79 Lao PDR | FREE eco 60.565 | 61.120 | 62.452 | 64.172 | 65.726 | 65.726 | 65.782 | 66.170 | 66.281 | 65.560 | 65.615 | 66.226 | 66.500 | 65.612 | 67.943 |
| 80 Latvia | FREE eco 76.506 | 77.718 | 77.162 | 78.257 | 78.431 | 78.272 | 76.567 | 76.073 | 76.450 | 77.314 | 78.525 | 80.416 | 80.845 | 81.233 | 83.675 |
| 81 Lebanon | FREE eco 70.692 | 70.803 | 70.970 | 71.136 | 72.746 | 72.524 | 71.469 | 72.246 | 72.416 | 71.219 | 70.396 | 70.504 | 70.503 | 70.614 | 67.173 |
| 82 Lesotho | FREE eco 60.086 | 59.143 | 61.141 | 62.891 | 61.296 | 61.937 | 60.388 | 59.772 | 60.146 | 59.538 | 60.858 | 63.324 | 63.325 | 63.880 | 65.711 |
| 83 Liberia | FREE eco 65.539 | 65.539 | 65.539 | 65.539 | 65.539 | 65.539 | 65.539 | 64.485 | 64.651 | 65.817 | 66.205 | 67.925 | 66.242 | 65.965 | 64.244 |
| 84 Libya | FREE eco 45.153 | 43.433 | 44.154 | 44.376 | 46.485 | 47.428 | 50.092 | 48.261 | 47.373 | 45.874 | 45.874 | 45.874 | 46.854 | 46.854 | 46.854 |
| 85 Lithuania | FREE eco 77.689 | 80.493 | 79.221 | 80.432 | 80.701 | 79.824 | 79.923 | 79.654 | 80.372 | 80.592 | 81.850 | 83.546 | 84.544 | 84.822 | 85.155 |

(continued)

Table A.2.2 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | |
|-----|------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 86 | Macedonia, FYR | FREE eco | 66.758 | 64.546 | 66.061 | 68.815 | 70.191 | 71.067 | 71.449 | 74.164 | 75.309 | 77.350 | 76.748 | 77.459 | 76.246 | 76.468 | 78.244 |
| 87 | Madagascar | FREE eco | 67.494 | 64.971 | 65.920 | 68.081 | 67.421 | 67.653 | 68.522 | 69.784 | 67.531 | 69.721 | 70.152 | 69.115 | 69.278 | 68.945 | 66.892 |
| 88 | Malawi | FREE eco | 62.765 | 61.845 | 60.994 | 61.184 | 62.814 | 63.641 | 64.135 | 66.439 | 64.922 | 62.788 | 63.061 | 62.293 | 60.628 | 60.850 | 60.850 |
| 89 | Malaysia | FREE eco | 68.727 | 69.095 | 71.565 | 71.181 | 72.837 | 71.424 | 71.758 | 73.229 | 74.116 | 74.117 | 75.147 | 77.253 | 78.408 | 78.797 | 80.073 |
| 90 | Mali | FREE eco | 64.674 | 62.204 | 63.463 | 63.156 | 63.870 | 62.900 | 63.716 | 63.452 | 63.555 | 63.334 | 63.399 | 63.454 | 64.620 | 64.620 | 64.620 |
| 91 | Mauritania | FREE eco | 67.018 | 68.572 | 67.240 | 63.010 | 61.845 | 63.168 | 62.773 | 60.250 | 60.360 | 60.315 | 59.491 | 59.991 | 59.829 | 60.661 | 60.439 |
| 92 | Mauritius | FREE eco | 74.748 | 74.039 | 78.260 | 77.501 | 81.440 | 83.597 | 83.941 | 85.759 | 86.084 | 87.072 | 86.853 | 86.087 | 86.141 | 85.197 | 85.197 |
| 93 | Mexico | FREE eco | 72.908 | 73.840 | 73.342 | 73.282 | 73.514 | 73.244 | 72.424 | 74.573 | 74.350 | 73.125 | 74.286 | 74.774 | 74.661 | 73.995 | 73.107 |
| 94 | Moldova | FREE eco | 69.912 | 68.303 | 68.469 | 68.857 | 69.517 | 69.726 | 66.701 | 65.600 | 67.363 | 66.315 | 66.327 | 67.979 | 67.600 | 67.544 | 67.877 |
| 95 | Mongolia | FREE eco | 69.071 | 68.405 | 71.650 | 71.650 | 70.949 | 71.910 | 73.098 | 71.708 | 72.029 | 72.322 | 73.467 | 72.893 | 73.277 | 73.388 | 70.835 |
| 96 | Morocco | FREE eco | 64.937 | 64.272 | 63.135 | 61.985 | 65.085 | 64.696 | 66.079 | 67.727 | 68.276 | 67.901 | 67.568 | 66.521 | 67.574 | 68.240 | 68.351 |
| 97 | Mozambique | FREE eco | 64.293 | 62.265 | 59.951 | 58.671 | 60.877 | 61.592 | 60.671 | 61.055 | 62.913 | 63.950 | 61.969 | 61.806 | 60.987 | 60.099 | 58.268 |
| 98 | Myanmar | FREE eco | 43.687 | 44.816 | 44.183 | 45.647 | 43.046 | 42.921 | 43.881 | 42.945 | 43.828 | 48.169 | 50.916 | 55.239 | 54.645 | 55.644 | 57.752 |
| 99 | Namibia | FREE eco | 73.909 | 70.156 | 70.254 | 69.757 | 73.051 | 71.233 | 72.060 | 71.895 | 70.594 | 71.184 | 70.623 | 70.885 | 69.853 | 71.130 | 71.463 |
| 100 | Nepal | FREE eco | 59.319 | 58.826 | 63.399 | 65.654 | 63.812 | 62.830 | 61.405 | 62.978 | 61.100 | 61.155 | 62.572 | 62.895 | 63.778 | 63.557 | 65.887 |
| 101 | Netherlands | FREE eco | 83.618 | 83.508 | 82.512 | 83.518 | 83.465 | 84.193 | 83.209 | 82.317 | 82.694 | 81.700 | 82.083 | 83.287 | 83.010 | 83.509 | 84.175 |
| 102 | New Zealand | FREE eco | 91.632 | 91.582 | 91.591 | 90.445 | 90.819 | 90.485 | 89.575 | 90.011 | 91.319 | 91.643 | 91.146 | 91.198 | 91.698 | 91.420 | 92.585 |
| 103 | Nicaragua | FREE eco | 72.606 | 71.451 | 73.585 | 74.850 | 74.457 | 72.478 | 71.760 | 71.417 | 72.402 | 72.174 | 71.344 | 72.180 | 71.573 | 72.128 | 72.461 |
| 104 | Niger | FREE eco | 56.846 | 56.741 | 57.226 | 58.079 | 58.086 | 58.682 | 60.868 | 61.511 | 62.179 | 60.329 | 63.317 | 62.677 | 61.529 | 61.363 | 59.420 |
| 105 | Nigeria | FREE eco | 57.829 | 57.771 | 59.231 | 62.553 | 65.349 | 63.385 | 62.623 | 64.818 | 65.959 | 65.084 | 65.289 | 64.845 | 65.566 | 66.621 | 66.399 |
| 106 | Norway | FREE eco | 78.859 | 78.195 | 77.850 | 78.975 | 79.737 | 79.581 | 79.762 | 79.155 | 80.144 | 79.420 | 80.309 | 80.803 | 81.575 | 81.020 | 82.796 |
| 107 | Oman | FREE eco | 77.035 | 76.734 | 76.240 | 73.217 | 75.579 | 75.868 | 75.973 | 75.709 | 76.330 | 75.983 | 75.604 | 75.760 | 73.032 | 73.254 | 70.479 |
| 108 | Pakistan | FREE eco | 61.207 | 61.369 | 62.712 | 65.646 | 64.876 | 63.336 | 64.929 | 64.202 | 64.473 | 63.815 | 63.983 | 62.678 | 63.118 | 63.284 | 61.564 |
| 109 | Panama | FREE eco | 79.198 | 77.260 | 76.869 | 77.155 | 76.981 | 75.295 | 75.350 | 75.242 | 74.808 | 76.117 | 74.727 | 75.880 | 76.866 | 77.255 | 78.087 |
| 110 | Papua New Guinea | FREE eco | 63.055 | 63.381 | 65.666 | 65.177 | 66.863 | 67.244 | 67.571 | 67.067 | 66.894 | 67.451 | 65.490 | 65.167 | 64.397 | 64.452 | 63.176 |
| 111 | Paraguay | FREE eco | 67.716 | 66.558 | 64.889 | 65.729 | 67.010 | 68.661 | 69.542 | 70.688 | 71.569 | 71.782 | 71.556 | 71.784 | 71.502 | 71.724 | 72.223 |
| 112 | Peru | FREE eco | 76.165 | 76.329 | 74.225 | 73.889 | 75.001 | 76.210 | 76.709 | 79.081 | 79.527 | 79.310 | 77.999 | 78.371 | 78.048 | 77.882 | 78.714 |
| 113 | Philippines | FREE eco | 71.885 | 69.794 | 68.549 | 69.600 | 68.400 | 67.856 | 67.973 | 69.818 | 70.741 | 71.459 | 73.538 | 73.885 | 75.159 | 75.659 | 77.046 |
| 114 | Poland | FREE eco | 69.605 | 69.626 | 70.561 | 70.666 | 69.565 | 71.548 | 72.418 | 73.810 | 74.962 | 75.453 | 75.908 | 77.605 | 78.004 | 78.392 | 77.837 |
| 115 | Portugal | FREE eco | 76.712 | 76.494 | 74.073 | 75.221 | 75.777 | 74.688 | 75.025 | 73.823 | 75.070 | 74.733 | 75.767 | 76.588 | 77.206 | 77.095 | 75.708 |

(continued)

Table A.2.2 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|-----|----------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 116 | Puerto Rico | FREE eco | | | | | | | | | | | | | | | |
| 117 | Qatar | FREE eco | 76.560 | 76.893 | 75.228 | 74.617 | 74.895 | 74.506 | 76.504 | 78.280 | 78.459 | 80.372 | 80.536 | 81.296 | 79.714 | 79.659 | 80.990 |
| 118 | Romania | FREE eco | 62.683 | 62.731 | 68.303 | 70.546 | 75.148 | 74.066 | 75.605 | 75.344 | 75.839 | 76.380 | 77.476 | 78.459 | 78.961 | 78.406 | 80.681 |
| 119 | Russian Federation | FREE eco | 60.781 | 63.414 | 62.418 | 63.627 | 64.060 | 63.109 | 63.175 | 63.496 | 63.715 | 64.151 | 64.048 | 64.601 | 64.821 | 63.989 | 67.596 |
| 120 | Rwanda | FREE eco | 59.660 | 60.427 | 60.736 | 64.012 | 64.226 | 66.802 | 67.564 | 72.133 | 75.328 | 75.841 | 75.724 | 76.111 | 77.146 | 76.203 | 78.700 |
| 121 | Saudi Arabia | FREE eco | 71.579 | 70.025 | 71.468 | 71.468 | 70.303 | 71.191 | 72.190 | 72.079 | 73.026 | 69.613 | 69.266 | 70.154 | 68.412 | 68.412 | 69.688 |
| 122 | Senegal | FREE eco | 63.145 | 63.698 | 63.469 | 62.798 | 64.396 | 64.290 | 64.159 | 62.672 | 63.010 | 62.844 | 64.423 | 64.639 | 65.590 | 65.757 | 64.536 |
| 123 | Serbia | FREE eco | 56.566 | 56.566 | 56.566 | 58.906 | 60.973 | 59.776 | 67.209 | 67.267 | 68.313 | 67.823 | 68.700 | 69.470 | 70.021 | 71.186 | 69.411 |
| 124 | Sierra Leone | FREE eco | 52.581 | 53.031 | 55.166 | 55.714 | 58.291 | 59.339 | 60.150 | 60.423 | 61.148 | 61.361 | 60.046 | 60.669 | 60.138 | 60.471 | 60.637 |
| 125 | Singapore | FREE eco | 96.388 | 96.940 | 97.372 | 96.876 | 96.268 | 96.161 | 95.778 | 95.169 | 95.779 | 95.293 | 95.570 | 97.435 | 97.544 | 96.656 | 97.100 |
| 126 | Slovak Republic | FREE eco | 70.554 | 77.144 | 78.582 | 80.030 | 79.973 | 80.195 | 78.883 | 79.321 | 79.265 | 77.333 | 78.113 | 77.327 | 77.063 | 76.730 | 76.231 |
| 127 | Slovenia | FREE eco | 69.343 | 70.284 | 70.670 | 72.327 | 70.887 | 71.547 | 73.099 | 73.010 | 73.009 | 72.120 | 70.801 | 72.934 | 71.548 | 71.714 | 70.937 |
| 128 | Somalia | FREE eco | | | | | | | | | | | | | | | |
| 129 | South Africa | FREE eco | 76.029 | 74.769 | 72.283 | 72.292 | 72.181 | 70.656 | 70.878 | 71.575 | 71.900 | 71.683 | 71.020 | 70.973 | 70.811 | 70.423 | 70.645 |
| 130 | South Sudan | FREE eco | | | | | | | | | | | | | | | |
| 131 | Spain | FREE eco | 80.182 | 80.346 | 78.639 | 79.033 | 79.370 | 78.444 | 78.455 | 78.450 | 79.490 | 78.335 | 77.562 | 77.825 | 78.374 | 78.873 | 76.154 |
| 132 | Sri Lanka | FREE eco | 69.341 | 68.025 | 68.889 | 68.592 | 67.947 | 66.467 | 65.625 | 66.371 | 68.521 | 68.969 | 69.811 | 69.096 | 68.700 | 69.421 | 68.034 |
| 133 | Sudan | FREE eco | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 | 54.162 |
| 134 | Suriname | FREE eco | 62.153 | 62.708 | 64.928 | 66.703 | 66.537 | 66.259 | 66.148 | 65.261 | 64.016 | 65.316 | 64.874 | 66.041 | 66.367 | 66.145 | 62.927 |
| 135 | Swaziland | FREE eco | 68.384 | 67.830 | 68.273 | 69.383 | 68.662 | 67.719 | 68.107 | 67.164 | 68.923 | 67.542 | 68.413 | 71.122 | 70.183 | 70.072 | 70.849 |
| 136 | Sweden | FREE eco | 80.141 | 79.543 | 79.540 | 79.933 | 78.882 | 79.551 | 79.330 | 81.418 | 81.086 | 80.486 | 80.716 | 82.024 | 81.965 | 81.577 | 83.186 |
| 137 | Switzerland | FREE eco | 90.304 | 90.364 | 89.545 | 89.595 | 89.150 | 88.949 | 89.111 | 90.272 | 90.607 | 90.000 | 89.890 | 90.822 | 90.592 | 90.870 | 91.147 |
| 138 | Syrian Arab Republic | FREE eco | 50.830 | 52.618 | 56.978 | 58.663 | 59.230 | 56.770 | 59.970 | 59.841 | 62.636 | 57.575 | 57.140 | 56.759 | 56.813 | 56.813 | 56.813 |
| 139 | Tajikistan | FREE eco | 59.972 | 61.193 | 62.136 | 63.357 | 63.912 | 64.356 | 64.467 | 63.579 | 64.455 | 65.488 | 65.869 | 65.962 | 66.242 | 65.465 | 69.294 |
| 140 | Tanzania | FREE eco | 64.275 | 66.214 | 65.465 | 65.797 | 65.086 | 67.282 | 68.806 | 68.411 | 67.649 | 69.400 | 68.855 | 69.559 | 70.114 | 70.169 | 70.169 |
| 141 | Thailand | FREE eco | 73.076 | 72.183 | 71.245 | 72.451 | 72.399 | 71.569 | 71.359 | 71.752 | 71.759 | 71.815 | 71.154 | 70.819 | 71.353 | 72.185 | 73.462 |
| 142 | Timor-Leste | FREE eco | 57.513 | 57.513 | 57.513 | 57.513 | 57.513 | 57.513 | 57.513 | 54.905 | 58.517 | 58.251 | 57.657 | 58.087 | 59.472 | 59.638 | 59.916 |
| 143 | Togo | FREE eco | 57.582 | 56.822 | 57.706 | 58.186 | 59.463 | 57.985 | 57.330 | 56.333 | 56.736 | 55.802 | 59.616 | 59.302 | 60.424 | 60.757 | 60.535 |
| 144 | Trinidad and Tobago | FREE eco | 77.734 | 78.468 | 78.089 | 76.391 | 76.447 | 75.239 | 73.699 | 72.422 | 73.084 | 71.647 | 71.189 | 71.791 | 70.936 | 70.270 | 69.327 |

(continued)

Table A.2.2 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 145 Tunisia | FREE eco 65.865 | 66.467 | 65.401 | 68.688 | 70.188 | 69.696 | 68.694 | 67.996 | 67.720 | 67.340 | 65.962 | 67.054 | 66.405 | 66.350 | 65.295 |
| 146 Turkey | FREE eco 62.207 | 63.523 | 63.064 | 66.724 | 67.653 | 70.782 | 71.344 | 72.783 | 73.984 | 72.823 | 72.120 | 73.448 | 72.178 | 71.567 | 73.288 |
| 147 Turkmenistan | FREE eco 56.937 | 56.271 | 52.830 | 48.613 | 47.725 | 48.169 | 49.057 | 47.170 | 48.391 | 48.613 | 47.281 | 46.837 | 45.949 | 46.504 | 52.608 |
| 148 Uganda | FREE eco 70.838 | 72.840 | 72.664 | 74.144 | 73.863 | 74.360 | 74.194 | 74.180 | 72.651 | 73.143 | 73.243 | 72.740 | 72.575 | 72.353 | 73.241 |
| 149 Ukraine | FREE eco 57.520 | 59.833 | 62.576 | 62.561 | 60.788 | 60.239 | 59.127 | 57.849 | 58.876 | 59.533 | 58.501 | 59.513 | 55.298 | 55.242 | 55.964 |
| 150 United Arab Emirates | FREE eco 80.504 | 76.465 | 76.334 | 75.758 | 76.415 | 76.524 | 76.166 | 78.860 | 79.790 | 80.677 | 81.295 | 80.918 | 80.983 | 81.094 | 83.480 |
| 151 UK | FREE eco 88.764 | 88.331 | 88.891 | 89.013 | 88.355 | 87.370 | 87.692 | 85.217 | 84.161 | 84.102 | 84.709 | 84.764 | 85.862 | 86.195 | 86.195 |
| 152 USA | FREE eco 89.207 | 89.484 | 89.062 | 89.566 | 90.164 | 89.401 | 88.037 | 85.777 | 85.394 | 85.215 | 84.286 | 84.390 | 85.485 | 85.042 | 84.875 |
| 153 Uruguay | FREE eco 76.820 | 75.807 | 75.482 | 74.322 | 76.478 | 76.418 | 76.703 | 78.615 | 79.052 | 78.725 | 78.015 | 77.195 | 77.024 | 77.135 | 77.635 |
| 154 Uzbekistan | FREE eco 42.508 | 43.396 | 50.832 | 54.051 | 57.159 | 57.603 | 56.049 | 52.719 | 50.832 | 50.832 | 51.054 | 51.609 | 52.164 | 51.054 | 58.047 |
| 155 Venezuela, RB | FREE eco 54.567 | 52.629 | 50.818 | 50.430 | 50.412 | 47.766 | 45.864 | 42.133 | 42.139 | 41.927 | 37.933 | 37.990 | 34.921 | 34.588 | 30.870 |
| 156 Vietnam | FREE eco 56.487 | 58.499 | 60.370 | 62.355 | 61.912 | 61.647 | 63.394 | 62.076 | 62.585 | 63.289 | 62.959 | 62.576 | 62.967 | 64.243 | 63.355 |
| 157 West Bank and Gaza | FREE eco | | | | | | | | | | | | | | |
| 158 Yemen, Rep. | FREE eco 61.210 | 61.321 | 63.153 | 62.487 | 63.319 | 63.153 | 64.873 | 63.486 | 63.756 | 64.257 | 65.461 | 66.381 | 63.369 | 63.369 | 63.369 |
| 159 Zambia | FREE eco 67.413 | 67.463 | 66.648 | 69.877 | 69.980 | 70.089 | 70.202 | 72.176 | 73.065 | 71.472 | 70.388 | 71.549 | 69.300 | 69.355 | 67.690 |
| 160 Zimbabwe | FREE eco 40.878 | 36.772 | 35.475 | 34.695 | 35.223 | 41.126 | 36.373 | 35.815 | 39.196 | 41.744 | 44.489 | 49.896 | 51.388 | 51.721 | 54.940 |

Source Author's own calculations based on Heritage Foundation (2018) and Fraser Institute (2018)

See Heritage Foundation (2018):

Index of Economic Freedom (HF)

Methodic note for "Overall Score": index year 2017 = calendar year 2016 (estimation)

<http://www.heritage.org/index/explore?view=by-region-country-year>

See Fraser Institute (2018):

Economic Freedom in the World (FI)

Methodic note for "Summary Ratings": index year 2017 = calendar year 2016 (estimation)

<https://www.fraserinstitute.org/resource-file?nid=11606&fid=7542>

Aggregation measures of the indicators used:

50%: Index of Economic Freedom (HF)

50%: Economic Freedom in the World (FI)

Status: April 30, 2018

Table A.2.3 Income equality. Scores transformed (rescaled) to 0–100: 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Afghanistan EQUAL inc (GINI index) | 81.504 | 81.504 | 81.504 | 82.816 | 82.816 | 82.816 | 83.532 | 83.532 | 83.532 | 83.532 | 84.726 | 84.726 | 84.726 | 84.726 | 84.726 |
| 2 Albania EQUAL inc (GINI index) | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 | 86.396 |
| 3 Algeria EQUAL inc (GINI index) | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 | 68.377 |
| 4 Angola EQUAL inc (GINI index) | 55.131 | 55.489 | 59.427 | 60.501 | 61.695 | 62.768 | 64.081 | 65.274 | 66.229 | 67.303 | 68.616 | 68.854 | 68.377 | 68.377 | 68.377 |
| 5 Argentina EQUAL inc (GINI index) | 77.804 | 79.952 | 74.582 | 76.372 | 80.549 | 83.771 | 82.697 | 84.010 | 82.220 | 81.981 | 82.936 | 81.742 | 81.742 | 80.668 | 80.668 |
| 6 Armenia EQUAL inc (GINI index) | 79.356 | 79.356 | 79.356 | 79.356 | 79.356 | 79.356 | 77.088 | 77.088 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 |
| 7 Australia EQUAL inc (GINI index) | 83.771 | 83.771 | 83.771 | 85.084 | 84.010 | 82.816 | 83.055 | 81.742 | 83.174 | 82.578 | 82.220 | 82.458 | 82.936 | 82.936 | 82.936 |
| 8 Austria EQUAL inc (GINI index) | 98.568 | 96.897 | 100.000 | 99.523 | 99.523 | 99.523 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 |
| 9 Azerbaijan EQUAL inc (GINI index) | 79.475 | 79.475 | 79.475 | 79.714 | 79.714 | 79.714 | 79.714 | 79.714 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 |
| 10 Bahrain EQUAL inc (GINI index) | 83.174 | 84.964 | 87.709 | 86.516 | 85.561 | 84.010 | 86.158 | 86.277 | 85.203 | 86.993 | 87.709 | 87.589 | 86.874 | 87.470 | 87.470 |
| 11 Bangladesh EQUAL inc (GINI index) | 82.936 | 82.936 | 82.936 | 84.368 | 85.919 | 84.487 | 85.442 | 85.322 | 85.442 | 85.800 | 86.516 | 86.277 | 85.800 | 85.800 | 85.800 |
| 12 Belarus EQUAL inc (GINI index) | 73.270 | 73.270 | 73.270 | 73.270 | 73.270 | 73.270 | 73.270 | 73.270 | 73.270 | 73.270 | 67.542 | 67.542 | 67.542 | 62.291 | 62.291 |
| 13 Belgium EQUAL inc (GINI index) | 47.494 | 47.494 | 53.699 | 49.523 | 51.432 | 53.222 | 57.995 | 60.024 | 60.024 | 64.081 | 63.604 | 61.933 | 61.575 | 64.678 | 64.678 |
| 14 Benin EQUAL inc (GINI index) | 83.532 | 83.532 | 78.759 | 78.759 | 78.759 | 78.833 | 79.833 | 79.833 | 79.833 | 78.998 | 78.998 | 78.998 | 78.998 | 78.998 | 78.998 |
| 15 Bolivia EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 16 Bosnia and Herzegovina EQUAL inc (GINI index) | | | | | | | | | | | | | | | |

(continued)

Table A.2.3 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 33 | Cote d'Ivoire (GINI index) | 70.048 | 70.048 | 70.048 | 70.048 | 70.048 | 70.048 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 69.570 |
| 34 | Croatia (GINI index) | 80.430 | 80.430 | 80.430 | 80.430 | 80.430 | 80.430 | 80.430 | 80.430 | 80.668 | 80.788 | 80.549 | 81.146 | 80.907 | 80.907 | 80.907 |
| 35 | Cuba (GINI index) | 83.413 | 83.413 | 83.413 | 83.174 | 82.220 | 82.220 | 81.504 | 81.026 | 81.742 | 80.430 | 78.401 | 75.179 | 76.850 | 76.850 | 76.850 |
| 36 | Cyprus (GINI index) | 86.516 | 86.516 | 86.516 | 87.112 | 87.470 | 88.305 | 87.947 | 88.067 | 87.589 | 87.828 | 88.186 | 87.709 | 88.425 | 88.425 | 88.425 |
| 37 | Czech Republic (GINI index) | 89.618 | 89.618 | 89.618 | 89.260 | 88.425 | 88.067 | 89.141 | 87.470 | 86.754 | 86.516 | 86.158 | 85.322 | 85.322 | 85.322 | 85.322 |
| 38 | Denmark (GINI index) | 59.547 | 57.160 | 57.279 | 59.666 | 57.399 | 61.217 | 60.859 | 60.979 | 63.007 | 62.768 | 64.797 | 63.126 | 66.229 | 65.752 | 65.752 |
| 39 | Dominican Republic (GINI index) | 52.029 | 53.699 | 54.773 | 54.773 | 55.847 | 54.535 | 58.950 | 60.501 | 60.501 | 64.200 | 63.723 | 62.888 | 65.155 | 63.842 | 63.842 |
| 40 | Ecuador (GINI index) | 81.265 | 81.265 | 81.265 | 81.265 | 81.265 | 81.265 | 82.220 | 82.220 | 81.742 | 81.742 | 83.771 | 83.771 | 83.771 | 81.384 | 81.384 |
| 41 | Egypt, Arab Rep. (GINI index) | 57.876 | 58.831 | 62.768 | 62.172 | 65.155 | 65.394 | 63.604 | 64.558 | 66.229 | 68.735 | 69.451 | 67.422 | 69.451 | 70.644 | 70.644 |
| 42 | El Salvador (GINI index) | 74.940 | 74.940 | 79.236 | 79.356 | 79.117 | 82.100 | 81.265 | 81.862 | 81.146 | 80.549 | 80.072 | 77.446 | 78.043 | 78.043 | 78.043 |
| 43 | Equatorial Guinea (GINI index) | 83.771 | 83.771 | 83.771 | 83.771 | 83.771 | 83.771 | 83.771 | 83.771 | 79.714 | 79.714 | 79.714 | 79.714 | 79.714 | 79.714 | 79.714 |
| 44 | Eritrea (GINI index) | 86.038 | 86.038 | 86.038 | 86.396 | 85.919 | 85.561 | 86.158 | 86.516 | 86.277 | 86.396 | 86.993 | 86.874 | 87.351 | 87.351 | 87.351 |
| 45 | Estonia (GINI index) | 82.816 | 82.816 | 82.816 | 83.771 | 83.890 | 80.668 | 79.952 | 79.952 | 79.117 | 79.594 | 79.952 | 80.549 | 80.788 | 80.788 | 80.788 |
| 46 | Ethiopia (GINI index) | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 |
| 47 | Finland (GINI index) | | | | | | | | | | | | | | | |
| 48 | France (GINI index) | | | | | | | | | | | | | | | |
| 49 | Gabon (GINI index) | | | | | | | | | | | | | | | |

(continued)

Table A.2.3 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 50 | Gambia, The EQUAL inc (GINI index) | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 | 62.888 |
| 51 | Georgia EQUAL inc (GINI index) | 72.076 | 72.196 | 71.838 | 71.241 | 71.957 | 70.883 | 70.883 | 69.570 | 69.093 | 69.690 | 70.048 | 71.599 | 71.480 | 73.389 | 73.389 |
| 52 | Germany EQUAL inc (GINI index) | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.265 | 82.220 | 82.100 | 82.697 | 83.532 | 83.532 | 81.862 | 81.862 | 81.862 | 81.862 |
| 53 | Ghana EQUAL inc (GINI index) | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 |
| 54 | Greece EQUAL inc (GINI index) | 79.236 | 79.236 | 79.236 | 78.043 | 77.446 | 78.759 | 79.236 | 79.236 | 78.640 | 77.804 | 76.014 | 76.253 | 76.611 | 76.611 | 76.611 |
| 55 | Guatemala EQUAL inc (GINI index) | 53.938 | 53.938 | 53.938 | 53.938 | 53.819 | 53.819 | 53.819 | 53.819 | 53.819 | 56.921 | 56.921 | 56.921 | 61.217 | 61.217 | 61.217 |
| 56 | Guinea EQUAL inc (GINI index) | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 | 72.315 | 72.315 | 72.315 | 72.315 | 72.315 | 79.117 | 79.117 | 79.117 | 79.117 | 79.117 |
| 57 | Guinea-Bissau EQUAL inc (GINI index) | 76.850 | 76.850 | 76.850 | 76.850 | 76.850 | 76.850 | 76.850 | 76.850 | 58.831 | 58.831 | 58.831 | 58.831 | 58.831 | 58.831 | 58.831 |
| 58 | Haiti EQUAL inc (GINI index) | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 | 70.525 |
| 59 | Honduras EQUAL inc (GINI index) | 49.165 | 49.284 | 49.642 | 48.329 | 50.835 | 52.267 | 52.864 | 57.757 | 55.609 | 50.835 | 50.835 | 55.251 | 58.473 | 59.547 | 59.547 |
| 60 | Hong Kong SAR, China EQUAL inc (GINI index) | 83.652 | 83.652 | 83.652 | 77.924 | 85.561 | 86.038 | 86.516 | 87.112 | 84.248 | 84.845 | 82.936 | 81.742 | 82.458 | 82.458 | 82.458 |
| 61 | Hungary EQUAL inc (GINI index) | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 |
| 62 | India EQUAL inc (GINI index) | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 |
| 63 | Indonesia EQUAL inc (GINI index) | 67.303 | 67.303 | 67.303 | 67.303 | 65.871 | 65.871 | 65.871 | 69.212 | 69.212 | 69.212 | 69.212 | 69.212 | 74.702 | 73.031 | 73.031 |
| 64 | Iran, Islamic Rep. EQUAL inc (GINI index) | 85.203 | 85.203 | 85.203 | 85.203 | 85.203 | 85.203 | 85.203 | 85.203 | 85.203 | 85.203 | 84.129 | 84.129 | 84.129 | 84.129 | 84.129 |
| 65 | Iraq EQUAL inc (GINI index) | 79.236 | 79.236 | 79.236 | 78.998 | 80.310 | 81.146 | 82.458 | 80.310 | 80.788 | 80.788 | 80.549 | 79.475 | 81.265 | 81.265 | 81.265 |
| 66 | Ireland EQUAL inc (GINI index) | | | | | | | | | | | | | | | |

(continued)

Table A.2.3 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 67 | Israel EQUAL inc (GINI index) | 72.912 | 72.912 | 72.912 | 69.570 | 69.570 | 70.406 | 70.406 | 70.406 | 68.616 | 68.616 | 69.928 | 69.928 | 69.928 | 69.928 | 69.928 |
| 68 | Italy EQUAL inc (GINI index) | 78.401 | 78.401 | 78.401 | 78.998 | 78.759 | 80.072 | 79.236 | 79.356 | 78.401 | 78.162 | 77.685 | 77.685 | 77.924 | 77.924 | 77.924 |
| 69 | Jamaica EQUAL inc (GINI index) | 61.695 | 61.695 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 | 65.036 |
| 70 | Japan EQUAL inc (GINI index) | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 |
| 71 | Jordan EQUAL inc (GINI index) | 75.179 | 75.179 | 75.179 | 75.179 | 78.878 | 78.878 | 80.430 | 80.430 | 79.117 | 79.117 | 79.117 | 79.117 | 79.117 | 79.117 | 79.117 |
| 72 | Kazakhstan EQUAL inc (GINI index) | 78.759 | 79.952 | 81.862 | 84.010 | 83.532 | 85.322 | 84.606 | 84.964 | 85.203 | 86.635 | 86.516 | 87.947 | 87.709 | 87.709 | 87.709 |
| 73 | Kenya EQUAL inc (GINI index) | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 | 61.456 |
| 74 | Korea, Dem. People's Rep. | | | | | | | | | | | | | | | |
| 75 | Korea, Rep. | 81.504 | 81.504 | 81.504 | 81.504 | 81.504 | 81.504 | 80.788 | 80.788 | 81.146 | 81.146 | 81.623 | 81.623 | 81.623 | 81.623 | 81.623 |
| 76 | Kosovo EQUAL inc (GINI index) | 84.726 | 84.726 | 84.726 | 82.100 | 83.174 | 83.174 | 83.174 | 81.384 | 79.594 | 86.158 | 84.248 | 87.470 | 87.470 | 87.470 | 87.470 |
| 77 | Kuwait EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 78 | Kyrgyz Republic | 83.174 | 85.084 | 77.804 | 80.430 | 74.702 | 78.878 | 81.742 | 83.652 | 83.413 | 86.158 | 86.635 | 84.964 | 87.351 | 84.726 | 84.726 |
| 79 | Lao PDR EQUAL inc (GINI index) | 80.430 | 80.430 | 80.430 | 80.430 | 80.430 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 75.895 | 75.895 | 75.895 | 75.895 | 75.895 |
| 80 | Latvia EQUAL inc (GINI index) | 75.895 | 75.895 | 75.895 | 72.792 | 76.969 | 74.582 | 74.940 | 76.372 | 77.566 | 76.611 | 77.327 | 76.969 | 77.446 | 77.446 | 77.446 |
| 81 | Lebanon EQUAL inc (GINI index) | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 | 81.384 |
| 82 | Lesotho EQUAL inc (GINI index) | 57.757 | 57.757 | 57.757 | 57.757 | 57.757 | 57.757 | 57.757 | 57.757 | 54.654 | 54.654 | 54.654 | 54.654 | 54.654 | 54.654 | 54.654 |

(continued)

Table A.2.3 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 83 Liberia | EQUAL inc (GINI index) | 75.776 | 75.776 | 75.776 | 75.776 | 75.776 | 75.776 | 75.776 | 75.776 | 75.776 | 75.776 | 75.776 | 79.714 | 79.714 | 79.714 |
| 84 Libya | EQUAL inc (GINI index) | 75.179 | 75.179 | 75.179 | 77.208 | 78.282 | 78.043 | 76.730 | 74.940 | 79.236 | 80.549 | 77.446 | 74.344 | 74.344 | 74.344 |
| 85 Lithuania | EQUAL inc (GINI index) | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 71.360 | 71.480 | 73.389 | 75.298 | 76.850 | 76.850 |
| 86 Macedonia, FYR | EQUAL inc (GINI index) | 62.768 | 62.768 | 62.768 | 71.718 | 71.718 | 71.718 | 71.718 | 71.718 | 68.735 | 68.735 | 68.377 | 68.377 | 68.377 | 68.377 |
| 87 Madagascar | EQUAL inc (GINI index) | 71.718 | 71.718 | 71.718 | 71.718 | 71.718 | 71.718 | 71.718 | 71.718 | 64.320 | 64.320 | 64.320 | 64.320 | 64.320 | 64.320 |
| 88 Malawi | EQUAL inc (GINI index) | 64.439 | 64.439 | 64.439 | 64.439 | 64.439 | 64.439 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 |
| 89 Malaysia | EQUAL inc (GINI index) | 71.718 | 71.718 | 71.718 | 71.718 | 72.912 | 72.912 | 72.912 | 79.952 | 79.952 | 79.952 | 79.952 | 79.952 | 79.952 | 79.952 |
| 90 Mali | EQUAL inc (GINI index) | 72.792 | 72.792 | 71.360 | 71.360 | 71.360 | 71.360 | 76.730 | 76.730 | 76.730 | 76.730 | 76.730 | 80.668 | 80.668 | 80.668 |
| 91 Mauritania | EQUAL inc (GINI index) | 76.730 | 76.730 | 76.730 | 76.730 | 76.730 | 76.730 | 76.730 | 76.730 | 76.730 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 |
| 92 Mauritius | EQUAL inc (GINI index) | 60.263 | 60.263 | 64.439 | 64.439 | 62.053 | 62.053 | 61.814 | 61.814 | 61.933 | 61.933 | 61.933 | 61.814 | 61.814 | 61.814 |
| 93 Mexico | EQUAL inc (GINI index) | 76.611 | 77.685 | 77.566 | 76.014 | 77.088 | 78.282 | 77.924 | 80.072 | 81.146 | 82.816 | 84.487 | 85.322 | 87.351 | 87.112 |
| 94 Moldova | EQUAL inc (GINI index) | 80.072 | 80.072 | 80.072 | 80.072 | 80.072 | 76.611 | 76.611 | 76.611 | 79.833 | 78.878 | 78.998 | 81.146 | 81.146 | 81.146 |
| 95 Mongolia | EQUAL inc (GINI index) | 70.883 | 70.883 | 70.883 | 70.883 | 70.764 | 70.764 | 70.764 | 70.764 | 70.764 | 70.764 | 70.764 | 70.764 | 70.764 | 70.764 |
| 96 Morocco | EQUAL inc (GINI index) | 63.246 | 63.246 | 63.246 | 63.246 | 63.246 | 63.246 | 64.916 | 64.916 | 64.916 | 64.916 | 64.916 | 64.916 | 64.916 | 64.916 |
| 97 Mozambique | EQUAL inc (GINI index) | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 | 73.866 |
| 98 Myanmar | EQUAL inc (GINI index) | 43.795 | 43.795 | 43.795 | 43.795 | 43.795 | 43.795 | 46.539 | 46.539 | 46.539 | 46.539 | 46.539 | 46.539 | 46.539 | 46.539 |
| 99 Namibia | EQUAL inc (GINI index) | | | | | | | | | | | | | | |

(continued)

Table A.2.3 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 100 | Nepal EQUAL inc (GINI index) | 67.064 | 67.064 | 67.064 | 67.064 | 67.064 | 67.064 | 67.064 | 67.064 | 80.191 | 80.191 | 80.191 | 80.191 | 80.191 | 80.191 | 80.191 |
| 101 | Netherlands EQUAL inc (GINI index) | 83.771 | 83.771 | 83.771 | 84.726 | 83.532 | 84.010 | 84.368 | 86.038 | 86.038 | 86.158 | 86.396 | 85.800 | 85.203 | 85.203 | 85.203 |
| 102 | New Zealand EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 103 | Nicaragua EQUAL inc (GINI index) | 55.967 | 55.967 | 55.967 | 60.621 | 60.621 | 60.621 | 60.621 | 66.587 | 66.587 | 66.587 | 66.587 | 66.587 | 63.723 | 63.723 | 63.723 |
| 104 | Niger EQUAL inc (GINI index) | 66.348 | 66.348 | 66.348 | 66.348 | 66.348 | 74.821 | 74.821 | 74.821 | 74.821 | 81.742 | 81.742 | 81.742 | 78.759 | 78.759 | 78.759 |
| 105 | Nigeria EQUAL inc (GINI index) | 71.480 | 71.480 | 71.480 | 71.480 | 71.480 | 71.480 | 71.480 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 |
| 106 | Norway EQUAL inc (GINI index) | 81.623 | 81.623 | 81.623 | 82.816 | 87.709 | 86.993 | 87.112 | 88.067 | 88.663 | 89.141 | 88.663 | 87.828 | 87.351 | 87.351 | 87.351 |
| 107 | Oman EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 108 | Pakistan EQUAL inc (GINI index) | 83.055 | 83.055 | 80.549 | 80.310 | 80.310 | 81.384 | 81.384 | 81.384 | 83.771 | 82.458 | 82.458 | 82.697 | 82.697 | 82.697 | 82.697 |
| 109 | Panama EQUAL inc (GINI index) | 51.790 | 52.029 | 53.580 | 54.893 | 53.580 | 56.086 | 56.563 | 57.279 | 57.399 | 57.518 | 57.399 | 57.637 | 58.831 | 58.473 | 58.473 |
| 110 | Papua New Guinea EQUAL inc (GINI index) | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 | 69.451 |
| 111 | Paraguay EQUAL inc (GINI index) | 50.955 | 53.103 | 56.563 | 57.995 | 55.370 | 57.160 | 58.473 | 60.024 | 57.518 | 56.563 | 61.814 | 61.695 | 57.637 | 62.053 | 62.053 |
| 112 | Peru EQUAL inc (GINI index) | 54.893 | 55.251 | 58.234 | 57.518 | 57.637 | 58.115 | 61.456 | 62.053 | 64.200 | 65.036 | 65.513 | 65.990 | 66.706 | 66.468 | 66.468 |
| 113 | Philippines EQUAL inc (GINI index) | 68.258 | 69.809 | 69.809 | 69.809 | 68.138 | 68.138 | 68.138 | 69.451 | 69.451 | 69.451 | 68.974 | 68.974 | 68.974 | 71.480 | 71.480 |
| 114 | Poland EQUAL inc (GINI index) | 78.759 | 77.685 | 77.088 | 78.162 | 79.117 | 79.356 | 79.117 | 79.236 | 79.714 | 80.191 | 80.668 | 80.549 | 81.026 | 81.026 | 81.026 |
| 115 | Portugal EQUAL inc (GINI index) | 72.912 | 72.912 | 72.912 | 73.389 | 73.866 | 75.418 | 75.656 | 77.685 | 76.611 | 76.014 | 76.372 | 76.134 | 76.850 | 76.850 | 76.850 |
| 116 | Puerto Rico EQUAL inc (GINI index) | | | | | | | | | | | | | | | |

(continued)

Table A.2.3 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 117 | Qatar EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 118 | Romania EQUAL inc (GINI index) | 83.294 | 83.652 | 83.532 | 83.771 | 82.936 | 83.294 | 84.010 | 85.680 | 85.680 | 86.874 | 86.754 | 86.516 | 86.516 | 86.516 | 86.516 |
| 119 | Russian Federation EQUAL inc (GINI index) | 74.821 | 71.599 | 71.241 | 70.048 | 70.406 | 68.854 | 69.690 | 71.838 | 72.196 | 71.838 | 70.764 | 70.525 | 71.718 | 74.344 | 74.344 |
| 120 | Rwanda EQUAL inc (GINI index) | 61.456 | 61.456 | 61.456 | 57.279 | 57.279 | 57.279 | 57.279 | 57.279 | 58.115 | 58.115 | 58.115 | 59.189 | 59.189 | 59.189 | 59.189 |
| 121 | Saudi Arabia EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 122 | Senegal EQUAL inc (GINI index) | 70.167 | 70.167 | 70.167 | 72.554 | 72.554 | 72.554 | 72.554 | 72.554 | 72.554 | 71.241 | 71.241 | 71.241 | 71.241 | 71.241 | 71.241 |
| 123 | Serbia EQUAL inc (GINI index) | 81.146 | 80.191 | 79.952 | 79.475 | 83.890 | 84.248 | 85.680 | 85.084 | 84.010 | 84.010 | 84.010 | 84.606 | 84.606 | 84.606 | 84.606 |
| 124 | Sierra Leone EQUAL inc (GINI index) | 71.360 | 71.360 | 71.360 | 71.360 | 71.360 | 71.360 | 71.360 | 71.360 | 71.360 | 78.759 | 78.759 | 78.759 | 78.759 | 78.759 | 78.759 |
| 125 | Singapore EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 126 | Slovak Republic EQUAL inc (GINI index) | 86.993 | 86.993 | 86.993 | 84.368 | 88.544 | 89.857 | 88.305 | 86.874 | 86.754 | 87.709 | 88.186 | 85.800 | 88.186 | 88.186 | 88.186 |
| 127 | Slovenia EQUAL inc (GINI index) | 89.737 | 89.737 | 89.737 | 89.976 | 90.215 | 90.215 | 91.050 | 89.737 | 89.618 | 89.618 | 88.783 | 88.067 | 88.663 | 88.663 | 88.663 |
| 128 | Somalia EQUAL inc (GINI index) | | | | | | | | | | | | | | | |
| 129 | South Africa EQUAL inc (GINI index) | 50.358 | 50.358 | 50.358 | 50.358 | 42.005 | 42.005 | 44.153 | 44.153 | 44.153 | 43.675 | 43.675 | 43.675 | 43.675 | 43.675 | 43.675 |
| 130 | South Sudan EQUAL inc (GINI index) | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 | 64.081 |
| 131 | Spain EQUAL inc (GINI index) | 79.594 | 79.594 | 79.594 | 80.668 | 80.549 | 79.833 | 78.520 | 77.685 | 77.208 | 76.730 | 77.088 | 76.134 | 76.372 | 76.372 | 76.372 |
| 132 | Sri Lanka EQUAL inc (GINI index) | 70.406 | 70.406 | 70.406 | 70.406 | 71.241 | 71.241 | 71.241 | 75.895 | 75.895 | 75.895 | 72.554 | 72.554 | 72.554 | 72.554 | 72.554 |

(continued)

Table A.2.3 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 133 | Sudan EQUAL inc (GINI index) | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 | 77.088 |
| 134 | Suriname EQUAL inc (GINI index) | 55.967 | 55.967 | 55.967 | 55.967 | 55.967 | 55.967 | 55.967 | 57.876 | 57.876 | 57.876 | 57.876 | 57.876 | 57.876 | 57.876 | 57.876 |
| 135 | Swaziland EQUAL inc (GINI index) | 88.186 | 88.186 | 87.351 | 87.828 | 87.351 | 87.947 | 87.709 | 87.232 | 86.993 | 86.277 | 86.874 | 86.874 | 86.874 | 86.874 | 86.874 |
| 136 | Sweden EQUAL inc (GINI index) | 78.401 | 78.401 | 78.401 | 78.401 | 78.401 | 78.401 | 78.998 | 80.072 | 80.549 | 81.504 | 81.623 | 80.549 | 80.549 | 80.549 | 80.549 |
| 137 | Switzerland EQUAL inc (GINI index) | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 |
| 138 | Syrian Arab Republic EQUAL inc (GINI index) | 80.310 | 80.310 | 79.236 | 79.236 | 79.236 | 80.907 | 80.907 | 82.578 | 82.578 | 82.578 | 82.936 | 83.055 | 82.578 | 78.759 | 78.759 |
| 139 | Tajikistan EQUAL inc (GINI index) | 74.821 | 74.821 | 74.821 | 74.821 | 74.821 | 71.241 | 71.241 | 71.241 | 71.241 | 74.224 | 74.224 | 74.224 | 74.224 | 74.224 | 74.224 |
| 140 | Tanzania EQUAL inc (GINI index) | 69.332 | 69.332 | 68.616 | 68.616 | 69.451 | 71.838 | 71.241 | 71.838 | 72.315 | 74.582 | 72.434 | 74.224 | 74.224 | 74.224 | 74.224 |
| 141 | Thailand EQUAL inc (GINI index) | 76.492 | 76.492 | 76.492 | 76.492 | 76.492 | 83.174 | 83.174 | 83.174 | 83.174 | 83.174 | 83.174 | 83.174 | 83.174 | 83.174 | 83.174 |
| 142 | Timor-Leste EQUAL inc (GINI index) | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 | 64.439 | 64.439 | 64.439 | 64.439 | 68.019 | 68.019 |
| 143 | Togo EQUAL inc (GINI index) | 70.644 | 70.644 | 70.644 | 70.644 | 74.344 | 74.344 | 74.344 | 74.344 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 |
| 144 | Trinidad and Tobago EQUAL inc (GINI index) | 69.928 | 68.974 | 70.048 | 68.496 | 71.957 | 73.508 | 72.792 | 72.792 | 73.031 | 71.599 | 71.360 | 71.360 | 70.167 | 70.167 | 70.167 |
| 145 | Tunisia EQUAL inc (GINI index) | 65.394 | 65.394 | 65.394 | 68.138 | 68.138 | 68.138 | 68.138 | 66.587 | 66.587 | 66.587 | 70.406 | 70.406 | 70.406 | 70.406 | 70.406 |
| 146 | Turkey EQUAL inc (GINI index) | 70.644 | 70.644 | 70.644 | 70.644 | 74.344 | 74.344 | 74.344 | 74.344 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 | 76.611 |
| 147 | Turkmenistan EQUAL inc (GINI index) | 65.394 | 65.394 | 65.394 | 68.138 | 68.138 | 68.138 | 68.138 | 66.587 | 66.587 | 66.587 | 70.406 | 70.406 | 70.406 | 70.406 | 70.406 |
| 148 | Uganda EQUAL inc (GINI index) | | | | | | | | | | | | | | | |

(continued)

Table A.2.3 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 149 | Ukraine EQUAL inc (GINI index) | 84.726 | 85.084 | 84.845 | 84.726 | 83.771 | 87.112 | 87.589 | 89.141 | 89.737 | 90.095 | 89.857 | 90.095 | 90.573 | 88.902 | 88.902 |
| 150 | United Arab Emirates EQUAL inc (GINI index) | 76.372 | 76.372 | 76.372 | 78.401 | 78.043 | 76.730 | 78.640 | 78.401 | 78.282 | 79.714 | 80.788 | 79.714 | 78.640 | 78.640 | 78.640 |
| 151 | UK EQUAL inc (GINI index) | 71.122 | 71.122 | 71.002 | 71.002 | 70.286 | 70.286 | 70.286 | 70.286 | 71.122 | 71.122 | 71.122 | 70.406 | 70.406 | 70.406 | 70.406 |
| 152 | USA EQUAL inc (GINI index) | 63.007 | 63.007 | 63.007 | 63.007 | 62.530 | 64.081 | 64.081 | 64.081 | 65.274 | 67.542 | 70.048 | 69.332 | 69.690 | 69.570 | 69.570 |
| 153 | Uruguay EQUAL inc (GINI index) | 79.952 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 | 77.208 |
| 154 | Uzbekistan EQUAL inc (GINI index) | 58.950 | 59.189 | 59.905 | 56.802 | 63.365 | 63.365 | 63.365 | 63.365 | 63.365 | 63.365 | 63.365 | 63.365 | 63.365 | 63.365 | 63.365 |
| 155 | Venezuela, RB EQUAL inc (GINI index) | 75.179 | 75.179 | 75.418 | 75.418 | 76.611 | 76.611 | 76.850 | 76.850 | 72.434 | 72.434 | 76.730 | 76.730 | 77.804 | 77.804 | 77.804 |
| 156 | Vietnam EQUAL inc (GINI index) | 78.759 | 78.759 | 78.759 | 77.924 | 78.759 | 76.850 | 76.850 | 78.162 | 76.253 | 78.282 | 78.282 | 78.282 | 78.282 | 78.282 | 78.282 |
| 157 | West Bank and Gaza EQUAL inc (GINI index) | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 77.924 | 75.537 | 75.537 | 75.537 |
| 158 | Yemen, Rep. EQUAL inc (GINI index) | 69.093 | 69.093 | 54.535 | 54.535 | 54.177 | 54.177 | 54.177 | 54.177 | 52.983 | 52.983 | 52.983 | 52.983 | 52.983 | 51.193 | 51.193 |
| 159 | Zambia EQUAL inc (GINI index) | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 | 67.780 |
| 160 | Zimbabwe EQUAL inc (GINI index) | | | | | | | | | | | | | | | |

Source Author's own calculations based on World Bank (2018)

See World Bank (2018), the World Development Indicators

<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>

<https://data.worldbank.org/indicator/SI.POV.GINI?locations=US>

Methodic note:

GINI Index was turned, higher scores with the Gini Index are lower scores in the tabulation here (see Chapter 2)

Status: April 30, 2018

Table A.2.4 Gender equality. Scores transformed (rescaled) to 0–100: 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016).

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|----|------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Afghanistan | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | | |
| 2 | Albania | EQUAL | 77.729 | 77.729 | 77.729 | 77.729 | 78.647 | 77.541 | 77.659 | 79.129 | 79.388 | 78.294 | 75.435 | 80.812 | 82.471 | 82.824 | 85.647 |
| | gen | | | | | | | | | | | | | | | | |
| 3 | Algeria | EQUAL | 70.800 | 70.800 | 70.800 | 71.388 | 71.894 | 71.988 | 71.200 | 70.482 | 71.906 | 70.188 | 72.729 | 74.353 | 75.529 | 74.000 | |
| | gen | | | | | | | | | | | | | | | | |
| 4 | Angola | EQUAL | 71.047 | 71.047 | 71.047 | 70.988 | 70.965 | 74.741 | 78.965 | 77.929 | 77.929 | 78.341 | 74.247 | 74.941 | 75.647 | 75.294 | |
| | gen | | | | | | | | | | | | | | | | |
| 5 | Argentina | EQUAL | 80.341 | 80.341 | 80.341 | 82.141 | 84.812 | 84.835 | 84.553 | 85.129 | 84.847 | 84.647 | 86.082 | 86.353 | 86.471 | 86.118 | |
| | gen | | | | | | | | | | | | | | | | |
| 6 | Armenia | EQUAL | 78.247 | 78.247 | 78.247 | 78.247 | 78.553 | 77.871 | 78.459 | 78.282 | 78.071 | 78.047 | 77.906 | 78.588 | 78.706 | 79.647 | |
| | gen | | | | | | | | | | | | | | | | |
| 7 | Australia | EQUAL | 83.271 | 83.965 | 83.824 | 84.271 | 84.753 | 85.188 | 85.671 | 85.541 | 85.776 | 85.812 | 86.941 | 87.165 | 86.235 | 84.824 | 86.000 |
| | gen | | | | | | | | | | | | | | | | |
| 8 | Austria | EQUAL | 82.188 | 82.188 | 82.188 | 82.188 | 83.059 | 84.153 | 82.718 | 83.424 | 84.294 | 86.953 | 87.494 | 85.482 | 86.235 | 84.235 | 83.412 |
| | gen | | | | | | | | | | | | | | | | |
| 9 | Azerbaijan | EQUAL | 79.776 | 79.776 | 79.776 | 79.776 | 80.659 | 77.953 | 75.835 | 77.376 | 77.012 | 77.435 | 79.447 | 79.412 | 80.471 | 79.529 | |
| | gen | | | | | | | | | | | | | | | | |
| 10 | Bahrain | EQUAL | 69.341 | 69.341 | 69.341 | 69.341 | 69.776 | 69.729 | 72.188 | 73.141 | 73.318 | 74.094 | 74.518 | 73.659 | 75.765 | 72.353 | 74.353 |
| | gen | | | | | | | | | | | | | | | | |
| 11 | Bangladesh | EQUAL | 71.718 | 72.976 | 72.741 | 73.765 | 74.282 | 76.835 | 76.776 | 78.847 | 80.141 | 78.635 | 80.565 | 82.035 | 82.824 | 82.118 | 84.588 |
| | gen | | | | | | | | | | | | | | | | |
| 12 | Belarus | EQUAL | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.353 | 86.706 | 87.529 |
| | gen | | | | | | | | | | | | | | | | |
| 13 | Belgium | EQUAL | 79.047 | 80.447 | 80.729 | 83.271 | 84.682 | 84.271 | 84.294 | 88.341 | 88.600 | 90.024 | 90.400 | 91.871 | 88.588 | 87.647 | 86.941 |
| | gen | | | | | | | | | | | | | | | | |
| 14 | Benin | EQUAL | 68.000 | 68.000 | 68.000 | 68.000 | 66.541 | 65.671 | 66.388 | 67.282 | 68.612 | 73.624 | 69.235 | 69.235 | 73.529 | 74.824 | 76.706 |
| | gen | | | | | | | | | | | | | | | | |
| 15 | Bolivia | EQUAL | 74.529 | 74.529 | 74.529 | 74.529 | 77.341 | 78.435 | 78.741 | 79.424 | 80.729 | 84.965 | 86.353 | 82.929 | 88.118 | 87.765 | 89.176 |
| | gen | | | | | | | | | | | | | | | | |
| 16 | Bosnia and Herzegovina | EQUAL | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 | 82.588 |
| | gen | | | | | | | | | | | | | | | | |

(continued)

Table A.2.4 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|-----------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 17 Botswana | EQUAL | 81.141 | 81.141 | 81.141 | 81.141 | 79.965 | 80.459 | 83.188 | 80.894 | 80.376 | 79.341 | 79.435 | 83.871 | 83.529 | 84.118 | 84.706 |
| | gen | | | | | | | | | | | | | | | |
| 18 Brazil | EQUAL | 76.976 | 76.976 | 76.976 | 76.976 | 78.082 | 79.259 | 78.765 | 78.294 | 78.576 | 81.282 | 81.753 | 81.659 | 80.706 | 80.824 | 80.471 |
| | gen | | | | | | | | | | | | | | | |
| 19 Bulgaria | EQUAL | 80.824 | 80.824 | 80.824 | 80.824 | 83.353 | 83.259 | 83.200 | 82.153 | 82.200 | 82.600 | 83.494 | 87.576 | 84.941 | 85.412 | 88.941 |
| | gen | | | | | | | | | | | | | | | |
| 20 Burkina Faso | EQUAL | 68.871 | 68.871 | 68.871 | 68.871 | 69.553 | 70.929 | 71.541 | 72.494 | 72.388 | 75.941 | 76.624 | 76.471 | 76.588 | 75.294 | 76.000 |
| | gen | | | | | | | | | | | | | | | |
| 21 Burundi | EQUAL | 85.529 | 85.529 | 85.529 | 85.529 | 85.529 | 85.529 | 85.529 | 85.529 | 85.529 | 86.329 | 87.024 | 89.000 | 88.000 | 90.353 | 88.824 |
| | gen | | | | | | | | | | | | | | | |
| 22 Cambodia | EQUAL | 74.012 | 74.012 | 74.012 | 74.012 | 74.741 | 76.106 | 75.412 | 76.259 | 76.047 | 75.965 | 76.576 | 76.706 | 77.882 | 77.412 | 79.529 |
| | gen | | | | | | | | | | | | | | | |
| 23 Cameroon | EQUAL | 69.000 | 69.000 | 69.000 | 69.000 | 69.635 | 70.788 | 71.859 | 71.882 | 71.447 | 74.012 | 77.176 | 77.176 | 80.235 | 80.471 | 81.059 |
| | gen | | | | | | | | | | | | | | | |
| 24 Canada | EQUAL | 83.082 | 83.671 | 83.859 | 84.294 | 84.682 | 83.953 | 84.659 | 86.729 | 87.141 | 86.835 | 87.353 | 87.812 | 87.059 | 86.000 | 90.471 |
| | gen | | | | | | | | | | | | | | | |
| 25 Central African Republic | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 26 Chad | EQUAL | 61.729 | 61.729 | 61.729 | 61.729 | 63.306 | 62.235 | 63.729 | 62.706 | 62.753 | 65.812 | 65.741 | 67.812 | 68.235 | 69.059 | 67.647 |
| | gen | | | | | | | | | | | | | | | |
| 27 Chile | EQUAL | 75.800 | 75.906 | 75.859 | 75.941 | 76.259 | 80.212 | 80.988 | 82.506 | 82.706 | 78.541 | 78.471 | 82.059 | 82.118 | 82.235 | 82.824 |
| | gen | | | | | | | | | | | | | | | |
| 28 China | EQUAL | 77.188 | 77.188 | 77.188 | 77.188 | 78.153 | 80.918 | 81.259 | 80.953 | 80.776 | 80.624 | 81.271 | 80.353 | 80.235 | 79.529 | 79.294 |
| | gen | | | | | | | | | | | | | | | |
| 29 Colombia | EQUAL | 85.129 | 84.518 | 84.482 | 82.929 | 83.412 | 81.694 | 81.635 | 81.494 | 78.988 | 81.188 | 84.365 | 83.788 | 85.294 | 85.529 | 86.000 |
| | gen | | | | | | | | | | | | | | | |
| 30 Congo, Dem. Rep. | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 31 Congo, Rep. | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 32 Costa Rica | EQUAL | 76.435 | 78.882 | 80.800 | 81.600 | 82.518 | 83.659 | 84.471 | 84.635 | 85.482 | 85.000 | 85.188 | 84.294 | 86.118 | 86.588 | 85.529 |
| | gen | | | | | | | | | | | | | | | |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|------------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| 33 | Cote d'Ivoire gen | EQUAL 66.953 | 66.953 | 66.953 | 66.953 | 66.953 | 66.953 | 66.953 | 66.953 | 67.918 | 68.059 | 68.400 | 69.106 | 71.294 | 70.235 | 71.882 |
| 34 | Croatia gen | EQUAL 80.988 | 82.118 | 80.965 | 84.059 | 84.824 | 81.965 | 81.694 | 81.635 | 82.424 | 82.976 | 83.165 | 83.235 | 83.294 | 82.353 | 83.647 |
| 35 | Cuba gen | EQUAL 84.341 | 84.341 | 84.341 | 84.341 | 84.341 | 84.647 | 84.424 | 85.329 | 86.988 | 87.259 | 88.706 | 86.082 | 87.059 | 87.059 | 87.647 |
| 36 | Cyprus gen | EQUAL 75.647 | 75.647 | 75.647 | 75.647 | 76.729 | 78.753 | 78.894 | 78.141 | 77.259 | 79.200 | 80.012 | 79.306 | 78.941 | 80.471 | 80.471 |
| 37 | Czech Republic gen | EQUAL 82.788 | 77.482 | 78.224 | 78.965 | 79.035 | 79.647 | 79.871 | 80.588 | 79.871 | 79.612 | 79.647 | 79.259 | 80.824 | 81.176 | 80.941 |
| 38 | Denmark gen | EQUAL 89.600 | 90.188 | 90.694 | 87.788 | 88.459 | 88.682 | 89.741 | 90.812 | 91.506 | 91.494 | 91.518 | 94.412 | 90.235 | 88.706 | 91.294 |
| 39 | Dominican Republic gen | EQUAL 78.106 | 78.106 | 78.106 | 78.106 | 78.882 | 79.341 | 80.694 | 79.694 | 78.612 | 78.341 | 80.788 | 81.247 | 80.706 | 79.529 | 82.000 |
| 40 | Ecuador gen | EQUAL 75.682 | 75.682 | 75.682 | 75.682 | 80.953 | 83.424 | 84.941 | 83.200 | 82.765 | 84.776 | 86.929 | 87.706 | 86.824 | 85.412 | 85.176 |
| 41 | Egypt, Arab Rep. gen | EQUAL 68.071 | 68.071 | 68.071 | 68.071 | 68.341 | 68.612 | 68.965 | 69.400 | 69.800 | 70.294 | 69.824 | 71.341 | 70.471 | 72.235 | 71.529 |
| 42 | El Salvador gen | EQUAL 74.294 | 75.400 | 75.141 | 80.435 | 80.624 | 80.882 | 81.635 | 77.600 | 77.259 | 78.000 | 77.753 | 80.741 | 83.059 | 82.588 | 82.941 |
| 43 | Equatorial Guinea gen | EQUAL 81.694 | 81.694 | 81.694 | 81.694 | 82.447 | 83.247 | 83.459 | 82.565 | 82.153 | 82.082 | 82.318 | 82.553 | 88.118 | 87.882 | 86.000 |
| 44 | Eritrea gen | EQUAL 69.953 | 69.953 | 69.953 | 69.953 | 70.482 | 69.024 | 69.976 | 70.812 | 72.188 | 72.941 | 72.918 | 72.282 | 75.294 | 77.882 | 77.176 |
| 45 | Estonia gen | EQUAL 92.929 | 90.953 | 91.224 | 93.624 | 94.635 | 96.412 | 97.082 | 97.176 | 98.624 | 99.424 | 99.071 | 99.447 | 100.000 | 99.412 | 96.824 |
| 46 | Ethiopia gen | EQUAL 76.706 | 76.706 | 76.706 | 76.706 | 80.282 | 86.365 | 86.247 | 82.647 | 82.565 | 82.165 | 83.400 | 89.271 | 89.529 | 88.824 | 91.529 |
| 47 | Finland gen | EQUAL 76.706 | 76.706 | 76.706 | 76.706 | 80.282 | 86.365 | 86.247 | 82.647 | 82.565 | 82.165 | 83.400 | 89.271 | 89.529 | 88.824 | 91.529 |
| 48 | France gen | EQUAL 76.706 | 76.706 | 76.706 | 76.706 | 80.282 | 86.365 | 86.247 | 82.647 | 82.565 | 82.165 | 83.400 | 89.271 | 89.529 | 88.824 | 91.529 |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 49 | Gabon | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 50 | Gambia, The | 75.859 | 75.859 | 75.859 | 75.859 | 75.541 | 77.906 | 79.435 | 79.553 | 79.565 | 78.000 | 78.000 | 78.000 | 79.294 | 78.471 | 76.353 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 51 | Georgia | 78.824 | 78.824 | 78.824 | 78.824 | 78.412 | 78.282 | 78.588 | 77.624 | 77.929 | 78.718 | 79.412 | 80.647 | 80.824 | 80.118 | 79.882 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 52 | Germany | 88.518 | 88.518 | 88.518 | 88.518 | 89.624 | 86.988 | 87.635 | 88.588 | 89.294 | 89.753 | 89.212 | 91.529 | 91.647 | 90.118 | 91.529 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 53 | Ghana | 78.271 | 78.271 | 78.271 | 78.271 | 79.118 | 78.576 | 78.871 | 79.788 | 80.129 | 79.741 | 80.129 | 78.365 | 82.824 | 82.941 | 81.765 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 54 | Greece | 74.294 | 75.294 | 75.871 | 76.941 | 78.212 | 79.141 | 78.376 | 81.271 | 81.365 | 79.012 | 79.788 | 79.812 | 80.588 | 80.000 | 81.412 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 55 | Guatemala | 71.376 | 71.376 | 71.376 | 71.376 | 72.282 | 71.435 | 73.047 | 73.388 | 73.282 | 73.647 | 74.165 | 80.247 | 78.471 | 78.353 | 78.471 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 56 | Guinea | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 72.706 | 75.294 | 77.529 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 57 | Guinea-Bissau | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 58 | Haiti | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 59 | Honduras | 76.271 | 76.271 | 76.271 | 76.271 | 78.365 | 81.882 | 81.094 | 81.494 | 81.706 | 79.565 | 79.682 | 81.588 | 80.941 | 81.176 | 83.647 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 60 | Hong Kong SAR, China | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 61 | Hungary | 82.271 | 80.918 | 80.812 | 78.800 | 79.188 | 80.788 | 80.929 | 79.059 | 78.141 | 79.035 | 79.318 | 79.518 | 79.059 | 78.706 | 78.824 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 62 | India | 70.718 | 70.718 | 70.718 | 70.718 | 69.835 | 71.294 | 72.365 | 72.412 | 72.824 | 75.788 | 77.071 | 75.941 | 78.118 | 80.353 | 78.706 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 63 | Indonesia | 76.953 | 76.953 | 76.953 | 76.953 | 77.059 | 76.153 | 77.412 | 77.824 | 77.576 | 77.541 | 77.800 | 79.118 | 80.118 | 80.235 | 81.294 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 64 | Iran, Islamic Rep. | 68.271 | 68.271 | 68.271 | 68.271 | 69.447 | 70.835 | 68.694 | 69.800 | 69.341 | 69.729 | 68.729 | 68.365 | 68.235 | 69.059 | 68.588 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 65 | Iraq EQUAL gen | | | | | | | | | | | | | | | |
| 66 | Ireland EQUAL gen | 81.035 | 82.718 | 83.588 | 86.294 | 87.729 | 88.447 | 89.376 | 91.447 | 92.118 | 92.224 | 92.035 | 92.353 | 94.941 | 93.765 | 93.412 |
| 67 | Israel EQUAL gen | 79.000 | 79.506 | 78.976 | 81.047 | 81.941 | 81.176 | 82.576 | 81.847 | 81.482 | 82.224 | 82.729 | 82.412 | 83.765 | 84.588 | 84.824 |
| 68 | Italy EQUAL gen | 73.871 | 75.271 | 75.188 | 75.953 | 76.447 | 79.859 | 79.976 | 79.588 | 79.953 | 79.165 | 81.000 | 82.035 | 85.412 | 84.588 | 81.412 |
| 69 | Jamaica EQUAL gen | 82.518 | 82.518 | 82.518 | 82.518 | 81.471 | 82.118 | 82.506 | 82.788 | 82.682 | 82.765 | 83.353 | 83.859 | 82.706 | 85.176 | 84.353 |
| 70 | Japan EQUAL gen | 71.729 | 73.224 | 73.882 | 75.847 | 75.941 | 75.694 | 75.847 | 76.753 | 76.635 | 76.824 | 76.447 | 77.459 | 78.824 | 77.647 | 77.294 |
| 71 | Jordan EQUAL gen | 71.871 | 71.871 | 71.871 | 71.871 | 72.976 | 73.824 | 72.729 | 71.153 | 71.965 | 71.800 | 71.682 | 70.212 | 69.765 | 70.941 | 71.059 |
| 72 | Kazakhstan EQUAL gen | 81.506 | 81.506 | 81.506 | 81.506 | 82.153 | 82.071 | 82.506 | 83.000 | 82.471 | 84.859 | 84.918 | 84.824 | 84.588 | 84.471 | 83.882 |
| 73 | Kenya EQUAL gen | 76.306 | 76.306 | 76.306 | 76.306 | 76.565 | 77.024 | 76.612 | 76.459 | 76.388 | 79.624 | 80.035 | 85.388 | 84.588 | 82.588 | 81.647 |
| 74 | Korea, Dem. People's Rep. EQUAL gen | | | | | | | | | | | | | | | |
| 75 | Korea, Rep. EQUAL gen | 70.812 | 69.600 | 69.388 | 72.435 | 75.400 | 72.400 | 72.306 | 74.612 | 73.894 | 74.776 | 74.718 | 75.329 | 76.588 | 76.353 | 76.471 |
| 76 | Kosovo EQUAL gen | | | | | | | | | | | | | | | |
| 77 | Kuwait EQUAL gen | 74.600 | 74.600 | 74.600 | 74.600 | 75.400 | 74.800 | 74.776 | 74.329 | 74.376 | 74.353 | 74.024 | 75.965 | 76.000 | 73.412 | 73.882 |
| 78 | Kyrgyz Republic EQUAL gen | 79.318 | 79.318 | 79.318 | 79.318 | 78.271 | 82.882 | 83.035 | 82.035 | 82.776 | 82.506 | 81.741 | 82.047 | 81.529 | 80.824 | 81.294 |
| 79 | Lao PDR EQUAL gen | 82.271 | 82.271 | 82.271 | 82.271 | 82.271 | 82.271 | 82.271 | 82.271 | 82.271 | 82.271 | 82.271 | 82.871 | 83.882 | 83.882 | 82.706 |

(continued)

Table A.2.4 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | |
|----|-------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 80 | Latvia | EQUAL | 82.165 | 82.306 | 82.188 | 83.424 | 86.271 | 87.024 | 87.247 | 87.400 | 87.047 | 89.082 | 89.529 | 90.482 | 88.471 | 88.824 | 88.941 |
| | | gen | | | | | | | | | | | | | | | |
| 81 | Lebanon | EQUAL | 71.576 | 71.576 | 71.576 | 71.576 | 71.576 | 71.576 | 71.576 | 71.565 | 70.941 | 70.918 | 69.682 | 70.353 | 70.353 | 70.118 | |
| | | gen | | | | | | | | | | | | | | | |
| 82 | Lesotho | EQUAL | 80.082 | 80.082 | 80.082 | 83.271 | 86.118 | 88.176 | 90.329 | 90.188 | 89.506 | 88.588 | 85.353 | 83.059 | 83.059 | 81.765 | |
| | | gen | | | | | | | | | | | | | | | |
| 83 | Liberia | EQUAL | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 76.706 | 78.706 | |
| | | gen | | | | | | | | | | | | | | | |
| 84 | Libya | EQUAL | | | | | | | | | | | | | | | |
| | | gen | | | | | | | | | | | | | | | |
| 85 | Lithuania | EQUAL | 83.659 | 81.494 | 82.035 | 83.259 | 85.106 | 84.965 | 84.412 | 83.906 | 83.894 | 84.600 | 85.976 | 84.800 | 87.059 | 87.529 | 87.294 |
| | | gen | | | | | | | | | | | | | | | |
| 86 | Macedonia, FYR | EQUAL | 82.153 | 82.153 | 82.153 | 81.965 | 81.341 | 81.765 | 82.306 | 81.953 | 81.976 | 82.506 | 81.682 | 82.471 | 81.882 | 82.588 | |
| | | gen | | | | | | | | | | | | | | | |
| 87 | Madagascar | EQUAL | 75.118 | 75.118 | 75.118 | 75.118 | 79.247 | 79.200 | 78.976 | 79.965 | 82.141 | 82.541 | 84.871 | 82.118 | 82.824 | 81.412 | |
| | | gen | | | | | | | | | | | | | | | |
| 88 | Malawi | EQUAL | 75.729 | 75.729 | 75.729 | 75.729 | 78.400 | 79.271 | 80.282 | 80.588 | 84.306 | 83.988 | 85.659 | 82.471 | 82.353 | 79.059 | |
| | | gen | | | | | | | | | | | | | | | |
| 89 | Malaysia | EQUAL | 73.553 | 72.129 | 75.306 | 76.576 | 75.812 | 75.788 | 76.082 | 76.224 | 76.765 | 76.929 | 76.682 | 76.706 | 77.059 | 78.353 | 78.824 |
| | | gen | | | | | | | | | | | | | | | |
| 90 | Mali | EQUAL | 70.541 | 70.541 | 70.541 | 70.541 | 71.965 | 68.941 | 66.824 | 67.671 | 68.729 | 69.082 | 67.988 | 70.471 | 69.529 | 68.588 | |
| | | gen | | | | | | | | | | | | | | | |
| 91 | Mauritania | EQUAL | 68.647 | 68.647 | 68.647 | 68.647 | 71.965 | 71.800 | 72.376 | 72.518 | 72.106 | 68.353 | 70.929 | 72.118 | 73.412 | 72.235 | |
| | | gen | | | | | | | | | | | | | | | |
| 92 | Mauritius | EQUAL | 74.447 | 74.447 | 74.447 | 74.447 | 76.071 | 76.624 | 76.706 | 76.812 | 77.024 | 77.635 | 76.953 | 76.000 | 76.706 | 78.118 | |
| | | gen | | | | | | | | | | | | | | | |
| 93 | Mexico | EQUAL | 73.082 | 74.235 | 74.224 | 76.024 | 75.776 | 75.776 | 76.506 | 77.376 | 77.694 | 78.965 | 81.376 | 81.176 | 82.235 | 82.353 | 81.412 |
| | | gen | | | | | | | | | | | | | | | |
| 94 | Moldova | EQUAL | 83.859 | 83.859 | 83.859 | 83.859 | 84.376 | 85.224 | 83.576 | 84.235 | 83.329 | 83.541 | 82.788 | 87.118 | 87.294 | 87.176 | 87.059 |
| | | gen | | | | | | | | | | | | | | | |
| 95 | Mongolia | EQUAL | 80.247 | 80.247 | 80.247 | 79.188 | 82.929 | 84.953 | 84.635 | 84.000 | 83.659 | 84.753 | 84.847 | 83.412 | 82.941 | 83.882 | |
| | | gen | | | | | | | | | | | | | | | |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| 96 | Morocco EQUAL gen | 68.553 | 68.553 | 68.553 | 68.553 | 66.776 | 67.729 | 69.718 | 67.847 | 68.282 | 68.624 | 68.765 | 70.447 | 69.765 | 70.235 | 70.353 |
| 97 | Mozambique EQUAL gen | 80.976 | 80.976 | 80.976 | 80.976 | 80.976 | 85.482 | 84.647 | 86.224 | 85.306 | 86.471 | 86.459 | 86.706 | 87.176 | 88.235 | 87.176 |
| 98 | Myanmar EQUAL gen | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 | 81.294 |
| 99 | Namibia EQUAL gen | 80.753 | 80.753 | 80.753 | 80.753 | 82.494 | 84.012 | 84.318 | 85.153 | 84.435 | 83.776 | 83.459 | 84.929 | 89.412 | 90.000 | 91.412 |
| 100 | Nepal EQUAL gen | 64.447 | 64.447 | 64.447 | 64.447 | 65.588 | 69.906 | 73.094 | 71.576 | 69.271 | 70.894 | 71.212 | 75.976 | 77.412 | 77.765 | 78.118 |
| 101 | Netherlands EQUAL gen | 83.224 | 83.447 | 84.318 | 85.294 | 86.859 | 87.047 | 88.118 | 87.576 | 87.882 | 90.106 | 89.506 | 90.941 | 91.294 | 88.941 | 86.706 |
| 102 | New Zealand EQUAL gen | 92.824 | 89.576 | 83.706 | 88.341 | 89.988 | 92.459 | 92.706 | 91.859 | 91.882 | 91.824 | 91.753 | 91.435 | 92.000 | 91.882 | 93.059 |
| 103 | Nicaragua EQUAL gen | 77.247 | 77.247 | 77.247 | 77.247 | 75.976 | 79.376 | 82.376 | 84.424 | 85.235 | 90.553 | 90.765 | 92.871 | 91.294 | 91.765 | 95.765 |
| 104 | Niger EQUAL gen | | | | | | | | | | | | | | | |
| 105 | Nigeria EQUAL gen | 71.812 | 71.812 | 71.812 | 71.812 | 72.024 | 74.576 | 73.882 | 71.235 | 70.718 | 74.294 | 76.106 | 75.188 | 75.059 | 75.647 | 75.412 |
| 106 | Norway EQUAL gen | 91.329 | 92.459 | 92.259 | 94.047 | 94.812 | 96.929 | 96.788 | 98.871 | 98.871 | 98.859 | 99.024 | 98.518 | 100.000 | 99.059 | 97.647 |
| 107 | Oman EQUAL gen | 69.447 | 69.447 | 69.447 | 69.447 | 69.447 | 70.118 | 69.859 | 70.000 | 69.094 | 70.424 | 71.212 | 71.659 | 71.059 | 72.000 | 72.000 |
| 108 | Pakistan EQUAL gen | 63.929 | 63.929 | 63.929 | 63.929 | 64.812 | 65.282 | 64.212 | 64.294 | 65.682 | 64.447 | 64.224 | 64.965 | 65.765 | 65.412 | 64.235 |
| 109 | Panama EQUAL gen | 78.071 | 79.812 | 79.918 | 81.588 | 81.812 | 83.471 | 82.635 | 83.200 | 82.847 | 83.788 | 84.282 | 84.647 | 90.824 | 84.824 | 84.941 |
| 110 | Papua New Guinea EQUAL gen | | | | | | | | | | | | | | | |
| 111 | Paraguay EQUAL gen | 77.129 | 77.129 | 77.129 | 77.129 | 78.341 | 75.047 | 80.800 | 80.047 | 80.212 | 78.988 | 79.106 | 81.059 | 78.353 | 79.529 | 79.765 |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|-----|--------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112 | Peru | EQUAL | 77.871 | 77.871 | 77.871 | 77.929 | 81.871 | 82.635 | 81.118 | 79.953 | 79.318 | 79.847 | 84.682 | 80.353 | 80.824 | 84.588 | |
| | | gen | | | | | | | | | | | | | | | |
| 113 | Philippines | EQUAL | 88.424 | 88.424 | 88.424 | 89.753 | 89.035 | 89.165 | 90.047 | 90.412 | 91.259 | 92.141 | 91.929 | 92.941 | 92.471 | 92.941 | |
| | | gen | | | | | | | | | | | | | | | |
| 114 | Poland | EQUAL | 80.976 | 80.482 | 79.847 | 80.024 | 79.482 | 81.776 | 82.329 | 82.788 | 82.800 | 82.529 | 82.718 | 82.953 | 84.118 | 85.529 | 85.647 |
| | | gen | | | | | | | | | | | | | | | |
| 115 | Portugal | EQUAL | 78.341 | 79.129 | 79.565 | 81.435 | 81.871 | 82.953 | 82.506 | 84.365 | 84.047 | 83.188 | 83.012 | 86.000 | 86.706 | 86.353 | |
| | | gen | | | | | | | | | | | | | | | |
| 116 | Puerto Rico | EQUAL | | | | | | | | | | | | | | | |
| | | gen | | | | | | | | | | | | | | | |
| 117 | Qatar | EQUAL | 71.071 | 71.071 | 71.071 | 71.071 | 69.976 | 69.494 | 71.282 | 73.294 | 73.694 | 74.106 | 75.329 | 75.882 | 75.647 | 73.647 | |
| | | gen | | | | | | | | | | | | | | | |
| 118 | Romania | EQUAL | 80.388 | 80.212 | 80.247 | 79.965 | 80.694 | 79.565 | 80.059 | 80.306 | 80.141 | 80.694 | 81.271 | 81.600 | 81.529 | 81.176 | 83.294 |
| | | gen | | | | | | | | | | | | | | | |
| 119 | Russian Federation | EQUAL | 79.647 | 79.647 | 79.647 | 79.647 | 82.282 | 82.200 | 82.776 | 82.788 | 82.118 | 82.153 | 81.494 | 81.647 | 81.294 | 81.882 | |
| | | gen | | | | | | | | | | | | | | | |
| 120 | Rwanda | EQUAL | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 93.412 | 96.706 | |
| | | gen | | | | | | | | | | | | | | | |
| 121 | Saudi Arabia | EQUAL | 61.671 | 61.671 | 61.671 | 61.671 | 66.435 | 65.141 | 66.482 | 67.212 | 67.682 | 69.165 | 71.282 | 71.176 | 68.588 | 68.706 | |
| | | gen | | | | | | | | | | | | | | | |
| 122 | Senegal | EQUAL | 75.612 | 75.612 | 75.612 | 75.612 | 75.612 | 75.612 | 75.459 | 77.329 | 78.318 | 81.447 | 81.318 | 82.118 | 80.588 | 80.471 | |
| | | gen | | | | | | | | | | | | | | | |
| 123 | Serbia | EQUAL | 82.788 | 82.788 | 82.788 | 82.788 | 82.788 | 82.788 | 82.788 | 82.788 | 82.788 | 82.788 | 83.365 | 84.706 | 84.706 | 85.529 | |
| | | gen | | | | | | | | | | | | | | | |
| 124 | Sierra Leone | EQUAL | | | | | | | | | | | | | | | |
| | | gen | | | | | | | | | | | | | | | |
| 125 | Singapore | EQUAL | 77.059 | 77.059 | 77.059 | 77.753 | 77.941 | 78.400 | 81.341 | 81.341 | 82.224 | 82.353 | 82.894 | 83.647 | 83.765 | 82.588 | |
| | | gen | | | | | | | | | | | | | | | |
| 126 | Slovak Republic | EQUAL | 80.706 | 79.894 | 80.647 | 79.494 | 79.965 | 80.282 | 80.529 | 79.741 | 79.965 | 80.282 | 80.671 | 79.412 | 79.882 | 81.647 | |
| | | gen | | | | | | | | | | | | | | | |
| 127 | Slovenia | EQUAL | 79.800 | 79.953 | 79.659 | 79.353 | 80.494 | 81.612 | 82.141 | 82.906 | 82.835 | 84.176 | 87.565 | 92.235 | 92.471 | 94.706 | |
| | | gen | | | | | | | | | | | | | | | |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 128 | Somalia EQUAL gen | | | | | | | | | | | | | | | |
| 129 | South Africa EQUAL gen | 83.824 | 83.824 | 83.824 | 83.824 | 84.635 | 85.082 | 90.694 | 88.647 | 87.976 | 88.188 | 88.353 | 88.553 | 89.294 | 89.882 | 88.941 |
| 130 | South Sudan EQUAL gen | | | | | | | | | | | | | | | |
| 131 | Spain EQUAL gen | 78.494 | 79.224 | 79.141 | 86.106 | 87.576 | 85.659 | 86.412 | 88.871 | 89.176 | 85.482 | 85.482 | 86.176 | 87.294 | 86.824 | 87.765 |
| 132 | Sri Lanka EQUAL gen | 84.694 | 84.694 | 84.694 | 84.694 | 85.059 | 86.718 | 87.082 | 87.741 | 84.847 | 83.788 | 82.576 | 81.212 | 80.706 | 79.176 | 78.706 |
| 133 | Sudan EQUAL gen | | | | | | | | | | | | | | | |
| 134 | Suriname EQUAL gen | 79.929 | 79.929 | 79.929 | 79.929 | 79.929 | 78.518 | 79.129 | 75.376 | 75.235 | 75.400 | 74.929 | 76.518 | 78.824 | 79.882 | 81.059 |
| 135 | Swaziland EQUAL gen | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.824 | 78.235 | 78.824 |
| 136 | Sweden EQUAL gen | 93.906 | 92.835 | 94.482 | 95.682 | 95.835 | 95.753 | 95.753 | 94.400 | 94.635 | 95.988 | 95.635 | 96.059 | 96.824 | 95.882 | 96.000 |
| 137 | Switzerland EQUAL gen | 79.024 | 79.824 | 82.541 | 82.318 | 81.459 | 86.588 | 87.365 | 88.965 | 89.729 | 90.259 | 91.012 | 91.741 | 92.353 | 91.294 | 88.824 |
| 138 | Syrian Arab Republic EQUAL gen | 73.129 | 73.129 | 73.129 | 73.129 | 73.129 | 72.718 | 71.435 | 69.718 | 69.365 | 66.188 | 66.600 | 67.941 | 66.824 | 66.706 | 66.824 |
| 139 | Tajikistan EQUAL gen | 77.388 | 77.388 | 77.388 | 77.388 | 77.388 | 76.953 | 78.365 | 77.624 | 76.776 | 77.741 | 78.612 | 78.282 | 79.412 | 79.882 | 79.765 |
| 140 | Tanzania EQUAL gen | 82.800 | 82.800 | 82.800 | 82.800 | 81.988 | 83.153 | 79.965 | 80.341 | 81.224 | 83.424 | 81.506 | 84.494 | 84.471 | 84.235 | 82.353 |
| 141 | Thailand EQUAL gen | 80.365 | 80.365 | 80.365 | 80.365 | 80.176 | 81.376 | 81.259 | 81.294 | 81.082 | 81.094 | 81.506 | 82.671 | 83.059 | 82.235 | 81.647 |
| 142 | Timor-Leste EQUAL gen | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 80.647 | 73.882 |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 143 | Togo | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 144 | Trinidad and Tobago | 78.035 | 79.129 | 79.294 | 79.965 | 80.694 | 85.235 | 85.859 | 86.506 | 86.729 | 83.718 | 84.306 | 84.165 | 84.706 | 85.059 | 85.059 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 145 | Tunisia | 73.976 | 73.976 | 73.976 | 73.976 | 73.918 | 74.059 | 73.329 | 73.718 | 73.588 | 73.588 | 73.588 | 73.788 | 74.588 | 74.824 | 76.588 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 146 | Turkey | 64.082 | 68.329 | 67.188 | 68.824 | 67.859 | 68.859 | 68.565 | 69.129 | 70.047 | 70.765 | 71.541 | 72.741 | 73.412 | 73.294 | 73.529 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 147 | Turkmenistan | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 148 | Uganda | 79.965 | 79.965 | 79.965 | 79.965 | 80.388 | 82.129 | 83.141 | 84.341 | 84.941 | 85.035 | 83.365 | 80.247 | 83.294 | 82.824 | 84.824 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 149 | Ukraine | 79.965 | 79.965 | 79.965 | 79.965 | 79.882 | 80.659 | 81.129 | 80.812 | 80.718 | 81.106 | 81.588 | 83.012 | 82.588 | 82.353 | 82.941 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 150 | United Arab Emirates | 69.635 | 69.635 | 69.635 | 69.635 | 72.753 | 73.176 | 72.918 | 75.259 | 75.929 | 75.200 | 74.965 | 75.718 | 76.000 | 75.176 | 76.353 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 151 | UK | 89.576 | 86.612 | 87.082 | 86.647 | 87.541 | 86.659 | 87.082 | 87.765 | 87.788 | 87.447 | 87.529 | 86.859 | 89.176 | 88.471 | 90.588 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 152 | USA | 82.847 | 82.847 | 82.847 | 82.847 | 82.376 | 84.459 | 84.388 | 87.188 | 87.200 | 86.741 | 86.965 | 87.800 | 87.059 | 84.941 | 84.471 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 153 | Uruguay | 77.047 | 77.047 | 77.047 | 77.047 | 77.741 | 81.259 | 81.600 | 81.141 | 81.259 | 79.353 | 80.035 | 80.835 | 79.882 | 80.118 | 83.529 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 154 | Uzbekistan | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 155 | Venezuela, RB | 78.400 | 78.400 | 78.400 | 78.400 | 79.965 | 80.882 | 80.459 | 80.741 | 80.718 | 83.059 | 83.059 | 80.600 | 81.294 | 81.647 | 83.059 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 156 | Vietnam | 81.047 | 81.047 | 81.047 | 81.047 | 81.047 | 79.741 | 80.024 | 79.718 | 79.200 | 80.788 | 80.741 | 81.353 | 80.824 | 82.353 | 82.118 |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |
| 157 | West Bank and Gaza | | | | | | | | | | | | | | | |
| | EQUAL | | | | | | | | | | | | | | | |
| | gen | | | | | | | | | | | | | | | |

(continued)

Table A.2.4 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 158 | Yemen, Rep. gen | EQUAL 54.059 | 54.059 | 54.059 | 54.059 | 53.059 | 54.871 | 54.224 | 54.153 | 57.329 | 59.459 | 60.329 | 60.529 | 56.941 | 60.706 | 60.706 |
| 159 | Zambia gen | EQUAL 74.824 | 74.824 | 74.824 | 74.824 | 73.976 | 73.000 | 74.235 | 74.035 | 74.118 | 73.871 | 74.259 | 74.871 | 76.471 | 76.471 | 76.471 |
| 160 | Zimbabwe gen | EQUAL 76.012 | 76.012 | 76.012 | 76.012 | 76.047 | 76.294 | 76.682 | 77.341 | 77.729 | 77.729 | 77.729 | 82.506 | 83.412 | 83.529 | 84.353 |

Source: Author's own calculations based on World Economic Forum (2018)

See World Economic Forum (2018), the Global Gender Gap Index

Methodic note for "Global Gender Gap Index": index year 2017 = calendar year 2016 (estimation)

http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

https://en.wikipedia.org/wiki/Global_Gender_Gap_Report

Status: April 30, 2018

Table A.2.5 Human development (index) re-engineered. Scores transformed (rescaled) to 0–100: 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|----|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Afghanistan | 23.031 | 23.283 | 23.520 | 23.786 | 24.034 | 24.296 | 24.517 | 25.514 | 25.772 | 25.866 | 26.078 | 26.233 | 27.749 | 27.897 | 27.895 |
| 2 | Albania | 35.712 | 36.019 | 37.117 | 38.215 | 39.334 | 40.686 | 41.374 | 41.965 | 45.309 | 46.951 | 49.603 | 50.864 | 51.062 | 49.943 | 50.046 |
| 3 | Algeria | 35.785 | 36.482 | 36.926 | 37.731 | 38.050 | 38.903 | 39.077 | 40.971 | 41.152 | 41.670 | 42.097 | 42.694 | 43.017 | 43.814 | 43.878 |
| 4 | Angola | 20.542 | 21.615 | 21.931 | 22.661 | 23.264 | 23.924 | 24.494 | 24.888 | 25.264 | 26.788 | 27.098 | 28.214 | 28.425 | 28.397 | 28.344 |
| 5 | Argentina | 49.847 | 50.882 | 51.342 | 51.290 | 52.479 | 52.746 | 53.446 | 53.848 | 55.257 | 56.535 | 56.918 | 57.329 | 58.031 | 58.173 | 58.012 |
| 6 | Armenia | 39.185 | 39.685 | 40.035 | 40.692 | 41.869 | 42.855 | 43.680 | 44.192 | 44.737 | 45.012 | 43.261 | 43.238 | 43.646 | 43.789 | 43.787 |
| 7 | Australia | 62.078 | 61.710 | 61.619 | 62.105 | 62.106 | 62.810 | 63.133 | 64.234 | 65.495 | 66.387 | 67.189 | 67.659 | 68.865 | 69.038 | 69.188 |
| 8 | Austria | 54.284 | 54.262 | 54.907 | 55.280 | 56.252 | 57.234 | 58.842 | 59.611 | 62.125 | 63.192 | 63.569 | 65.842 | 65.864 | 66.421 | 66.638 |
| 9 | Azerbaijan | 33.505 | 33.807 | 34.129 | 34.745 | 35.637 | 36.372 | 37.186 | 37.520 | 37.684 | 38.024 | 38.554 | 39.121 | 39.811 | 39.811 | 39.811 |
| 10 | Bahrain | 48.667 | 48.747 | 48.858 | 47.773 | 47.372 | 47.454 | 47.372 | 47.038 | 47.058 | 52.900 | 52.948 | 52.435 | 53.288 | 53.911 | 53.911 |
| 11 | Bangladesh | 28.433 | 28.664 | 28.741 | 29.104 | 29.563 | 29.931 | 30.398 | 31.134 | 31.339 | 32.314 | 32.544 | 32.735 | 32.933 | 33.113 | 33.161 |
| 12 | Belarus | 45.608 | 46.740 | 47.802 | 48.789 | 49.976 | 51.183 | 51.551 | 52.443 | 54.132 | 56.179 | 58.136 | 58.546 | 58.213 | 58.033 | 57.907 |
| 13 | Belgium | 57.104 | 57.368 | 58.362 | 58.601 | 59.101 | 59.367 | 59.531 | 60.183 | 61.145 | 61.907 | 62.188 | 62.506 | 63.212 | 63.785 | 63.842 |
| 14 | Benin | 24.039 | 24.359 | 24.558 | 24.714 | 25.141 | 25.680 | 25.815 | 26.533 | 27.597 | 27.458 | 27.864 | 28.527 | 28.648 | 28.750 | 28.756 |
| 15 | Bolivia | 35.668 | 36.609 | 36.964 | 37.221 | 37.485 | 37.553 | 37.853 | 38.087 | 38.342 | 38.603 | 38.853 | 39.116 | 39.347 | 39.559 | 39.604 |
| 16 | Bosnia and Herzegovina | 37.476 | 37.604 | 37.769 | 38.164 | 38.351 | 38.543 | 38.539 | 38.634 | 38.743 | 38.813 | 38.873 | 39.099 | 39.274 | 39.374 | 39.346 |
| 17 | Botswana | 24.327 | 25.029 | 25.609 | 26.130 | 27.167 | 28.065 | 29.965 | 32.346 | 32.416 | 32.512 | 34.206 | 35.023 | 36.656 | 37.625 | 36.525 |
| 18 | Brazil | 36.760 | 37.612 | 38.249 | 38.874 | 39.107 | 40.745 | 42.354 | 42.866 | 43.231 | 45.261 | 45.916 | 46.446 | 47.322 | 47.605 | 47.439 |
| 19 | Bulgaria | 42.457 | 42.875 | 43.395 | 44.287 | 44.986 | 46.336 | 47.205 | 48.005 | 49.158 | 49.966 | 50.917 | 52.248 | 53.353 | 54.409 | 54.591 |
| 20 | Burkina Faso | 20.959 | 21.253 | 21.514 | 22.008 | 22.355 | 22.719 | 23.200 | 23.598 | 23.913 | 24.347 | 24.718 | 25.001 | 25.209 | 25.398 | 25.628 |
| 21 | Burundi | 21.227 | 21.306 | 21.553 | 21.674 | 21.820 | 21.996 | 22.224 | 22.452 | 22.762 | 22.906 | 23.285 | 23.672 | 24.000 | 24.147 | 24.140 |
| 22 | Cambodia | 24.889 | 25.410 | 25.788 | 26.353 | 27.364 | 28.167 | 28.971 | 29.939 | 30.833 | 31.569 | 31.778 | 31.977 | 32.168 | 31.572 | 31.617 |
| 23 | Cameroon | 22.258 | 22.518 | 22.765 | 23.214 | 23.711 | 24.052 | 24.422 | 24.918 | 25.668 | 26.086 | 26.535 | 27.319 | 27.782 | 28.400 | 28.414 |
| 24 | Canada | 57.787 | 57.965 | 58.290 | 58.573 | 58.762 | 58.976 | 59.026 | 58.691 | 58.990 | 59.312 | 59.425 | 59.639 | 59.868 | 59.947 | 59.974 |
| 25 | Central African Republic | 18.020 | 18.048 | 18.111 | 18.262 | 18.306 | 18.543 | 19.115 | 19.429 | 19.741 | 20.153 | 20.401 | 20.621 | 20.937 | 21.254 | 21.260 |
| 26 | Chad | 19.350 | 19.437 | 19.659 | 19.853 | 19.957 | 20.106 | 20.430 | 20.654 | 20.938 | 21.172 | 21.404 | 21.605 | 22.132 | 22.272 | 22.220 |
| 27 | Chile | 45.954 | 46.938 | 47.293 | 49.007 | 48.908 | 50.721 | 51.708 | 52.918 | 55.372 | 57.181 | 58.697 | 60.153 | 61.068 | 61.767 | 61.811 |
| 28 | China | 33.494 | 34.554 | 35.454 | 36.752 | 37.181 | 37.476 | 38.184 | 38.888 | 39.441 | 40.350 | 41.452 | 44.292 | 45.678 | 45.892 | 45.892 |
| 29 | Colombia | 37.126 | 37.281 | 38.204 | 39.091 | 39.906 | 40.494 | 41.364 | 41.963 | 42.761 | 44.123 | 45.035 | 46.303 | 47.364 | 48.165 | 48.201 |

(continued)

Table A.2.5 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 30 Congo, Dem. Rep. | 21.659 | 21.962 | 22.272 | 22.576 | 22.866 | 23.145 | 23.717 | 24.234 | 24.460 | 25.032 | 25.257 | 25.088 | 25.271 | 25.445 | 25.443 |
| 31 Congo, Rep. | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r | DEVELOP hdi-r |
| 32 Costa Rica | 22.832 | 23.082 | 23.445 | 23.925 | 24.431 | 24.858 | 25.359 | 26.598 | 27.070 | 28.145 | 28.845 | 28.941 | 29.253 | 29.482 | 29.420 |
| 33 Cote d'Ivoire | 40.956 | 41.078 | 41.204 | 41.318 | 41.528 | 41.777 | 41.930 | 41.908 | 42.082 | 47.784 | 48.570 | 48.871 | 49.880 | 50.255 | 50.380 |
| 34 Croatia | 21.799 | 21.865 | 21.999 | 22.177 | 22.381 | 22.601 | 22.690 | 22.879 | 22.893 | 21.809 | 22.066 | 23.714 | 23.986 | 24.379 | 24.430 |
| 35 Cuba | 44.506 | 45.502 | 46.409 | 47.251 | 47.961 | 48.644 | 49.428 | 49.064 | 50.647 | 51.890 | 52.821 | 54.331 | 55.186 | 55.098 | 55.297 |
| 36 Cyprus | 57.161 | 59.734 | 68.771 | 72.477 | 82.987 | 91.394 | 96.662 | 95.537 | 87.347 | 81.330 | 73.858 | 67.642 | 64.215 | 62.336 | 62.336 |
| 37 Czech Republic | 46.047 | 48.105 | 49.500 | 49.004 | 49.353 | 50.410 | 52.384 | 54.659 | 53.589 | 52.978 | 52.469 | 52.536 | 54.125 | 56.312 | 56.521 |
| 38 Denmark | 45.097 | 46.000 | 48.384 | 50.142 | 51.311 | 52.861 | 54.179 | 54.650 | 55.729 | 56.491 | 56.560 | 56.427 | 57.052 | 57.342 | 57.520 |
| 39 Dominican Republic | 59.071 | 60.296 | 62.618 | 64.655 | 64.786 | 64.747 | 63.914 | 62.944 | 63.111 | 64.378 | 65.142 | 65.852 | 66.221 | 66.836 | 66.889 |
| 40 Ecuador | 39.519 | 39.566 | 39.648 | 39.895 | 40.186 | 40.447 | 40.578 | 40.648 | 40.912 | 41.041 | 41.589 | 45.069 | 45.557 | 46.544 | 46.731 |
| 41 Egypt, Arab Rep. | 41.824 | 41.938 | 42.153 | 42.306 | 42.438 | 42.518 | 42.692 | 42.736 | 42.852 | 43.078 | 43.589 | 43.932 | 44.084 | 44.134 | 44.053 |
| 42 El Salvador | 37.711 | 36.912 | 37.346 | 37.792 | 37.880 | 38.146 | 38.251 | 38.544 | 38.961 | 37.809 | 38.191 | 39.016 | 39.487 | 40.882 | 40.940 |
| 43 Equatorial Guinea | 35.077 | 35.396 | 35.718 | 35.963 | 36.206 | 36.685 | 37.053 | 37.257 | 37.563 | 38.052 | 38.477 | 38.759 | 38.792 | 39.003 | 39.040 |
| 44 Eritrea | 27.037 | 27.620 | 29.494 | 30.453 | 30.807 | 31.774 | 33.053 | 32.868 | 31.723 | 32.033 | 32.496 | 31.872 | 31.584 | 30.665 | 29.746 |
| 45 Estonia | 23.167 | 23.413 | 23.617 | 23.921 | 24.215 | 24.511 | 24.744 | 25.257 | 25.605 | 25.841 | 26.039 | 26.230 | 26.481 | 26.663 | 26.663 |
| 46 Ethiopia | 49.791 | 51.124 | 52.202 | 53.479 | 54.157 | 54.688 | 54.360 | 53.857 | 54.670 | 56.058 | 56.875 | 57.543 | 57.279 | 56.905 | 57.009 |
| 47 Finland | 21.719 | 22.231 | 22.703 | 23.186 | 23.640 | 24.105 | 24.780 | 25.690 | 26.682 | 27.169 | 27.600 | 27.891 | 28.142 | 28.368 | 28.388 |
| 48 France | 63.874 | 64.725 | 65.927 | 66.809 | 67.740 | 68.447 | 68.900 | 67.102 | 68.051 | 68.917 | 68.134 | 67.531 | 66.839 | 66.530 | 66.640 |
| 49 Gabon | 55.341 | 55.693 | 56.406 | 56.546 | 56.969 | 57.072 | 56.993 | 56.855 | 57.699 | 58.278 | 58.737 | 59.443 | 60.289 | 60.349 | 60.425 |
| 50 Gambia, The | 30.079 | 30.194 | 30.204 | 30.398 | 30.314 | 30.647 | 30.632 | 30.770 | 31.165 | 31.554 | 31.863 | 32.179 | 32.434 | 32.666 | 32.652 |
| 51 Georgia | 23.165 | 23.336 | 23.506 | 23.641 | 23.780 | 23.922 | 24.066 | 24.205 | 24.622 | 25.050 | 25.080 | 25.190 | 25.280 | 25.383 | 25.377 |
| 52 Germany | 40.980 | 41.581 | 41.536 | 42.900 | 40.656 | 40.556 | 39.866 | 37.393 | 38.458 | 39.251 | 38.876 | 40.552 | 41.959 | 43.268 | 43.331 |
| 53 Ghana | 57.535 | 57.521 | 57.753 | 57.926 | 58.376 | 58.878 | 59.091 | 58.563 | 59.046 | 59.807 | 59.881 | 59.886 | 61.482 | 62.353 | 62.428 |
| 54 Greece | 24.939 | 25.092 | 25.278 | 25.487 | 25.539 | 26.094 | 26.912 | 27.197 | 27.363 | 28.472 | 28.660 | 29.413 | 29.987 | 30.213 | 30.226 |
| 55 Guatemala | 56.563 | 58.549 | 60.697 | 63.194 | 64.705 | 63.994 | 64.142 | 63.867 | 67.786 | 68.675 | 68.856 | 68.926 | 70.081 | 70.168 | 70.212 |
| 56 Guinea | 31.176 | 31.324 | 31.471 | 31.613 | 31.789 | 34.249 | 34.403 | 34.043 | 34.676 | 34.857 | 35.014 | 35.562 | 35.720 | 36.849 | 36.868 |
| 57 Guinea-Bissau | 21.249 | 21.408 | 21.640 | 22.135 | 23.050 | 24.141 | 24.748 | 25.034 | 25.606 | 25.856 | 25.916 | 26.257 | 26.598 | 26.818 | 26.826 |
| 58 Haiti | 21.749 | 21.827 | 21.923 | 22.037 | 22.249 | 22.380 | 22.517 | 22.659 | 22.809 | 22.980 | 23.115 | 23.264 | 23.421 | 23.599 | 23.599 |
| | 35.170 | 35.338 | 35.499 | 35.713 | 35.949 | 36.204 | 36.452 | 36.715 | 36.921 | 37.182 | 37.416 | 37.643 | 37.845 | 38.021 | 38.022 |

(continued)

Table A.2.5 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 59 Honduras | 32.761 | 33.741 | 33.863 | 33.972 | 34.087 | 34.199 | 34.776 | 34.799 | 35.405 | 35.494 | 35.545 | 35.826 | 35.910 | 36.251 | 36.272 |
| 60 Hong Kong SAR, China | 49.796 | 50.026 | 50.926 | 51.802 | 53.038 | 55.948 | 59.736 | 59.863 | 61.493 | 62.752 | 62.853 | 65.195 | 65.937 | 66.174 | 66.377 |
| 61 Hungary | 46.032 | 48.369 | 50.971 | 52.601 | 53.708 | 53.689 | 53.171 | 52.091 | 51.891 | 52.025 | 52.123 | 51.687 | 50.958 | 50.597 | 50.739 |
| 62 India | 28.586 | 28.908 | 29.194 | 29.340 | 29.790 | 30.486 | 31.212 | 31.720 | 32.477 | 34.069 | 34.683 | 34.748 | 35.410 | 35.989 | 36.076 |
| 63 Indonesia | 32.042 | 32.505 | 32.801 | 33.127 | 33.294 | 33.603 | 34.572 | 35.370 | 35.863 | 36.682 | 38.015 | 38.362 | 38.472 | 36.728 | 36.830 |
| 64 Iran, Islamic Rep. | 36.676 | 37.263 | 38.016 | 38.566 | 39.520 | 41.228 | 43.135 | 43.460 | 45.603 | 47.534 | 49.112 | 49.941 | 52.448 | 54.087 | 54.087 |
| 65 Iraq | 33.650 | 32.591 | 34.310 | 34.322 | 34.481 | 34.424 | 34.597 | 34.657 | 34.832 | 35.060 | 35.509 | 35.722 | 35.715 | 35.857 | 36.156 |
| 66 Ireland | 55.981 | 56.804 | 58.195 | 58.925 | 59.811 | 60.695 | 59.346 | 59.406 | 61.250 | 61.963 | 62.363 | 64.062 | 66.375 | 71.255 | 71.741 |
| 67 Israel | 53.678 | 53.706 | 54.036 | 54.650 | 54.964 | 56.041 | 56.094 | 56.941 | 57.284 | 58.488 | 59.090 | 58.999 | 59.109 | 58.710 | 58.875 |
| 68 Italy | 56.610 | 57.375 | 58.799 | 59.476 | 60.308 | 60.690 | 60.500 | 60.084 | 60.200 | 60.290 | 59.703 | 59.183 | 59.170 | 59.239 | 59.335 |
| 69 Jamaica | 36.122 | 36.919 | 37.091 | 36.619 | 36.702 | 36.838 | 38.244 | 38.207 | 39.226 | 39.160 | 39.936 | 39.564 | 39.637 | 39.647 | 39.668 |
| 70 Japan | 55.104 | 55.610 | 56.394 | 56.890 | 57.765 | 58.179 | 58.054 | 57.696 | 58.140 | 58.562 | 59.341 | 59.901 | 60.312 | 60.540 | 60.649 |
| 71 Jordan | 39.076 | 40.197 | 41.623 | 41.817 | 41.956 | 42.558 | 43.609 | 43.984 | 42.758 | 42.706 | 44.721 | 44.727 | 44.751 | 44.019 | 43.993 |
| 72 Kazakhstan | 38.128 | 38.374 | 38.691 | 39.031 | 46.837 | 47.320 | 47.624 | 48.109 | 45.005 | 46.253 | 47.481 | 47.735 | 47.895 | 47.351 | 47.387 |
| 73 Kenya | 22.110 | 22.444 | 22.916 | 23.461 | 24.054 | 24.675 | 25.249 | 26.107 | 26.637 | 27.083 | 27.450 | 27.765 | 28.017 | 28.216 | 28.240 |
| 74 Korea, Dem. People's Rep. | 52.407 | 52.815 | 53.105 | 53.281 | 53.379 | 53.468 | 53.598 | 53.781 | 54.013 | 54.050 | 54.311 | 54.548 | 54.752 | 53.977 | 53.977 |
| 75 Korea, Rep. | 60.387 | 61.463 | 62.461 | 62.726 | 63.288 | 64.366 | 65.451 | 66.405 | 67.416 | 67.767 | 67.362 | 67.362 | 67.326 | 67.232 | 67.441 |
| 76 Kosovo | 42.551 | 42.832 | 43.042 | 43.334 | 43.578 | 43.899 | 44.070 | 44.291 | 44.514 | 44.775 | 45.045 | 45.300 | 45.522 | 45.844 | 45.935 |
| 77 Kuwait | 53.307 | 55.769 | 57.338 | 58.890 | 59.635 | 59.830 | 59.049 | 56.055 | 54.368 | 54.996 | 55.085 | 56.078 | 55.289 | 54.951 | 54.951 |
| 78 Kyrgyz Republic | 39.517 | 38.876 | 38.838 | 39.269 | 39.475 | 39.433 | 40.757 | 40.366 | 39.824 | 39.742 | 40.597 | 41.743 | 41.444 | 41.830 | 41.844 |
| 79 Lao PDR | 25.555 | 26.032 | 26.519 | 27.356 | 27.956 | 28.909 | 29.651 | 30.724 | 31.011 | 31.545 | 31.689 | 32.218 | 32.209 | 32.322 | 32.399 |
| 80 Latvia | 50.274 | 52.018 | 54.024 | 54.681 | 55.092 | 55.432 | 55.611 | 55.006 | 53.367 | 52.921 | 52.791 | 53.460 | 53.712 | 53.916 | 54.085 |
| 81 Lebanon | 45.492 | 45.102 | 45.487 | 45.829 | 45.983 | 47.189 | 48.161 | 48.624 | 48.731 | 49.039 | 47.774 | 47.719 | 46.755 | 45.525 | 45.496 |
| 82 Lesotho | 19.461 | 19.463 | 19.489 | 19.874 | 20.241 | 20.617 | 21.017 | 21.379 | 21.729 | 22.039 | 24.248 | 24.295 | 24.425 | 24.642 | 24.651 |
| 83 Liberia | 26.498 | 26.631 | 26.933 | 27.319 | 27.754 | 28.185 | 28.569 | 28.891 | 26.343 | 26.559 | 27.402 | 27.593 | 27.771 | 27.955 | 27.947 |
| 84 Libya | 49.840 | 51.049 | 51.993 | 52.385 | 52.763 | 52.876 | 52.876 | 53.023 | 53.023 | 53.023 | 48.250 | 48.237 | 48.241 | 48.264 | 48.308 |
| 85 Lithuania | 49.033 | 51.712 | 53.702 | 55.322 | 56.096 | 56.877 | 58.165 | 58.689 | 58.247 | 57.461 | 56.905 | 55.743 | 55.309 | 55.373 | 55.974 |

(continued)

Table A.2.5 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|-----|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 86 | Macdonia, FYR | 38.787 | 38.963 | 39.234 | 39.833 | 39.877 | 41.842 | 43.458 | 43.637 | 43.432 | 44.484 | 44.004 | 43.747 | 43.993 | 44.865 | 44.941 |
| 87 | Madagascar | 24.536 | 24.829 | 25.136 | 25.346 | 25.570 | 25.848 | 26.007 | 26.207 | 26.420 | 26.703 | 26.902 | 27.116 | 27.431 | 27.593 | 27.598 |
| 88 | Malawi | 18.957 | 19.227 | 19.601 | 20.033 | 20.559 | 21.148 | 21.768 | 22.398 | 23.065 | 23.653 | 24.148 | 24.585 | 24.952 | 25.239 | 25.238 |
| 89 | Malaysia | 40.829 | 41.907 | 42.006 | 41.635 | 42.044 | 44.934 | 44.040 | 44.435 | 45.155 | 44.934 | 45.344 | 45.729 | 43.602 | 43.447 | 43.620 |
| 90 | Mali | 20.586 | 20.940 | 21.269 | 21.612 | 21.927 | 22.209 | 23.372 | 23.753 | 24.009 | 24.268 | 24.568 | 24.736 | 24.933 | 25.133 | 25.144 |
| 91 | Mauritania | 25.320 | 25.445 | 25.536 | 25.581 | 25.894 | 26.116 | 26.229 | 26.324 | 26.592 | 26.812 | 27.040 | 27.228 | 27.329 | 27.428 | 27.343 |
| 92 | Mauritius | 35.819 | 36.164 | 36.732 | 37.796 | 38.679 | 39.206 | 40.139 | 41.730 | 42.343 | 43.052 | 44.378 | 44.873 | 44.812 | 44.473 | 44.650 |
| 93 | Mexico | 39.115 | 39.446 | 39.861 | 40.145 | 40.477 | 40.751 | 40.968 | 40.893 | 41.358 | 41.762 | 42.284 | 42.599 | 42.910 | 43.035 | 43.077 |
| 94 | Moldova | 36.247 | 36.662 | 37.069 | 37.476 | 38.719 | 39.361 | 39.246 | 38.891 | 39.116 | 39.747 | 40.107 | 40.686 | 40.919 | 40.921 | 40.972 |
| 95 | Mongolia | 36.487 | 37.352 | 38.436 | 39.773 | 40.857 | 41.016 | 41.757 | 42.718 | 43.641 | 44.630 | 45.868 | 47.218 | 48.056 | 49.358 | 49.337 |
| 96 | Morocco | 31.712 | 32.103 | 32.423 | 32.881 | 33.366 | 33.487 | 34.081 | 34.462 | 34.917 | 35.629 | 36.647 | 37.707 | 38.579 | 39.579 | 39.574 |
| 97 | Mozambique | 19.992 | 20.236 | 20.502 | 20.864 | 21.355 | 21.899 | 22.306 | 22.644 | 23.095 | 23.409 | 23.723 | 24.066 | 24.483 | 24.852 | 24.855 |
| 98 | Myanmar | 28.149 | 28.315 | 28.481 | 28.654 | 28.838 | 29.026 | 29.222 | 29.433 | 29.646 | 30.830 | 30.831 | 31.013 | 31.180 | 31.328 | 31.400 |
| 99 | Namibia | 24.618 | 24.587 | 24.685 | 24.939 | 25.124 | 25.517 | 26.703 | 27.144 | 27.746 | 28.339 | 28.909 | 29.443 | 29.932 | 30.320 | 30.294 |
| 100 | Nepal | 27.053 | 27.337 | 27.854 | 28.553 | 28.921 | 29.664 | 30.143 | 30.321 | 31.380 | 31.565 | 31.742 | 32.606 | 32.478 | 32.385 | 32.382 |
| 101 | Netherlands | 57.442 | 57.670 | 58.439 | 59.223 | 59.985 | 60.631 | 60.987 | 60.862 | 61.784 | 65.597 | 65.627 | 65.649 | 65.931 | 66.108 | 66.308 |
| 102 | New Zealand | 57.613 | 58.399 | 62.818 | 62.287 | 61.949 | 62.218 | 61.882 | 63.185 | 63.195 | 63.173 | 63.174 | 63.103 | 63.588 | 64.503 | 64.664 |
| 103 | Nicaragua | 33.750 | 33.934 | 34.135 | 34.320 | 34.492 | 34.672 | 34.832 | 34.918 | 35.079 | 35.256 | 35.433 | 35.590 | 35.741 | 35.891 | 35.937 |
| 104 | Niger | 20.681 | 20.941 | 21.190 | 21.520 | 21.815 | 22.087 | 22.436 | 22.791 | 23.102 | 23.386 | 23.707 | 23.934 | 24.140 | 24.314 | 24.316 |
| 105 | Nigeria | 21.961 | 22.179 | 22.673 | 23.044 | 23.321 | 23.586 | 23.837 | 24.084 | 24.072 | 24.436 | 24.623 | 24.826 | 25.045 | 25.218 | 25.158 |
| 106 | Norway | 66.994 | 68.800 | 69.537 | 69.724 | 69.857 | 69.552 | 68.632 | 68.340 | 68.366 | 68.486 | 68.819 | 69.700 | 70.149 | 70.223 | 70.260 |
| 107 | Oman | 60.504 | 59.940 | 59.988 | 60.181 | 60.787 | 61.203 | 62.122 | 62.558 | 62.595 | 61.496 | 61.984 | 61.691 | 61.191 | 61.270 | 61.270 |
| 108 | Pakistan | 26.675 | 26.785 | 27.107 | 27.668 | 27.812 | 28.114 | 28.206 | 28.692 | 28.800 | 29.402 | 29.874 | 30.116 | 30.224 | 30.208 | 30.252 |
| 109 | Panama | 43.789 | 44.989 | 44.946 | 44.820 | 45.368 | 45.802 | 46.157 | 46.217 | 46.717 | 46.625 | 47.522 | 46.318 | 46.604 | 46.887 | 47.057 |
| 110 | Papua New Guinea | 37.721 | 37.911 | 38.106 | 38.320 | 38.497 | 38.689 | 38.860 | 39.011 | 39.156 | 39.315 | 39.451 | 39.567 | 39.715 | 39.806 | 39.806 |
| 111 | Paraguay | 36.743 | 36.518 | 36.711 | 36.977 | 37.110 | 38.133 | 39.811 | 40.537 | 40.236 | 40.366 | 40.383 | 40.678 | 40.799 | 40.879 | 40.940 |
| 112 | Peru | 38.772 | 38.974 | 39.648 | 39.849 | 40.403 | 40.654 | 40.920 | 41.001 | 42.970 | 43.177 | 43.385 | 43.594 | 43.710 | 43.857 | 43.936 |
| 113 | Philippines | 36.187 | 35.958 | 35.859 | 35.705 | 35.883 | 35.988 | 36.484 | 36.342 | 36.759 | 37.160 | 37.388 | 38.165 | 38.886 | 39.016 | 39.109 |
| 114 | Poland | 49.593 | 50.120 | 50.778 | 51.626 | 52.407 | 53.211 | 54.305 | 55.041 | 56.130 | 56.589 | 56.611 | 56.328 | 55.922 | 56.406 | 56.588 |
| 115 | Portugal | 52.044 | 52.547 | 53.047 | 53.176 | 53.392 | 54.181 | 55.328 | 55.476 | 56.548 | 57.593 | 57.526 | 56.967 | 57.049 | 56.304 | 56.422 |
| 116 | Puerto Rico | 60.027 | 60.255 | 60.461 | 60.577 | 60.579 | 60.317 | 61.724 | 62.598 | 63.922 | 63.989 | 63.979 | 63.782 | 63.605 | 63.686 | 63.686 |

(continued)

Table A.2.5 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 117 Qatar | 63.556 | 62.393 | 65.236 | 63.567 | 65.882 | 64.630 | 64.484 | 63.559 | 65.697 | 67.295 | 66.215 | 65.850 | 65.866 | 65.933 | 65.537 |
| 118 Romania | 40.274 | 41.976 | 43.447 | 44.871 | 47.042 | 49.341 | 53.231 | 53.426 | 52.516 | 51.566 | 49.318 | 49.105 | 49.526 | 49.752 | 50.038 |
| 119 Russian Federation | 48.379 | 49.735 | 50.213 | 51.105 | 52.067 | 53.218 | 52.925 | 53.859 | 54.175 | 55.054 | 55.308 | 56.100 | 56.280 | 56.635 | 56.610 |
| 120 Rwanda | 20.904 | 21.526 | 22.238 | 22.955 | 23.899 | 24.626 | 25.359 | 26.162 | 26.841 | 27.567 | 27.856 | 28.407 | 28.671 | 28.990 | 29.022 |
| 121 Saudi Arabia | 45.590 | 47.425 | 48.449 | 48.924 | 49.060 | 48.903 | 49.426 | 49.174 | 51.016 | 53.217 | 55.595 | 57.393 | 59.307 | 60.118 | 60.049 |
| 122 Senegal | 25.052 | 25.293 | 25.556 | 25.975 | 26.297 | 26.769 | 27.495 | 27.791 | 27.964 | 28.845 | 29.096 | 29.372 | 29.656 | 29.848 | 29.870 |
| 123 Serbia | 40.835 | 42.102 | 42.792 | 43.918 | 45.013 | 45.624 | 46.094 | 46.373 | 46.330 | 47.180 | 47.812 | 48.853 | 49.332 | 49.499 | 49.613 |
| 124 Sierra Leone | 16.934 | 17.342 | 17.739 | 18.121 | 18.499 | 18.883 | 19.261 | 19.630 | 19.987 | 20.316 | 20.644 | 20.962 | 21.189 | 21.278 | 21.291 |
| 125 Singapore | 66.499 | 67.979 | 69.973 | 71.409 | 72.817 | 74.173 | 73.457 | 72.817 | 76.249 | 77.493 | 78.034 | 79.158 | 79.984 | 80.270 | 80.483 |
| 126 Slovak Republic | 42.400 | 43.148 | 44.119 | 45.647 | 47.439 | 49.524 | 51.029 | 51.361 | 52.013 | 52.290 | 52.456 | 52.219 | 52.128 | 52.548 | 52.780 |
| 127 Slovenia | 54.755 | 56.020 | 57.378 | 59.707 | 61.179 | 62.352 | 62.881 | 62.453 | 63.367 | 62.700 | 62.922 | 62.605 | 62.479 | 62.644 | 62.826 |
| 128 Somalia | 61.109 | 61.430 | 61.763 | 62.122 | 62.504 | 62.893 | 63.280 | 63.668 | 64.063 | 64.472 | 64.899 | 65.346 | 65.813 | 66.296 | 66.296 |
| 129 South Africa | 29.379 | 29.097 | 28.943 | 28.925 | 29.062 | 29.335 | 29.670 | 29.966 | 30.483 | 31.057 | 31.609 | 32.331 | 32.712 | 33.090 | 33.047 |
| 130 South Sudan | 59.319 | 59.771 | 60.232 | 60.716 | 61.235 | 61.789 | 62.625 | 62.943 | 63.283 | 63.491 | 63.173 | 63.559 | 63.872 | 64.102 | 64.102 |
| 131 Spain | 56.728 | 57.524 | 58.334 | 58.917 | 59.767 | 60.231 | 60.761 | 61.157 | 62.555 | 64.099 | 64.424 | 64.994 | 65.745 | 66.235 | 66.504 |
| 132 Sri Lanka | 34.706 | 35.021 | 35.272 | 35.474 | 35.649 | 35.784 | 35.900 | 35.974 | 36.148 | 36.045 | 36.824 | 37.438 | 37.703 | 38.019 | 38.111 |
| 133 Sudan | 26.591 | 26.612 | 27.296 | 27.856 | 28.510 | 28.677 | 29.278 | 29.539 | 29.797 | 29.928 | 30.274 | 30.975 | 30.924 | 31.051 | 31.076 |
| 134 Suriname | 33.147 | 33.351 | 33.671 | 33.886 | 34.095 | 34.352 | 34.579 | 34.763 | 35.013 | 35.281 | 35.426 | 35.571 | 35.609 | 35.521 | 35.095 |
| 135 Swaziland | 21.181 | 21.036 | 21.292 | 21.284 | 21.537 | 21.964 | 22.403 | 22.905 | 23.466 | 24.412 | 24.954 | 25.319 | 25.755 | 26.068 | 25.986 |
| 136 Sweden | 62.325 | 64.326 | 65.528 | 65.294 | 65.079 | 64.214 | 63.071 | 62.590 | 64.065 | 64.208 | 62.850 | 61.260 | 61.267 | 61.710 | 61.956 |
| 137 Switzerland | 56.153 | 56.983 | 57.912 | 58.343 | 59.100 | 59.840 | 60.520 | 60.416 | 61.535 | 62.239 | 62.561 | 62.915 | 63.439 | 63.518 | 63.548 |
| 138 Syrian Arab Republic | 48.872 | 49.309 | 50.331 | 51.787 | 52.932 | 53.490 | 53.892 | 53.531 | 53.769 | 53.269 | 55.336 | 56.163 | 59.932 | 60.067 | 60.067 |
| 139 Tajikistan | 31.571 | 32.139 | 32.702 | 33.066 | 33.571 | 33.971 | 34.232 | 34.284 | 34.466 | 34.427 | 34.675 | 34.862 | 35.481 | 36.105 | 36.838 |
| 140 Tanzania | 21.626 | 22.082 | 22.596 | 23.088 | 23.500 | 23.924 | 24.310 | 24.674 | 25.201 | 25.550 | 26.383 | 26.650 | 26.994 | 27.327 | 27.351 |
| 141 Thailand | 41.781 | 42.320 | 42.899 | 43.802 | 44.090 | 45.500 | 45.584 | 45.939 | 46.673 | 47.501 | 47.508 | 47.631 | 48.049 | 47.214 | 47.328 |
| 142 Timor-Leste | 27.058 | 27.419 | 27.798 | 28.189 | 28.515 | 28.852 | 29.147 | 31.535 | 32.147 | 32.283 | 32.392 | 32.487 | 32.606 | 32.730 | 32.730 |
| 143 Togo | 22.931 | 23.029 | 23.144 | 23.285 | 23.467 | 23.857 | 24.091 | 24.347 | 25.571 | 26.112 | 26.392 | 26.696 | 26.718 | 27.006 | 27.014 |
| 144 Trinidad and Tobago | 34.866 | 35.648 | 37.010 | 37.419 | 38.333 | 38.719 | 39.018 | 38.691 | 38.986 | 38.995 | 39.127 | 39.364 | 39.336 | 39.307 | 38.867 |

(continued)

Table A.2.5 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 145 Tunisia | 37,667 | 38,989 | 39,857 | 40,501 | 40,842 | 41,083 | 41,480 | 41,883 | 42,065 | 41,927 | 42,142 | 41,953 | 42,183 | 42,261 | 42,262 |
| 146 Turkey | 38,876 | 40,224 | 40,920 | 41,972 | 43,430 | 44,265 | 44,780 | 46,378 | 49,518 | 51,380 | 54,033 | 57,182 | 59,516 | 62,213 | 62,290 |
| 147 Turkmenistan | 28,968 | 29,112 | 29,290 | 29,595 | 29,890 | 30,202 | 30,600 | 30,831 | 31,128 | 31,561 | 31,918 | 32,257 | 32,609 | 32,839 | 33,008 |
| 148 Uganda | 20,715 | 21,240 | 21,665 | 22,107 | 22,518 | 22,921 | 23,391 | 23,853 | 24,086 | 24,497 | 24,542 | 24,730 | 25,151 | 25,298 | 25,303 |
| 149 Ukraine | 44,158 | 45,509 | 47,141 | 48,535 | 50,331 | 51,687 | 52,494 | 52,725 | 52,609 | 53,328 | 53,059 | 52,577 | 53,185 | 52,985 | 53,037 |
| 150 United Arab Emirates | 81,787 | 82,670 | 82,922 | 80,616 | 79,301 | 75,824 | 73,016 | 69,024 | 67,758 | 68,175 | 68,814 | 69,958 | 70,666 | 71,472 | 71,920 |
| 150 United Arab Emirates | 81,787 | 82,670 | 82,922 | 80,616 | 79,301 | 75,824 | 73,016 | 69,024 | 67,758 | 68,175 | 68,814 | 69,958 | 70,666 | 71,472 | 71,920 |
| 151 UK | 57,192 | 57,432 | 56,971 | 57,201 | 57,482 | 57,599 | 57,025 | 57,070 | 57,566 | 57,827 | 57,933 | 57,434 | 57,663 | 57,917 | 58,018 |
| 152 USA | 64,456 | 65,277 | 65,842 | 66,315 | 66,601 | 67,098 | 67,506 | 68,169 | 70,010 | 70,741 | 70,556 | 69,003 | 68,618 | 68,624 | 68,748 |
| 153 Uruguay | 43,567 | 44,191 | 44,762 | 45,876 | 46,264 | 45,468 | 52,023 | 51,854 | 52,188 | 52,457 | 52,663 | 50,696 | 51,237 | 51,081 | 51,136 |
| 154 Uzbekistan | 31,271 | 31,425 | 31,620 | 30,631 | 30,846 | 31,009 | 31,208 | 31,345 | 31,382 | 31,436 | 31,433 | 31,656 | 31,849 | 32,054 | 32,226 |
| 155 Venezuela, RB | 42,799 | 42,966 | 44,023 | 44,369 | 44,717 | 45,042 | 55,230 | 54,916 | 54,826 | 54,986 | 55,218 | 55,271 | 55,333 | 55,398 | 55,398 |
| 156 Vietnam | 32,561 | 32,789 | 32,913 | 34,688 | 34,980 | 35,573 | 35,846 | 36,280 | 37,122 | 37,838 | 38,019 | 38,144 | 39,804 | 39,501 | 39,576 |
| 157 West Bank and Gaza | 53,985 | 55,861 | 57,857 | 59,560 | 60,587 | 62,277 | 62,887 | 62,304 | 62,957 | 63,798 | 63,293 | 62,209 | 61,755 | 61,973 | 61,973 |
| 158 Yemen, Rep. | 28,074 | 28,069 | 28,065 | 28,211 | 28,248 | 28,727 | 28,914 | 29,196 | 29,211 | 28,981 | 29,080 | 29,196 | 29,260 | 29,056 | 28,975 |
| 159 Zambia | 19,987 | 20,404 | 20,863 | 21,362 | 21,907 | 22,491 | 23,092 | 23,709 | 24,316 | 24,845 | 25,327 | 25,729 | 26,058 | 26,304 | 26,306 |
| 160 Zimbabwe | 19,669 | 19,589 | 19,704 | 19,951 | 20,349 | 20,869 | 21,434 | 22,159 | 22,934 | 23,683 | 24,420 | 25,040 | 25,558 | 26,676 | 26,668 |

Source: Author's own calculations based on World Bank (2018)

See World Bank (2018), the World Development Indicators

<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>

Aggregation measures of the indicators used:

33.33%: Life expectancy at birth, total (years)

33.33%: School enrollment, tertiary (% gross)

33.33%: GDP per capita, PPP (constant 2011 international \$)

Status: April 30, 2018

Table A.2.6 Development (sustainable development) non-political. Scores transformed (rescaled) to 0–100: 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| Country name | Series | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Afghanistan | DEVELOP non-pol | 21.542 | 21.649 | 21.727 | 21.852 | 21.953 | 22.095 | 22.169 | 22.616 | 22.715 | 22.764 | 22.925 | 22.980 | 23.539 | 23.582 | 23.577 |
| 2 Albania | DEVELOP non-pol | 38.373 | 38.555 | 39.016 | 39.607 | 40.192 | 40.648 | 41.131 | 41.568 | 42.708 | 43.143 | 43.839 | 44.788 | 45.042 | 44.838 | 45.275 |
| 3 Algeria | DEVELOP non-pol | 39.362 | 39.765 | 40.023 | 40.344 | 40.543 | 40.887 | 40.981 | 41.425 | 41.496 | 41.832 | 41.814 | 42.269 | 42.565 | 42.997 | 42.941 |
| 4 Angola | DEVELOP non-pol | 30.979 | 31.352 | 31.438 | 31.810 | 32.168 | 32.608 | 33.325 | 33.836 | 33.840 | 34.300 | 34.449 | 34.444 | 34.594 | 34.648 | 34.533 |
| 5 Argentina | DEVELOP non-pol | 41.823 | 42.426 | 43.196 | 43.620 | 44.561 | 45.429 | 45.891 | 45.753 | 46.783 | 47.523 | 47.628 | 48.016 | 47.949 | 48.097 | 47.821 |
| 6 Armenia | DEVELOP non-pol | 38.340 | 38.850 | 38.550 | 39.099 | 40.099 | 40.987 | 41.199 | 41.289 | 41.316 | 41.413 | 41.090 | 41.029 | 41.294 | 41.306 | 41.398 |
| 7 Australia | DEVELOP non-pol | 53.404 | 53.640 | 53.916 | 54.302 | 54.452 | 55.051 | 55.129 | 55.406 | 56.019 | 56.445 | 57.112 | 57.534 | 58.068 | 58.113 | 58.456 |
| 8 Austria | DEVELOP non-pol | 53.832 | 53.765 | 54.218 | 54.617 | 55.296 | 56.062 | 56.608 | 56.346 | 57.465 | 58.371 | 58.598 | 59.043 | 59.239 | 59.191 | 59.135 |
| 9 Azerbaijan | DEVELOP non-pol | 38.968 | 39.047 | 39.600 | 40.200 | 41.208 | 42.467 | 40.766 | 41.078 | 41.533 | 41.444 | 41.602 | 42.186 | 42.367 | 42.675 | 42.309 |
| 10 Bahrain | DEVELOP non-pol | 46.318 | 46.395 | 46.498 | 45.995 | 46.069 | 45.020 | 44.940 | 44.920 | 44.935 | 47.033 | 47.706 | 47.461 | 48.445 | 48.304 | 48.526 |
| 11 Bangladesh | DEVELOP non-pol | 34.147 | 34.356 | 34.373 | 34.635 | 34.852 | 35.254 | 35.415 | 35.866 | 36.215 | 36.393 | 36.694 | 36.937 | 37.115 | 37.147 | 37.467 |
| 12 Belarus | DEVELOP non-pol | 42.402 | 43.099 | 43.954 | 44.428 | 45.005 | 45.582 | 46.304 | 46.632 | 47.370 | 48.432 | 49.201 | 49.358 | 49.281 | 49.101 | 48.995 |
| 13 Belgium | DEVELOP non-pol | 53.420 | 53.603 | 54.339 | 55.043 | 55.746 | 56.038 | 56.178 | 56.450 | 56.851 | 57.485 | 57.683 | 57.812 | 57.879 | 58.071 | 58.086 |
| 14 Benin | DEVELOP non-pol | 31.831 | 31.925 | 31.990 | 32.034 | 31.994 | 32.075 | 32.203 | 32.502 | 32.945 | 32.832 | 32.525 | 32.745 | 33.226 | 32.857 | 33.054 |
| 15 Bolivia | DEVELOP non-pol | 34.086 | 34.372 | 35.134 | 34.815 | 35.365 | 35.766 | 36.416 | 36.780 | 37.011 | 37.967 | 38.156 | 37.820 | 38.427 | 38.830 | 39.039 |

(continued)

Table A.2.6 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|--------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 16 | Bosnia and Herzegovina | DEVELOP | 39.406 | 39.521 | 39.181 | 39.431 | 39.564 | 39.882 | 39.999 | 39.897 | 39.938 | 39.822 | 39.907 | 40.069 | 40.152 | 40.438 |
| | non-pol | DEVELOP | 32.599 | 32.934 | 33.151 | 33.402 | 33.838 | 34.406 | 35.416 | 36.075 | 36.235 | 36.378 | 37.007 | 38.037 | 38.476 | 38.430 |
| 17 | Botswana | DEVELOP | 36.953 | 37.287 | 37.759 | 38.052 | 38.426 | 39.302 | 39.980 | 40.118 | 40.491 | 41.587 | 41.903 | 42.102 | 42.402 | 42.020 |
| | non-pol | DEVELOP | 40.788 | 41.041 | 41.449 | 41.978 | 42.708 | 43.337 | 44.207 | 44.308 | 44.428 | 44.880 | 45.176 | 46.087 | 46.667 | 47.294 |
| 19 | Bulgaria | DEVELOP | 30.271 | 30.374 | 30.458 | 30.626 | 30.808 | 31.062 | 31.282 | 31.914 | 32.020 | 32.519 | 32.710 | 32.775 | 33.394 | 33.480 |
| | non-pol | DEVELOP | 33.103 | 33.117 | 33.194 | 33.226 | 33.274 | 33.330 | 33.402 | 33.470 | 33.564 | 33.690 | 33.874 | 33.500 | 33.500 | 33.599 |
| 21 | Burundi | DEVELOP | 28.128 | 28.334 | 28.508 | 28.762 | 29.239 | 29.717 | 29.944 | 30.340 | 30.647 | 30.929 | 31.115 | 31.250 | 31.487 | 31.603 |
| | non-pol | DEVELOP | 31.256 | 31.342 | 31.424 | 31.558 | 31.774 | 31.896 | 32.119 | 32.255 | 32.441 | 32.843 | 33.308 | 33.563 | 33.593 | 33.909 |
| 23 | Cameroon | DEVELOP | 52.899 | 52.963 | 53.311 | 53.708 | 54.118 | 54.209 | 54.281 | 54.010 | 54.442 | 54.789 | 55.063 | 55.322 | 55.440 | 55.857 |
| | non-pol | DEVELOP | 24.881 | 24.870 | 24.902 | 24.950 | 24.973 | 25.060 | 23.581 | 23.687 | 23.797 | 23.942 | 24.036 | 23.989 | 24.096 | 24.219 |
| 25 | Central African Republic | DEVELOP | 29.506 | 29.565 | 29.741 | 29.864 | 30.037 | 29.974 | 30.219 | 30.189 | 30.332 | 30.271 | 30.364 | 30.644 | 30.866 | 30.762 |
| | non-pol | DEVELOP | 41.051 | 41.648 | 42.001 | 42.742 | 43.388 | 44.479 | 45.000 | 45.324 | 46.312 | 46.855 | 47.570 | 48.594 | 48.957 | 49.352 |
| 27 | Chile | DEVELOP | 35.455 | 35.816 | 36.143 | 36.441 | 36.866 | 37.486 | 37.755 | 38.106 | 38.483 | 38.792 | 39.407 | 39.874 | 40.966 | 41.860 |
| | non-pol | DEVELOP | 37.021 | 37.533 | 37.719 | 38.036 | 38.478 | 38.656 | 38.848 | 39.029 | 39.149 | 40.119 | 40.891 | 41.325 | 41.945 | 42.679 |
| 29 | Colombia | DEVELOP | 26.168 | 26.273 | 26.382 | 26.487 | 26.587 | 26.686 | 26.882 | 27.053 | 27.135 | 27.332 | 27.428 | 27.381 | 27.453 | 27.516 |
| | non-pol | DEVELOP | 27.265 | 27.301 | 27.431 | 27.660 | 27.870 | 27.928 | 28.124 | 28.586 | 28.828 | 28.975 | 29.203 | 29.250 | 29.432 | 29.406 |
| 31 | Congo, Rep. | DEVELOP | | | | | | | | | | | | | | |
| | non-pol | DEVELOP | | | | | | | | | | | | | | |

(continued)

Table A.2.6 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 32 Costa Rica | DEVELOP | 38.702 | 39.179 | 39.611 | 39.942 | 40.108 | 40.479 | 40.782 | 40.487 | 41.126 | 42.849 | 43.255 | 43.241 | 43.917 | 44.274 | 44.357 |
| | non-pol | | | | | | | | | | | | | | | |
| 33 Cote d'Ivoire | DEVELOP | 31.039 | 31.049 | 31.066 | 31.118 | 31.184 | 31.250 | 31.055 | 31.130 | 31.219 | 30.851 | 31.011 | 31.619 | 31.973 | 32.225 | 32.466 |
| | non-pol | | | | | | | | | | | | | | | |
| 34 Croatia | DEVELOP | 44.017 | 44.669 | 45.076 | 45.869 | 46.449 | 46.656 | 47.047 | 46.487 | 47.007 | 47.619 | 47.837 | 48.322 | 48.579 | 48.613 | 49.041 |
| | non-pol | | | | | | | | | | | | | | | |
| 35 Cuba | DEVELOP | | | | | | | | | | | | | | | |
| | non-pol | | | | | | | | | | | | | | | |
| 36 Cyprus | DEVELOP | 48.336 | 48.977 | 49.795 | 49.844 | 50.227 | 50.986 | 51.627 | 51.785 | 51.382 | 51.082 | 50.413 | 49.620 | 50.177 | 51.194 | 51.508 |
| | non-pol | | | | | | | | | | | | | | | |
| 37 Czech Republic | DEVELOP | 45.495 | 45.449 | 46.671 | 47.754 | 48.647 | 49.666 | 50.330 | 50.213 | 50.534 | 50.992 | 51.059 | 50.923 | 51.602 | 52.114 | 52.357 |
| | non-pol | | | | | | | | | | | | | | | |
| 38 Denmark | DEVELOP | 57.290 | 57.620 | 58.846 | 59.515 | 59.805 | 59.990 | 59.900 | 58.858 | 59.041 | 59.697 | 59.996 | 60.430 | 60.429 | 60.585 | 60.922 |
| | non-pol | | | | | | | | | | | | | | | |
| 39 Dominican Republic | DEVELOP | 37.814 | 37.547 | 37.640 | 38.145 | 38.315 | 39.016 | 39.224 | 39.156 | 39.543 | 39.593 | 41.238 | 41.308 | 41.945 | 42.302 | 42.831 |
| | non-pol | | | | | | | | | | | | | | | |
| 40 Ecuador | DEVELOP | 37.410 | 37.617 | 37.925 | 38.055 | 38.821 | 38.946 | 39.701 | 39.646 | 39.692 | 40.492 | 40.946 | 41.127 | 41.368 | 41.065 | 40.920 |
| | non-pol | | | | | | | | | | | | | | | |
| 41 Egypt, Arab Rep. | DEVELOP | 38.305 | 38.056 | 38.236 | 38.405 | 38.564 | 38.792 | 39.087 | 39.289 | 39.513 | 39.188 | 39.467 | 39.879 | 39.981 | 40.404 | 40.420 |
| | non-pol | | | | | | | | | | | | | | | |
| 42 El Salvador | DEVELOP | 35.606 | 35.931 | 36.429 | 37.035 | 37.489 | 37.756 | 37.793 | 37.467 | 37.713 | 38.220 | 38.427 | 38.651 | 39.117 | 39.295 | 39.386 |
| | non-pol | | | | | | | | | | | | | | | |
| 43 Equatorial Guinea | DEVELOP | 28.674 | 29.358 | 32.996 | 34.823 | 35.358 | 37.028 | 39.344 | 38.800 | 36.465 | 36.583 | 37.491 | 36.170 | 35.472 | 33.598 | 31.874 |
| | non-pol | | | | | | | | | | | | | | | |
| 44 Eritrea | DEVELOP | 21.841 | 21.888 | 21.952 | 22.066 | 22.166 | 22.272 | 22.298 | 22.497 | 22.630 | 22.752 | 22.826 | 22.898 | 22.992 | 23.060 | 23.060 |
| | non-pol | | | | | | | | | | | | | | | |
| 45 Estonia | DEVELOP | 44.447 | 45.028 | 46.166 | 47.253 | 48.334 | 49.209 | 48.749 | 47.741 | 47.620 | 48.461 | 49.146 | 48.970 | 49.795 | 49.774 | 49.743 |
| | non-pol | | | | | | | | | | | | | | | |
| 46 Ethiopia | DEVELOP | 32.079 | 32.222 | 32.383 | 32.547 | 32.753 | 32.767 | 33.085 | 33.459 | 33.518 | 33.765 | 33.912 | 33.962 | 34.368 | 34.728 | 34.687 |
| | non-pol | | | | | | | | | | | | | | | |
| 47 Finland | DEVELOP | 56.390 | 56.423 | 57.291 | 58.499 | 58.935 | 59.957 | 60.484 | 58.951 | 59.404 | 60.176 | 59.960 | 59.717 | 59.489 | 59.329 | 59.236 |
| | non-pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.6 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 48 France | DEVELOP non-pol | 52.564 | 52.674 | 53.110 | 53.346 | 54.061 | 54.598 | 54.461 | 53.699 | 54.026 | 54.444 | 54.707 | 55.574 | 56.006 | 56.026 | 56.410 |
| 49 Gabon | DEVELOP non-pol | 34.106 | 34.130 | 34.027 | 34.142 | 33.844 | 34.114 | 33.765 | 33.658 | 33.928 | 34.243 | 34.442 | 34.665 | 34.835 | 34.966 | 34.944 |
| 50 Gambia, The | DEVELOP non-pol | 31.256 | 31.325 | 31.394 | 31.415 | 31.415 | 31.692 | 31.900 | 31.968 | 32.107 | 32.041 | 32.063 | 32.106 | 32.247 | 32.203 | 31.982 |
| 51 Georgia | DEVELOP non-pol | 38.395 | 38.713 | 38.734 | 39.205 | 38.682 | 38.750 | 38.689 | 37.627 | 38.071 | 38.556 | 38.700 | 39.617 | 40.146 | 40.744 | 40.814 |
| 52 Germany | DEVELOP non-pol | 54.189 | 54.111 | 54.328 | 54.505 | 55.157 | 55.510 | 55.891 | 55.242 | 55.953 | 57.036 | 57.032 | 57.096 | 57.822 | 58.043 | 58.296 |
| 53 Ghana | DEVELOP non-pol | 32.800 | 32.864 | 32.945 | 33.036 | 33.149 | 33.274 | 33.607 | 33.815 | 33.938 | 34.330 | 34.562 | 34.650 | 35.290 | 35.389 | 35.291 |
| 54 Greece | DEVELOP non-pol | 49.208 | 50.333 | 51.436 | 52.183 | 53.215 | 53.506 | 53.499 | 53.317 | 54.032 | 53.236 | 52.630 | 52.630 | 53.190 | 53.190 | 53.396 |
| 55 Guatemala | DEVELOP non-pol | 33.648 | 33.702 | 33.754 | 33.805 | 33.998 | 34.733 | 34.979 | 35.011 | 35.066 | 35.509 | 35.625 | 36.417 | 36.716 | 37.088 | 37.128 |
| 56 Guinea | DEVELOP non-pol | 30.787 | 30.831 | 30.902 | 31.056 | 31.332 | 32.087 | 32.276 | 32.352 | 32.518 | 32.597 | 33.306 | 33.413 | 33.506 | 33.823 | 34.058 |
| 57 Guinea-Bissau | DEVELOP non-pol | 27.337 | 27.351 | 27.385 | 27.431 | 27.502 | 27.548 | 27.598 | 27.649 | 25.706 | 25.794 | 25.817 | 25.858 | 25.910 | 25.976 | 25.994 |
| 58 Haiti | DEVELOP non-pol | 30.713 | 30.750 | 30.754 | 30.807 | 30.870 | 30.939 | 30.998 | 31.076 | 31.088 | 31.176 | 31.242 | 31.314 | 31.366 | 31.409 | 31.411 |
| 59 Honduras | DEVELOP non-pol | 33.278 | 33.593 | 33.695 | 33.636 | 34.194 | 34.736 | 34.921 | 35.421 | 35.430 | 34.773 | 34.831 | 35.561 | 35.856 | 36.114 | 36.392 |
| 60 Hong Kong SAR, China | DEVELOP non-pol | 43.302 | 43.710 | 45.183 | 46.478 | 48.005 | 49.994 | 51.684 | 51.305 | 53.017 | 54.175 | 54.337 | 55.689 | 56.342 | 56.736 | 57.117 |
| 61 Hungary | DEVELOP non-pol | 45.552 | 46.318 | 47.438 | 47.446 | 48.866 | 49.131 | 49.132 | 48.311 | 47.905 | 48.270 | 48.108 | 48.081 | 48.195 | 48.304 | 48.528 |
| 62 India | DEVELOP non-pol | 34.042 | 34.184 | 34.318 | 34.424 | 34.537 | 34.966 | 35.300 | 35.519 | 35.903 | 36.736 | 37.088 | 37.072 | 37.564 | 38.074 | 38.040 |
| 63 Indonesia | DEVELOP non-pol | 36.199 | 36.397 | 36.544 | 36.728 | 36.876 | 36.968 | 37.467 | 37.809 | 38.068 | 38.326 | 38.864 | 39.318 | 39.582 | 39.183 | 39.443 |

(continued)

Table A.2.6 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 64 | Iran, Islamic Rep. | DEVELOP non-pol | 37.576 | 38.015 | 38.319 | 38.579 | 38.965 | 39.978 | 40.290 | 40.877 | 41.720 | 42.454 | 42.365 | 42.965 | 43.644 | 44.035 |
| 65 | Iraq | DEVELOP non-pol | 34.950 | 33.273 | 34.938 | 35.029 | 35.471 | 35.649 | 35.750 | 35.746 | 35.922 | 36.082 | 36.507 | 36.694 | 36.573 | 37.198 |
| 66 | Ireland | DEVELOP non-pol | 54.758 | 55.503 | 56.665 | 57.685 | 58.745 | 59.289 | 58.207 | 57.512 | 58.402 | 58.727 | 58.623 | 59.203 | 61.489 | 67.257 |
| 67 | Israel | DEVELOP non-pol | 47.597 | 47.560 | 47.973 | 48.305 | 48.709 | 49.412 | 49.590 | 49.786 | 49.925 | 50.669 | 50.977 | 51.344 | 51.701 | 51.985 |
| 68 | Italy | DEVELOP non-pol | 52.465 | 52.763 | 53.281 | 53.681 | 54.168 | 54.894 | 54.611 | 53.893 | 54.014 | 54.005 | 53.697 | 53.407 | 53.753 | 53.611 |
| 69 | Jamaica | DEVELOP non-pol | 37.160 | 37.454 | 37.861 | 37.741 | 37.668 | 37.905 | 38.302 | 38.333 | 38.607 | 38.597 | 38.887 | 38.796 | 38.749 | 38.966 |
| 70 | Japan | DEVELOP non-pol | 50.778 | 51.193 | 51.695 | 52.253 | 52.685 | 52.933 | 52.834 | 52.341 | 52.822 | 52.949 | 53.277 | 53.766 | 54.117 | 54.349 |
| 71 | Jordan | DEVELOP non-pol | 38.331 | 38.710 | 39.243 | 39.392 | 40.046 | 40.415 | 40.886 | 40.865 | 40.402 | 40.304 | 40.789 | 40.604 | 40.509 | 40.339 |
| 72 | Kazakhstan | DEVELOP non-pol | 39.889 | 40.340 | 40.682 | 41.368 | 44.061 | 44.512 | 44.617 | 45.014 | 44.083 | 45.138 | 45.906 | 46.269 | 46.628 | 46.354 |
| 73 | Kenya | DEVELOP non-pol | 31.026 | 31.134 | 31.287 | 31.468 | 31.693 | 31.953 | 32.065 | 32.304 | 32.498 | 32.976 | 33.147 | 33.799 | 33.815 | 33.641 |
| 74 | Korea, Dem. People's Rep. | DEVELOP non-pol | 48.920 | 49.298 | 49.856 | 50.589 | 51.402 | 51.759 | 52.155 | 52.693 | 53.312 | 53.719 | 53.836 | 54.080 | 54.713 | 55.037 |
| 75 | Korea, Rep. | DEVELOP non-pol | 26.823 | 27.055 | 27.183 | 27.058 | 27.389 | 27.677 | 27.785 | 27.676 | 27.568 | 28.710 | 28.587 | 29.207 | 29.613 | 29.743 |
| 76 | Kosovo | DEVELOP non-pol | 56.252 | 60.795 | 63.553 | 65.638 | 66.998 | 67.382 | 65.830 | 60.775 | 58.098 | 59.320 | 59.085 | 58.910 | 57.903 | 56.938 |
| 77 | Kuwait | DEVELOP non-pol | 38.614 | 38.638 | 37.927 | 38.320 | 37.724 | 38.614 | 39.344 | 39.360 | 39.247 | 39.476 | 39.622 | 39.920 | 40.048 | 39.916 |
| 78 | Kyrgyz Republic | DEVELOP non-pol | 34.694 | 34.875 | 35.053 | 35.351 | 35.590 | 35.615 | 35.899 | 36.276 | 36.433 | 36.674 | 36.684 | 37.000 | 37.184 | 37.309 |
| 79 | Lao PDR | DEVELOP non-pol | | | | | | | | | | | | | | |

(continued)

Table A.2.6 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 80 | Latvia DEVELOP non-pol | 44.451 | 45.335 | 46.337 | 46.910 | 48.394 | 48.969 | 48.929 | 48.095 | 47.511 | 48.004 | 48.417 | 48.910 | 49.041 | 49.383 | 49.648 |
| 81 | Lebanon DEVELOP non-pol | 42.054 | 41.811 | 42.071 | 42.201 | 42.319 | 43.048 | 43.546 | 43.934 | 44.222 | 44.097 | 43.468 | 43.102 | 42.697 | 42.203 | 42.136 |
| 82 | Lesotho DEVELOP non-pol | 30.032 | 30.052 | 30.062 | 30.192 | 30.641 | 31.061 | 31.422 | 31.748 | 31.564 | 31.626 | 32.230 | 31.927 | 31.744 | 31.844 | 31.727 |
| 83 | Liberia DEVELOP non-pol | 33.436 | 33.393 | 33.481 | 33.596 | 33.735 | 33.880 | 34.006 | 34.108 | 33.339 | 33.411 | 33.672 | 33.747 | 34.191 | 34.241 | 34.428 |
| 84 | Libya DEVELOP non-pol | 37.475 | 38.806 | 39.136 | 40.294 | 40.921 | 41.703 | 41.710 | 41.401 | 41.859 | 33.659 | 33.242 | 33.129 | 33.117 | 33.133 | 33.133 |
| 85 | Lithuania DEVELOP non-pol | 44.351 | 45.447 | 46.448 | 47.715 | 48.739 | 49.654 | 50.113 | 49.147 | 49.619 | 50.105 | 50.124 | 50.029 | 50.163 | 50.560 | 50.897 |
| 86 | Macedonia, FYR DEVELOP non-pol | 38.442 | 38.520 | 38.731 | 39.032 | 39.199 | 40.031 | 40.740 | 40.887 | 40.882 | 41.257 | 41.492 | 41.710 | 42.210 | 42.711 | 42.896 |
| 87 | Madagascar DEVELOP non-pol | 31.530 | 31.639 | 31.740 | 32.705 | 32.871 | 33.292 | 33.353 | 33.360 | 33.213 | 33.507 | 33.570 | 33.863 | 33.685 | 33.806 | 33.672 |
| 88 | Malawi DEVELOP non-pol | 30.669 | 30.756 | 30.875 | 31.007 | 31.219 | 31.630 | 31.914 | 32.220 | 31.721 | 32.275 | 32.389 | 32.693 | 32.493 | 32.567 | 32.236 |
| 89 | Malaysia DEVELOP non-pol | 40.298 | 40.528 | 41.111 | 41.266 | 41.582 | 42.207 | 42.570 | 42.440 | 42.935 | 43.117 | 43.485 | 43.726 | 43.412 | 43.740 | 44.047 |
| 90 | Mali DEVELOP non-pol | 30.900 | 31.036 | 31.126 | 31.246 | 31.494 | 31.694 | 31.747 | 32.364 | 32.537 | 32.721 | 32.825 | 32.763 | 33.089 | 33.071 | 32.994 |
| 91 | Mauritania DEVELOP non-pol | 32.493 | 32.554 | 32.457 | 32.521 | 32.980 | 33.149 | 33.683 | 33.723 | 33.833 | 33.871 | 33.585 | 33.933 | 34.505 | 34.648 | 34.496 |
| 92 | Mauritius DEVELOP non-pol | 39.023 | 39.209 | 39.564 | 39.883 | 40.604 | 40.950 | 41.495 | 42.129 | 42.495 | 42.921 | 43.528 | 43.762 | 43.824 | 43.981 | 44.387 |
| 93 | Mexico DEVELOP non-pol | 38.950 | 39.142 | 39.824 | 40.137 | 40.126 | 40.294 | 40.390 | 40.182 | 40.552 | 40.903 | 41.419 | 41.508 | 41.760 | 41.874 | 41.843 |
| 94 | Moldova DEVELOP non-pol | 37.575 | 37.850 | 38.016 | 38.101 | 38.620 | 39.065 | 38.914 | 39.028 | 39.176 | 39.632 | 39.828 | 40.635 | 40.997 | 40.957 | 41.022 |
| 95 | Mongolia DEVELOP non-pol | 37.968 | 38.340 | 38.789 | 39.302 | 39.611 | 39.709 | 40.306 | 40.446 | 41.058 | 41.163 | 41.695 | 41.736 | 43.260 | 43.622 | 43.685 |

(continued)

Table A.2.6 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 96 Morocco | DEVELOP | 34.753 | 34.947 | 35.071 | 35.232 | 35.287 | 35.448 | 35.899 | 35.888 | 36.103 | 36.422 | 36.753 | 37.324 | 37.541 | 37.954 | 37.958 |
| | non-pol | | | | | | | | | | | | | | | |
| 97 Mozambique | DEVELOP | 30.611 | 30.688 | 30.778 | 30.900 | 31.062 | 31.685 | 31.901 | 32.167 | 32.220 | 32.439 | 32.546 | 32.681 | 32.842 | 33.071 | 32.969 |
| | non-pol | | | | | | | | | | | | | | | |
| 98 Myanmar | DEVELOP | 34.426 | 34.536 | 34.647 | 34.781 | 34.918 | 35.064 | 35.217 | 35.374 | 35.524 | 35.929 | 36.017 | 36.162 | 36.282 | 36.420 | 36.528 |
| | non-pol | | | | | | | | | | | | | | | |
| 99 Namibia | DEVELOP | 31.639 | 31.680 | 31.924 | 32.005 | 32.366 | 32.763 | 33.114 | 33.598 | 33.815 | 34.032 | 34.213 | 34.667 | 35.306 | 35.568 | 35.671 |
| | non-pol | | | | | | | | | | | | | | | |
| 100 Nepal | DEVELOP | 31.736 | 31.831 | 32.004 | 32.222 | 32.461 | 33.128 | 33.613 | 33.530 | 34.948 | 35.177 | 35.283 | 36.033 | 36.163 | 36.181 | 36.211 |
| | non-pol | | | | | | | | | | | | | | | |
| 101 Netherlands | DEVELOP | 55.167 | 55.236 | 55.752 | 56.471 | 57.208 | 57.983 | 58.424 | 57.932 | 58.269 | 59.907 | 59.720 | 59.719 | 59.989 | 60.018 | 60.094 |
| | non-pol | | | | | | | | | | | | | | | |
| 102 New Zealand | DEVELOP | 49.431 | 49.582 | 50.658 | 51.261 | 51.550 | 52.135 | 51.817 | 52.100 | 52.189 | 52.362 | 52.446 | 52.615 | 53.028 | 53.381 | 53.779 |
| | non-pol | | | | | | | | | | | | | | | |
| 103 Nicaragua | DEVELOP | 34.404 | 34.462 | 34.567 | 35.125 | 35.076 | 35.512 | 35.893 | 36.662 | 36.830 | 37.470 | 37.621 | 37.933 | 37.579 | 37.726 | 38.194 |
| | non-pol | | | | | | | | | | | | | | | |
| 104 Niger | DEVELOP | 25.636 | 25.726 | 25.799 | 25.913 | 26.017 | 27.047 | 27.178 | 27.282 | 27.396 | 28.254 | 28.377 | 28.457 | 28.202 | 28.259 | 28.263 |
| | non-pol | | | | | | | | | | | | | | | |
| 105 Nigeria | DEVELOP | 31.713 | 31.841 | 32.285 | 32.408 | 32.593 | 32.989 | 33.046 | 32.592 | 32.600 | 33.099 | 33.361 | 33.376 | 33.492 | 33.602 | 33.489 |
| | non-pol | | | | | | | | | | | | | | | |
| 106 Norway | DEVELOP | 64.475 | 64.949 | 65.866 | 66.605 | 67.467 | 67.873 | 67.089 | 66.770 | 66.581 | 67.100 | 67.310 | 67.160 | 67.890 | 67.937 | 67.850 |
| | non-pol | | | | | | | | | | | | | | | |
| 107 Oman | DEVELOP | 51.220 | 49.742 | 49.985 | 49.907 | 49.774 | 49.966 | 51.083 | 51.720 | 51.237 | 49.670 | 50.165 | 49.827 | 49.208 | 49.290 | 49.290 |
| | non-pol | | | | | | | | | | | | | | | |
| 108 Pakistan | DEVELOP | 33.669 | 33.728 | 33.622 | 33.828 | 34.003 | 34.273 | 34.192 | 34.359 | 34.764 | 34.700 | 34.839 | 35.042 | 35.190 | 35.187 | 35.135 |
| | non-pol | | | | | | | | | | | | | | | |
| 109 Panama | DEVELOP | 39.066 | 39.688 | 40.047 | 40.446 | 40.728 | 41.680 | 42.036 | 42.125 | 42.414 | 42.930 | 43.628 | 43.579 | 44.739 | 44.436 | 44.703 |
| | non-pol | | | | | | | | | | | | | | | |
| 110 Papua New Guinea | DEVELOP | 31.154 | 31.187 | 31.223 | 31.308 | 31.357 | 31.385 | 31.500 | 31.560 | 31.649 | 31.742 | 31.836 | 31.870 | 31.966 | 31.989 | 31.989 |
| | non-pol | | | | | | | | | | | | | | | |
| 111 Paraguay | DEVELOP | 35.519 | 35.707 | 36.155 | 36.397 | 36.354 | 36.585 | 37.889 | 38.073 | 37.971 | 37.855 | 38.340 | 38.893 | 38.333 | 38.959 | 39.075 |
| | non-pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.6 (continued)

| | Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112 | Peru | DEVELOP | 36.847 | 37.011 | 37.560 | 37.633 | 37.979 | 38.633 | 39.345 | 39.217 | 40.079 | 40.359 | 40.651 | 41.388 | 41.077 | 41.214 | 41.708 |
| | | non-pol | | | | | | | | | | | | | | | |
| 113 | Philippines | DEVELOP | 37.724 | 37.851 | 37.883 | 37.878 | 37.963 | 37.991 | 38.183 | 38.357 | 38.605 | 38.845 | 39.034 | 39.336 | 39.730 | 40.062 | 40.249 |
| | | non-pol | | | | | | | | | | | | | | | |
| 114 | Poland | DEVELOP | 44.347 | 44.488 | 44.807 | 45.375 | 45.914 | 46.828 | 47.442 | 47.966 | 48.513 | 49.003 | 49.261 | 49.281 | 49.636 | 50.217 | 50.501 |
| | | non-pol | | | | | | | | | | | | | | | |
| 115 | Portugal | DEVELOP | 47.886 | 48.097 | 48.390 | 48.681 | 49.033 | 49.721 | 50.118 | 50.312 | 50.738 | 50.831 | 50.489 | 50.475 | 50.767 | 50.776 | 50.918 |
| | | non-pol | | | | | | | | | | | | | | | |
| 116 | Puerto Rico | DEVELOP | 41.714 | 41.993 | 42.362 | 42.529 | 42.452 | 41.885 | 42.293 | 42.378 | 42.616 | 42.530 | 42.286 | 42.286 | 42.210 | 42.245 | 42.245 |
| | | non-pol | | | | | | | | | | | | | | | |
| 117 | Qatar | DEVELOP | 67.106 | 66.210 | 70.833 | 67.595 | 70.700 | 71.934 | 73.282 | 72.813 | 77.010 | 78.952 | 76.649 | 76.946 | 75.062 | 74.677 | 73.795 |
| | | non-pol | | | | | | | | | | | | | | | |
| 118 | Romania | DEVELOP | 41.480 | 42.210 | 43.026 | 43.656 | 44.635 | 45.661 | 47.232 | 47.519 | 47.231 | 47.160 | 46.614 | 46.864 | 47.192 | 47.494 | 48.135 |
| | | non-pol | | | | | | | | | | | | | | | |
| 119 | Russian Federation | DEVELOP | 43.100 | 43.498 | 43.997 | 44.504 | 45.384 | 46.290 | 46.895 | 46.723 | 47.054 | 47.412 | 47.563 | 47.854 | 48.046 | 48.146 | 48.167 |
| | | non-pol | | | | | | | | | | | | | | | |
| 120 | Rwanda | DEVELOP | 32.031 | 32.220 | 32.450 | 32.269 | 32.574 | 32.809 | 33.058 | 33.312 | 33.617 | 33.855 | 33.968 | 34.250 | 34.352 | 34.549 | 34.836 |
| | | non-pol | | | | | | | | | | | | | | | |
| 121 | Saudi Arabia | DEVELOP | 44.018 | 45.780 | 46.380 | 47.005 | 47.405 | 47.467 | 48.107 | 47.173 | 47.931 | 49.913 | 50.988 | 52.018 | 52.532 | 52.778 | 52.677 |
| | | non-pol | | | | | | | | | | | | | | | |
| 122 | Senegal | DEVELOP | 32.618 | 32.709 | 32.805 | 33.181 | 33.293 | 33.444 | 33.671 | 33.750 | 33.960 | 34.179 | 34.585 | 34.655 | 34.826 | 34.754 | 34.775 |
| | | non-pol | | | | | | | | | | | | | | | |
| 123 | Serbia | DEVELOP | 40.281 | 40.695 | 41.149 | 41.625 | 42.575 | 43.047 | 43.553 | 43.591 | 43.511 | 43.773 | 44.142 | 44.578 | 44.955 | 45.056 | 45.309 |
| | | non-pol | | | | | | | | | | | | | | | |
| 124 | Sierra Leone | DEVELOP | 25.005 | 25.155 | 25.295 | 25.427 | 25.555 | 25.705 | 25.842 | 25.975 | 26.104 | 27.042 | 27.202 | 27.391 | 27.477 | 27.378 | 27.399 |
| | | non-pol | | | | | | | | | | | | | | | |
| 125 | Singapore | DEVELOP | 56.425 | 58.725 | 61.094 | 62.536 | 64.318 | 66.381 | 64.721 | 63.281 | 67.443 | 69.430 | 70.344 | 70.983 | 71.964 | 72.277 | 72.396 |
| | | non-pol | | | | | | | | | | | | | | | |
| 126 | Slovak Republic | DEVELOP | 43.563 | 43.985 | 44.664 | 45.118 | 46.651 | 48.231 | 48.938 | 48.489 | 48.998 | 49.469 | 49.777 | 49.511 | 49.930 | 50.418 | 50.943 |
| | | non-pol | | | | | | | | | | | | | | | |
| 127 | Slovenia | DEVELOP | 49.653 | 50.250 | 50.940 | 51.932 | 52.929 | 53.957 | 54.460 | 53.619 | 53.945 | 53.913 | 53.691 | 53.808 | 54.657 | 54.927 | 55.423 |
| | | non-pol | | | | | | | | | | | | | | | |

(continued)

Table A.2.6 (continued)

| | Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|----------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 128 | Somalia | DEVELOP non-pol | | | | | | | | | | | | | | | |
| 129 | South Africa | DEVELOP | 34.140 | 33.961 | 33.882 | 34.136 | 33.484 | 33.711 | 34.578 | 34.355 | 34.613 | 34.857 | 35.092 | 35.393 | 35.539 | 35.700 | 35.542 |
| 130 | South Sudan | DEVELOP non-pol | | | | | | | 20.118 | 20.219 | 20.338 | 20.262 | 29.484 | 29.646 | 29.725 | 29.713 | 29.713 |
| 131 | Spain | DEVELOP non-pol | 51.341 | 51.779 | 52.105 | 53.252 | 53.923 | 53.987 | 54.158 | 54.122 | 54.542 | 54.457 | 54.313 | 54.416 | 54.945 | 55.361 | 55.859 |
| 132 | Sri Lanka | DEVELOP non-pol | 37.572 | 37.757 | 37.908 | 38.075 | 38.387 | 38.721 | 38.912 | 39.525 | 39.466 | 39.516 | 39.525 | 39.658 | 39.793 | 39.863 | 39.953 |
| 133 | Sudan | DEVELOP non-pol | 29.347 | 29.390 | 29.618 | 29.849 | 30.131 | 30.266 | 30.519 | 30.612 | 30.708 | 30.846 | 31.126 | 31.386 | 31.373 | 31.450 | 31.491 |
| 134 | Suriname | DEVELOP non-pol | 34.042 | 34.297 | 34.705 | 34.911 | 35.049 | 35.149 | 35.374 | 35.095 | 35.227 | 35.718 | 35.710 | 36.152 | 36.370 | 36.267 | 35.688 |
| 135 | Swaziland | DEVELOP non-pol | 31.542 | 31.573 | 31.708 | 31.808 | 31.982 | 32.167 | 32.275 | 32.619 | 32.833 | 33.126 | 33.335 | 33.576 | 33.753 | 33.778 | 33.714 |
| 136 | Sweden | DEVELOP non-pol | 57.639 | 58.419 | 59.421 | 59.742 | 60.303 | 60.419 | 59.835 | 58.920 | 59.861 | 60.254 | 59.733 | 59.322 | 59.704 | 60.152 | 60.532 |
| 137 | Switzerland | DEVELOP non-pol | 57.298 | 57.537 | 58.421 | 58.889 | 59.569 | 60.930 | 61.402 | 61.040 | 61.880 | 62.406 | 62.578 | 62.717 | 63.172 | 63.038 | 62.835 |
| 138 | Syrian Arab Republic | DEVELOP non-pol | | | | | | | | | | | | | | | |
| 139 | Tajikistan | DEVELOP non-pol | 35.628 | 35.832 | 35.921 | 36.057 | 36.230 | 36.492 | 36.753 | 36.882 | 36.877 | 37.000 | 37.221 | 37.283 | 37.536 | 37.417 | 37.663 |
| 140 | Tanzania | DEVELOP non-pol | 32.730 | 32.885 | 33.062 | 33.232 | 33.282 | 33.198 | 33.009 | 33.170 | 33.432 | 34.082 | 34.149 | 34.551 | 34.678 | 34.782 | 34.630 |
| 141 | Thailand | DEVELOP non-pol | 40.060 | 40.381 | 40.623 | 41.009 | 41.307 | 42.271 | 42.274 | 42.364 | 42.853 | 43.356 | 43.427 | 43.857 | 44.010 | 43.795 | 43.908 |
| 142 | Timor-Leste | DEVELOP non-pol | 34.247 | 34.330 | 34.429 | 34.560 | 34.626 | 35.433 | 35.572 | 36.340 | 36.569 | 36.643 | 36.691 | 36.704 | 36.758 | 36.238 | 36.132 |

(continued)

Table A.2.6 (continued)

| | Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|-------------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 143 | Togo | DEVELOP non-pol | 26.785 | 26.821 | 26.860 | 26.904 | 26.975 | 27.098 | 27.168 | 27.227 | 27.646 | 27.337 | 27.441 | 27.545 | 27.569 | 28.075 | 28.088 |
| 144 | Trinidad and Tobago | DEVELOP non-pol | 34.503 | 35.420 | 36.311 | 36.394 | 37.346 | 38.068 | 38.721 | 38.112 | 38.157 | 37.904 | 38.326 | 38.503 | 38.503 | 38.425 | 37.693 |
| 145 | Tunisia | DEVELOP non-pol | 37.853 | 38.341 | 38.724 | 39.353 | 39.564 | 39.798 | 39.931 | 40.155 | 40.459 | 40.349 | 40.491 | 40.504 | 40.694 | 40.741 | 40.918 |
| 146 | Turkey | DEVELOP non-pol | 38.733 | 39.614 | 40.160 | 40.818 | 41.748 | 42.409 | 42.452 | 42.684 | 44.069 | 45.043 | 46.077 | 47.587 | 48.434 | 49.535 | 49.673 |
| 147 | Turkmenistan | DEVELOP non-pol | 23.769 | 23.691 | 23.780 | 24.107 | 24.436 | 24.580 | 25.126 | 25.657 | 25.798 | 26.291 | 26.773 | 27.263 | 27.803 | 28.144 | 28.461 |
| 148 | Uganda | DEVELOP non-pol | 31.096 | 31.264 | 31.403 | 31.818 | 32.009 | 32.322 | 32.585 | 32.702 | 32.839 | 32.999 | 33.230 | 32.973 | 33.412 | 33.417 | 33.626 |
| 149 | Ukraine | DEVELOP non-pol | 40.414 | 40.915 | 41.650 | 42.155 | 42.787 | 43.824 | 44.264 | 44.237 | 44.202 | 44.693 | 44.615 | 44.722 | 45.031 | 44.540 | 44.677 |
| 150 | United Arab Emirates | DEVELOP non-pol | 74.171 | 74.260 | 74.602 | 72.046 | 71.006 | 66.826 | 63.094 | 58.470 | 57.356 | 57.760 | 58.288 | 59.890 | 59.861 | 60.674 | 61.380 |
| 151 | UK | DEVELOP non-pol | 52.985 | 53.055 | 53.187 | 53.670 | 54.021 | 54.085 | 54.011 | 53.614 | 53.833 | 54.223 | 54.396 | 54.244 | 54.804 | 54.972 | 55.335 |
| 152 | USA | DEVELOP non-pol | 55.979 | 56.509 | 57.066 | 57.578 | 57.954 | 58.348 | 58.389 | 58.509 | 59.353 | 59.730 | 60.028 | 59.723 | 59.760 | 59.846 | 59.985 |
| 153 | Uruguay | DEVELOP non-pol | 40.385 | 40.604 | 40.906 | 41.510 | 41.812 | 43.970 | 44.522 | 44.620 | 45.296 | 45.605 | 46.120 | 45.836 | 46.151 | 46.117 | 46.542 |
| 154 | Uzbekistan | DEVELOP non-pol | 30.440 | 30.232 | 30.374 | 30.172 | 30.296 | 30.456 | 30.599 | 30.846 | 30.971 | 31.028 | 31.126 | 31.387 | 31.555 | 31.736 | 31.910 |
| 155 | Venezuela, RB | DEVELOP non-pol | 39.425 | 39.147 | 40.393 | 40.483 | 41.763 | 42.366 | 45.484 | 45.169 | 44.947 | 45.445 | 45.628 | 45.486 | 45.580 | 45.635 | 45.776 |
| 156 | Vietnam | DEVELOP non-pol | 36.156 | 36.262 | 36.362 | 36.945 | 37.208 | 37.322 | 37.488 | 37.625 | 37.431 | 37.861 | 38.422 | 38.579 | 39.177 | 39.331 | 39.419 |

(continued)

Table A.2.6 (continued)

| Country name | Series | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 157 West Bank and Gaza | DEVELOP non-pol | 32.719 | 32.719 | 32.723 | 32.796 | 32.706 | 33.045 | 33.041 | 33.122 | 33.520 | 33.484 | 33.607 | 33.647 | 33.057 | 33.024 | 32.902 |
| 158 Yemen, Rep. | DEVELOP non-pol | 31.040 | 31.192 | 29.904 | 30.085 | 30.167 | 30.294 | 30.637 | 30.854 | 30.991 | 31.149 | 31.371 | 31.572 | 31.844 | 31.737 | 31.740 |
| 159 Zambia | DEVELOP non-pol | 30.850 | 30.716 | 30.726 | 30.748 | 30.852 | 31.016 | 31.163 | 31.498 | 31.799 | 32.068 | 32.368 | 33.009 | 33.257 | 33.598 | 33.669 |
| 160 Zimbabwe | DEVELOP non-pol | | | | | | | | | | | | | | | |

Source: Author's own calculations based on World Bank (2018) and World Economic Forum (2018)

See World Bank (2018), the World Development Indicators

<http://datatabank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>

<https://data.worldbank.org/indicator/SI.POV.GINI?locations=US>

Aggregation measures of the indicators used:

10%: Life expectancy at birth, total (years)

10%: School enrollment, tertiary (% gross)

10%: GINI index (World Bank estimate)

10%: Global Gender Gap Index (WEF)

10%: CO2 emissions (metric tons per capita)

50%: GDP per capita, PPP (constant 2011 international \$)

Methodic note:

CO2 emissions (metric tons per capita) was turned, higher scores with the CO2 emissions are lower scores in the tabulation here (see Chapter 2)

Status: April 30, 2018

Table A.2.7 Sustainable development (SD) comprehensive, quality of democracy (QoD). Scores transformed (rescaled) to 0–100:
 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Afghanistan | DEVELOP SD, QoD | 23.911 | 24.327 | 25.200 | 26.632 | 29.234 | 29.053 | 28.269 | 27.464 | 25.757 | 25.298 | 26.091 | 27.520 | 27.341 | 27.963 |
| 2 Albania | DEVELOP SD, QoD | 51.151 | 51.424 | 51.292 | 51.213 | 50.562 | 51.178 | 51.697 | 52.193 | 52.486 | 52.800 | 52.457 | 52.932 | 54.499 | 54.253 |
| 3 Algeria | DEVELOP SD, QoD | 38.103 | 38.123 | 38.071 | 39.220 | 39.526 | 39.698 | 39.745 | 39.605 | 40.003 | 40.171 | 40.065 | 40.655 | 40.163 | 39.904 |
| 4 Angola | DEVELOP SD, QoD | 30.937 | 32.210 | 31.865 | 32.620 | 33.065 | 33.104 | 33.825 | 34.314 | 34.001 | 33.338 | 33.542 | 33.158 | 32.616 | 31.085 |
| 5 Argentina | DEVELOP SD, QoD | 53.816 | 54.842 | 59.793 | 59.836 | 59.750 | 59.603 | 59.084 | 59.015 | 59.167 | 59.718 | 59.687 | 59.674 | 59.641 | 60.205 |
| 6 Armenia | DEVELOP SD, QoD | 43.870 | 44.306 | 43.600 | 41.213 | 40.551 | 40.632 | 40.764 | 39.730 | 40.203 | 41.092 | 41.656 | 42.357 | 43.054 | 43.100 |
| 7 Australia | DEVELOP SD, QoD | 74.394 | 74.512 | 73.926 | 73.938 | 73.650 | 73.949 | 73.807 | 73.946 | 74.434 | 74.646 | 74.980 | 75.288 | 75.554 | 75.396 |
| 8 Austria | DEVELOP SD, QoD | 73.643 | 73.609 | 74.476 | 74.737 | 75.120 | 75.393 | 74.875 | 75.434 | 75.887 | 76.001 | 75.836 | 75.752 | 75.547 | 75.122 |
| 9 Azerbaijan | DEVELOP SD, QoD | 36.468 | 36.870 | 36.965 | 36.710 | 36.560 | 36.550 | 35.241 | 34.440 | 34.668 | 34.055 | 32.272 | 32.202 | 31.471 | 30.708 |
| 10 Bahrain | DEVELOP SD, QoD | 40.991 | 40.667 | 40.150 | 39.717 | 40.988 | 40.684 | 40.811 | 39.749 | 38.799 | 37.119 | 33.986 | 32.907 | 32.844 | 32.109 |
| 11 Bangladesh | DEVELOP SD, QoD | 41.883 | 41.444 | 41.453 | 41.694 | 41.887 | 41.725 | 38.002 | 43.928 | 46.848 | 47.577 | 46.881 | 46.265 | 45.411 | 42.997 |
| 12 Belarus | DEVELOP SD, QoD | 33.280 | 33.266 | 32.278 | 31.377 | 30.374 | 29.912 | 29.886 | 30.534 | 30.722 | 31.253 | 31.360 | 31.438 | 31.399 | 31.672 |
| 13 Belgium | DEVELOP SD, QoD | 75.030 | 75.121 | 76.348 | 76.313 | 76.387 | 76.920 | 76.421 | 76.557 | 77.145 | 77.256 | 77.742 | 77.529 | 77.563 | 77.659 |
| 14 Benin | DEVELOP SD, QoD | 53.920 | 53.605 | 55.078 | 55.100 | 54.802 | 56.102 | 56.166 | 55.288 | 55.510 | 56.215 | 55.396 | 55.422 | 54.744 | 54.837 |
| 15 Bolivia | DEVELOP SD, QoD | 54.847 | 53.722 | 53.025 | 53.893 | 53.056 | 52.894 | 52.507 | 51.843 | 51.415 | 51.046 | 51.069 | 51.845 | 51.774 | 51.890 |
| 16 Bosnia and Herzegovina | DEVELOP SD, QoD | 46.080 | 46.319 | 48.689 | 49.647 | 50.657 | 51.591 | 50.512 | 50.002 | 50.022 | 49.686 | 49.548 | 50.223 | 49.696 | 49.579 |
| 17 Botswana | DEVELOP SD, QoD | 56.655 | 56.823 | 56.931 | 56.151 | 54.928 | 55.033 | 55.633 | 55.212 | 54.168 | 54.239 | 54.373 | 54.500 | 54.176 | 53.806 |
| 18 Brazil | DEVELOP SD, QoD | 54.663 | 55.193 | 54.982 | 55.587 | 55.786 | 55.837 | 56.175 | 56.451 | 56.456 | 57.282 | 57.743 | 58.302 | 58.451 | 57.898 |
| 19 Bulgaria | DEVELOP SD, QoD | 62.080 | 61.301 | 61.505 | 62.229 | 62.593 | 62.811 | 62.425 | 61.895 | 61.774 | 61.819 | 61.398 | 61.491 | 60.509 | 61.163 |
| 20 Burkina Faso | DEVELOP SD, QoD | 44.545 | 44.597 | 43.792 | 43.741 | 44.207 | 43.971 | 44.081 | 44.120 | 44.173 | 44.519 | 43.949 | 44.284 | 44.594 | 42.003 |
| 21 Burundi | DEVELOP SD, QoD | 30.550 | 30.739 | 31.843 | 31.859 | 38.323 | 37.454 | 37.309 | 36.930 | 37.571 | 34.230 | 33.385 | 33.385 | 31.764 | 26.506 |
| 22 Cambodia | DEVELOP SD, QoD | 31.568 | 31.852 | 32.178 | 33.262 | 34.321 | 34.198 | 34.130 | 34.051 | 33.286 | 32.374 | 32.201 | 31.991 | 31.954 | 32.496 |
| 23 Cameroon | DEVELOP SD, QoD | 30.011 | 29.692 | 29.274 | 31.991 | 31.736 | 32.159 | 31.495 | 30.717 | 30.907 | 30.539 | 31.134 | 31.261 | 31.664 | 32.351 |
| 24 Canada | DEVELOP SD, QoD | 73.598 | 73.992 | 74.747 | 74.377 | 74.763 | 75.015 | 74.870 | 74.069 | 74.950 | 75.124 | 75.080 | 75.112 | 75.243 | 75.208 |
| 25 Central African Republic | DEVELOP SD, QoD | 32.560 | 33.098 | 29.199 | 30.858 | 35.347 | 34.569 | 32.997 | 33.050 | 32.827 | 31.943 | 32.765 | 28.803 | 19.950 | 20.188 |
| 26 Chad | DEVELOP SD, QoD | 29.995 | 28.756 | 29.025 | 29.087 | 28.992 | 27.630 | 26.725 | 26.528 | 26.962 | 27.210 | 27.075 | 27.396 | 27.688 | 27.746 |
| 27 Chile | DEVELOP SD, QoD | 63.719 | 63.837 | 65.441 | 66.224 | 66.488 | 67.311 | 67.753 | 67.733 | 68.409 | 68.318 | 68.675 | 68.909 | 68.813 | 69.310 |
| 28 China | DEVELOP SD, QoD | 27.010 | 27.190 | 26.436 | 27.405 | 27.436 | 27.746 | 27.977 | 27.778 | 27.954 | 28.218 | 28.610 | 28.940 | 29.124 | 29.202 |
| 29 Colombia | DEVELOP SD, QoD | 44.180 | 44.436 | 45.085 | 45.605 | 47.494 | 47.996 | 47.814 | 47.446 | 47.953 | 49.284 | 50.032 | 50.068 | 50.585 | 51.108 |

(continued)

Table A.2.7 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 30 Congo, Dem. Rep. | 23.166 | 23.581 | 24.508 | 24.560 | 24.514 | 26.707 | 26.418 | 25.451 | 25.214 | 24.950 | 24.501 | 25.201 | 28.861 | 26.841 | 26.115 |
| 31 Congo, Rep. | 34.989 | 35.188 | 36.739 | 36.854 | 35.570 | 34.934 | 33.507 | 33.944 | 32.735 | 32.627 | 32.560 | 32.402 | 28.785 | 32.447 | 31.549 |
| 32 Costa Rica | 65.266 | 64.599 | 64.815 | 65.717 | 65.438 | 65.527 | 65.679 | 65.531 | 66.032 | 66.712 | 67.096 | 67.089 | 67.221 | 67.399 | 67.622 |
| 33 Cote d'Ivoire | 30.910 | 31.458 | 32.131 | 29.555 | 29.044 | 29.330 | 29.884 | 30.490 | 30.450 | 28.018 | 31.608 | 35.997 | 40.031 | 40.797 | 42.636 |
| 34 Croatia | 60.936 | 60.537 | 60.463 | 61.659 | 62.977 | 63.540 | 63.373 | 62.453 | 63.197 | 63.684 | 63.793 | 64.036 | 64.164 | 63.819 | 64.602 |
| 35 Cuba | 71.135 | 71.456 | 71.140 | 71.165 | 70.969 | 71.348 | 71.669 | 71.748 | 71.269 | 71.118 | 69.962 | 69.566 | 69.457 | 70.424 | 71.150 |
| 36 Cyprus | 65.256 | 65.233 | 67.414 | 69.429 | 69.960 | 71.413 | 71.745 | 71.687 | 71.666 | 71.895 | 71.928 | 71.679 | 71.450 | 72.093 | 72.215 |
| 37 Czech Republic | 77.824 | 78.532 | 78.783 | 79.117 | 78.804 | 79.077 | 78.851 | 78.052 | 77.504 | 78.290 | 78.718 | 78.935 | 78.934 | 79.012 | 79.181 |
| 38 Denmark | 57.169 | 55.948 | 54.457 | 56.829 | 56.371 | 57.568 | 57.490 | 57.915 | 57.095 | 56.163 | 56.889 | 56.743 | 56.215 | 56.394 | 55.715 |
| 39 Dominican Republic | 50.969 | 50.892 | 52.390 | 52.732 | 53.116 | 53.566 | 53.290 | 52.939 | 51.778 | 50.704 | 49.166 | 47.913 | 47.671 | 46.879 | 46.807 |
| 40 Ecuador | 31.277 | 31.696 | 33.236 | 35.144 | 36.541 | 36.255 | 35.666 | 35.767 | 35.529 | 36.150 | 38.711 | 39.102 | 35.644 | 33.632 | 34.028 |
| 41 Egypt, Arab Rep. | 54.545 | 53.983 | 53.638 | 53.579 | 54.762 | 54.727 | 54.468 | 54.124 | 54.816 | 55.709 | 56.019 | 56.772 | 57.004 | 56.538 | 54.335 |
| 42 El Salvador | 23.994 | 22.886 | 24.887 | 25.134 | 23.722 | 24.557 | 25.534 | 24.707 | 23.539 | 23.417 | 23.871 | 23.391 | 23.042 | 21.924 | 21.063 |
| 43 Equatorial Guinea | 19.659 | 18.596 | 18.265 | 18.044 | 17.551 | 17.326 | 17.340 | 17.439 | 16.116 | 15.790 | 15.549 | 14.642 | 14.689 | 14.723 | 14.723 |
| 44 Eritrea | 66.653 | 66.943 | 68.068 | 70.013 | 71.219 | 71.657 | 71.220 | 70.741 | 70.499 | 70.920 | 71.625 | 71.537 | 71.950 | 71.939 | 71.536 |
| 45 Estonia | 33.931 | 33.640 | 33.358 | 32.450 | 33.353 | 32.876 | 32.647 | 32.472 | 31.946 | 28.199 | 27.426 | 27.355 | 27.195 | 27.375 | 25.648 |
| 46 Ethiopia | 77.555 | 77.752 | 77.689 | 79.069 | 79.286 | 79.797 | 79.880 | 79.113 | 79.340 | 79.726 | 79.436 | 79.315 | 79.201 | 79.121 | 78.894 |
| 47 Finland | 73.153 | 72.846 | 72.773 | 72.709 | 72.511 | 72.877 | 72.530 | 72.801 | 72.965 | 72.715 | 73.209 | 73.642 | 73.677 | 72.781 | 72.224 |
| 48 France | 41.470 | 40.758 | 38.263 | 37.862 | 35.910 | 35.212 | 35.037 | 34.344 | 34.176 | 34.152 | 34.070 | 34.363 | 34.448 | 34.876 | 34.321 |
| 49 Gabon | 40.328 | 40.724 | 39.238 | 39.346 | 36.515 | 36.014 | 36.117 | 34.290 | 33.139 | 32.828 | 27.709 | 27.453 | 27.330 | 25.943 | 25.058 |
| 50 Gambia, The | 44.947 | 45.106 | 45.529 | 47.483 | 47.874 | 47.752 | 44.950 | 43.547 | 45.547 | 46.889 | 48.279 | 49.875 | 50.902 | 51.407 | 51.371 |
| 51 Georgia | 73.940 | 73.720 | 75.159 | 75.525 | 75.186 | 75.085 | 75.275 | 74.770 | 75.125 | 75.666 | 75.665 | 75.697 | 75.878 | 75.627 | 75.475 |
| 52 Germany | 53.648 | 54.043 | 56.054 | 57.346 | 58.540 | 58.421 | 58.769 | 58.873 | 58.934 | 58.768 | 58.884 | 58.928 | 59.248 | 58.754 | 58.065 |
| 53 Ghana | 65.264 | 65.826 | 67.767 | 69.083 | 69.865 | 69.926 | 69.560 | 69.191 | 68.703 | 68.304 | 65.621 | 64.160 | 63.534 | 64.077 | 64.905 |
| 54 Greece | 43.289 | 42.591 | 42.121 | 42.535 | 43.283 | 44.607 | 44.368 | 44.384 | 44.205 | 44.523 | 45.150 | 45.086 | 44.959 | 45.229 | 44.862 |
| 55 Guatemala | 31.641 | 32.207 | 32.713 | 32.269 | 32.684 | 33.723 | 33.725 | 30.919 | 29.236 | 35.883 | 35.682 | 36.872 | 37.694 | 37.671 | 37.329 |
| 56 Guinea | 37.161 | 36.625 | 33.111 | 40.565 | 43.468 | 41.145 | 40.130 | 39.516 | 37.445 | 36.327 | 34.889 | 29.172 | 31.422 | 34.375 | 34.178 |
| 57 Guinea-Bissau | 28.257 | 28.275 | 29.521 | 28.190 | 30.408 | 38.467 | 40.648 | 41.412 | 41.418 | 40.505 | 40.719 | 39.909 | 39.825 | 38.819 | 38.820 |
| 58 Haiti | | | | | | | | | | | | | | | |

(continued)

Table A.2.7 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|------------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 59 Honduras | DEVELOP SD, QoD | 48.532 | 48.509 | 48.076 | 47.865 | 48.325 | 47.375 | 47.009 | 45.713 | 42.087 | 41.964 | 41.993 | 41.609 | 41.251 | 41.006 | 40.105 |
| 60 Hong Kong SAR, China | DEVELOP SD, QoD | 51.196 | 51.399 | 55.331 | 56.799 | 58.215 | 59.209 | 59.511 | 59.599 | 60.636 | 60.756 | 60.475 | 60.789 | 60.390 | 60.394 | 59.486 |
| 61 Hungary | DEVELOP SD, QoD | 66.674 | 67.600 | 67.979 | 68.816 | 69.804 | 69.659 | 69.659 | 68.886 | 67.138 | 65.955 | 65.209 | 65.377 | 65.071 | 62.476 | 61.031 |
| 62 India | DEVELOP SD, QoD | 51.274 | 52.070 | 53.733 | 54.633 | 55.051 | 55.266 | 55.252 | 55.905 | 55.734 | 55.789 | 56.061 | 55.594 | 55.937 | 56.398 | 55.741 |
| 63 Indonesia | DEVELOP SD, QoD | 46.200 | 46.480 | 46.178 | 47.820 | 49.284 | 49.330 | 50.135 | 50.391 | 50.061 | 50.915 | 51.184 | 51.411 | 51.265 | 51.066 | 51.583 |
| 64 Iran, Islamic Rep. | DEVELOP SD, QoD | 32.619 | 32.295 | 31.988 | 31.394 | 31.199 | 31.356 | 31.790 | 30.693 | 29.978 | 29.220 | 28.898 | 29.560 | 30.287 | 30.506 | 30.483 |
| 65 Iraq | DEVELOP SD, QoD | 19.046 | 23.461 | 31.005 | 31.147 | 33.099 | 31.923 | 32.613 | 33.251 | 33.461 | 33.082 | 33.657 | 33.000 | 32.784 | 32.641 | 33.833 |
| 66 Ireland | DEVELOP SD, QoD | 73.766 | 74.138 | 76.509 | 77.019 | 77.368 | 77.433 | 76.892 | 76.545 | 76.809 | 76.971 | 76.919 | 77.209 | 78.352 | 80.750 | 80.596 |
| 67 Israel | DEVELOP SD, QoD | 65.634 | 65.435 | 64.866 | 65.032 | 65.499 | 66.309 | 65.854 | 66.315 | 65.719 | 66.187 | 65.605 | 65.970 | 66.148 | 65.514 | 65.649 |
| 68 Italy | DEVELOP SD, QoD | 70.167 | 69.410 | 69.307 | 69.229 | 70.948 | 71.201 | 70.516 | 69.420 | 68.912 | 69.088 | 68.825 | 68.654 | 69.603 | 69.230 | 69.144 |
| 69 Jamaica | DEVELOP SD, QoD | 57.808 | 58.498 | 59.064 | 58.364 | 59.355 | 59.474 | 60.835 | 60.114 | 59.888 | 59.218 | 59.363 | 59.499 | 59.863 | 59.815 | 59.887 |
| 70 Japan | DEVELOP SD, QoD | 69.986 | 70.012 | 69.901 | 70.568 | 70.325 | 70.449 | 70.399 | 70.153 | 70.393 | 70.275 | 70.077 | 70.140 | 70.872 | 71.408 | 72.622 |
| 71 Jordan | DEVELOP SD, QoD | 37.489 | 38.041 | 39.264 | 40.075 | 41.565 | 41.277 | 40.944 | 40.281 | 38.610 | 38.560 | 39.080 | 37.805 | 38.507 | 38.713 | 38.337 |
| 72 Kazakhstan | DEVELOP SD, QoD | 34.933 | 34.977 | 34.689 | 35.975 | 37.528 | 37.391 | 36.668 | 36.757 | 35.374 | 35.611 | 35.173 | 34.896 | 34.798 | 34.604 | 34.383 |
| 73 Kenya | DEVELOP SD, QoD | 37.783 | 39.286 | 44.782 | 45.694 | 45.625 | 44.909 | 42.749 | 42.191 | 42.276 | 44.208 | 44.390 | 43.436 | 42.998 | 42.204 | 42.175 |
| 74 Korea, Dem. People's Rep. | DEVELOP SD, QoD | 65.055 | 65.244 | 65.355 | 66.703 | 67.109 | 67.844 | 67.764 | 68.033 | 67.980 | 68.184 | 68.423 | 68.364 | 68.021 | 67.724 | 67.427 |
| 75 Korea, Rep. | DEVELOP SD, QoD | 31.299 | 31.415 | 31.896 | 28.422 | 29.169 | 31.561 | 31.615 | 34.446 | 36.472 | 37.793 | 37.731 | 38.429 | 38.874 | 42.179 | 42.534 |
| 76 Kosovo | DEVELOP SD, QoD | 51.266 | 52.993 | 54.192 | 55.596 | 56.554 | 58.052 | 57.094 | 54.562 | 52.921 | 52.442 | 51.301 | 50.132 | 48.899 | 48.356 | 48.356 |
| 77 Kuwait | DEVELOP SD, QoD | 36.098 | 36.110 | 36.310 | 37.665 | 40.815 | 40.439 | 40.164 | 37.995 | 37.429 | 38.222 | 39.736 | 39.653 | 39.536 | 39.158 | 39.192 |
| 78 Kyrgyz Republic | DEVELOP SD, QoD | 25.796 | 25.524 | 25.600 | 26.001 | 26.121 | 25.771 | 25.370 | 25.920 | 25.817 | 25.732 | 25.737 | 25.617 | 26.096 | 26.160 | 25.978 |
| 79 Lao PDR | DEVELOP SD, QoD | 66.086 | 66.709 | 67.210 | 67.412 | 68.709 | 68.453 | 67.865 | 66.516 | 65.837 | 65.625 | 65.372 | 65.800 | 65.684 | 66.243 | 67.125 |
| 80 Latvia | DEVELOP SD, QoD | 36.436 | 37.220 | 38.437 | 39.555 | 44.285 | 46.872 | 46.165 | 47.315 | 48.100 | 48.400 | 47.445 | 46.706 | 45.754 | 43.995 | 43.574 |
| 81 Lebanon | DEVELOP SD, QoD | 49.703 | 50.075 | 50.105 | 50.171 | 50.950 | 50.048 | 49.311 | 49.474 | 48.994 | 48.844 | 48.758 | 50.132 | 49.859 | 49.341 | 47.589 |
| 82 Lesotho | DEVELOP SD, QoD | 28.785 | 29.488 | 29.564 | 36.912 | 42.452 | 42.912 | 44.003 | 44.417 | 44.006 | 43.862 | 45.492 | 45.167 | 44.749 | 44.303 | 45.643 |
| 83 Liberia | DEVELOP SD, QoD | 24.335 | 24.094 | 23.801 | 24.089 | 24.402 | 25.433 | 25.437 | 25.282 | 25.511 | 27.571 | 30.263 | 38.972 | 36.308 | 29.526 | 28.111 |
| 84 Libya | DEVELOP SD, QoD | 67.089 | 67.637 | 68.415 | 67.886 | 69.341 | 69.798 | 70.028 | 69.389 | 69.166 | 69.228 | 69.056 | 69.009 | 68.894 | 69.843 | 70.374 |
| 85 Lithuania | DEVELOP SD, QoD | 50.185 | 49.680 | 50.426 | 50.273 | 50.416 | 50.082 | 50.436 | 50.691 | 51.270 | 51.313 | 50.791 | 50.441 | 50.510 | 48.595 | 47.382 |
| 86 FYR Macedonia | DEVELOP SD, QoD | | | | | | | | | | | | | | | |

(continued)

Table A.2.7 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | |
|-----|------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 87 | Madagascar | DEVELOP SD, QoD | 46.906 | 46.417 | 46.058 | 46.335 | 45.959 | 46.144 | 45.243 | 43.435 | 36.668 | 36.221 | 35.709 | 35.288 | 39.025 | 42.535 | 43.799 |
| 88 | Malawi | DEVELOP SD, QoD | 42.091 | 43.040 | 43.513 | 43.177 | 43.646 | 43.767 | 43.450 | 43.603 | 44.697 | 44.068 | 44.451 | 45.908 | 46.170 | 47.320 | 47.987 |
| 89 | Malaysia | DEVELOP SD, QoD | 40.099 | 40.577 | 41.701 | 43.834 | 43.726 | 44.027 | 43.653 | 44.712 | 44.959 | 45.231 | 45.235 | 45.077 | 44.351 | 43.875 | 43.279 |
| 90 | Malì | DEVELOP SD, QoD | 53.953 | 53.478 | 54.803 | 54.792 | 54.528 | 54.084 | 53.737 | 53.671 | 54.326 | 54.696 | 50.762 | 36.173 | 43.209 | 43.201 | 43.440 |
| 91 | Mauritania | DEVELOP SD, QoD | 37.620 | 37.108 | 34.662 | 35.478 | 37.569 | 40.353 | 42.473 | 35.873 | 37.246 | 37.447 | 37.931 | 38.202 | 38.126 | 36.963 | 36.247 |
| 92 | Mauritius | DEVELOP SD, QoD | 62.840 | 62.571 | 62.386 | 63.186 | 64.321 | 63.829 | 64.489 | 64.625 | 64.627 | 64.659 | 64.781 | 64.898 | 64.929 | 65.189 | 65.392 |
| 93 | Mexico | DEVELOP SD, QoD | 56.882 | 57.341 | 56.595 | 55.277 | 56.712 | 54.922 | 53.302 | 51.349 | 50.784 | 50.017 | 50.455 | 50.112 | 49.876 | 49.474 | 49.737 |
| 94 | Moldova | DEVELOP SD, QoD | 47.119 | 46.532 | 46.253 | 45.023 | 45.282 | 45.324 | 45.067 | 44.711 | 47.760 | 49.777 | 50.722 | 51.235 | 50.776 | 50.187 | 49.057 |
| 95 | Mongolia | DEVELOP SD, QoD | 58.253 | 58.438 | 59.122 | 59.172 | 59.352 | 58.651 | 58.406 | 58.948 | 60.197 | 60.612 | 60.878 | 61.286 | 62.048 | 62.229 | 62.261 |
| 96 | Morocco | DEVELOP SD, QoD | 39.585 | 38.957 | 38.657 | 39.933 | 39.502 | 39.776 | 39.614 | 39.244 | 38.215 | 38.375 | 39.290 | 39.686 | 39.406 | 39.613 | 39.038 |
| 97 | Mozambique | DEVELOP SD, QoD | 45.204 | 45.605 | 45.650 | 45.864 | 46.731 | 47.214 | 47.443 | 46.432 | 46.623 | 46.858 | 46.382 | 46.366 | 46.118 | 45.539 | 45.339 |
| 98 | Myanmar | DEVELOP SD, QoD | 21.904 | 21.778 | 21.155 | 20.557 | 20.626 | 20.130 | 20.110 | 19.982 | 20.238 | 23.233 | 28.572 | 32.889 | 32.406 | 32.197 | 33.304 |
| 99 | Namibia | DEVELOP SD, QoD | 53.131 | 53.695 | 54.722 | 53.916 | 54.820 | 55.019 | 55.194 | 54.046 | 54.433 | 54.625 | 55.175 | 55.402 | 55.359 | 55.490 | 56.000 |
| 100 | Nepal | DEVELOP SD, QoD | 39.566 | 39.614 | 37.147 | 34.586 | 33.768 | 39.884 | 40.404 | 41.550 | 42.259 | 42.433 | 42.052 | 42.584 | 43.811 | 44.389 | 44.876 |
| 101 | Netherlands | DEVELOP SD, QoD | 75.760 | 76.338 | 77.333 | 77.414 | 77.420 | 77.808 | 78.029 | 77.601 | 77.770 | 78.673 | 79.039 | 79.220 | 79.173 | 79.188 | 79.226 |
| 102 | New Zealand | DEVELOP SD, QoD | 73.773 | 73.485 | 73.383 | 73.504 | 73.648 | 73.941 | 73.600 | 73.742 | 73.883 | 73.607 | 73.831 | 73.553 | 73.578 | 73.573 | 74.341 |
| 103 | Nicaragua | DEVELOP SD, QoD | 50.591 | 51.163 | 48.921 | 49.116 | 49.454 | 50.931 | 49.816 | 47.345 | 46.376 | 46.333 | 44.884 | 44.859 | 45.735 | 45.445 | 45.498 |
| 104 | Niger | DEVELOP SD, QoD | 39.465 | 38.967 | 40.658 | 42.277 | 41.967 | 42.352 | 41.015 | 39.787 | 35.382 | 37.513 | 42.820 | 42.498 | 42.551 | 42.218 | 41.070 |
| 105 | Nigeria | DEVELOP SD, QoD | 39.843 | 39.906 | 40.588 | 40.287 | 41.529 | 42.645 | 41.607 | 40.715 | 40.415 | 42.190 | 42.637 | 41.702 | 41.398 | 40.762 | 42.643 |
| 106 | Norway | DEVELOP SD, QoD | 82.056 | 82.293 | 82.571 | 82.940 | 83.190 | 83.574 | 83.182 | 83.023 | 82.747 | 83.188 | 83.293 | 83.218 | 83.583 | 83.787 | 83.925 |
| 107 | Oman | DEVELOP SD, QoD | 40.262 | 39.342 | 38.275 | 40.149 | 40.179 | 40.276 | 40.834 | 41.153 | 40.523 | 39.740 | 39.987 | 39.540 | 39.231 | 39.272 | 38.884 |
| 108 | Pakistan | DEVELOP SD, QoD | 35.981 | 35.829 | 35.969 | 35.795 | 35.797 | 35.389 | 33.244 | 38.496 | 39.641 | 39.634 | 39.245 | 39.068 | 39.071 | 39.141 | 38.656 |
| 109 | Panama | DEVELOP SD, QoD | 59.383 | 57.702 | 57.507 | 57.888 | 58.862 | 59.157 | 59.335 | 59.379 | 59.524 | 59.419 | 59.406 | 58.742 | 59.393 | 59.785 | 61.102 |
| 110 | Papua New Guinea | DEVELOP SD, QoD | 54.287 | 54.303 | 52.434 | 50.312 | 50.155 | 49.976 | 49.621 | 49.625 | 49.489 | 49.173 | 49.039 | 48.875 | 49.310 | 48.934 | 48.934 |
| 111 | Paraguay | DEVELOP SD, QoD | 45.659 | 45.935 | 47.844 | 47.396 | 46.832 | 47.057 | 47.612 | 48.480 | 48.248 | 48.189 | 48.251 | 48.224 | 47.557 | 49.272 | 48.871 |
| 112 | Peru | DEVELOP SD, QoD | 56.708 | 55.972 | 54.495 | 54.822 | 54.416 | 54.772 | 54.708 | 54.933 | 54.892 | 54.831 | 55.038 | 55.311 | 54.320 | 54.569 | 54.997 |
| 113 | Philippines | DEVELOP SD, QoD | 55.388 | 55.727 | 55.562 | 55.041 | 53.112 | 52.364 | 48.844 | 48.387 | 50.783 | 51.083 | 51.313 | 51.528 | 51.694 | 52.453 | 52.453 |
| 114 | Poland | DEVELOP SD, QoD | 66.699 | 66.589 | 66.844 | 67.891 | 67.979 | 67.796 | 68.658 | 68.920 | 69.013 | 69.258 | 69.205 | 69.034 | 69.393 | 69.321 | 68.376 |
| 115 | Portugal | DEVELOP SD, QoD | 72.119 | 72.406 | 72.553 | 72.420 | 72.596 | 72.578 | 73.054 | 72.763 | 72.795 | 72.842 | 72.671 | 72.483 | 72.629 | 72.633 | 72.885 |
| 116 | Porto Rico | DEVELOP SD, QoD | 65.780 | 65.919 | 66.103 | 66.187 | 67.399 | 67.115 | 67.319 | 67.361 | 67.480 | 66.604 | 66.066 | 66.066 | 66.028 | 66.045 | 66.462 |
| 117 | Qatar | DEVELOP SD, QoD | 48.273 | 47.825 | 50.343 | 49.848 | 51.704 | 52.140 | 53.020 | 52.605 | 54.703 | 55.493 | 54.341 | 54.490 | 53.548 | 52.993 | 51.984 |

(continued)

Table A.2.7 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 118 Romania | 58.315 | 57.050 | 57.736 | 56.210 | 58.116 | 60.152 | 60.938 | 62.038 | 62.075 | 62.221 | 61.767 | 61.297 | 62.443 | 62.931 | 63.251 |
| 119 Russian Federation | 42.406 | 42.424 | 42.104 | 39.308 | 39.314 | 38.946 | 38.111 | 37.456 | 36.400 | 36.761 | 36.933 | 36.523 | 36.256 | 35.473 | 35.206 |
| 120 Rwanda | 27.352 | 27.084 | 29.718 | 29.834 | 30.445 | 30.730 | 31.062 | 31.551 | 31.413 | 29.730 | 29.593 | 29.637 | 30.354 | 30.175 | 29.930 |
| 121 Saudi Arabia | 29.624 | 30.505 | 30.030 | 31.021 | 31.899 | 32.389 | 32.528 | 31.492 | 31.871 | 32.681 | 32.662 | 33.359 | 33.616 | 33.195 | 33.145 |
| 122 Senegal | 50.997 | 51.223 | 53.546 | 52.743 | 52.327 | 51.859 | 50.085 | 49.012 | 49.661 | 49.202 | 49.948 | 52.258 | 53.565 | 53.070 | 53.442 |
| 123 Serbia | 56.746 | 56.953 | 55.740 | 57.141 | 57.797 | 58.033 | 58.286 | 59.030 | 60.017 | 59.786 | 59.826 | 59.826 | 59.471 | 59.281 | 58.018 |
| 124 Sierra Leone | 39.090 | 39.708 | 40.152 | 39.941 | 41.104 | 40.636 | 42.410 | 43.045 | 43.472 | 44.566 | 45.689 | 46.837 | 45.755 | 44.497 | 44.326 |
| 125 Singapore | 49.346 | 50.859 | 52.514 | 54.624 | 54.693 | 55.447 | 54.798 | 53.801 | 55.882 | 57.056 | 58.844 | 59.164 | 59.376 | 59.533 | 59.592 |
| 126 Slovak Republic | 64.265 | 64.476 | 65.927 | 67.278 | 68.322 | 68.750 | 68.922 | 68.698 | 68.856 | 69.272 | 69.801 | 69.486 | 69.237 | 69.203 | 68.716 |
| 127 Slovenia | 70.392 | 70.690 | 71.035 | 71.072 | 71.668 | 71.541 | 71.612 | 71.010 | 71.173 | 71.157 | 71.227 | 71.286 | 71.529 | 72.026 | 72.662 |
| 128 Somalia | | | | | | | | | | | | | | | |
| 129 South Africa | 60.218 | 60.309 | 59.908 | 59.853 | 59.346 | 58.794 | 58.865 | 58.114 | 57.784 | 57.447 | 56.996 | 57.231 | 56.470 | 56.731 | 55.734 |
| 130 South Sudan | | | | | | | | | | | | | | | |
| 131 Spain | 71.889 | 71.565 | 70.797 | 71.551 | 72.817 | 73.055 | 72.960 | 73.329 | 73.720 | 73.497 | 72.881 | 72.364 | 72.628 | 72.836 | 72.808 |
| 132 Sri Lanka | 47.889 | 47.800 | 48.055 | 47.499 | 46.084 | 43.918 | 42.804 | 42.748 | 43.010 | 40.360 | 40.003 | 39.041 | 38.831 | 40.762 | 46.008 |
| 133 Sudan | 19.568 | 19.409 | 20.840 | 20.471 | 21.725 | 23.388 | 23.515 | 23.924 | 23.332 | 24.176 | 22.235 | 22.462 | 22.455 | 21.492 | 21.331 |
| 134 Suriname | 58.321 | 59.898 | 59.739 | 59.577 | 58.108 | 57.590 | 58.090 | 57.950 | 58.017 | 58.262 | 58.077 | 57.295 | 57.223 | 57.353 | 57.173 |
| 135 Swaziland | 31.689 | 31.161 | 26.874 | 26.899 | 27.445 | 28.312 | 28.367 | 28.539 | 28.923 | 28.792 | 27.940 | 27.879 | 27.509 | 26.423 | 26.209 |
| 136 Sweden | 78.542 | 78.931 | 79.529 | 79.509 | 79.608 | 79.666 | 79.374 | 79.098 | 79.387 | 79.765 | 79.504 | 79.299 | 79.212 | 79.255 | 79.722 |
| 137 Switzerland | 78.287 | 78.587 | 78.667 | 78.901 | 78.782 | 79.282 | 78.852 | 78.671 | 78.813 | 79.257 | 79.343 | 79.413 | 79.459 | 79.392 | 79.291 |
| 138 Syrian Arab Republic | | | | | | | | | | | | | | | |
| 139 Tajikistan | 32.200 | 32.846 | 32.987 | 32.861 | 32.947 | 32.232 | 32.291 | 31.968 | 31.965 | 31.568 | 31.678 | 30.973 | 30.737 | 29.831 | 27.013 |
| 140 Tanzania | 45.656 | 45.191 | 45.098 | 45.364 | 45.208 | 45.709 | 45.252 | 45.333 | 45.439 | 48.296 | 47.967 | 47.999 | 47.798 | 47.281 | 45.718 |
| 141 Thailand | 56.081 | 55.699 | 55.554 | 53.186 | 51.040 | 40.709 | 41.802 | 43.494 | 43.013 | 43.072 | 46.511 | 46.751 | 45.113 | 37.272 | 36.941 |
| 142 Timor-Leste | 54.768 | 53.542 | 52.745 | 50.237 | 50.779 | 49.355 | 50.659 | 51.405 | 51.520 | 51.557 | 51.581 | 51.975 | 52.002 | 52.297 | 52.244 |
| 143 Togo | 29.421 | 28.714 | 29.252 | 28.646 | 27.074 | 28.356 | 31.912 | 31.857 | 33.579 | 33.871 | 34.407 | 34.977 | 36.863 | 37.479 | 38.307 |
| 144 Trinidad and Tobago | 55.186 | 55.645 | 56.271 | 55.563 | 57.234 | 59.773 | 60.487 | 60.182 | 60.024 | 60.103 | 59.855 | 60.125 | 59.763 | 59.724 | 59.720 |

(continued)

Table A.2.7 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|--------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 145 Tunisia | DEVELOP SD, QoD | 32.731 | 32.613 | 32.526 | 32.020 | 31.350 | 31.829 | 31.327 | 30.896 | 31.048 | 37.152 | 48.961 | 48.896 | 51.395 | 56.127 | 55.963 |
| 146 Turkey | DEVELOP SD, QoD | 46.040 | 47.024 | 49.907 | 52.013 | 52.406 | 52.375 | 52.965 | 52.622 | 51.996 | 52.302 | 52.747 | 51.859 | 51.462 | 49.317 | 47.705 |
| 147 Turkmenistan | DEVELOP SD, QoD | 15.608 | 15.025 | 14.333 | 14.496 | 14.383 | 14.455 | 15.839 | 16.674 | 17.118 | 17.365 | 17.328 | 17.754 | 18.024 | 17.736 | 16.867 |
| 148 Uganda | DEVELOP SD, QoD | 38.606 | 38.871 | 39.993 | 39.139 | 39.538 | 40.263 | 40.117 | 39.994 | 40.063 | 39.599 | 39.025 | 37.687 | 37.326 | 36.869 | 36.792 |
| 149 Ukraine | DEVELOP SD, QoD | 44.099 | 44.168 | 45.501 | 48.119 | 54.036 | 54.942 | 54.910 | 55.149 | 54.588 | 52.513 | 49.909 | 48.366 | 48.761 | 51.915 | 51.706 |
| 150 United Arab Emirates | DEVELOP SD, QoD | 51.783 | 51.646 | 50.694 | 50.406 | 49.343 | 48.196 | 46.536 | 44.418 | 43.473 | 43.494 | 42.562 | 42.445 | 42.153 | 42.197 | 42.163 |
| 151 UK | DEVELOP SD, QoD | 73.848 | 73.701 | 73.839 | 73.899 | 73.797 | 74.676 | 74.179 | 73.981 | 73.812 | 73.923 | 73.732 | 73.572 | 73.670 | 73.573 | 73.199 |
| 152 USA | DEVELOP SD, QoD | 73.807 | 74.797 | 74.628 | 75.176 | 75.254 | 75.380 | 75.497 | 75.557 | 76.160 | 76.167 | 76.038 | 75.232 | 74.792 | 75.016 | 74.058 |
| 153 Uruguay | DEVELOP SD, QoD | 62.990 | 63.824 | 63.432 | 64.967 | 65.977 | 67.056 | 68.057 | 68.287 | 68.625 | 68.598 | 68.856 | 68.714 | 69.622 | 69.423 | 69.817 |
| 154 Uzbekistan | DEVELOP SD, QoD | 22.582 | 22.840 | 22.730 | 21.336 | 18.775 | 18.673 | 18.564 | 18.868 | 18.846 | 18.694 | 18.743 | 18.873 | 18.957 | 19.048 | 18.857 |
| 155 Venezuela, RB | DEVELOP SD, QoD | 45.639 | 45.500 | 45.398 | 45.611 | 44.280 | 43.419 | 43.938 | 43.031 | 41.686 | 41.767 | 41.580 | 40.372 | 39.488 | 38.753 | 38.863 |
| 156 Vietnam | DEVELOP SD, QoD | 26.333 | 26.385 | 26.713 | 28.382 | 29.431 | 29.138 | 29.040 | 29.567 | 29.011 | 28.767 | 28.770 | 28.848 | 29.173 | 29.431 | 29.656 |
| 157 West Bank and Gaza | DEVELOP SD, QoD | | | | | | | | | | | | | | | |
| 158 Yemen, Rep. | DEVELOP SD, QoD | 31.737 | 32.099 | 32.912 | 32.153 | 31.178 | 32.375 | 32.470 | 32.716 | 30.266 | 30.248 | 29.038 | 30.267 | 29.997 | 28.688 | 25.493 |
| 159 Zambia | DEVELOP SD, QoD | 40.304 | 40.380 | 40.537 | 41.086 | 40.740 | 41.966 | 42.344 | 42.911 | 43.246 | 42.840 | 44.779 | 44.311 | 43.103 | 43.618 | 43.258 |
| 160 Zimbabwe | DEVELOP SD, QoD | 25.254 | 25.006 | 24.733 | 24.175 | 23.297 | 22.714 | 23.356 | 23.583 | 25.995 | 27.532 | 27.947 | 30.711 | 32.321 | 31.768 | 32.914 |

Source: Author's own calculations based on Freedom House (2018a, b), and World Bank (2018)

See Freedom House (2018a)

Methodic note for CL aggregate scores: index year 2017 = calendar year 2016 (estimation)

<https://freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores#.UJEFLQo71I>

See Freedom House (2018b)

Methodic note for FOTP total scores: index year 2017 = calendar year 2016 (estimation)

<https://freedomhouse.org/report-types/freedom-pres>

See World Bank (2018), the World Development Indicators

<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>

<https://data.worldbank.org/indicator/SI.POV.GINI?locations=US>

Aggregation measures of the indicators used:

50%: Political Freedom (see Table A.2.1)

50%: Development non-political (see Table A.2.6)

Status: April 30, 2018

Table A.2.8 Life expectancy. Scores transformed (rescaled) to 0–100:
0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Afghanistan | Life expectancy at birth, | 67.222 | 67.949 | 68.691 | 69.432 | 70.156 | 70.847 | 71.498 | 72.100 | 72.659 | 73.179 | 73.676 | 74.161 | 74.637 | 75.106 |
| | total (years) | | | | | | | | | | | | | | |
| 2 Albania | Life expectancy at birth, | 88.600 | 88.914 | 89.178 | 89.415 | 89.657 | 89.934 | 90.264 | 90.646 | 91.065 | 91.493 | 91.896 | 92.251 | 92.549 | 92.792 |
| | total (years) | | | | | | | | | | | | | | |
| 3 Algeria | Life expectancy at birth, | 84.566 | 85.164 | 85.759 | 86.335 | 86.879 | 87.381 | 87.835 | 88.241 | 88.599 | 88.917 | 89.206 | 89.480 | 89.745 | 90.006 |
| | total (years) | | | | | | | | | | | | | | |
| 4 Angola | Life expectancy at birth, | 58.499 | 59.881 | 61.265 | 62.635 | 63.987 | 65.317 | 66.612 | 67.848 | 68.987 | 69.996 | 70.859 | 71.575 | 72.150 | 72.604 |
| | total (years) | | | | | | | | | | | | | | |
| 5 Argentina | Life expectancy at birth, | 87.989 | 88.210 | 88.420 | 88.621 | 88.815 | 89.005 | 89.194 | 89.384 | 89.575 | 89.767 | 89.958 | 90.148 | 90.337 | 90.525 |
| | total (years) | | | | | | | | | | | | | | |
| 6 Armenia | Life expectancy at birth, | 85.299 | 85.575 | 85.769 | 85.905 | 86.014 | 86.135 | 86.293 | 86.498 | 86.748 | 87.029 | 87.314 | 87.581 | 87.828 | 88.049 |
| | total (years) | | | | | | | | | | | | | | |
| 7 Australia | Life expectancy at birth, | 94.849 | 95.208 | 95.506 | 95.922 | 96.160 | 96.458 | 96.579 | 96.756 | 96.935 | 97.173 | 97.352 | 97.474 | 97.653 | 97.832 |
| | total (years) | | | | | | | | | | | | | | |
| 8 Austria | Life expectancy at birth, | 93.355 | 93.300 | 93.951 | 94.131 | 94.782 | 95.138 | 95.436 | 95.317 | 95.613 | 96.090 | 96.035 | 96.273 | 96.692 | 97.112 |
| | total (years) | | | | | | | | | | | | | | |
| 9 Azerbaijan | Life expectancy at birth, | 79.867 | 80.344 | 80.891 | 81.489 | 82.108 | 82.710 | 83.261 | 83.745 | 84.148 | 84.470 | 84.726 | 84.935 | 85.105 | 85.248 |
| | total (years) | | | | | | | | | | | | | | |
| 10 Bahrain | Life expectancy at birth, | 88.873 | 89.082 | 89.282 | 89.474 | 89.660 | 89.839 | 90.015 | 90.190 | 90.362 | 90.533 | 90.703 | 90.872 | 91.038 | 91.204 |
| | total (years) | | | | | | | | | | | | | | |
| 11 Bangladesh | Life expectancy at birth, | 78.846 | 79.460 | 80.048 | 80.616 | 81.172 | 81.722 | 82.268 | 82.811 | 83.346 | 83.866 | 84.365 | 84.836 | 85.279 | 85.694 |
| | total (years) | | | | | | | | | | | | | | |
| 12 Belarus | Life expectancy at birth, | 80.752 | 81.342 | 81.820 | 81.695 | 82.352 | 83.304 | 83.600 | 83.542 | 83.539 | 83.715 | 85.391 | 85.990 | 86.583 | 87.359 |
| | total (years) | | | | | | | | | | | | | | |
| 13 Belgium | Life expectancy at birth, | 92.641 | 92.704 | 93.593 | 93.714 | 94.189 | 94.666 | 94.545 | 94.904 | 95.141 | 95.618 | 95.381 | 95.621 | 96.452 | 96.452 |
| | total (years) | | | | | | | | | | | | | | |
| 14 Benin | Life expectancy at birth, | 66.386 | 66.876 | 67.414 | 67.972 | 68.522 | 69.044 | 69.521 | 69.943 | 70.314 | 70.643 | 70.953 | 71.260 | 71.570 | 71.887 |
| | total (years) | | | | | | | | | | | | | | |
| 15 Bolivia | Life expectancy at birth, | 73.363 | 74.039 | 74.715 | 75.393 | 76.076 | 76.762 | 77.449 | 78.130 | 78.794 | 79.429 | 80.029 | 80.587 | 81.101 | 81.575 |
| | total (years) | | | | | | | | | | | | | | |
| 16 Bosnia and Herzegovina | Life expectancy at birth, | 88.606 | 88.780 | 88.939 | 89.095 | 89.256 | 89.418 | 89.582 | 89.752 | 89.933 | 90.122 | 90.320 | 90.522 | 90.728 | 90.937 |
| | total (years) | | | | | | | | | | | | | | |
| 17 Botswana | Life expectancy at birth, | 58.193 | 58.988 | 60.213 | 61.784 | 63.592 | 65.509 | 67.419 | 69.241 | 70.933 | 72.496 | 73.978 | 75.406 | 76.763 | 78.017 |
| | total (years) | | | | | | | | | | | | | | |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 18 Brazil | Life expectancy at birth, total (years) | 84,066 | 84,530 | 84,978 | 85,415 | 85,846 | 86,274 | 86,700 | 87,120 | 87,531 | 87,924 | 88,292 | 88,631 | 88,942 | 89,227 |
| 19 Bulgaria | Life expectancy at birth, total (years) | 85,272 | 85,510 | 86,100 | 86,097 | 86,158 | 86,219 | 86,575 | 87,107 | 87,226 | 87,998 | 88,178 | 88,826 | 88,357 | 88,357 |
| 20 Burkina Faso | Life expectancy at birth, total (years) | 60,848 | 61,531 | 62,302 | 63,146 | 64,044 | 64,970 | 65,896 | 66,797 | 67,651 | 68,441 | 69,171 | 69,841 | 70,452 | 71,009 |
| 21 Burundi | Life expectancy at birth, total (years) | 61,621 | 61,881 | 62,180 | 62,537 | 62,963 | 63,441 | 63,957 | 64,503 | 65,067 | 65,633 | 66,189 | 66,725 | 67,234 | 67,716 |
| 22 Cambodia | Life expectancy at birth, total (years) | 71,415 | 72,543 | 73,653 | 74,716 | 75,704 | 76,611 | 77,432 | 78,165 | 78,810 | 79,377 | 79,887 | 80,363 | 80,811 | 81,245 |
| 23 Cameroon | Life expectancy at birth, total (years) | 60,552 | 61,278 | 62,025 | 62,755 | 63,442 | 64,083 | 64,680 | 65,228 | 65,736 | 66,220 | 66,705 | 67,208 | 67,737 | 68,295 |
| 24 Canada | Life expectancy at birth, total (years) | 94,438 | 94,733 | 95,092 | 95,271 | 95,271 | 95,569 | 95,749 | 96,047 | 96,345 | 96,643 | 96,803 | 97,027 | 97,241 | 97,450 |
| 25 Central African Republic | Life expectancy at birth, total (years) | 51,848 | 51,977 | 52,277 | 52,734 | 53,327 | 54,019 | 54,775 | 55,572 | 56,400 | 57,259 | 58,155 | 59,085 | 60,029 | 60,962 |
| 26 Chad | Life expectancy at birth, total (years) | 56,498 | 56,588 | 56,744 | 56,987 | 57,336 | 57,786 | 58,323 | 58,928 | 59,572 | 60,220 | 60,840 | 61,409 | 61,915 | 62,358 |
| 27 Chile | Life expectancy at birth, total (years) | 91,492 | 91,729 | 91,942 | 92,132 | 92,303 | 92,459 | 92,610 | 92,760 | 92,917 | 93,088 | 93,274 | 93,477 | 93,695 | 93,928 |
| 28 China | Life expectancy at birth, total (years) | 86,467 | 86,959 | 87,415 | 87,825 | 88,188 | 88,509 | 88,801 | 89,066 | 89,307 | 89,530 | 89,736 | 89,935 | 90,127 | 90,317 |
| 29 Colombia | Life expectancy at birth, total (years) | 84,864 | 85,167 | 85,461 | 85,745 | 86,016 | 86,271 | 86,512 | 86,738 | 86,954 | 87,162 | 87,366 | 87,572 | 87,780 | 87,990 |
| 30 Congo, Dem. Rep. | Life expectancy at birth, total (years) | 60,925 | 61,827 | 62,744 | 63,643 | 64,505 | 65,324 | 66,098 | 66,818 | 67,479 | 68,086 | 68,651 | 69,190 | 69,708 | 70,212 |
| 31 Congo, Rep. | Life expectancy at birth, total (years) | 61,697 | 62,510 | 63,583 | 64,863 | 66,281 | 67,745 | 69,177 | 70,519 | 71,730 | 72,795 | 73,743 | 74,598 | 75,364 | 76,047 |
| 32 Costa Rica | Life expectancy at birth, total (years) | 92,206 | 92,361 | 92,510 | 92,654 | 92,796 | 92,941 | 93,091 | 93,250 | 93,420 | 93,604 | 93,802 | 94,012 | 94,232 | 94,460 |
| 33 Cote d'Ivoire | Life expectancy at birth, total (years) | 55,379 | 55,642 | 56,058 | 56,594 | 57,214 | 57,880 | 58,558 | 59,222 | 59,862 | 60,481 | 61,096 | 61,720 | 62,350 | 62,980 |
| 34 Croatia | Life expectancy at birth, total (years) | 88,656 | 88,533 | 89,608 | 89,281 | 89,984 | 89,828 | 90,074 | 90,377 | 90,742 | 91,098 | 91,275 | 91,515 | 91,931 | 91,691 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 35 Cuba | Life expectancy at birth, total (years) | 91,486 | 91,796 | 92,129 | 92,470 | 92,795 | 93,084 | 93,324 | 93,514 | 93,662 | 93,785 | 93,906 | 94,042 | 94,200 | 94,382 |
| 36 Cyprus | Life expectancy at birth, total (years) | 92,817 | 92,961 | 93,103 | 93,251 | 93,409 | 93,583 | 93,772 | 93,977 | 94,194 | 94,417 | 94,641 | 94,858 | 95,069 | 95,269 |
| 37 Czech Republic | Life expectancy at birth, total (years) | 89,255 | 89,194 | 89,848 | 90,088 | 90,800 | 91,037 | 91,335 | 91,457 | 91,868 | 92,400 | 92,641 | 92,759 | 93,529 | 94,299 |
| 38 Denmark | Life expectancy at birth, total (years) | 91,240 | 91,535 | 91,949 | 92,366 | 92,664 | 92,782 | 93,080 | 93,260 | 93,856 | 94,687 | 94,985 | 95,280 | 95,754 | 96,229 |
| 39 Dominican Republic | Life expectancy at birth, total (years) | 84,306 | 84,562 | 84,819 | 85,076 | 85,332 | 85,584 | 85,833 | 86,077 | 86,315 | 86,548 | 86,779 | 87,006 | 87,231 | 87,453 |
| 40 Ecuador | Life expectancy at birth, total (years) | 87,202 | 87,482 | 87,736 | 87,969 | 88,185 | 88,394 | 88,600 | 88,812 | 89,031 | 89,263 | 89,505 | 89,755 | 90,011 | 90,274 |
| 41 Egypt, Arab Rep. | Life expectancy at birth, total (years) | 81,810 | 81,995 | 82,181 | 82,375 | 82,582 | 82,797 | 83,015 | 83,237 | 83,464 | 83,693 | 83,922 | 84,150 | 84,375 | 84,596 |
| 42 El Salvador | Life expectancy at birth, total (years) | 82,225 | 82,571 | 82,919 | 83,271 | 83,627 | 83,984 | 84,340 | 84,693 | 85,040 | 85,378 | 85,707 | 86,023 | 86,328 | 86,622 |
| 43 Equatorial Guinea | Life expectancy at birth, total (years) | 63,396 | 63,746 | 64,076 | 64,405 | 64,750 | 65,121 | 65,523 | 65,954 | 66,398 | 66,834 | 67,240 | 67,607 | 67,936 | 68,236 |
| 44 Eritrea | Life expectancy at birth, total (years) | 67,032 | 67,853 | 68,731 | 69,648 | 70,571 | 71,466 | 72,306 | 73,076 | 73,775 | 74,411 | 75,005 | 75,577 | 76,133 | 76,680 |
| 45 Estonia | Life expectancy at birth, total (years) | 84,132 | 84,621 | 85,324 | 86,106 | 86,252 | 86,398 | 87,533 | 88,783 | 89,500 | 90,450 | 90,565 | 91,532 | 91,405 | 91,521 |
| 46 Ethiopia | Life expectancy at birth, total (years) | 63,289 | 64,310 | 65,451 | 66,695 | 68,012 | 69,354 | 70,672 | 71,931 | 73,094 | 74,132 | 75,048 | 75,849 | 76,541 | 77,135 |
| 47 Finland | Life expectancy at birth, total (years) | 92,693 | 92,988 | 93,399 | 93,520 | 93,992 | 94,050 | 94,412 | 94,591 | 94,771 | 95,482 | 95,668 | 96,081 | 96,325 | 96,568 |
| 48 France | Life expectancy at birth, total (years) | 94,047 | 93,873 | 95,118 | 95,118 | 95,888 | 96,244 | 96,365 | 96,602 | 96,898 | 97,433 | 97,259 | 97,557 | 98,093 | 98,093 |
| 49 Gabon | Life expectancy at birth, total (years) | 70,132 | 70,265 | 70,557 | 71,006 | 71,596 | 72,287 | 73,035 | 73,809 | 74,582 | 75,332 | 76,052 | 76,735 | 77,367 | 77,938 |
| 50 Gambia, The | Life expectancy at birth, total (years) | 67,374 | 67,845 | 68,312 | 68,768 | 69,209 | 69,632 | 70,034 | 70,414 | 70,773 | 71,111 | 71,432 | 71,741 | 72,040 | 72,329 |
| 51 Georgia | Life expectancy at birth, total (years) | 85,667 | 85,870 | 86,002 | 86,067 | 86,075 | 86,055 | 86,028 | 86,013 | 86,022 | 86,068 | 86,148 | 86,260 | 86,405 | 86,578 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 52 Germany | Life expectancy at birth, total (years) | 92.823 | 93.002 | 93.358 | 93.656 | 93.894 | 94.371 | 94.611 | 94.730 | 94.909 | 95.442 | 95.563 | 95.506 | 96.218 | 96.218 |
| 53 Ghana | Life expectancy at birth, total (years) | 68.108 | 68.523 | 69.028 | 69.593 | 70.186 | 70.770 | 71.319 | 71.814 | 72.253 | 72.641 | 73.002 | 73.353 | 73.701 | 74.049 |
| 54 Greece | Life expectancy at birth, total (years) | 93.312 | 93.549 | 93.784 | 94.021 | 94.258 | 94.258 | 94.852 | 95.147 | 95.384 | 95.792 | 95.676 | 96.449 | 96.628 | 96.808 |
| 55 Guatemala | Life expectancy at birth, total (years) | 81.422 | 81.861 | 82.265 | 82.648 | 83.030 | 83.421 | 83.831 | 84.260 | 84.703 | 85.145 | 85.572 | 85.970 | 86.336 | 86.669 |
| 56 Guinea | Life expectancy at birth, total (years) | 61.041 | 61.523 | 62.215 | 63.073 | 64.022 | 64.972 | 65.855 | 66.641 | 67.329 | 67.943 | 68.536 | 69.152 | 69.799 | 70.480 |
| 57 Guinea-Bissau | Life expectancy at birth, total (years) | 62.415 | 62.664 | 62.948 | 63.269 | 63.627 | 64.012 | 64.414 | 64.831 | 65.261 | 65.704 | 66.159 | 66.624 | 67.097 | 67.574 |
| 58 Haiti | Life expectancy at birth, total (years) | 69.056 | 69.407 | 69.794 | 70.219 | 70.683 | 71.172 | 71.675 | 72.182 | 72.680 | 73.157 | 73.607 | 74.026 | 74.412 | 74.765 |
| 59 Honduras | Life expectancy at birth, total (years) | 84.139 | 84.367 | 84.592 | 84.817 | 85.043 | 85.265 | 85.480 | 85.691 | 85.900 | 86.111 | 86.326 | 86.547 | 86.772 | 87.003 |
| 60 Hong Kong SAR, China | Life expectancy at birth, total (years) | 96.678 | 96.501 | 97.037 | 96.799 | 97.743 | 97.685 | 97.743 | 98.217 | 98.457 | 98.984 | 99.054 | 99.470 | 99.647 | 100.000 |
| 61 Hungary | Life expectancy at birth, total (years) | 85.845 | 85.787 | 86.201 | 86.201 | 86.734 | 86.797 | 87.452 | 87.692 | 88.051 | 88.823 | 89.066 | 89.663 | 89.897 | 90.131 |
| 62 India | Life expectancy at birth, total (years) | 75.197 | 75.660 | 76.127 | 76.604 | 77.091 | 77.588 | 78.088 | 78.585 | 79.072 | 79.536 | 79.973 | 80.376 | 80.745 | 81.080 |
| 63 Indonesia | Life expectancy at birth, total (years) | 79.034 | 79.248 | 79.469 | 79.699 | 79.936 | 80.175 | 80.410 | 80.642 | 80.867 | 81.086 | 81.299 | 81.510 | 81.716 | 81.918 |
| 64 Iran, Islamic Rep. | Life expectancy at birth, total (years) | 84.124 | 84.546 | 84.949 | 85.349 | 85.768 | 86.218 | 86.705 | 87.222 | 87.753 | 88.273 | 88.757 | 89.187 | 89.559 | 89.872 |
| 65 Iraq | Life expectancy at birth, total (years) | 81.803 | 81.584 | 81.350 | 81.138 | 80.988 | 80.919 | 80.940 | 81.056 | 81.257 | 81.522 | 81.813 | 82.104 | 82.377 | 82.625 |
| 66 Ireland | Life expectancy at birth, total (years) | 92.117 | 92.716 | 93.190 | 93.671 | 94.024 | 94.498 | 95.037 | 95.150 | 95.807 | 95.809 | 95.928 | 96.110 | 96.524 | 96.707 |
| 67 Israel | Life expectancy at birth, total (years) | 94.273 | 94.507 | 95.098 | 95.103 | 95.581 | 95.523 | 96.053 | 96.591 | 96.825 | 96.889 | 96.947 | 97.364 | 97.479 | 97.358 |
| 68 Italy | Life expectancy at birth, total (years) | 95.196 | 94.904 | 95.850 | 95.853 | 96.446 | 96.626 | 96.686 | 96.866 | 97.340 | 97.520 | 97.581 | 98.116 | 98.591 | 99.065 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|----|---------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 69 | Jamaica | Life expectancy at birth, total (years) | 86.232 | 86.503 | 86.803 | 87.126 | 87.467 | 87.815 | 88.161 | 88.496 | 88.809 | 89.092 | 89.347 | 89.573 | 89.773 | 89.948 |
| 70 | Japan | Life expectancy at birth, total (years) | 96.779 | 97.012 | 97.333 | 97.208 | 97.679 | 97.899 | 97.994 | 98.402 | 98.297 | 97.998 | 98.877 | 99.181 | 99.485 | 99.485 |
| 71 | Jordan | Life expectancy at birth, total (years) | 85.589 | 85.793 | 85.994 | 86.190 | 86.383 | 86.573 | 86.763 | 86.951 | 87.138 | 87.323 | 87.504 | 87.682 | 87.858 | 88.031 |
| 72 | Kazakhstan | Life expectancy at birth, total (years) | 78.275 | 78.153 | 78.179 | 78.205 | 78.503 | 78.911 | 79.525 | 81.195 | 81.036 | 81.848 | 82.596 | 83.592 | 84.981 | 85.431 |
| 73 | Kenya | Life expectancy at birth, total (years) | 62.345 | 63.343 | 64.642 | 66.186 | 67.904 | 69.697 | 71.464 | 73.129 | 74.620 | 75.892 | 76.959 | 77.841 | 78.543 | 79.078 |
| 74 | Korea, Dem. People's Rep. | Life expectancy at birth, total (years) | 79.050 | 79.865 | 80.446 | 80.797 | 80.993 | 81.170 | 81.432 | 81.797 | 82.260 | 82.785 | 83.307 | 83.780 | 84.188 | 84.528 |
| 75 | Korea, Rep. | Life expectancy at birth, total (years) | 91.173 | 91.661 | 92.369 | 93.064 | 93.701 | 94.152 | 94.725 | 95.277 | 95.578 | 96.071 | 96.364 | 96.947 | 97.482 | 97.482 |
| 76 | Kosovo | Life expectancy at birth, total (years) | 80.619 | 80.917 | 81.215 | 81.510 | 81.808 | 82.106 | 82.344 | 82.642 | 82.940 | 83.235 | 83.649 | 84.005 | 84.361 | 84.656 |
| 77 | Kuwait | Life expectancy at birth, total (years) | 87.169 | 87.247 | 87.325 | 87.407 | 87.498 | 87.597 | 87.708 | 87.830 | 87.962 | 88.103 | 88.249 | 88.396 | 88.544 | 88.691 |
| 78 | Kyrgyz Republic | Life expectancy at birth, total (years) | 80.871 | 80.989 | 80.868 | 80.633 | 80.324 | 80.561 | 81.221 | 81.993 | 82.228 | 82.587 | 83.061 | 83.299 | 83.536 | 83.831 |
| 79 | Lao PDR | Life expectancy at birth, total (years) | 71.223 | 71.907 | 72.590 | 73.263 | 73.919 | 74.555 | 75.166 | 75.748 | 76.299 | 76.818 | 77.308 | 77.775 | 78.220 | 78.649 |
| 80 | Latvia | Life expectancy at birth, total (years) | 84.199 | 84.560 | 85.463 | 84.667 | 84.086 | 84.268 | 85.929 | 86.714 | 87.191 | 87.301 | 87.541 | 87.784 | 87.952 | 87.952 |
| 81 | Lebanon | Life expectancy at birth, total (years) | 89.480 | 90.058 | 90.623 | 91.161 | 91.661 | 92.116 | 92.523 | 92.880 | 93.189 | 93.458 | 93.696 | 93.916 | 94.124 | 94.329 |
| 82 | Lesotho | Life expectancy at birth, total (years) | 54.901 | 54.457 | 54.520 | 55.040 | 55.916 | 56.982 | 58.090 | 59.154 | 60.112 | 60.943 | 61.685 | 62.371 | 62.998 | 63.564 |
| 83 | Liberia | Life expectancy at birth, total (years) | 62.646 | 63.249 | 64.150 | 65.297 | 66.581 | 67.851 | 68.988 | 69.949 | 70.725 | 71.346 | 71.892 | 72.428 | 72.974 | 73.543 |
| 84 | Libya | Life expectancy at birth, total (years) | 84.109 | 84.334 | 84.573 | 84.804 | 84.994 | 85.121 | 85.179 | 85.171 | 85.119 | 85.056 | 85.016 | 85.027 | 85.099 | 85.230 |
| 85 | Lithuania | Life expectancy at birth, total (years) | 85.148 | 85.504 | 85.385 | 84.546 | 84.312 | 84.126 | 85.209 | 86.517 | 86.936 | 87.287 | 87.643 | 87.703 | 88.418 | 89.133 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 86 Macedonia, FYR | Life expectancy at birth, total (years) | 87.369 | 87.534 | 87.664 | 87.770 | 87.874 | 87.992 | 88.138 | 88.315 | 88.521 | 88.749 | 88.980 | 89.204 | 89.416 | 89.613 |
| 87 Madagascar | Life expectancy at birth, total (years) | 70.836 | 71.472 | 72.058 | 72.602 | 73.120 | 73.627 | 74.136 | 74.652 | 75.177 | 75.708 | 76.235 | 76.748 | 77.246 | 77.728 |
| 88 Malawi | Life expectancy at birth, total (years) | 55.922 | 56.707 | 57.751 | 59.056 | 60.609 | 62.340 | 64.169 | 66.023 | 67.819 | 69.481 | 70.973 | 72.268 | 73.348 | 74.211 |
| 89 Malaysia | Life expectancy at birth, total (years) | 86.807 | 86.965 | 87.105 | 87.238 | 87.378 | 87.535 | 87.715 | 87.921 | 88.145 | 88.382 | 88.618 | 88.844 | 89.055 | 89.252 |
| 90 Mali | Life expectancy at birth, total (years) | 58.763 | 59.751 | 60.761 | 61.749 | 62.675 | 63.521 | 64.280 | 64.947 | 65.533 | 66.061 | 66.568 | 67.083 | 67.617 | 68.176 |
| 91 Mauritania | Life expectancy at birth, total (years) | 71.418 | 71.574 | 71.764 | 71.992 | 72.258 | 72.553 | 72.866 | 73.188 | 73.508 | 73.815 | 74.101 | 74.363 | 74.599 | 74.808 |
| 92 Mauritius | Life expectancy at birth, total (years) | 85.391 | 85.575 | 85.760 | 85.944 | 86.109 | 86.259 | 86.409 | 86.579 | 86.759 | 86.935 | 87.103 | 87.265 | 87.422 | 87.574 |
| 93 Mexico | Life expectancy at birth, total (years) | 88.688 | 88.917 | 89.128 | 89.326 | 89.513 | 89.692 | 89.866 | 90.039 | 90.218 | 90.403 | 90.597 | 90.798 | 91.007 | 91.223 |
| 94 Moldova | Life expectancy at birth, total (years) | 79.792 | 79.981 | 80.151 | 80.334 | 80.574 | 80.908 | 81.348 | 81.884 | 82.478 | 83.077 | 83.626 | 84.084 | 84.437 | 84.685 |
| 95 Mongolia | Life expectancy at birth, total (years) | 75.767 | 76.316 | 76.847 | 77.362 | 77.874 | 78.399 | 78.938 | 79.487 | 80.027 | 80.538 | 80.998 | 81.397 | 81.733 | 82.009 |
| 96 Morocco | Life expectancy at birth, total (years) | 82.667 | 83.331 | 84.018 | 84.711 | 85.393 | 86.049 | 86.663 | 87.227 | 87.735 | 88.185 | 88.588 | 88.956 | 89.294 | 89.608 |
| 97 Mozambique | Life expectancy at birth, total (years) | 58.531 | 59.243 | 60.019 | 60.845 | 61.691 | 62.526 | 63.322 | 64.074 | 64.788 | 65.483 | 66.182 | 66.897 | 67.627 | 68.356 |
| 98 Myanmar | Life expectancy at birth, total (years) | 74.392 | 74.732 | 75.058 | 75.380 | 75.715 | 76.070 | 76.450 | 76.847 | 77.249 | 77.636 | 77.991 | 78.299 | 78.558 | 78.770 |
| 99 Namibia | Life expectancy at birth, total (years) | 64.168 | 63.630 | 63.374 | 63.467 | 63.958 | 64.815 | 65.974 | 67.370 | 68.908 | 70.486 | 72.005 | 73.383 | 74.561 | 75.508 |
| 100 Nepal | Life expectancy at birth, total (years) | 75.572 | 76.327 | 77.044 | 77.722 | 78.360 | 78.961 | 79.528 | 80.066 | 80.579 | 81.072 | 81.549 | 82.012 | 82.464 | 82.904 |
| 101 Netherlands | Life expectancy at birth, total (years) | 92.898 | 93.135 | 93.850 | 94.148 | 94.565 | 95.040 | 95.222 | 95.575 | 95.757 | 96.354 | 96.235 | 96.472 | 96.950 | 96.950 |
| 102 New Zealand | Life expectancy at birth, total (years) | 93.555 | 93.911 | 94.388 | 94.747 | 94.982 | 95.103 | 95.341 | 95.757 | 95.998 | 96.296 | 96.594 | 96.591 | 96.652 | 96.652 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 103 Nicaragua | Life expectancy at birth, total (years) | 83.754 | 84.275 | 84.770 | 85.240 | 85.687 | 86.115 | 86.529 | 86.931 | 87.321 | 87.695 | 88.053 | 88.396 | 88.722 | 89.036 |
| 104 Niger | Life expectancy at birth, total (years) | 60.644 | 61.415 | 62.208 | 63.032 | 63.892 | 64.779 | 65.679 | 66.577 | 67.450 | 68.270 | 69.022 | 69.696 | 70.292 | 70.815 |
| 105 Nigeria | Life expectancy at birth, total (years) | 55.566 | 56.046 | 56.611 | 57.237 | 57.895 | 58.552 | 59.182 | 59.773 | 60.321 | 60.834 | 61.333 | 61.834 | 62.343 | 62.861 |
| 106 Norway | Life expectancy at birth, total (years) | 93.723 | 94.200 | 94.736 | 94.973 | 95.332 | 95.393 | 95.627 | 95.867 | 96.108 | 96.461 | 96.646 | 97.002 | 97.416 | 97.416 |
| 107 Oman | Life expectancy at birth, total (years) | 86.883 | 87.376 | 87.854 | 88.311 | 88.740 | 89.137 | 89.501 | 89.835 | 90.142 | 90.429 | 90.702 | 90.971 | 91.239 | 91.509 |
| 108 Pakistan | Life expectancy at birth, total (years) | 75.021 | 75.278 | 75.527 | 75.777 | 76.040 | 76.325 | 76.635 | 76.964 | 77.304 | 77.638 | 77.954 | 78.239 | 78.489 | 78.706 |
| 109 Panama | Life expectancy at birth, total (years) | 89.540 | 89.745 | 89.945 | 90.144 | 90.343 | 90.547 | 90.756 | 90.971 | 91.192 | 91.419 | 91.648 | 91.878 | 92.106 | 92.334 |
| 110 Papua New Guinea | Life expectancy at birth, total (years) | 74.130 | 74.515 | 74.902 | 75.281 | 75.635 | 75.958 | 76.242 | 76.488 | 76.699 | 76.883 | 77.056 | 77.228 | 77.403 | 77.586 |
| 111 Paraguay | Life expectancy at birth, total (years) | 83.767 | 84.058 | 84.329 | 84.584 | 84.828 | 85.068 | 85.309 | 85.550 | 85.785 | 86.007 | 86.208 | 86.385 | 86.538 | 86.669 |
| 112 Peru | Life expectancy at birth, total (years) | 84.700 | 85.166 | 85.593 | 85.976 | 86.317 | 86.620 | 86.895 | 87.149 | 87.391 | 87.630 | 87.872 | 88.121 | 88.381 | 88.651 |
| 113 Philippines | Life expectancy at birth, total (years) | 80.037 | 80.180 | 80.317 | 80.451 | 80.582 | 80.712 | 80.842 | 80.974 | 81.110 | 81.253 | 81.402 | 81.557 | 81.718 | 81.884 |
| 114 Poland | Life expectancy at birth, total (years) | 88.395 | 88.514 | 88.809 | 88.985 | 89.162 | 89.281 | 89.637 | 89.816 | 90.470 | 91.002 | 91.063 | 91.364 | 92.079 | 92.794 |
| 115 Portugal | Life expectancy at birth, total (years) | 91.442 | 91.625 | 92.160 | 92.635 | 93.049 | 92.933 | 93.173 | 93.413 | 93.769 | 95.482 | 95.367 | 95.781 | 96.255 | 96.730 |
| 116 Puerto Rico | Life expectancy at birth, total (years) | 92.267 | 92.635 | 92.759 | 92.902 | 93.045 | 93.056 | 92.436 | 92.729 | 93.035 | 93.347 | 93.650 | 93.936 | 94.200 | 94.445 |
| 117 Qatar | Life expectancy at birth, total (years) | 91.063 | 91.179 | 91.287 | 91.393 | 91.507 | 91.634 | 91.779 | 91.943 | 92.124 | 92.319 | 92.518 | 92.717 | 92.911 | 93.100 |
| 118 Romania | Life expectancy at birth, total (years) | 84.257 | 84.612 | 84.950 | 85.288 | 85.625 | 86.103 | 86.103 | 86.986 | 87.162 | 88.291 | 88.294 | 89.066 | 88.945 | 88.945 |
| 119 Russian Federation | Life expectancy at birth, total (years) | 77.278 | 77.182 | 77.684 | 77.754 | 79.175 | 80.195 | 80.625 | 81.498 | 81.683 | 82.683 | 83.144 | 83.745 | 83.941 | 84.136 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 120 Rwanda | Life expectancy at birth, total (years) | 60.409 | 61.947 | 63.710 | 65.695 | 67.815 | 69.890 | 71.779 | 73.434 | 74.830 | 75.977 | 76.930 | 77.746 | 78.447 | 79.049 |
| 121 Saudi Arabia | Life expectancy at birth, total (years) | 86.522 | 86.666 | 86.775 | 86.861 | 86.941 | 87.031 | 87.142 | 87.280 | 87.449 | 87.643 | 87.850 | 88.064 | 88.276 | 88.486 |
| 122 Senegal | Life expectancy at birth, total (years) | 69.546 | 70.210 | 70.952 | 71.757 | 72.609 | 73.487 | 74.367 | 75.226 | 76.038 | 76.785 | 77.465 | 78.076 | 78.618 | 79.097 |
| 123 Serbia | Life expectancy at birth, total (years) | 85.770 | 85.950 | 86.242 | 86.421 | 87.075 | 87.368 | 87.669 | 87.787 | 88.204 | 88.441 | 88.797 | 89.211 | 89.391 | 89.570 |
| 124 Sierra Leone | Life expectancy at birth, total (years) | 48.225 | 49.419 | 50.593 | 51.737 | 52.855 | 53.966 | 55.074 | 56.163 | 57.206 | 58.170 | 59.035 | 59.793 | 60.446 | 61.004 |
| 125 Singapore | Life expectancy at birth, total (years) | 93.205 | 93.784 | 94.319 | 94.912 | 95.092 | 95.448 | 95.862 | 96.397 | 96.753 | 96.993 | 97.291 | 97.589 | 97.884 | 98.003 |
| 126 Slovak Republic | Life expectancy at birth, total (years) | 87.336 | 87.336 | 87.755 | 87.692 | 88.048 | 88.051 | 88.641 | 88.884 | 89.124 | 90.128 | 90.308 | 90.667 | 91.141 | 91.616 |
| 127 Slovenia | Life expectancy at birth, total (years) | 90.186 | 91.196 | 91.610 | 92.091 | 92.654 | 93.216 | 93.460 | 93.703 | 94.238 | 94.889 | 95.071 | 95.306 | 96.203 | 96.203 |
| 128 Somalia | Life expectancy at birth, total (years) | 61.109 | 61.430 | 61.763 | 62.122 | 62.504 | 62.893 | 63.280 | 63.668 | 64.063 | 64.472 | 64.899 | 65.346 | 65.813 | 66.296 |
| 129 South Africa | Life expectancy at birth, total (years) | 64.447 | 63.469 | 62.745 | 62.369 | 62.418 | 62.884 | 63.722 | 64.885 | 66.292 | 67.848 | 69.437 | 70.956 | 72.326 | 73.488 |
| 130 South Sudan | Life expectancy at birth, total (years) | 59.319 | 59.771 | 60.232 | 60.716 | 61.235 | 61.789 | 62.377 | 62.995 | 63.637 | 64.291 | 64.943 | 65.583 | 66.205 | 66.806 |
| 131 Spain | Life expectancy at birth, total (years) | 94.412 | 94.472 | 94.771 | 95.126 | 95.899 | 95.960 | 96.319 | 96.675 | 96.854 | 97.861 | 97.803 | 98.576 | 98.756 | 98.935 |
| 132 Sri Lanka | Life expectancy at birth, total (years) | 86.119 | 86.843 | 87.383 | 87.728 | 87.906 | 87.989 | 88.043 | 88.098 | 88.176 | 88.288 | 88.427 | 88.587 | 88.771 | 88.978 |
| 133 Sudan | Life expectancy at birth, total (years) | 70.216 | 70.688 | 71.174 | 71.676 | 72.192 | 72.720 | 73.251 | 73.775 | 74.279 | 74.749 | 75.180 | 75.566 | 75.909 | 76.211 |
| 134 Suriname | Life expectancy at birth, total (years) | 80.856 | 81.076 | 81.357 | 81.689 | 82.058 | 82.441 | 82.816 | 83.170 | 83.491 | 83.771 | 84.016 | 84.231 | 84.419 | 84.585 |
| 135 Swaziland | Life expectancy at birth, total (years) | 55.081 | 54.491 | 54.348 | 54.670 | 55.445 | 56.575 | 57.945 | 59.468 | 61.046 | 62.595 | 64.062 | 65.402 | 66.567 | 67.529 |
| 136 Sweden | Life expectancy at birth, total (years) | 94.742 | 95.037 | 95.514 | 95.572 | 95.812 | 95.992 | 96.229 | 96.527 | 96.646 | 97.063 | 96.947 | 97.245 | 97.598 | 97.951 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 137 Switzerland | Life expectancy at birth, total (years) | 95.381 | 95.561 | 96.215 | 96.391 | 96.692 | 97.288 | 97.349 | 97.589 | 98.122 | 98.125 | 98.243 | 98.718 | 98.718 | 98.718 |
| 138 Syrian Arab Republic | Life expectancy at birth, total (years) | 87.409 | 87.783 | 88.137 | 88.376 | 88.389 | 88.119 | 87.565 | 86.772 | 85.835 | 84.885 | 84.069 | 83.504 | 83.252 | 83.358 |
| 139 Tajikistan | Life expectancy at birth, total (years) | 78.776 | 79.297 | 79.832 | 80.375 | 80.916 | 81.442 | 81.941 | 82.405 | 82.824 | 83.193 | 83.515 | 83.795 | 84.040 | 84.253 |
| 140 Tanzania | Life expectancy at birth, total (years) | 63.042 | 64.190 | 65.399 | 66.629 | 67.844 | 69.021 | 70.147 | 71.205 | 72.208 | 73.180 | 74.144 | 75.115 | 76.080 | 77.011 |
| 141 Thailand | Life expectancy at birth, total (years) | 84.370 | 84.734 | 85.143 | 85.582 | 86.035 | 86.485 | 86.915 | 87.315 | 87.679 | 88.003 | 88.299 | 88.573 | 88.830 | 89.072 |
| 142 Timor-Leste | Life expectancy at birth, total (years) | 72.661 | 73.813 | 74.982 | 76.124 | 77.181 | 78.099 | 78.848 | 79.426 | 79.855 | 80.178 | 80.453 | 80.730 | 81.033 | 81.374 |
| 143 Togo | Life expectancy at birth, total (years) | 63.692 | 63.965 | 64.316 | 64.753 | 65.288 | 65.917 | 66.625 | 67.385 | 68.158 | 68.901 | 69.585 | 70.185 | 70.690 | 71.102 |
| 144 Trinidad and Tobago | Life expectancy at birth, total (years) | 81.528 | 81.616 | 81.720 | 81.846 | 81.999 | 82.177 | 82.375 | 82.590 | 82.812 | 83.031 | 83.240 | 83.432 | 83.604 | 83.757 |
| 145 Tunisia | Life expectancy at birth, total (years) | 87.474 | 87.713 | 87.931 | 88.128 | 88.297 | 88.440 | 88.560 | 88.665 | 88.767 | 88.880 | 89.014 | 89.174 | 89.364 | 89.581 |
| 146 Turkey | Life expectancy at birth, total (years) | 84.342 | 84.926 | 85.467 | 85.963 | 86.415 | 86.829 | 87.215 | 87.575 | 87.916 | 88.243 | 88.560 | 88.868 | 89.172 | 89.474 |
| 147 Turkmenistan | Life expectancy at birth, total (years) | 76.013 | 76.351 | 76.714 | 77.098 | 77.496 | 77.898 | 78.295 | 78.677 | 79.031 | 79.348 | 79.628 | 79.871 | 80.081 | 80.259 |
| 148 Uganda | Life expectancy at birth, total (years) | 58.367 | 59.723 | 61.071 | 62.373 | 63.604 | 64.764 | 65.848 | 66.841 | 67.725 | 68.490 | 69.146 | 69.709 | 70.191 | 70.610 |
| 149 Ukraine | Life expectancy at birth, total (years) | 81.012 | 80.935 | 80.905 | 80.634 | 80.777 | 80.949 | 80.984 | 82.097 | 83.373 | 84.019 | 84.179 | 84.434 | 84.466 | 84.470 |
| 150 United Arab Emirates | Life expectancy at birth, total (years) | 89.013 | 89.304 | 89.586 | 89.856 | 90.111 | 90.354 | 90.582 | 90.798 | 91.002 | 91.198 | 91.387 | 91.572 | 91.755 | 91.939 |
| 151 UK | Life expectancy at birth, total (years) | 92.722 | 93.080 | 93.436 | 93.795 | 94.033 | 94.270 | 94.449 | 94.985 | 95.401 | 96.053 | 95.998 | 96.116 | 96.472 | 96.828 |
| 152 USA | Life expectancy at birth, total (years) | 91.289 | 91.408 | 91.943 | 91.943 | 92.180 | 92.536 | 92.597 | 93.014 | 93.193 | 93.312 | 93.431 | 93.431 | 93.431 | 93.431 |

(continued)

Table A.2.8 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 153 Uruguay | Life expectancy at birth, total (years) | 89.105 | 89.329 | 89.542 | 89.744 | 89.936 | 90.120 | 90.298 | 90.474 | 90.648 | 90.821 | 90.994 | 91.168 | 91.343 | 91.520 |
| 154 Uzbekistan | Life expectancy at birth, total (years) | 80.156 | 80.449 | 80.757 | 81.083 | 81.435 | 81.814 | 82.212 | 82.620 | 83.021 | 83.395 | 83.726 | 84.008 | 84.237 | 84.418 |
| 155 Venezuela, RB | Life expectancy at birth, total (years) | 86.351 | 86.552 | 86.721 | 86.860 | 86.976 | 87.081 | 87.186 | 87.296 | 87.419 | 87.560 | 87.717 | 87.888 | 88.073 | 88.269 |
| 156 Vietnam | Life expectancy at birth, total (years) | 87.302 | 87.535 | 87.756 | 87.967 | 88.171 | 88.368 | 88.562 | 88.758 | 88.956 | 89.161 | 89.372 | 89.591 | 89.816 | 90.049 |
| 157 West Bank and Gaza | Life expectancy at birth, total (years) | 84.368 | 84.564 | 84.761 | 84.961 | 85.163 | 85.365 | 85.565 | 85.764 | 85.962 | 86.162 | 86.363 | 86.565 | 86.770 | 86.976 |
| 158 Yemen, Rep. | Life expectancy at birth, total (years) | 72.279 | 72.625 | 72.999 | 73.394 | 73.804 | 74.214 | 74.612 | 74.990 | 75.344 | 75.673 | 75.979 | 76.268 | 76.541 | 76.800 |
| 159 Zambia | Life expectancy at birth, total (years) | 54.921 | 56.102 | 57.405 | 58.823 | 60.361 | 62.002 | 63.704 | 65.416 | 67.069 | 68.593 | 69.944 | 71.098 | 72.042 | 72.782 |
| 160 Zimbabwe | Life expectancy at birth, total (years) | 52.280 | 52.363 | 52.808 | 53.645 | 54.898 | 56.522 | 58.437 | 60.548 | 62.742 | 64.901 | 66.930 | 68.749 | 70.296 | 71.524 |

Source: Author's own calculations based on World Bank (2018)

See World Bank (2018), the World Development Indicators

<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>

Status: April 30, 2018

Table A.2.9 Education tertiary. Scores transformed (rescaled) to 0–100: 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 Afghanistan School enrollment, tertiary (% gross) | 1.049 | 1.049 | 1.049 | 1.049 | 1.049 | 1.049 | 1.049 | 3.259 | 3.259 | 3.136 | 3.136 | 3.136 | 7.232 | 7.232 | 7.232 |
| 2 Albania School enrollment, tertiary (% gross) | 13.718 | 14.031 | 16.744 | 19.462 | 22.225 | 25.592 | 26.781 | 27.885 | 37.186 | 41.468 | 48.895 | 52.219 | 52.352 | 48.514 | 48.514 |
| 3 Algeria School enrollment, tertiary (% gross) | 14.420 | 15.423 | 15.899 | 17.333 | 17.724 | 19.610 | 19.610 | 24.895 | 24.908 | 26.050 | 26.909 | 28.357 | 28.881 | 30.825 | 30.825 |
| 4 Angola School enrollment, tertiary (% gross) | 0.665 | 2.464 | 1.853 | 2.295 | 2.247 | 2.247 | 2.247 | 2.247 | 2.247 | 5.799 | 5.799 | 8.285 | 8.285 | 7.771 | 7.771 |
| 5 Argentina School enrollment, tertiary (% gross) | 51.957 | 54.106 | 54.464 | 53.253 | 55.795 | 55.395 | 56.889 | 58.886 | 61.730 | 64.664 | 65.932 | 66.779 | 69.225 | 69.225 | 69.225 |
| 6 Armenia School enrollment, tertiary (% gross) | 29.420 | 30.226 | 30.722 | 32.031 | 34.868 | 37.010 | 38.902 | 41.027 | 42.282 | 42.580 | 36.663 | 36.159 | 36.947 | 36.993 | 36.993 |
| 7 Australia School enrollment, tertiary (% gross) | 63.244 | 61.275 | 59.859 | 60.355 | 59.679 | 60.545 | 60.878 | 64.089 | 67.555 | 69.687 | 71.310 | 72.262 | 75.394 | 75.394 | 75.394 |
| 8 Austria School enrollment, tertiary (% gross) | 38.851 | 38.758 | 39.406 | 39.892 | 41.254 | 42.769 | 46.878 | 50.691 | 57.383 | 59.285 | 60.374 | 67.113 | 66.789 | 68.076 | 68.076 |
| 9 Azerbaijan School enrollment, tertiary (% gross) | 16.522 | 16.522 | 16.522 | 16.522 | 16.522 | 16.167 | 15.903 | 15.911 | 16.080 | 16.403 | 17.064 | 17.900 | 19.335 | 21.275 | 21.275 |
| 10 Bahrain School enrollment, tertiary (% gross) | 23.329 | 23.329 | 23.329 | 20.002 | 19.031 | 19.031 | 19.031 | 19.031 | 19.031 | 36.706 | 36.057 | 33.000 | 34.487 | 36.119 | 36.119 |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 11 Bangladesh | School enrollment, tertiary (% gross) | 5.118 | 5.158 | 4.754 | 5.206 | 5.946 | 6.410 | 7.187 | 8.783 | 8.783 | 11.088 | 11.176 | 11.176 | 11.221 | 11.221 |
| 12 Belarus | School enrollment, tertiary (% gross) | 49.565 | 51.863 | 53.717 | 56.002 | 57.980 | 59.776 | 59.480 | 62.163 | 66.306 | 71.550 | 75.503 | 75.998 | 74.184 | 73.419 |
| 13 Belgium | School enrollment, tertiary (% gross) | 49.355 | 49.979 | 51.134 | 51.265 | 51.728 | 51.219 | 51.847 | 54.432 | 56.530 | 58.212 | 59.480 | 60.369 | 61.212 | 62.646 |
| 14 Benin | School enrollment, tertiary (% gross) | 4.395 | 4.859 | 4.902 | 4.829 | 5.545 | 6.599 | 6.501 | 8.240 | 11.070 | 10.323 | 11.205 | 12.826 | 12.826 | 12.826 |
| 15 Bolivia | School enrollment, tertiary (% gross) | 30.216 | 32.331 | 32.639 | 32.639 | 32.639 | 32.051 | 32.051 | 32.051 | 32.051 | 32.051 | 32.051 | 32.051 | 32.051 | 32.051 |
| 16 Bosnia and Herzegovina | School enrollment, tertiary (% gross) | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 | 18.458 |
| 17 Botswana | School enrollment, tertiary (% gross) | 6.477 | 7.522 | 7.925 | 7.653 | 8.351 | 8.499 | 11.832 | 18.134 | 16.006 | 14.301 | 17.628 | 20.902 | 22.985 | 19.564 |
| 18 Brazil | School enrollment, tertiary (% gross) | 17.278 | 19.383 | 20.447 | 21.698 | 21.698 | 25.703 | 29.690 | 30.922 | 30.922 | 36.283 | 37.769 | 38.777 | 41.142 | 42.249 |
| 19 Bulgaria | School enrollment, tertiary (% gross) | 34.118 | 34.664 | 35.012 | 36.960 | 38.254 | 41.349 | 42.871 | 45.178 | 48.432 | 49.780 | 52.381 | 55.551 | 59.097 | 61.726 |
| 20 Burkina Faso | School enrollment, tertiary (% gross) | 1.179 | 1.337 | 1.337 | 1.927 | 2.038 | 2.181 | 2.655 | 2.949 | 2.988 | 3.462 | 3.806 | 3.987 | 3.987 | 4.644 |
| 21 Burundi | School enrollment, tertiary (% gross) | 1.471 | 1.471 | 1.906 | 1.925 | 1.927 | 1.969 | 2.127 | 2.265 | 2.490 | 2.490 | 3.063 | 3.680 | 4.146 | 4.146 |

(continued)

Table A.2.9 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|--------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22 | Cambodia | School enrollment, tertiary (% gross) | 2.072 | 2.429 | 2.345 | 2.820 | 4.725 | 6.085 | 7.586 | 9.784 | 11.739 | 13.276 | 13.276 | 13.276 | 13.276 | 10.927 |
| 23 | Cameroon | School enrollment, tertiary (% gross) | 4.221 | 4.250 | 4.223 | 4.849 | 5.642 | 6.014 | 6.526 | 7.483 | 9.216 | 9.957 | 10.782 | 12.572 | 13.363 | 14.592 |
| 24 | Canada | School enrollment, tertiary (% gross) | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 | 49.160 |
| 25 | Central African Republic | School enrollment, tertiary (% gross) | 1.555 | 1.555 | 1.421 | 1.421 | 0.942 | 1.900 | 2.041 | 2.136 | 2.494 | 2.316 | 2.316 | 2.316 | 2.316 | 2.316 |
| 26 | Chad | School enrollment, tertiary (% gross) | 0.689 | 0.771 | 1.007 | 1.186 | 1.186 | 1.625 | 1.681 | 1.754 | 1.854 | 1.854 | 1.854 | 1.854 | 2.876 | 2.876 |
| 27 | Chile | School enrollment, tertiary (% gross) | 34.854 | 37.231 | 37.367 | 41.739 | 40.591 | 45.344 | 47.802 | 51.654 | 58.169 | 62.654 | 66.328 | 69.976 | 72.326 | 73.951 |
| 28 | China | School enrollment, tertiary (% gross) | 10.679 | 13.054 | 14.953 | 16.143 | 17.113 | 17.403 | 17.482 | 18.798 | 19.993 | 20.766 | 22.696 | 25.181 | 32.886 | 36.227 |
| 29 | Colombia | School enrollment, tertiary (% gross) | 20.008 | 20.008 | 22.220 | 24.366 | 26.158 | 27.244 | 29.426 | 30.956 | 32.902 | 36.319 | 38.584 | 41.830 | 44.481 | 46.467 |
| 30 | Congo, Dem. Rep. | School enrollment, tertiary (% gross) | 3.661 | 3.661 | 3.661 | 3.661 | 3.661 | 4.596 | 5.429 | 5.429 | 6.524 | 6.614 | 6.614 | 5.544 | 5.544 | 5.544 |
| 31 | Congo, Rep. | School enrollment, tertiary (% gross) | 3.241 | 3.244 | 3.244 | 3.244 | 3.244 | 3.244 | 3.244 | 5.472 | 5.472 | 7.611 | 8.716 | 8.114 | 8.114 | 8.114 |
| 32 | Costa Rica | School enrollment, tertiary (% gross) | 22.777 | 22.777 | 22.777 | 22.777 | 22.777 | 22.777 | 22.777 | 22.777 | 39.389 | 41.180 | 41.751 | 44.280 | 44.774 | 44.774 |

(continued)

Table A.2.9 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|--------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| 33 | Cote d'Ivoire | School enrollment, tertiary (% gross) | 7.863 | 7.863 | 7.863 | 7.863 | 7.863 | 7.445 | 7.329 | 6.737 | 3.005 | 3.005 | 7.195 | 7.247 | 7.643 | 7.643 |
| 34 | Croatia | School enrollment, tertiary (% gross) | 31.653 | 34.031 | 35.103 | 37.363 | 38.058 | 39.433 | 41.190 | 41.033 | 45.644 | 48.566 | 51.484 | 55.899 | 58.061 | 57.650 |
| 35 | Cuba | School enrollment, tertiary (% gross) | 22.836 | 27.672 | 45.413 | 52.483 | 73.178 | 89.705 | 100.000 | 97.559 | 81.031 | 68.874 | 53.810 | 41.242 | 34.230 | 30.290 |
| 36 | Cyprus | School enrollment, tertiary (% gross) | 20.957 | 26.686 | 29.942 | 27.735 | 27.901 | 30.201 | 35.581 | 43.417 | 40.334 | 38.855 | 38.290 | 39.678 | 44.335 | 50.177 |
| 37 | Czech Republic | School enrollment, tertiary (% gross) | 28.821 | 30.967 | 36.588 | 40.442 | 41.928 | 45.298 | 48.541 | 51.050 | 53.448 | 54.808 | 54.986 | 54.582 | 55.116 | 54.239 |
| 38 | Denmark | School enrollment, tertiary (% gross) | 53.043 | 56.383 | 62.145 | 67.143 | 66.009 | 65.608 | 63.203 | 62.032 | 61.463 | 64.119 | 66.166 | 67.823 | 68.056 | 69.117 |
| 39 | Dominican Republic | School enrollment, tertiary (% gross) | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 | 27.822 |
| 40 | Ecuador | School enrollment, tertiary (% gross) | 32.296 | 32.296 | 32.296 | 32.296 | 32.296 | 32.296 | 32.296 | 32.296 | 32.296 | 32.296 | 32.281 | 33.796 | 33.796 | 33.796 |
| 41 | Egypt, Arab Rep. | School enrollment, tertiary (% gross) | 25.491 | 22.836 | 23.827 | 24.814 | 24.566 | 24.808 | 24.544 | 25.003 | 25.797 | 22.138 | 23.058 | 25.311 | 26.448 | 30.246 |
| 42 | El Salvador | School enrollment, tertiary (% gross) | 17.946 | 18.469 | 19.017 | 19.240 | 19.428 | 20.322 | 21.021 | 21.485 | 22.006 | 23.035 | 23.902 | 24.352 | 24.089 | 24.321 |
| 43 | Equatorial Guinea | School enrollment, tertiary (% gross) | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 | 2.701 |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 44 Eritrea | School enrollment, tertiary (% gross) | 1.103 | 1.103 | 0.857 | 0.857 | 0.857 | 0.857 | 1.603 | 1.945 | 1.945 | 1.945 | 1.945 | 2.142 | 2.142 | 2.142 |
| 45 Estonia | School enrollment, tertiary (% gross) | 51.373 | 53.762 | 55.254 | 56.700 | 56.659 | 56.496 | 55.472 | 55.633 | 56.929 | 58.749 | 60.196 | 60.883 | 59.591 | 58.066 |
| 46 Ethiopia | School enrollment, tertiary (% gross) | 1.372 | 1.911 | 2.138 | 2.297 | 2.297 | 2.297 | 2.953 | 4.381 | 6.122 | 6.476 | 6.800 | 6.784 | 6.784 | 6.784 |
| 47 Finland | School enrollment, tertiary (% gross) | 70.930 | 72.698 | 74.858 | 76.665 | 77.883 | 78.460 | 79.375 | 76.666 | 78.577 | 79.815 | 77.877 | 76.028 | 74.029 | 72.876 |
| 48 France | School enrollment, tertiary (% gross) | 44.565 | 45.765 | 46.100 | 46.284 | 46.315 | 45.770 | 45.517 | 45.867 | 47.694 | 48.443 | 50.082 | 51.885 | 53.758 | 53.758 |
| 49 Gabon | School enrollment, tertiary (% gross) | 6.784 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 | 7.042 |
| 50 Gambia, The | School enrollment, tertiary (% gross) | 0.961 | 0.961 | 0.961 | 0.961 | 0.961 | 0.961 | 0.961 | 0.961 | 1.814 | 2.852 | 2.592 | 2.592 | 2.592 | 2.592 |
| 51 Georgia | School enrollment, tertiary (% gross) | 34.443 | 35.690 | 35.193 | 38.845 | 31.692 | 30.834 | 28.615 | 21.332 | 24.146 | 26.030 | 24.386 | 29.014 | 32.709 | 36.250 |
| 52 Germany | School enrollment, tertiary (% gross) | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 50.974 | 54.662 | 56.993 |
| 53 Ghana | School enrollment, tertiary (% gross) | 4.904 | 4.904 | 4.904 | 4.904 | 4.396 | 5.444 | 7.218 | 7.530 | 7.530 | 10.084 | 10.171 | 11.943 | 13.269 | 13.550 |
| 54 Greece | School enrollment, tertiary (% gross) | 55.781 | 60.358 | 65.524 | 72.710 | 75.786 | 72.927 | 72.927 | 72.927 | 85.767 | 90.023 | 92.056 | 91.972 | 95.068 | 95.068 |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 55 Guatemala | School enrollment, tertiary (% gross) | 7.344 | 7.344 | 7.344 | 7.344 | 7.344 | 14.135 | 14.135 | 14.135 | 14.135 | 14.135 | 15.300 | 15.300 | 18.239 | 18.239 |
| 56 Guinea | School enrollment, tertiary (% gross) | 1.787 | 1.787 | 1.787 | 2.405 | 6.526 | 7.439 | 7.534 | 8.566 | 8.686 | 8.258 | 8.665 | 9.058 | 9.058 | 9.058 |
| 57 Guinea-Bissau | School enrollment, tertiary (% gross) | 1.810 | 1.810 | 1.810 | 1.810 | 2.088 | 2.088 | 2.088 | 2.088 | 2.088 | 2.088 | 2.088 | 2.088 | 2.088 | 2.088 |
| 58 Haiti | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |
| 59 Honduras | School enrollment, tertiary (% gross) | 11.536 | 14.197 | 14.239 | 14.239 | 14.239 | 15.689 | 15.689 | 17.244 | 17.244 | 17.111 | 17.703 | 17.686 | 18.417 | 18.417 |
| 60 Hong Kong SAR, China | School enrollment, tertiary (% gross) | 26.142 | 26.142 | 26.152 | 26.969 | 27.725 | 34.645 | 45.412 | 46.281 | 48.829 | 50.551 | 50.582 | 56.167 | 57.421 | 57.168 |
| 61 Hungary | School enrollment, tertiary (% gross) | 37.203 | 43.653 | 50.222 | 54.356 | 56.451 | 56.223 | 53.823 | 51.512 | 50.400 | 49.680 | 49.923 | 47.602 | 44.409 | 42.463 |
| 62 India | School enrollment, tertiary (% gross) | 8.534 | 8.911 | 9.170 | 8.958 | 9.635 | 11.011 | 12.621 | 13.444 | 14.954 | 19.086 | 20.342 | 19.945 | 21.319 | 22.437 |
| 63 Indonesia | School enrollment, tertiary (% gross) | 12.365 | 13.381 | 13.874 | 14.407 | 14.454 | 14.875 | 17.282 | 19.250 | 20.204 | 22.128 | 25.594 | 26.119 | 25.966 | 20.250 |
| 64 Iran, Islamic Rep. | School enrollment, tertiary (% gross) | 16.038 | 16.654 | 18.177 | 19.099 | 21.034 | 24.779 | 30.040 | 30.354 | 35.570 | 40.509 | 45.834 | 48.294 | 55.066 | 60.012 |
| 65 Iraq | School enrollment, tertiary (% gross) | 10.675 | 10.675 | 13.300 | 13.406 | 13.406 | 13.406 | 13.406 | 13.406 | 13.406 | 13.406 | 13.406 | 13.406 | 13.406 | 13.406 |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 66 Ireland | School enrollment, tertiary (% gross) | 41.636 | 42.824 | 44.849 | 45.286 | 46.436 | 48.286 | 46.179 | 48.281 | 52.642 | 54.920 | 56.467 | 61.086 | 64.809 | 69.944 |
| 67 Israel | School enrollment, tertiary (% gross) | 47.419 | 47.392 | 47.162 | 48.489 | 48.151 | 50.537 | 49.891 | 52.144 | 52.144 | 54.973 | 56.600 | 55.332 | 55.253 | 54.055 |
| 68 Italy | School enrollment, tertiary (% gross) | 45.876 | 48.547 | 51.607 | 53.503 | 54.913 | 55.595 | 55.470 | 55.779 | 55.272 | 55.249 | 54.295 | 52.977 | 52.677 | 52.176 |
| 69 Jamaica | School enrollment, tertiary (% gross) | 15.886 | 17.818 | 17.989 | 16.230 | 15.986 | 15.986 | 19.949 | 19.822 | 22.687 | 22.126 | 24.263 | 22.913 | 22.913 | 22.725 |
| 70 Japan | School enrollment, tertiary (% gross) | 42.334 | 43.276 | 44.730 | 45.894 | 47.676 | 48.268 | 48.121 | 48.154 | 48.485 | 50.029 | 51.310 | 52.106 | 52.900 | 52.900 |
| 71 Jordan | School enrollment, tertiary (% gross) | 25.627 | 28.662 | 32.381 | 32.457 | 32.405 | 33.762 | 36.552 | 37.464 | 33.813 | 33.670 | 39.729 | 39.729 | 37.460 | 37.460 |
| 72 Kazakhstan | School enrollment, tertiary (% gross) | 26.506 | 26.506 | 26.506 | 26.506 | 48.448 | 48.448 | 48.448 | 48.448 | 38.442 | 40.462 | 42.849 | 41.853 | 40.471 | 38.624 |
| 73 Kenya | School enrollment, tertiary (% gross) | 2.358 | 2.358 | 2.439 | 2.476 | 2.476 | 2.476 | 2.476 | 3.379 | 3.379 | 3.379 | 3.379 | 3.379 | 3.379 | 3.379 |
| 74 Korea, Dem. People's Rep. | School enrollment, tertiary (% gross) | 25.765 | 25.765 | 25.765 | 25.765 | 25.765 | 25.765 | 25.765 | 25.765 | 25.315 | 25.315 | 25.315 | 25.315 | 23.426 | 23.426 |
| 75 Korea, Rep. | School enrollment, tertiary (% gross) | 72.209 | 74.523 | 75.993 | 75.386 | 75.524 | 77.290 | 79.526 | 81.794 | 83.204 | 83.086 | 81.155 | 79.601 | 78.654 | 77.793 |
| 76 Kosovo | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |

(continued)

Table A.2.9 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|-----------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 77 | Kuwait | School enrollment, tertiary (% gross) | 19,106 | 17,854 | 17,001 | 17,001 | 17,001 | 17,001 | 17,001 | 17,001 | 17,001 | 17,001 | 22,564 | 22,564 | 22,564 | 22,564 |
| 78 | Kyrgyz Republic | School enrollment, tertiary (% gross) | 36,023 | 33,882 | 33,789 | 35,341 | 36,231 | 35,729 | 38,893 | 36,913 | 35,086 | 34,382 | 36,511 | 39,518 | 38,336 | 39,157 |
| 79 | Lao PDR | School enrollment, tertiary (% gross) | 3,473 | 4,131 | 4,812 | 6,530 | 7,518 | 9,602 | 11,063 | 13,544 | 13,656 | 14,537 | 14,258 | 15,145 | 14,437 | 14,114 |
| 80 | Latvia | School enrollment, tertiary (% gross) | 56,542 | 60,458 | 64,521 | 65,850 | 65,917 | 65,098 | 64,410 | 63,940 | 58,800 | 56,174 | 54,735 | 55,899 | 55,970 | 55,970 |
| 81 | Lebanon | School enrollment, tertiary (% gross) | 37,435 | 35,856 | 36,308 | 36,837 | 36,818 | 39,171 | 40,810 | 40,904 | 40,418 | 41,525 | 38,053 | 38,359 | 35,710 | 32,130 |
| 82 | Lesotho | School enrollment, tertiary (% gross) | 2,070 | 2,469 | 2,469 | 3,067 | 3,240 | 3,240 | 3,240 | 3,240 | 3,240 | 9,036 | 8,473 | 8,217 | 8,217 | 8,217 |
| 83 | Liberia | School enrollment, tertiary (% gross) | 16,197 | 16,197 | 16,197 | 16,197 | 16,197 | 16,197 | 16,197 | 16,197 | 7,763 | 9,717 | 9,717 | 9,717 | 9,717 | 9,717 |
| 84 | Libya | School enrollment, tertiary (% gross) | 49,436 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 | 51,042 |
| 85 | Lithuania | School enrollment, tertiary (% gross) | 51,059 | 57,495 | 62,642 | 67,099 | 68,347 | 68,934 | 71,067 | 73,856 | 71,517 | 67,428 | 64,479 | 60,086 | 57,215 | 57,215 |
| 86 | Macedonia, FYR | School enrollment, tertiary (% gross) | 22,482 | 22,714 | 23,099 | 24,473 | 24,139 | 29,432 | 33,697 | 34,096 | 32,725 | 32,725 | 34,101 | 32,853 | 33,056 | 35,118 |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 87 Madagascar | School enrollment, tertiary (% gross) | 1.800 | 1.978 | 2.294 | 2.362 | 2.496 | 2.787 | 2.708 | 2.871 | 3.010 | 3.344 | 3.411 | 3.545 | 3.987 | 3.987 |
| 88 Malawi | School enrollment, tertiary (% gross) | 0.336 | 0.344 | 0.405 | 0.392 | 0.408 | 0.403 | 0.403 | 0.403 | 0.578 | 0.666 | 0.666 | 0.666 | 0.666 | 0.666 |
| 89 Malaysia | School enrollment, tertiary (% gross) | 22.881 | 25.486 | 25.016 | 23.306 | 23.872 | 25.275 | 28.180 | 29.852 | 31.003 | 29.552 | 30.389 | 23.047 | 21.769 | 21.769 |
| 90 Mali | School enrollment, tertiary (% gross) | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 | 4.438 | 4.894 | 5.046 | 5.295 | 5.740 | 5.740 | 5.740 | 5.740 |
| 91 Mauritania | School enrollment, tertiary (% gross) | 2.483 | 2.640 | 2.666 | 2.443 | 2.758 | 3.130 | 3.201 | 3.263 | 3.702 | 4.015 | 4.342 | 4.563 | 4.693 | 4.461 |
| 92 Mauritius | School enrollment, tertiary (% gross) | 13.229 | 13.821 | 14.880 | 17.825 | 19.702 | 20.574 | 22.823 | 26.878 | 28.128 | 29.417 | 32.276 | 33.166 | 32.288 | 30.613 |
| 93 Mexico | School enrollment, tertiary (% gross) | 17.395 | 18.139 | 18.837 | 19.303 | 19.710 | 20.156 | 20.662 | 21.033 | 21.846 | 22.573 | 23.633 | 24.385 | 24.997 | 24.997 |
| 94 Moldova | School enrollment, tertiary (% gross) | 26.887 | 27.800 | 28.683 | 30.138 | 32.896 | 34.401 | 33.394 | 31.970 | 31.847 | 32.934 | 33.486 | 34.461 | 34.639 | 34.408 |
| 95 Mongolia | School enrollment, tertiary (% gross) | 29.887 | 31.710 | 34.051 | 37.282 | 39.685 | 39.196 | 40.477 | 42.971 | 44.935 | 46.485 | 49.039 | 51.970 | 53.661 | 57.245 |
| 96 Morocco | School enrollment, tertiary (% gross) | 8.723 | 9.059 | 9.192 | 9.788 | 10.297 | 9.901 | 10.858 | 11.296 | 12.034 | 13.532 | 16.103 | 18.757 | 20.976 | 23.496 |
| 97 Mozambique | School enrollment, tertiary (% gross) | 0.944 | 0.944 | 0.944 | 1.174 | 1.762 | 2.532 | 2.933 | 3.172 | 3.789 | 4.005 | 4.219 | 4.502 | 4.988 | 5.335 |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 98 Myanmar | School enrollment, tertiary (% gross) | 8.824 | 8.824 | 8.824 | 8.824 | 8.811 | 8.811 | 8.811 | 8.811 | 11.839 | 11.294 | 11.294 | 11.294 | 11.294 | 11.294 |
| 99 Namibia | School enrollment, tertiary (% gross) | 4.842 | 5.144 | 5.144 | 5.738 | 5.475 | 7.789 | 7.789 | 7.789 | 7.789 | 7.789 | 7.789 | 7.789 | 7.789 | 7.789 |
| 100 Nepal | School enrollment, tertiary (% gross) | 4.381 | 4.448 | 5.244 | 6.636 | 7.072 | 8.669 | 9.471 | 12.026 | 12.052 | 12.052 | 14.133 | 13.218 | 12.473 | 12.473 |
| 101 Netherlands | School enrollment, tertiary (% gross) | 46.910 | 47.417 | 48.467 | 49.885 | 50.626 | 50.882 | 51.301 | 52.125 | 54.399 | 64.824 | 65.538 | 65.538 | 65.538 | 65.538 |
| 102 New Zealand | School enrollment, tertiary (% gross) | 56.167 | 57.590 | 69.796 | 67.325 | 65.691 | 65.888 | 65.146 | 68.963 | 68.892 | 68.215 | 67.494 | 66.551 | 67.527 | 70.072 |
| 103 Nicaragua | School enrollment, tertiary (% gross) | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 | 14.803 |
| 104 Niger | School enrollment, tertiary (% gross) | 0.801 | 0.801 | 0.777 | 0.938 | 0.952 | 0.884 | 0.998 | 1.193 | 1.227 | 1.268 | 1.431 | 1.431 | 1.431 | 1.431 |
| 105 Nigeria | School enrollment, tertiary (% gross) | 8.049 | 8.049 | 8.226 | 8.687 | 8.687 | 8.687 | 8.687 | 8.687 | 8.687 | 8.408 | 8.408 | 8.408 | 8.408 | 8.408 |
| 106 Norway | School enrollment, tertiary (% gross) | 61.257 | 66.045 | 66.175 | 65.580 | 64.856 | 62.957 | 60.392 | 60.701 | 60.851 | 61.017 | 63.549 | 64.104 | 64.032 | 64.032 |
| 107 Oman | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |
| 108 Pakistan | School enrollment, tertiary (% gross) | 2.279 | 2.279 | 2.851 | 4.126 | 4.169 | 4.701 | 4.681 | 5.785 | 5.785 | 8.290 | 8.658 | 8.645 | 8.288 | 8.288 |

(continued)

Table A.2.9 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 109 | Panama | School enrollment, tertiary (% gross) | 33.740 | 36.954 | 36.168 | 35.132 | 35.964 | 36.084 | 36.220 | 36.208 | 37.039 | 35.359 | 36.860 | 32.342 | 32.342 | 32.342 |
| 110 | Papua New Guinea | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |
| 111 | Paraguay | School enrollment, tertiary (% gross) | 21.973 | 20.896 | 21.096 | 21.616 | 21.616 | 24.253 | 28.794 | 31.010 | 29.288 | 29.288 | 29.288 | 29.288 | 29.288 | 29.288 |
| 112 | Peru | School enrollment, tertiary (% gross) | 26.370 | 26.362 | 27.757 | 27.699 | 28.656 | 28.656 | 28.656 | 28.656 | 33.823 | 33.823 | 33.823 | 33.823 | 33.823 | 33.823 |
| 113 | Philippines | School enrollment, tertiary (% gross) | 25.186 | 24.261 | 23.667 | 22.968 | 23.247 | 23.247 | 24.505 | 23.967 | 24.841 | 25.815 | 26.130 | 28.063 | 29.849 | 29.849 |
| 114 | Poland | School enrollment, tertiary (% gross) | 48.608 | 49.643 | 50.688 | 52.601 | 53.938 | 55.227 | 57.515 | 59.109 | 61.090 | 60.819 | 59.408 | 56.866 | 56.866 | 56.866 |
| 115 | Portugal | School enrollment, tertiary (% gross) | 44.299 | 45.893 | 46.541 | 46.335 | 46.286 | 48.291 | 51.481 | 52.341 | 54.818 | 57.194 | 57.260 | 55.287 | 54.774 | 51.657 |
| 116 | Puerto Rico | School enrollment, tertiary (% gross) | 59.834 | 59.834 | 59.834 | 59.834 | 59.834 | 59.834 | 65.017 | 67.852 | 72.095 | 72.183 | 72.271 | 71.245 | 70.450 | 70.450 |
| 117 | Qatar | School enrollment, tertiary (% gross) | 14.058 | 12.804 | 14.420 | 14.419 | 14.463 | 10.386 | 9.115 | 8.232 | 8.221 | 9.565 | 9.257 | 10.023 | 11.252 | 12.121 |
| 118 | Romania | School enrollment, tertiary (% gross) | 27.232 | 31.395 | 34.582 | 37.994 | 43.186 | 48.563 | 55.872 | 59.490 | 56.611 | 52.419 | 45.518 | 43.554 | 44.428 | 44.432 |
| 119 | Russian Federation | School enrollment, tertiary (% gross) | 55.826 | 59.020 | 58.963 | 60.620 | 60.814 | 61.834 | 62.580 | 62.977 | 62.977 | 63.866 | 63.546 | 65.117 | 65.666 | 67.119 |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 120 Rwanda | School enrollment, tertiary (% gross) | 1.601 | 1.927 | 2.259 | 2.371 | 3.031 | 3.093 | 3.330 | 4.052 | 4.647 | 5.472 | 6.286 | 6.318 | 6.593 | 6.645 |
| 121 Saudi Arabia | School enrollment, tertiary (% gross) | 19.948 | 22.874 | 24.254 | 24.707 | 25.042 | 24.789 | 25.049 | 25.854 | 30.485 | 40.543 | 45.819 | 51.021 | 52.652 | 52.652 |
| 122 Senegal | School enrollment, tertiary (% gross) | 4.134 | 4.134 | 4.134 | 4.541 | 4.659 | 5.164 | 6.446 | 6.483 | 6.169 | 8.135 | 8.346 | 8.634 | 8.672 | 8.672 |
| 123 Serbia | School enrollment, tertiary (% gross) | 29.775 | 33.072 | 34.175 | 36.906 | 39.088 | 40.068 | 40.629 | 41.618 | 40.978 | 43.074 | 44.666 | 47.071 | 48.469 | 48.663 |
| 124 Sierra Leone | School enrollment, tertiary (% gross) | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 | 1.814 |
| 125 Singapore | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |
| 126 Slovak Republic | School enrollment, tertiary (% gross) | 26.808 | 28.334 | 30.100 | 33.772 | 37.483 | 41.927 | 44.824 | 46.665 | 47.465 | 46.770 | 46.792 | 45.441 | 44.184 | 44.184 |
| 127 Slovenia | School enrollment, tertiary (% gross) | 55.351 | 57.615 | 60.451 | 66.191 | 68.936 | 70.499 | 71.110 | 71.660 | 73.691 | 70.942 | 72.069 | 71.149 | 69.233 | 69.233 |
| 128 Somalia | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |
| 129 South Africa | School enrollment, tertiary (% gross) | 15.858 | 15.858 | 15.858 | 15.858 | 15.858 | 15.858 | 15.858 | 15.858 | 15.858 | 15.858 | 16.416 | 16.176 | 16.176 | 16.176 |

(continued)

Table A.2.9 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|----------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 130 | South Sudan | School enrollment, tertiary (% gross) | 51.501 | 53.503 | 55.291 | 56.188 | 57.349 | 58.194 | 59.552 | 61.554 | 65.680 | 69.646 | 71.420 | 72.689 | 74.364 | 74.863 |
| 131 | Spain | School enrollment, tertiary (% gross) | 13.648 | 13.648 | 13.648 | 13.648 | 13.648 | 13.648 | 13.648 | 13.648 | 12.725 | 14.328 | 15.810 | 16.103 | 16.528 | 16.528 |
| 132 | Sri Lanka | School enrollment, tertiary (% gross) | 7.664 | 7.163 | 8.710 | 9.795 | 11.089 | 10.870 | 12.020 | 12.261 | 12.510 | 12.227 | 12.475 | 14.130 | 13.626 | 13.626 |
| 133 | Sudan | School enrollment, tertiary (% gross) | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 | 10.562 |
| 134 | Suriname | School enrollment, tertiary (% gross) | 3.787 | 3.787 | 4.559 | 3.967 | 3.710 | 3.710 | 3.710 | 3.710 | 3.710 | 4.979 | 4.449 | 4.449 | 4.449 | 4.449 |
| 135 | Swaziland | School enrollment, tertiary (% gross) | 62.870 | 67.991 | 69.946 | 68.438 | 66.245 | 62.596 | 59.379 | 59.653 | 62.352 | 61.735 | 58.121 | 52.925 | 52.013 | 52.013 |
| 136 | Sweden | School enrollment, tertiary (% gross) | 34.105 | 36.685 | 37.992 | 38.166 | 38.776 | 39.352 | 40.668 | 41.756 | 44.075 | 45.366 | 46.335 | 47.013 | 47.779 | 48.149 |
| 137 | Switzerland | School enrollment, tertiary (% gross) | 10.335 | 10.835 | 12.525 | 15.198 | 17.476 | 18.861 | 20.218 | 20.291 | 21.703 | 21.652 | 26.604 | 28.821 | 36.612 | 36.775 |
| 138 | Syrian Arab Republic | School enrollment, tertiary (% gross) | 14.863 | 15.952 | 17.012 | 17.504 | 18.417 | 19.012 | 19.216 | 18.883 | 18.945 | 18.379 | 18.712 | 18.905 | 20.433 | 22.019 |
| 139 | Tajikistan | School enrollment, tertiary (% gross) | 0.606 | 0.777 | 1.048 | 1.227 | 1.227 | 1.248 | 1.248 | 1.248 | 1.779 | 1.779 | 3.284 | 3.045 | 3.045 | 3.045 |
| 140 | Tanzania | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 141 Thailand | School enrollment, tertiary (% gross) | 33.309 | 34.072 | 34.946 | 36.915 | 36.939 | 40.269 | 39.975 | 40.758 | 41.913 | 44.037 | 43.054 | 42.895 | 43.835 | 40.790 |
| 142 Timor-Leste | School enrollment, tertiary (% gross) | 7.409 | 7.409 | 7.409 | 7.409 | 7.409 | 7.409 | 7.409 | 13.862 | 15.153 | 15.153 | 15.153 | 15.153 | 15.153 | 15.153 |
| 143 Togo | School enrollment, tertiary (% gross) | 4.190 | 4.190 | 4.190 | 4.190 | 4.190 | 4.732 | 4.732 | 4.732 | 7.620 | 8.481 | 8.617 | 8.916 | 8.447 | 8.871 |
| 144 Trinidad and Tobago | School enrollment, tertiary (% gross) | 7.266 | 7.328 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 | 9.978 |
| 145 Tunisia | School enrollment, tertiary (% gross) | 19.472 | 22.961 | 25.008 | 26.570 | 27.133 | 27.310 | 28.145 | 29.103 | 29.358 | 29.076 | 29.368 | 28.506 | 28.873 | 28.892 |
| 146 Turkey | School enrollment, tertiary (% gross) | 21.874 | 24.907 | 25.570 | 27.345 | 30.539 | 32.126 | 33.335 | 38.583 | 46.752 | 50.698 | 57.858 | 65.940 | 72.057 | 79.089 |
| 147 Turkmenistan | School enrollment, tertiary (% gross) | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 | 6.666 |
| 148 Uganda | School enrollment, tertiary (% gross) | 2.895 | 3.091 | 2.988 | 2.988 | 2.921 | 3.194 | 3.552 | 3.341 | 3.743 | 3.215 | 3.215 | 3.975 | 3.975 | 3.975 |
| 149 Ukraine | School enrollment, tertiary (% gross) | 47.114 | 50.798 | 55.103 | 59.369 | 64.164 | 67.544 | 69.742 | 70.294 | 68.404 | 69.562 | 68.565 | 66.849 | 68.714 | 68.714 |
| 150 United Arab Emirates | School enrollment, tertiary (% gross) | | | | | | | | | | | | | | |

(continued)

Table A.2.9 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 151 UK | School enrollment, tertiary (% gross) | 52.264 | 51.834 | 49.561 | 49.258 | 49.363 | 48.967 | 47.483 | 48.551 | 49.313 | 49.246 | 49.444 | 47.479 | 47.151 | 47.151 |
| 152 USA | School enrollment, tertiary (% gross) | 66.233 | 67.886 | 68.012 | 68.530 | 68.504 | 69.320 | 70.970 | 73.954 | 78.668 | 80.417 | 79.181 | 74.144 | 72.353 | 71.629 |
| 153 Uruguay | School enrollment, tertiary (% gross) | 32.784 | 34.355 | 35.404 | 37.851 | 38.431 | 53.206 | 53.937 | 52.794 | 52.709 | 52.709 | 46.021 | 47.040 | 46.391 | 46.391 |
| 154 Uzbekistan | School enrollment, tertiary (% gross) | 11.612 | 11.717 | 11.861 | 8.437 | 8.588 | 8.488 | 8.489 | 8.307 | 7.847 | 7.459 | 6.887 | 7.041 | 7.158 | 7.337 |
| 155 Venezuela, RB | School enrollment, tertiary (% gross) | 31.926 | 33.177 | 34.690 | 34.690 | 34.690 | 34.690 | 64.667 | 64.268 | 64.268 | 64.268 | 64.268 | 64.268 | 64.268 | 64.268 |
| 156 Vietnam | School enrollment, tertiary (% gross) | 8.124 | 8.448 | 8.448 | 13.402 | 13.918 | 15.331 | 15.817 | 16.789 | 18.941 | 20.707 | 20.889 | 20.880 | 25.445 | 24.074 |
| 157 West Bank and Gaza | School enrollment, tertiary (% gross) | 23.602 | 27.158 | 30.952 | 34.159 | 36.012 | 39.189 | 40.210 | 38.845 | 39.952 | 41.435 | 40.224 | 37.853 | 36.740 | 36.971 |
| 158 Yemen, Rep. | School enrollment, tertiary (% gross) | 8.876 | 8.487 | 8.069 | 8.027 | 7.715 | 8.725 | 8.862 | 9.293 | 8.828 | 8.328 | 8.328 | 8.328 | 8.328 | 8.328 |
| 159 Zambia | School enrollment, tertiary (% gross) | 3.345 | 3.345 | 3.345 | 3.345 | 3.345 | 3.345 | 3.345 | 3.345 | 3.345 | 3.345 | 3.324 | 3.324 | 3.324 | 3.324 |
| 160 Zimbabwe | School enrollment, tertiary (% gross) | 4.930 | 4.930 | 4.930 | 4.930 | 4.930 | 4.930 | 4.930 | 4.930 | 4.862 | 4.900 | 4.902 | 4.902 | 7.041 | 7.041 |

Source: Author's own calculations based on World Bank (2018). See World Bank (2018), the World Development Indicators <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on> Status: April 30, 2018

Table A.2.10 GDP per capita. Scores transformed (rescaled) to 0–100:
0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Afghanistan GDP per capita, PPP (constant 2011 international \$) | 0.822 | 0.850 | 0.821 | 0.878 | 0.898 | 0.993 | 1.004 | 1.184 | 1.248 | 1.284 | 1.422 | 1.403 | 1.376 | 1.351 | 1.345 |
| 2 | Albania GDP per capita, PPP (constant 2011 international \$) | 4.817 | 5.114 | 5.429 | 5.769 | 6.121 | 6.531 | 7.077 | 7.363 | 7.675 | 7.892 | 8.017 | 8.121 | 8.284 | 8.523 | 8.832 |
| 3 | Algeria GDP per capita, PPP (constant 2011 international \$) | 8.370 | 8.859 | 9.120 | 9.526 | 9.546 | 9.718 | 9.787 | 9.777 | 9.950 | 10.042 | 10.175 | 10.246 | 10.424 | 10.610 | 10.804 |
| 4 | Angola GDP per capita, PPP (constant 2011 international \$) | 2.462 | 2.501 | 2.676 | 3.053 | 3.557 | 4.208 | 4.622 | 4.567 | 4.557 | 4.570 | 4.638 | 4.782 | 4.840 | 4.817 | 4.658 |
| 5 | Argentina GDP per capita, PPP (constant 2011 international \$) | 9.596 | 10.330 | 11.140 | 11.997 | 12.827 | 13.839 | 14.253 | 13.273 | 14.466 | 15.175 | 14.863 | 15.062 | 14.532 | 14.767 | 14.286 |
| 6 | Armenia GDP per capita, PPP (constant 2011 international \$) | 2.837 | 3.252 | 3.613 | 4.141 | 4.724 | 5.420 | 5.843 | 5.051 | 5.182 | 5.429 | 5.807 | 5.974 | 6.162 | 6.324 | 6.320 |
| 7 | Australia GDP per capita, PPP (constant 2011 international \$) | 28.141 | 28.649 | 29.493 | 30.039 | 30.480 | 31.426 | 31.942 | 31.857 | 31.995 | 32.302 | 32.904 | 33.181 | 33.549 | 33.887 | 34.336 |
| 8 | Austria GDP per capita, PPP (constant 2011 international \$) | 30.645 | 30.727 | 31.363 | 31.817 | 32.721 | 33.796 | 34.211 | 32.826 | 33.378 | 34.200 | 34.299 | 34.141 | 34.111 | 34.074 | 34.127 |
| 9 | Azerbaijan GDP per capita, PPP (constant 2011 international \$) | 4.127 | 4.554 | 4.975 | 6.225 | 8.281 | 10.238 | 11.106 | 11.901 | 12.331 | 12.179 | 12.283 | 12.828 | 12.922 | 12.910 | 12.365 |
| 10 | Bahrain GDP per capita, PPP (constant 2011 international \$) | 33.799 | 33.830 | 33.961 | 33.841 | 33.427 | 33.492 | 33.071 | 31.895 | 31.780 | 31.462 | 32.085 | 33.433 | 34.339 | 34.409 | 34.409 |
| 11 | Bangladesh GDP per capita, PPP (constant 2011 international \$) | 1.334 | 1.373 | 1.422 | 1.492 | 1.570 | 1.661 | 1.741 | 1.809 | 1.888 | 1.988 | 2.092 | 2.192 | 2.298 | 2.422 | 2.566 |

(continued)

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 12 Belarus | GDP per capita, PPP (constant 2011 international \$) | 6.506 | 7.014 | 7.870 | 8.669 | 9.594 | 10.467 | 11.575 | 11.624 | 12.551 | 13.272 | 13.514 | 13.650 | 13.873 | 13.320 | 12.943 |
| 13 Belgium | GDP per capita, PPP (constant 2011 international \$) | 29.318 | 29.422 | 30.359 | 30.825 | 31.388 | 32.217 | 32.202 | 31.214 | 31.764 | 31.889 | 31.702 | 31.528 | 31.972 | 32.256 | 32.428 |
| 14 Benin | GDP per capita, PPP (constant 2011 international \$) | 1.336 | 1.341 | 1.359 | 1.342 | 1.355 | 1.396 | 1.423 | 1.416 | 1.406 | 1.408 | 1.435 | 1.496 | 1.547 | 1.536 | 1.554 |
| 15 Bolivia | GDP per capita, PPP (constant 2011 international \$) | 3.426 | 3.456 | 3.537 | 3.630 | 3.739 | 3.844 | 4.013 | 4.080 | 4.180 | 4.328 | 4.478 | 4.709 | 4.890 | 5.049 | 5.186 |
| 16 Bosnia and Herzegovina | GDP per capita, PPP (constant 2011 international \$) | 5.364 | 5.574 | 5.911 | 6.428 | 6.778 | 7.176 | 7.590 | 7.406 | 7.512 | 7.649 | 7.662 | 7.939 | 8.113 | 8.428 | 8.643 |
| 17 Botswana | GDP per capita, PPP (constant 2011 international \$) | 8.310 | 8.577 | 8.689 | 8.955 | 9.558 | 10.186 | 10.644 | 9.663 | 10.309 | 10.738 | 11.012 | 12.036 | 12.304 | 11.872 | 11.993 |
| 18 Brazil | GDP per capita, PPP (constant 2011 international \$) | 8.937 | 8.924 | 9.322 | 9.509 | 9.776 | 10.260 | 10.673 | 10.555 | 11.240 | 11.576 | 11.688 | 11.929 | 11.883 | 11.338 | 10.842 |
| 19 Bulgaria | GDP per capita, PPP (constant 2011 international \$) | 7.979 | 8.451 | 9.073 | 9.804 | 10.545 | 11.439 | 12.170 | 11.731 | 11.815 | 12.119 | 12.193 | 12.367 | 12.603 | 13.143 | 13.691 |
| 20 Burkina Faso | GDP per capita, PPP (constant 2011 international \$) | 0.849 | 0.890 | 0.903 | 0.952 | 0.982 | 1.007 | 1.048 | 1.047 | 1.101 | 1.139 | 1.176 | 1.174 | 1.187 | 1.199 | 1.233 |
| 21 Burundi | GDP per capita, PPP (constant 2011 international \$) | 0.590 | 0.565 | 0.573 | 0.560 | 0.571 | 0.578 | 0.587 | 0.588 | 0.591 | 0.596 | 0.602 | 0.611 | 0.621 | 0.579 | 0.558 |
| 22 Cambodia | GDP per capita, PPP (constant 2011 international \$) | 1.179 | 1.258 | 1.366 | 1.522 | 1.661 | 1.803 | 1.896 | 1.869 | 1.950 | 2.055 | 2.170 | 2.293 | 2.415 | 2.544 | 2.677 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 23 | Cameroon GDP per capita, PPP (constant 2011 international \$) | 2.000 | 2.027 | 2.047 | 2.038 | 2.048 | 2.058 | 2.060 | 2.043 | 2.053 | 2.080 | 2.118 | 2.176 | 2.245 | 2.312 | 2.355 |
| 24 | Canada GDP per capita, PPP (constant 2011 international \$) | 29.764 | 30.001 | 30.618 | 31.288 | 31.854 | 32.197 | 32.170 | 30.865 | 31.465 | 32.134 | 32.311 | 32.730 | 33.202 | 33.230 | 33.311 |
| 25 | Central African Republic GDP per capita, PPP (constant 2011 international \$) | 0.659 | 0.612 | 0.637 | 0.631 | 0.650 | 0.668 | 0.671 | 0.673 | 0.687 | 0.705 | 0.731 | 0.462 | 0.465 | 0.484 | 0.501 |
| 26 | Chad GDP per capita, PPP (constant 2011 international \$) | 0.862 | 0.952 | 1.225 | 1.386 | 1.348 | 1.346 | 1.343 | 1.355 | 1.488 | 1.441 | 1.517 | 1.552 | 1.605 | 1.583 | 1.427 |
| 27 | Chile GDP per capita, PPP (constant 2011 international \$) | 11.516 | 11.853 | 12.569 | 13.149 | 13.831 | 14.358 | 14.713 | 14.339 | 15.031 | 15.800 | 16.490 | 17.007 | 17.183 | 17.423 | 17.554 |
| 28 | China GDP per capita, PPP (constant 2011 international \$) | 3.336 | 3.648 | 3.993 | 4.422 | 4.956 | 5.632 | 6.144 | 6.689 | 7.364 | 8.028 | 8.617 | 9.239 | 9.864 | 10.491 | 11.133 |
| 29 | Colombia GDP per capita, PPP (constant 2011 international \$) | 6.506 | 6.668 | 6.930 | 7.162 | 7.546 | 7.968 | 8.154 | 8.195 | 8.427 | 8.888 | 9.154 | 9.506 | 9.831 | 10.039 | 10.146 |
| 30 | Congo, Dem. Rep. GDP per capita, PPP (constant 2011 international \$) | 0.390 | 0.399 | 0.412 | 0.424 | 0.432 | 0.445 | 0.457 | 0.455 | 0.471 | 0.487 | 0.505 | 0.530 | 0.561 | 0.580 | 0.574 |
| 31 | Congo, Rep. GDP per capita, PPP (constant 2011 international \$) | 3.560 | 3.491 | 3.509 | 3.667 | 3.770 | 3.585 | 3.657 | 3.802 | 4.010 | 4.031 | 4.075 | 4.111 | 4.281 | 4.285 | 4.098 |
| 32 | Costa Rica GDP per capita, PPP (constant 2011 international \$) | 7.887 | 8.097 | 8.325 | 8.524 | 9.011 | 9.612 | 9.923 | 9.698 | 10.050 | 10.357 | 10.729 | 10.851 | 11.126 | 11.530 | 11.907 |
| 33 | Cote d'Ivoire GDP per capita, PPP (constant 2011 international \$) | 2.156 | 2.089 | 2.077 | 2.074 | 2.064 | 2.058 | 2.066 | 2.086 | 2.080 | 1.942 | 2.097 | 2.226 | 2.361 | 2.513 | 2.666 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45 | Estonia GDP per capita, PPP (constant 2011 international \$) | 13.868 | 14.990 | 16.029 | 17.632 | 19.558 | 21.170 | 20.077 | 17.153 | 17.581 | 18.974 | 19.862 | 20.215 | 20.841 | 21.128 | 21.442 |
| 46 | Ethiopia GDP per capita, PPP (constant 2011 international \$) | 0.496 | 0.472 | 0.521 | 0.566 | 0.611 | 0.663 | 0.715 | 0.757 | 0.830 | 0.899 | 0.951 | 1.025 | 1.101 | 1.185 | 1.243 |
| 47 | Finland GDP per capita, PPP (constant 2011 international \$) | 28.000 | 28.491 | 29.523 | 30.240 | 31.346 | 32.831 | 32.914 | 30.049 | 30.806 | 31.452 | 30.857 | 30.482 | 30.164 | 30.146 | 30.478 |
| 48 | France GDP per capita, PPP (constant 2011 international \$) | 27.411 | 27.441 | 27.999 | 28.235 | 28.705 | 29.201 | 29.095 | 28.095 | 28.506 | 28.958 | 28.871 | 28.888 | 29.015 | 29.197 | 29.423 |
| 49 | Gabon GDP per capita, PPP (constant 2011 international \$) | 13.321 | 13.275 | 13.013 | 13.146 | 12.302 | 12.611 | 11.819 | 11.459 | 11.872 | 12.287 | 12.493 | 12.758 | 12.894 | 13.016 | 12.977 |
| 50 | Gambia, The GDP per capita, PPP (constant 2011 international \$) | 1.160 | 1.200 | 1.244 | 1.194 | 1.169 | 1.174 | 1.202 | 1.240 | 1.280 | 1.187 | 1.217 | 1.236 | 1.209 | 1.228 | 1.211 |
| 51 | Georgia GDP per capita, PPP (constant 2011 international \$) | 2.829 | 3.182 | 3.413 | 3.790 | 4.200 | 4.780 | 4.954 | 4.836 | 5.206 | 5.655 | 6.093 | 6.381 | 6.764 | 6.977 | 7.165 |
| 52 | Germany GDP per capita, PPP (constant 2011 international \$) | 28.807 | 28.587 | 28.928 | 29.149 | 30.261 | 31.290 | 31.689 | 29.984 | 31.255 | 33.005 | 33.106 | 33.177 | 33.566 | 33.849 | 34.072 |
| 53 | Ghana GDP per capita, PPP (constant 2011 international \$) | 1.804 | 1.849 | 1.903 | 1.963 | 2.035 | 2.068 | 2.200 | 2.248 | 2.365 | 2.632 | 2.808 | 2.943 | 2.991 | 3.038 | 3.077 |
| 54 | Greece GDP per capita, PPP (constant 2011 international \$) | 20.597 | 21.739 | 22.783 | 22.852 | 24.071 | 24.796 | 24.648 | 23.526 | 22.208 | 20.210 | 18.836 | 18.358 | 18.546 | 18.628 | 18.758 |
| 55 | Guatemala GDP per capita, PPP (constant 2011 international \$) | 4.760 | 4.767 | 4.803 | 4.847 | 4.993 | 5.190 | 5.243 | 5.157 | 5.191 | 5.291 | 5.334 | 5.416 | 5.526 | 5.638 | 5.695 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 56 | Guinea GDP per capita, PPP (constant 2011 international \$) | 0.919 | 0.913 | 0.917 | 0.926 | 0.929 | 0.925 | 0.950 | 0.926 | 0.923 | 0.939 | 0.954 | 0.955 | 0.937 | 0.915 | 0.939 |
| 57 | Guinea-Bissau GDP per capita, PPP (constant 2011 international \$) | 1.023 | 1.007 | 1.012 | 1.032 | 1.032 | 1.041 | 1.049 | 1.058 | 1.077 | 1.148 | 1.098 | 1.079 | 1.078 | 1.101 | 1.134 |
| 58 | Haiti GDP per capita, PPP (constant 2011 international \$) | 1.284 | 1.269 | 1.205 | 1.208 | 1.216 | 1.237 | 1.228 | 1.247 | 1.161 | 1.208 | 1.225 | 1.260 | 1.278 | 1.277 | 1.279 |
| 59 | Honduras GDP per capita, PPP (constant 2011 international \$) | 2.607 | 2.660 | 2.759 | 2.858 | 2.978 | 3.094 | 3.158 | 3.019 | 3.070 | 3.128 | 3.198 | 3.230 | 3.271 | 3.333 | 3.396 |
| 60 | Hong Kong SAR, China GDP per capita, PPP (constant 2011 international \$) | 26.568 | 27.435 | 29.590 | 31.637 | 33.646 | 35.514 | 36.053 | 35.091 | 37.192 | 38.721 | 38.923 | 39.946 | 40.743 | 41.353 | 41.963 |
| 61 | Hungary GDP per capita, PPP (constant 2011 international \$) | 15.047 | 15.668 | 16.488 | 17.245 | 17.938 | 18.046 | 18.239 | 17.068 | 17.223 | 17.572 | 17.380 | 17.797 | 18.567 | 19.197 | 19.622 |
| 62 | India GDP per capita, PPP (constant 2011 international \$) | 2.028 | 2.152 | 2.285 | 2.458 | 2.644 | 2.860 | 2.927 | 3.131 | 3.405 | 3.584 | 3.732 | 3.922 | 4.167 | 4.448 | 4.710 |
| 63 | Indonesia GDP per capita, PPP (constant 2011 international \$) | 4.728 | 4.886 | 5.061 | 5.276 | 5.491 | 5.760 | 6.024 | 6.220 | 6.520 | 6.832 | 7.152 | 7.455 | 7.733 | 8.015 | 8.322 |
| 64 | Iran, Islamic Rep. GDP per capita, PPP (constant 2011 international \$) | 9.865 | 10.588 | 10.920 | 11.250 | 11.757 | 12.685 | 12.659 | 12.804 | 13.486 | 13.820 | 12.744 | 12.342 | 12.718 | 12.377 | 12.377 |
| 65 | Iraq GDP per capita, PPP (constant 2011 international \$) | 8.472 | 5.516 | 8.280 | 8.423 | 9.048 | 8.949 | 9.445 | 9.509 | 9.832 | 10.253 | 11.307 | 11.657 | 11.362 | 11.541 | 12.437 |
| 66 | Ireland GDP per capita, PPP (constant 2011 international \$) | 34.191 | 34.874 | 36.545 | 37.819 | 38.973 | 39.299 | 36.822 | 34.786 | 35.301 | 35.158 | 34.694 | 34.988 | 37.793 | 47.116 | 48.572 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 77 | Kuwait GDP per capita, PPP (constant 2011 international \$) | 53.647 | 62.205 | 67.689 | 72.261 | 74.406 | 74.890 | 72.438 | 63.334 | 58.140 | 59.884 | 60.006 | 57.275 | 54.760 | 53.598 | 53.598 |
| 78 | Kyrgyz Republic GDP per capita, PPP (constant 2011 international \$) | 1.658 | 1.756 | 1.856 | 1.832 | 1.869 | 2.009 | 2.158 | 2.193 | 2.157 | 2.258 | 2.219 | 2.412 | 2.460 | 2.503 | 2.545 |
| 79 | Lao PDR GDP per capita, PPP (constant 2011 international \$) | 1.970 | 2.058 | 2.157 | 2.274 | 2.430 | 2.570 | 2.724 | 2.881 | 3.080 | 3.281 | 3.500 | 3.734 | 3.969 | 4.201 | 4.433 |
| 80 | Latvia GDP per capita, PPP (constant 2011 international \$) | 10.081 | 11.037 | 12.088 | 13.526 | 15.274 | 16.931 | 16.493 | 14.364 | 14.110 | 15.287 | 16.097 | 16.698 | 17.213 | 17.826 | 18.332 |
| 81 | Lebanon GDP per capita, PPP (constant 2011 international \$) | 9.561 | 9.393 | 9.531 | 9.488 | 9.469 | 10.280 | 11.151 | 12.088 | 12.587 | 12.134 | 11.573 | 10.881 | 10.430 | 10.118 | 10.030 |
| 82 | Lesotho GDP per capita, PPP (constant 2011 international \$) | 1.412 | 1.464 | 1.477 | 1.515 | 1.567 | 1.628 | 1.721 | 1.741 | 1.836 | 1.935 | 2.024 | 2.041 | 2.060 | 2.147 | 2.171 |
| 83 | Liberia GDP per capita, PPP (constant 2011 international \$) | 0.652 | 0.448 | 0.451 | 0.462 | 0.482 | 0.508 | 0.522 | 0.528 | 0.541 | 0.568 | 0.597 | 0.633 | 0.622 | 0.607 | 0.583 |
| 84 | Libya GDP per capita, PPP (constant 2011 international \$) | 15.977 | 17.772 | 18.276 | 20.135 | 21.120 | 22.127 | 22.407 | 21.983 | 22.907 | 8.653 | 8.653 | 8.653 | 8.653 | 8.653 | 8.653 |
| 85 | Lithuania GDP per capita, PPP (constant 2011 international \$) | 10.893 | 12.139 | 13.080 | 14.322 | 15.630 | 17.571 | 18.219 | 15.693 | 16.289 | 17.669 | 18.594 | 19.442 | 20.295 | 20.851 | 21.573 |
| 86 | Macedonia, FYR GDP per capita, PPP (constant 2011 international \$) | 6.511 | 6.642 | 6.940 | 7.256 | 7.618 | 8.102 | 8.538 | 8.500 | 8.779 | 8.977 | 8.929 | 9.183 | 9.508 | 9.864 | 10.093 |
| 87 | Madagascar GDP per capita, PPP (constant 2011 international \$) | 0.972 | 1.035 | 1.058 | 1.074 | 1.096 | 1.131 | 1.177 | 1.099 | 1.071 | 1.057 | 1.060 | 1.055 | 1.061 | 1.064 | 1.079 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 88 Malawi | GDP per capita, PPP (constant 2011 international \$) | 0.613 | 0.631 | 0.647 | 0.650 | 0.660 | 0.702 | 0.733 | 0.770 | 0.799 | 0.813 | 0.804 | 0.821 | 0.843 | 0.842 | 0.838 |
| 89 Malaysia | GDP per capita, PPP (constant 2011 international \$) | 12.798 | 13.271 | 13.898 | 14.362 | 14.883 | 15.991 | 16.226 | 15.533 | 16.318 | 16.868 | 17.465 | 17.955 | 18.706 | 19.319 | 19.838 |
| 90 Mali | GDP per capita, PPP (constant 2011 international \$) | 1.268 | 1.341 | 1.320 | 1.361 | 1.379 | 1.380 | 1.398 | 1.417 | 1.447 | 1.449 | 1.395 | 1.387 | 1.442 | 1.484 | 1.517 |
| 91 Mauritania | GDP per capita, PPP (constant 2011 international \$) | 2.059 | 2.121 | 2.179 | 2.308 | 2.667 | 2.666 | 2.620 | 2.520 | 2.564 | 2.607 | 2.677 | 2.756 | 2.826 | 2.784 | 2.762 |
| 92 Mauritius | GDP per capita, PPP (constant 2011 international \$) | 8.838 | 9.095 | 9.557 | 9.619 | 10.391 | 10.937 | 11.484 | 11.833 | 12.322 | 12.804 | 13.215 | 13.629 | 14.114 | 14.584 | 15.113 |
| 93 Mexico | GDP per capita, PPP (constant 2011 international \$) | 11.261 | 11.283 | 11.618 | 11.808 | 12.209 | 12.404 | 12.375 | 11.606 | 12.010 | 12.310 | 12.620 | 12.614 | 12.724 | 12.886 | 13.012 |
| 94 Moldova | GDP per capita, PPP (constant 2011 international \$) | 2.062 | 2.204 | 2.373 | 2.557 | 2.687 | 2.774 | 2.996 | 2.820 | 3.023 | 3.231 | 3.209 | 3.511 | 3.682 | 3.670 | 3.822 |
| 95 Mongolia | GDP per capita, PPP (constant 2011 international \$) | 3.807 | 4.031 | 4.411 | 4.675 | 5.012 | 5.454 | 5.857 | 5.696 | 5.959 | 6.866 | 7.568 | 8.288 | 8.774 | 8.821 | 8.758 |
| 96 Morocco | GDP per capita, PPP (constant 2011 international \$) | 3.745 | 3.921 | 4.061 | 4.145 | 4.407 | 4.510 | 4.721 | 4.861 | 4.981 | 5.171 | 5.250 | 5.409 | 5.466 | 5.633 | 5.617 |
| 97 Mozambique | GDP per capita, PPP (constant 2011 international \$) | 0.503 | 0.520 | 0.544 | 0.574 | 0.612 | 0.639 | 0.663 | 0.685 | 0.710 | 0.738 | 0.769 | 0.800 | 0.835 | 0.864 | 0.872 |
| 98 Myanmar | GDP per capita, PPP (constant 2011 international \$) | 1.232 | 1.388 | 1.562 | 1.759 | 1.974 | 2.196 | 2.406 | 2.643 | 2.877 | 3.014 | 3.207 | 3.446 | 3.688 | 3.920 | 4.137 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 99 | Namibia GDP per capita, PPP (constant 2011 international \$) | 4.845 | 4.988 | 5.537 | 5.613 | 5.941 | 6.260 | 6.345 | 6.273 | 6.541 | 6.742 | 6.932 | 7.158 | 7.445 | 7.663 | 7.586 |
| 100 | Nepal GDP per capita, PPP (constant 2011 international \$) | 1.207 | 1.235 | 1.275 | 1.302 | 1.330 | 1.361 | 1.430 | 1.480 | 1.535 | 1.570 | 1.626 | 1.673 | 1.752 | 1.779 | 1.769 |
| 101 | Netherlands GDP per capita, PPP (constant 2011 international \$) | 32.518 | 32.457 | 33.001 | 33.635 | 34.763 | 35.970 | 36.439 | 34.887 | 35.195 | 35.614 | 35.107 | 34.937 | 35.306 | 35.836 | 36.435 |
| 102 | New Zealand GDP per capita, PPP (constant 2011 international \$) | 23.116 | 23.697 | 24.269 | 24.789 | 25.175 | 25.662 | 25.160 | 24.834 | 24.935 | 25.307 | 25.734 | 26.163 | 26.648 | 26.785 | 27.266 |
| 103 | Nicaragua GDP per capita, PPP (constant 2011 international \$) | 2.694 | 2.726 | 2.833 | 2.916 | 2.988 | 3.099 | 3.164 | 3.020 | 3.115 | 3.271 | 3.443 | 3.571 | 3.699 | 3.835 | 3.971 |
| 104 | Niger GDP per capita, PPP (constant 2011 international \$) | 0.597 | 0.607 | 0.586 | 0.590 | 0.601 | 0.598 | 0.631 | 0.603 | 0.629 | 0.620 | 0.667 | 0.676 | 0.696 | 0.694 | 0.701 |
| 105 | Nigeria GDP per capita, PPP (constant 2011 international \$) | 2.269 | 2.441 | 3.182 | 3.208 | 3.382 | 3.519 | 3.642 | 3.792 | 3.982 | 4.066 | 4.128 | 4.236 | 4.385 | 4.384 | 4.205 |
| 106 | Norway GDP per capita, PPP (constant 2011 international \$) | 46.003 | 46.154 | 47.699 | 48.619 | 49.384 | 50.307 | 49.875 | 48.451 | 48.139 | 47.979 | 48.655 | 48.550 | 48.927 | 49.223 | 49.332 |
| 107 | Oman GDP per capita, PPP (constant 2011 international \$) | 34.125 | 32.504 | 32.123 | 32.051 | 32.835 | 33.270 | 34.742 | 35.281 | 35.048 | 32.564 | 33.266 | 32.412 | 31.142 | 31.031 | 31.031 |
| 108 | Pakistan GDP per capita, PPP (constant 2011 international \$) | 2.724 | 2.797 | 2.942 | 3.103 | 3.228 | 3.315 | 3.303 | 3.328 | 3.312 | 3.332 | 3.376 | 3.451 | 3.538 | 3.630 | 3.762 |
| 109 | Panama GDP per capita, PPP (constant 2011 international \$) | 8.086 | 8.268 | 8.726 | 9.183 | 9.797 | 10.774 | 11.494 | 11.472 | 11.921 | 13.096 | 14.058 | 14.733 | 15.363 | 15.983 | 16.494 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|
| 110 Papua New Guinea | GDP per capita, PPP (constant 2011 international \$) | 1.313 | 1.308 | 1.311 | 1.360 | 1.358 | 1.420 | 1.479 | 1.533 | 1.614 | 1.746 | 1.846 | 1.907 | 2.026 | 2.026 | 2.026 |
| 111 Paraguay | GDP per capita, PPP (constant 2011 international \$) | 4.490 | 4.601 | 4.707 | 4.731 | 4.885 | 5.078 | 5.328 | 5.050 | 5.635 | 5.802 | 5.653 | 6.360 | 6.573 | 6.679 | 6.863 |
| 112 Peru | GDP per capita, PPP (constant 2011 international \$) | 5.245 | 5.395 | 5.593 | 5.872 | 6.237 | 6.687 | 7.208 | 7.197 | 7.697 | 8.078 | 8.461 | 8.837 | 8.926 | 9.097 | 9.333 |
| 113 Philippines | GDP per capita, PPP (constant 2011 international \$) | 3.339 | 3.434 | 3.593 | 3.695 | 3.820 | 4.005 | 4.105 | 4.086 | 4.327 | 4.412 | 4.630 | 4.876 | 5.092 | 5.315 | 5.594 |
| 114 Poland | GDP per capita, PPP (constant 2011 international \$) | 11.776 | 12.204 | 12.838 | 13.292 | 14.123 | 15.124 | 15.765 | 16.199 | 16.831 | 17.666 | 17.949 | 18.210 | 18.822 | 19.559 | 20.103 |
| 115 Portugal | GDP per capita, PPP (constant 2011 international \$) | 20.391 | 20.125 | 20.441 | 20.559 | 20.841 | 21.318 | 21.330 | 20.675 | 21.058 | 20.704 | 19.950 | 19.833 | 20.119 | 20.524 | 20.879 |
| 116 Puerto Rico | GDP per capita, PPP (constant 2011 international \$) | 27.980 | 28.296 | 28.788 | 28.993 | 28.858 | 28.062 | 27.719 | 27.213 | 26.636 | 26.437 | 26.016 | 26.164 | 26.164 | 26.164 | 26.164 |
| 117 Qatar | GDP per capita, PPP (constant 2011 international \$) | 85.547 | 83.197 | 90.003 | 84.888 | 91.678 | 91.868 | 92.558 | 90.502 | 96.746 | 100.000 | 96.871 | 94.810 | 93.437 | 92.578 | 91.392 |
| 118 Romania | GDP per capita, PPP (constant 2011 international \$) | 9.332 | 9.919 | 10.809 | 11.330 | 12.316 | 13.357 | 14.730 | 13.804 | 13.775 | 13.989 | 14.142 | 14.696 | 15.204 | 15.878 | 16.736 |
| 119 Russian Federation | GDP per capita, PPP (constant 2011 international \$) | 12.064 | 13.003 | 13.992 | 14.941 | 16.212 | 17.626 | 18.559 | 17.102 | 17.865 | 18.612 | 19.234 | 19.439 | 19.235 | 18.650 | 18.574 |
| 120 Rwanda | GDP per capita, PPP (constant 2011 international \$) | 0.701 | 0.705 | 0.745 | 0.799 | 0.853 | 0.895 | 0.968 | 1.001 | 1.046 | 1.099 | 1.166 | 1.190 | 1.249 | 1.327 | 1.371 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 121 Saudi Arabia | GDP per capita, PPP (constant 2011 international \$) | 30.301 | 32.736 | 34.319 | 35.206 | 35.197 | 34.890 | 36.087 | 34.388 | 35.115 | 37.514 | 38.391 | 38.297 | 38.623 | 39.214 | 39.009 |
| 122 Senegal | GDP per capita, PPP (constant 2011 international \$) | 1.476 | 1.534 | 1.582 | 1.627 | 1.623 | 1.658 | 1.672 | 1.665 | 1.686 | 1.666 | 1.688 | 1.696 | 1.717 | 1.776 | 1.840 |
| 123 Serbia | GDP per capita, PPP (constant 2011 international \$) | 6.961 | 7.284 | 7.961 | 8.427 | 8.876 | 9.436 | 9.985 | 9.713 | 9.809 | 10.025 | 9.972 | 10.278 | 10.137 | 10.265 | 10.607 |
| 124 Sierra Leone | GDP per capita, PPP (constant 2011 international \$) | 0.762 | 0.794 | 0.808 | 0.811 | 0.827 | 0.869 | 0.894 | 0.914 | 0.941 | 0.963 | 1.084 | 1.280 | 1.308 | 1.017 | 1.056 |
| 125 Singapore | GDP per capita, PPP (constant 2011 international \$) | 39.792 | 42.174 | 45.627 | 47.905 | 50.543 | 52.897 | 51.053 | 49.237 | 55.744 | 57.992 | 58.778 | 60.726 | 62.084 | 62.537 | 62.964 |
| 126 Slovak Republic | GDP per capita, PPP (constant 2011 international \$) | 13.057 | 13.773 | 14.501 | 15.478 | 16.786 | 18.593 | 19.623 | 18.534 | 19.450 | 19.973 | 20.269 | 20.549 | 21.057 | 21.843 | 22.540 |
| 127 Slovenia | GDP per capita, PPP (constant 2011 international \$) | 18.726 | 19.247 | 20.072 | 20.839 | 21.948 | 23.340 | 24.073 | 21.996 | 22.171 | 22.269 | 21.624 | 21.360 | 22.002 | 22.495 | 23.041 |
| 128 Somalia | GDP per capita, PPP (constant 2011 international \$) | | | | | | | | | | | | | | | |
| 129 South Africa | GDP per capita, PPP (constant 2011 international \$) | 7.832 | 7.966 | 8.225 | 8.549 | 8.911 | 9.264 | 9.429 | 9.155 | 9.300 | 9.466 | 9.532 | 9.622 | 9.634 | 9.606 | 9.478 |
| 130 South Sudan | GDP per capita, PPP (constant 2011 international \$) | | | | | | | 2.874 | 2.891 | 2.930 | 2.692 | 1.402 | 1.535 | 1.538 | 1.398 | |
| 131 Spain | GDP per capita, PPP (constant 2011 international \$) | 24.272 | 24.596 | 24.941 | 25.436 | 26.054 | 26.540 | 26.412 | 25.243 | 25.131 | 24.791 | 24.049 | 23.716 | 24.115 | 24.906 | 25.714 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 143 | Togo GDP per capita, PPP (constant 2011 international \$) | 0.911 | 0.931 | 0.926 | 0.913 | 0.924 | 0.920 | 0.916 | 0.923 | 0.934 | 0.954 | 0.974 | 0.986 | 1.017 | 1.044 | 1.069 |
| 144 | Trinidad and Tobago GDP per capita, PPP (constant 2011 international \$) | 15.805 | 18.000 | 19.333 | 20.432 | 23.021 | 24.003 | 24.701 | 23.505 | 24.168 | 23.976 | 24.163 | 24.682 | 24.426 | 24.185 | 22.867 |
| 145 | Tunisia GDP per capita, PPP (constant 2011 international \$) | 6.055 | 6.292 | 6.632 | 6.806 | 7.097 | 7.498 | 7.734 | 7.882 | 8.068 | 7.824 | 8.043 | 8.179 | 8.312 | 8.311 | 8.312 |
| 146 | Turkey GDP per capita, PPP (constant 2011 international \$) | 10.412 | 10.840 | 11.721 | 12.609 | 13.337 | 13.840 | 13.790 | 12.975 | 13.884 | 15.200 | 15.680 | 16.738 | 17.319 | 18.077 | 18.306 |
| 147 | Turkmenistan GDP per capita, PPP (constant 2011 international \$) | 4.225 | 4.321 | 4.491 | 5.022 | 5.508 | 6.042 | 6.838 | 7.150 | 7.686 | 8.668 | 9.459 | 10.233 | 11.080 | 11.591 | 12.098 |
| 148 | Uganda GDP per capita, PPP (constant 2011 international \$) | 0.882 | 0.907 | 0.935 | 0.961 | 1.028 | 1.077 | 1.131 | 1.166 | 1.191 | 1.259 | 1.264 | 1.266 | 1.288 | 1.308 | 1.325 |
| 149 | Ukraine GDP per capita, PPP (constant 2011 international \$) | 4.347 | 4.794 | 5.415 | 5.602 | 6.052 | 6.569 | 6.757 | 5.782 | 6.049 | 6.403 | 6.434 | 6.447 | 6.373 | 5.771 | 5.928 |
| 150 | United Arab Emirates GDP per capita, PPP (constant 2011 international \$) | 74.562 | 76.035 | 76.258 | 71.377 | 68.490 | 61.293 | 55.450 | 47.251 | 44.515 | 45.152 | 46.241 | 48.344 | 49.576 | 51.005 | 51.900 |
| 151 | UK GDP per capita, PPP (constant 2011 international \$) | 26.589 | 27.383 | 27.916 | 28.549 | 29.049 | 29.560 | 29.145 | 27.673 | 27.983 | 28.184 | 28.356 | 28.705 | 29.365 | 29.771 | 30.074 |
| 152 | USA GDP per capita, PPP (constant 2011 international \$) | 35.846 | 36.537 | 37.570 | 38.471 | 39.118 | 39.437 | 38.952 | 37.540 | 38.170 | 38.493 | 39.056 | 39.434 | 40.070 | 40.812 | 41.185 |
| 153 | Uruguay GDP per capita, PPP (constant 2011 international \$) | 8.813 | 8.890 | 9.339 | 10.032 | 10.426 | 11.079 | 11.834 | 12.293 | 13.206 | 13.842 | 14.285 | 14.898 | 15.329 | 15.332 | 15.498 |

Table A.2.10 (continued)

| Country name | Series name | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|---|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 154 | Uzbekistan GDP per capita, PPP (constant 2011 international \$) | 2.046 | 2.107 | 2.243 | 2.373 | 2.515 | 2.726 | 2.923 | 3.107 | 3.278 | 3.456 | 3.684 | 3.918 | 4.152 | 4.407 | 4.669 |
| 155 | Venezuela, RB GDP per capita, PPP (constant 2011 international \$) | 10.120 | 9.169 | 10.657 | 11.556 | 12.485 | 13.356 | 13.836 | 13.184 | 12.791 | 13.128 | 13.667 | 13.657 | 13.657 | 13.657 | 13.657 |
| 156 | Vietnam GDP per capita, PPP (constant 2011 international \$) | 2.257 | 2.385 | 2.535 | 2.694 | 2.850 | 3.021 | 3.158 | 3.293 | 3.468 | 3.646 | 3.796 | 3.960 | 4.152 | 4.381 | 4.604 |
| 157 | West Bank and Gaza GDP per capita, PPP (constant 2011 international \$) | | | | | | | | | | | | | | | |
| 158 | Yemen, Rep. GDP per capita, PPP (constant 2011 international \$) | 3.068 | 3.095 | 3.128 | 3.213 | 3.224 | 3.241 | 3.268 | 3.303 | 3.463 | 2.942 | 2.933 | 2.994 | 2.912 | 2.042 | 1.798 |
| 159 | Zambia GDP per capita, PPP (constant 2011 international \$) | 1.695 | 1.764 | 1.839 | 1.919 | 2.016 | 2.125 | 2.228 | 2.366 | 2.535 | 2.598 | 2.713 | 2.765 | 2.808 | 2.804 | 2.811 |
| 160 | Zimbabwe GDP per capita, PPP (constant 2011 international \$) | 1.796 | 1.475 | 1.374 | 1.279 | 1.217 | 1.155 | 0.935 | 0.997 | 1.129 | 1.286 | 1.429 | 1.470 | 1.475 | 1.462 | 1.438 |

Source: Author's own calculations based on World Bank (2018)

See World Bank (2018), the World Development Indicators

<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>

Status: April 30, 2018

Table A.2.11 CO2 emissions. Scores transformed (rescaled) to 0–100
 0 = lowest possible value, 100 = empirically highest (best) observed value (years 2002–2016)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | Afghanistan CO2 emissions (metric tons per capita) | 99.952 | 99.948 | 99.967 | 99.946 | 99.929 | 99.895 | 99.786 | 99.648 | 99.566 | 99.379 | 99.476 | 99.531 | 99.557 | 99.557 | 99.557 |
| 2 | Albania CO2 emissions (metric tons per capita) | 98.089 | 97.800 | 97.857 | 97.800 | 97.973 | 97.942 | 97.687 | 97.669 | 97.538 | 97.182 | 97.357 | 97.268 | 96.906 | 96.906 | 96.906 |
| 3 | Algeria CO2 emissions (metric tons per capita) | 95.594 | 95.569 | 95.774 | 94.943 | 95.306 | 94.995 | 95.039 | 94.626 | 94.821 | 94.834 | 94.568 | 94.493 | 94.162 | 94.162 | 94.162 |
| 4 | Angola CO2 emissions (metric tons per capita) | 98.892 | 99.243 | 98.457 | 98.483 | 98.295 | 98.139 | 98.164 | 98.084 | 98.067 | 98.052 | 97.929 | 98.049 | 97.991 | 97.991 | 97.991 |
| 5 | Argentina CO2 emissions (metric tons per capita) | 94.834 | 94.465 | 93.607 | 93.493 | 93.029 | 93.112 | 92.638 | 93.067 | 92.834 | 92.768 | 92.817 | 92.985 | 92.537 | 92.537 | 92.537 |
| 6 | Armenia CO2 emissions (metric tons per capita) | 98.446 | 98.236 | 98.112 | 97.725 | 97.691 | 97.304 | 97.012 | 97.647 | 97.716 | 97.330 | 96.910 | 97.031 | 97.026 | 97.026 | 97.026 |
| 7 | Australia CO2 emissions (metric tons per capita) | 72.611 | 73.351 | 73.154 | 72.928 | 72.168 | 71.830 | 71.364 | 71.302 | 72.027 | 72.346 | 73.075 | 74.612 | 75.724 | 75.724 | 75.724 |
| 8 | Austria CO2 emissions (metric tons per capita) | 86.930 | 85.998 | 86.047 | 85.792 | 86.254 | 86.761 | 86.936 | 88.162 | 87.290 | 87.800 | 88.369 | 88.398 | 89.180 | 89.180 | 89.180 |
| 9 | Azerbaijan CO2 emissions (metric tons per capita) | 94.309 | 94.161 | 93.932 | 93.571 | 92.743 | 94.418 | 93.635 | 94.401 | 94.681 | 94.274 | 93.992 | 94.055 | 93.824 | 93.824 | 93.824 |
| 10 | Bahrain CO2 emissions (metric tons per capita) | 66.324 | 66.648 | 66.724 | 65.932 | 69.018 | 59.123 | 57.873 | 62.444 | 62.802 | 64.652 | 67.648 | 62.456 | 63.016 | 63.016 | 63.016 |
| 11 | Bangladesh CO2 emissions (metric tons per capita) | 99.640 | 99.624 | 99.608 | 99.595 | 99.557 | 99.553 | 99.504 | 99.466 | 99.408 | 99.379 | 99.345 | 99.331 | 99.305 | 99.305 | 99.305 |

(continued)

Table A.2.11 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 12 | Belarus CO2 emissions (metric tons per capita) | 91.645 | 91.405 | 90.595 | 90.366 | 89.829 | 90.037 | 89.575 | 89.865 | 89.544 | 89.355 | 89.486 | 89.396 | 89.451 | 89.451 | 89.451 |
| 13 | Belgium CO2 emissions (metric tons per capita) | 83.637 | 82.853 | 83.201 | 83.684 | 84.007 | 84.648 | 84.637 | 85.430 | 83.975 | 85.750 | 86.539 | 86.342 | 86.884 | 86.884 | 86.884 |
| 14 | Benin CO2 emissions (metric tons per capita) | 99.580 | 99.535 | 99.519 | 99.556 | 99.286 | 99.190 | 99.229 | 99.207 | 99.156 | 99.146 | 99.142 | 99.112 | 99.060 | 99.060 | 99.060 |
| 15 | Bolivia CO2 emissions (metric tons per capita) | 98.133 | 98.042 | 98.073 | 97.922 | 97.469 | 97.968 | 97.853 | 97.767 | 97.610 | 97.501 | 97.132 | 97.158 | 96.979 | 96.979 | 96.979 |
| 16 | Bosnia and Herzegovina CO2 emissions (metric tons per capita) | 94.051 | 93.978 | 93.513 | 93.266 | 92.694 | 92.646 | 91.577 | 91.307 | 91.007 | 89.808 | 90.399 | 90.431 | 90.188 | 90.188 | 90.188 |
| 17 | Botswana CO2 emissions (metric tons per capita) | 96.501 | 96.680 | 96.666 | 96.546 | 96.564 | 96.540 | 96.375 | 97.030 | 96.358 | 96.816 | 96.832 | 96.152 | 94.910 | 94.910 | 94.910 |
| 18 | Brazil CO2 emissions (metric tons per capita) | 97.118 | 97.247 | 97.143 | 97.097 | 97.126 | 97.028 | 96.859 | 97.056 | 96.663 | 96.539 | 96.330 | 96.102 | 95.934 | 95.934 | 95.934 |
| 19 | Bulgaria CO2 emissions (metric tons per capita) | 91.040 | 90.426 | 90.456 | 90.154 | 89.856 | 89.098 | 89.340 | 90.983 | 90.614 | 89.430 | 90.370 | 91.426 | 90.762 | 90.762 | 90.762 |
| 20 | Burkina Faso CO2 emissions (metric tons per capita) | 99.900 | 99.895 | 99.896 | 99.897 | 99.874 | 99.847 | 99.823 | 99.828 | 99.831 | 99.812 | 99.779 | 99.747 | 99.774 | 99.774 | 99.774 |
| 21 | Burundi CO2 emissions (metric tons per capita) | 99.980 | 99.983 | 99.986 | 99.997 | 99.991 | 99.992 | 99.993 | 99.994 | 99.991 | 99.987 | 99.982 | 99.982 | 99.959 | 99.959 | 99.959 |
| 22 | Cambodia CO2 emissions (metric tons per capita) | 99.754 | 99.737 | 99.734 | 99.699 | 99.678 | 99.629 | 99.586 | 99.508 | 99.476 | 99.464 | 99.447 | 99.441 | 99.338 | 99.338 | 99.338 |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 23 Cameroon | 99,694 | 99,667 | 99,661 | 99,694 | 99,689 | 99,529 | 99,567 | 99,483 | 99,493 | 99,586 | 99,571 | 99,536 | 99,532 | 99,532 | 99,532 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 24 Canada | 73,892 | 72,468 | 72,788 | 72,800 | 73,675 | 73,424 | 73,393 | 74,835 | 75,212 | 75,343 | 76,526 | 76,810 | 76,174 | 76,174 | 76,174 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 25 Central African Republic | 99,930 | 99,936 | 99,938 | 99,940 | 99,936 | 99,936 | 99,937 | 99,939 | 99,936 | 99,931 | 99,926 | 99,925 | 99,924 | 99,924 | 99,924 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 26 Chad | 100,000 | 99,965 | 99,968 | 99,967 | 99,968 | 99,962 | 99,957 | 99,962 | 99,961 | 99,960 | 99,953 | 99,945 | 99,945 | 99,945 | 99,945 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 27 Chile | 94,456 | 94,475 | 94,123 | 93,986 | 93,761 | 93,173 | 93,223 | 93,764 | 93,318 | 92,738 | 92,646 | 92,507 | 92,631 | 92,631 | 92,631 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 28 China | 95,283 | 94,467 | 93,656 | 92,890 | 92,168 | 91,609 | 91,029 | 90,543 | 89,674 | 88,599 | 88,310 | 88,101 | 88,122 | 88,122 | 88,122 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 29 Colombia | 97,916 | 97,879 | 97,995 | 97,807 | 97,763 | 97,809 | 97,636 | 97,504 | 97,411 | 97,426 | 97,338 | 97,041 | 97,252 | 97,252 | 97,252 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 30 Congo, Dem. Rep. | 100,000 | 99,999 | 99,994 | 99,986 | 99,984 | 99,982 | 99,981 | 99,985 | 99,980 | 99,970 | 99,974 | 99,950 | 99,929 | 99,929 | 99,929 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 31 Congo, Rep. | 99,763 | 99,616 | 99,614 | 99,612 | 99,570 | 99,548 | 99,527 | 99,382 | 99,317 | 99,239 | 99,018 | 99,004 | 99,027 | 99,027 | 99,027 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 32 Costa Rica | 97,572 | 97,494 | 97,417 | 97,477 | 97,429 | 97,095 | 97,132 | 97,250 | 97,401 | 97,373 | 97,395 | 97,481 | 97,455 | 97,455 | 97,455 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 33 Cote d'Ivoire | 99,367 | 99,542 | 99,357 | 99,356 | 99,439 | 99,469 | 99,481 | 99,581 | 99,490 | 99,482 | 99,344 | 99,262 | 99,256 | 99,256 | 99,256 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 34 Croatia | 92.395 | 91.858 | 92.073 | 92.001 | 91.993 | 91.551 | 91.988 | 92.486 | 92.822 | 92.725 | 93.374 | 93.520 | 93.757 | 93.757 | 93.757 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 35 Cuba | 96.358 | 96.452 | 96.526 | 96.392 | 96.200 | 96.288 | 95.781 | 95.860 | 94.685 | 95.027 | 95.015 | 95.216 | 95.223 | 95.223 | 95.223 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 36 Cyprus | 88.684 | 87.720 | 88.573 | 88.506 | 88.271 | 87.868 | 87.512 | 88.370 | 89.094 | 89.609 | 90.407 | 91.822 | 91.726 | 91.726 | 91.726 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 37 Czech Republic | 81.493 | 81.130 | 81.954 | 81.463 | 81.205 | 81.132 | 82.298 | 83.759 | 83.215 | 83.952 | 84.858 | 85.216 | 85.562 | 85.562 | 85.562 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 38 Denmark | 84.747 | 83.632 | 85.251 | 86.313 | 84.067 | 85.505 | 86.544 | 87.309 | 86.759 | 88.513 | 89.746 | 89.197 | 90.660 | 90.660 | 90.660 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 39 Dominican Republic | 96.217 | 96.243 | 96.855 | 96.844 | 96.697 | 96.513 | 96.637 | 96.761 | 96.677 | 96.688 | 96.591 | 96.738 | 96.762 | 96.762 | 96.762 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 40 Ecuador | 97.017 | 96.826 | 96.636 | 96.552 | 96.768 | 96.486 | 96.329 | 96.154 | 96.176 | 96.014 | 96.125 | 95.898 | 95.670 | 95.670 | 95.670 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 41 Egypt, Arab Rep. | 97.264 | 96.873 | 96.869 | 96.592 | 96.423 | 96.277 | 96.157 | 96.072 | 96.225 | 96.039 | 96.128 | 96.279 | 96.558 | 96.558 | 96.558 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 42 El Salvador | 98.425 | 98.297 | 98.355 | 98.340 | 98.245 | 98.219 | 98.339 | 98.372 | 98.376 | 98.335 | 98.339 | 98.456 | 98.450 | 98.450 | 98.450 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 43 Equatorial Guinea | 88.234 | 86.355 | 88.666 | 90.208 | 90.553 | 90.901 | 91.845 | 92.007 | 92.264 | 90.302 | 92.255 | 92.510 | 92.557 | 92.557 | 92.557 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 44 Eritrea | 99.765 | 99.723 | 99.714 | 99.725 | 99.812 | 99.809 | 99.875 | 99.841 | 99.845 | 99.820 | 99.820 | 99.820 | 99.820 | 99.820 | 99.820 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 45 Estonia | 82,993 | 80,310 | 80,009 | 80,509 | 81,073 | 78,003 | 79,381 | 82,802 | 78,563 | 77,905 | 78,999 | 76,205 | 76,592 | 76,592 | 76,592 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 46 Ethiopia | 99,928 | 99,921 | 99,917 | 99,924 | 99,919 | 99,912 | 99,905 | 99,907 | 99,911 | 99,894 | 99,883 | 99,852 | 99,841 | 99,841 | 99,841 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 47 Finland | 81,308 | 79,098 | 79,774 | 83,588 | 80,188 | 80,933 | 83,239 | 84,316 | 81,759 | 83,386 | 85,705 | 86,326 | 86,359 | 86,359 | 86,359 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 48 France | 90,450 | 90,376 | 90,369 | 90,402 | 90,707 | 90,928 | 91,047 | 91,445 | 91,460 | 92,014 | 92,019 | 92,039 | 92,813 | 92,813 | 92,813 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 49 Gabon | 94,453 | 94,512 | 94,607 | 94,531 | 95,471 | 95,665 | 95,742 | 95,802 | 95,400 | 95,405 | 95,443 | 95,443 | 95,660 | 95,660 | 95,660 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 50 Gambia, The | 99,681 | 99,692 | 99,698 | 99,709 | 99,703 | 99,668 | 99,665 | 99,662 | 99,626 | 99,625 | 99,631 | 99,662 | 99,607 | 99,607 | 99,607 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 51 Georgia | 98,802 | 98,645 | 98,422 | 98,120 | 97,683 | 97,547 | 98,006 | 97,553 | 97,491 | 96,782 | 96,546 | 96,744 | 96,223 | 96,223 | 96,223 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 52 Germany | 84,153 | 84,294 | 84,405 | 84,772 | 84,385 | 85,053 | 85,024 | 86,110 | 85,382 | 85,627 | 85,509 | 85,207 | 85,998 | 85,998 | 85,998 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 53 Ghana | 99,441 | 99,440 | 99,477 | 99,517 | 99,361 | 99,346 | 99,410 | 99,520 | 99,388 | 99,412 | 99,301 | 99,153 | 99,183 | 99,183 | 99,183 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 54 Greece | 86,468 | 86,201 | 86,032 | 85,854 | 86,095 | 85,994 | 86,356 | 86,963 | 88,128 | 88,661 | 88,591 | 90,028 | 90,274 | 90,274 | 90,274 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 55 Guatemala | 98,595 | 98,662 | 98,596 | 98,514 | 98,539 | 98,575 | 98,741 | 98,723 | 98,771 | 98,780 | 98,792 | 98,650 | 98,213 | 98,213 | 98,213 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 56 | Guinea CO ₂ emissions (metric tons per capita) | 99.718 | 99.710 | 99.706 | 99.732 | 99.727 | 99.722 | 99.695 | 99.691 | 99.649 | 99.632 | 99.668 | 99.715 | 99.702 | 99.702 | 99.702 |
| 57 | Guinea-Bissau CO ₂ emissions (metric tons per capita) | 99.841 | 99.797 | 99.794 | 99.786 | 99.788 | 99.777 | 99.787 | 99.785 | 99.788 | 99.786 | 99.786 | 99.788 | 99.781 | 99.781 | 99.781 |
| 58 | Haiti CO ₂ emissions (metric tons per capita) | 99.703 | 99.724 | 99.685 | 99.676 | 99.675 | 99.635 | 99.639 | 99.666 | 99.694 | 99.684 | 99.674 | 99.665 | 99.602 | 99.602 | 99.602 |
| 59 | Honduras CO ₂ emissions (metric tons per capita) | 98.629 | 98.510 | 98.415 | 98.412 | 98.563 | 98.232 | 98.291 | 98.483 | 98.493 | 98.337 | 98.362 | 98.377 | 98.332 | 98.332 | 98.332 |
| 60 | Hong Kong SAR, China CO ₂ emissions (metric tons per capita) | 90.753 | 89.861 | 90.324 | 89.866 | 90.348 | 90.051 | 90.053 | 90.488 | 90.889 | 90.254 | 90.449 | 90.146 | 89.955 | 89.955 | 89.955 |
| 61 | Hungary CO ₂ emissions (metric tons per capita) | 91.318 | 90.827 | 91.056 | 90.951 | 91.035 | 91.234 | 91.406 | 92.390 | 92.102 | 92.456 | 92.936 | 93.306 | 93.297 | 93.297 | 93.297 |
| 62 | India CO ₂ emissions (metric tons per capita) | 98.502 | 98.463 | 98.411 | 98.343 | 98.258 | 98.146 | 97.961 | 97.769 | 97.824 | 97.699 | 97.507 | 97.517 | 97.299 | 97.299 | 97.299 |
| 63 | Indonesia CO ₂ emissions (metric tons per capita) | 97.803 | 97.762 | 97.646 | 97.648 | 97.659 | 97.485 | 97.245 | 97.085 | 97.239 | 96.151 | 95.989 | 96.959 | 97.158 | 97.158 | 97.158 |
| 64 | Iran, Islamic Rep. CO ₂ emissions (metric tons per capita) | 90.701 | 90.431 | 89.894 | 89.522 | 88.742 | 88.649 | 88.294 | 88.156 | 87.900 | 87.713 | 87.399 | 87.396 | 86.955 | 86.955 | 86.955 |
| 65 | Iraq CO ₂ emissions (metric tons per capita) | 94.507 | 94.417 | 93.187 | 93.395 | 94.401 | 96.574 | 94.979 | 94.509 | 94.273 | 93.344 | 92.675 | 92.319 | 92.434 | 92.434 | 92.434 |
| 66 | Ireland CO ₂ emissions (metric tons per capita) | 82.602 | 83.170 | 83.059 | 83.509 | 84.088 | 84.012 | 84.912 | 85.999 | 86.165 | 87.741 | 87.782 | 88.065 | 88.384 | 88.384 | 88.384 |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 67 Israel | 85,660 | 85,191 | 86,348 | 87,058 | 86,050 | 86,164 | 85,287 | 86,435 | 85,768 | 85,978 | 84,959 | 86,894 | 87,618 | 87,618 | 87,618 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 68 Italy | 87,509 | 87,131 | 87,060 | 87,140 | 87,288 | 87,532 | 88,031 | 89,303 | 89,236 | 89,450 | 90,235 | 90,980 | 91,710 | 91,710 | 91,710 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 69 Jamaica | 94,032 | 93,822 | 93,857 | 93,992 | 93,456 | 94,541 | 94,254 | 95,672 | 95,941 | 95,646 | 95,883 | 95,550 | 95,936 | 95,936 | 95,936 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 70 Japan | 84,919 | 84,679 | 84,388 | 84,720 | 84,826 | 84,588 | 85,114 | 86,422 | 85,589 | 85,323 | 84,816 | 84,591 | 84,973 | 84,973 | 84,973 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 71 Jordan | 94,988 | 94,920 | 94,543 | 94,212 | 94,411 | 94,413 | 94,837 | 94,964 | 95,375 | 95,514 | 95,202 | 95,454 | 95,290 | 95,290 | 95,290 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 72 Kazakhstan | 85,823 | 84,974 | 81,835 | 81,551 | 80,167 | 77,364 | 76,585 | 79,104 | 75,993 | 75,332 | 77,190 | 75,675 | 77,359 | 77,359 | 77,359 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 73 Kenya | 99,651 | 99,717 | 99,686 | 99,654 | 99,622 | 99,622 | 99,616 | 99,545 | 99,565 | 99,529 | 99,577 | 99,560 | 99,539 | 99,539 | 99,539 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 74 Korea, Dem. People's Rep. | 95,347 | 95,285 | 95,216 | 95,039 | 94,985 | 95,841 | 95,416 | 95,469 | 95,764 | 96,963 | 96,914 | 97,755 | 97,482 | 97,482 | 97,482 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 75 Korea, Rep. | 84,603 | 84,664 | 84,198 | 84,865 | 84,692 | 83,959 | 83,697 | 83,740 | 81,978 | 81,399 | 81,668 | 81,484 | 81,767 | 81,767 | 81,767 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 76 Kosovo | | | | | | | | | | | | | | | |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 77 Kuwait | 57,158 | 56,425 | 54,610 | 50,425 | 51,049 | 52,593 | 50,796 | 51,145 | 52,844 | 55,003 | 52,459 | 56,891 | 60,216 | 60,216 | 60,216 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 78 | Kyrgyz Republic CO2 emissions (metric tons per capita) | 98.461 | 98.327 | 98.213 | 98.320 | 98.363 | 98.043 | 97.756 | 98.038 | 98.180 | 97.838 | 97.177 | 97.313 | 97.431 | 97.431 | 97.431 |
| 79 | Lao PDR CO2 emissions (metric tons per capita) | 99.699 | 99.718 | 99.641 | 99.644 | 99.611 | 99.788 | 99.783 | 99.707 | 99.615 | 99.625 | 99.612 | 99.646 | 99.560 | 99.560 | 99.560 |
| 80 | Latvia CO2 emissions (metric tons per capita) | 95.307 | 94.944 | 94.866 | 94.737 | 94.328 | 94.063 | 94.301 | 94.700 | 93.953 | 94.440 | 94.550 | 94.476 | 94.508 | 94.508 | 94.508 |
| 81 | Lebanon CO2 emissions (metric tons per capita) | 92.859 | 92.276 | 93.166 | 93.612 | 94.404 | 94.830 | 93.415 | 92.154 | 92.733 | 92.997 | 92.763 | 93.274 | 93.249 | 93.249 | 93.249 |
| 82 | Lesotho CO2 emissions (metric tons per capita) | 98.447 | 98.439 | 98.410 | 98.399 | 98.392 | 98.377 | 98.351 | 98.295 | 98.268 | 98.246 | 98.213 | 98.214 | 98.214 | 98.214 | 98.214 |
| 83 | Liberia CO2 emissions (metric tons per capita) | 99.778 | 99.766 | 99.723 | 99.678 | 99.680 | 99.730 | 99.786 | 99.815 | 99.713 | 99.684 | 99.642 | 99.677 | 99.693 | 99.693 | 99.693 |
| 84 | Libya CO2 emissions (metric tons per capita) | 86.371 | 86.210 | 86.096 | 85.831 | 85.733 | 86.821 | 85.423 | 85.078 | 84.176 | 89.911 | 86.613 | 85.696 | 85.529 | 85.529 | 85.529 |
| 85 | Lithuania CO2 emissions (metric tons per capita) | 94.004 | 94.103 | 93.839 | 93.425 | 93.195 | 92.621 | 92.622 | 93.782 | 93.165 | 92.842 | 92.722 | 93.284 | 93.119 | 93.119 | 93.119 |
| 86 | Macedonia, FYR CO2 emissions (metric tons per capita) | 91.605 | 91.336 | 91.442 | 91.388 | 91.661 | 92.774 | 92.851 | 93.394 | 93.472 | 92.871 | 93.206 | 94.062 | 94.323 | 94.323 | 94.323 |
| 87 | Madagascar CO2 emissions (metric tons per capita) | 99.913 | 99.874 | 99.869 | 99.879 | 99.889 | 99.882 | 99.880 | 99.893 | 99.883 | 99.860 | 99.838 | 99.815 | 99.824 | 99.824 | 99.824 |
| 88 | Malawi CO2 emissions (metric tons per capita) | 99.918 | 99.912 | 99.913 | 99.923 | 99.922 | 99.928 | 99.913 | 99.928 | 99.910 | 99.910 | 99.922 | 99.913 | 99.911 | 99.911 | 99.911 |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 89 Malaysia | 91.306 | 89.912 | 89.757 | 89.296 | 89.904 | 89.073 | 88.151 | 88.658 | 87.763 | 87.880 | 88.195 | 87.463 | 87.350 | 87.350 | 87.350 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 90 Mali | 99.915 | 99.918 | 99.918 | 99.919 | 99.917 | 99.913 | 99.910 | 99.942 | 99.928 | 99.923 | 99.931 | 99.931 | 99.898 | 99.898 | 99.898 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 91 Mauritania | 99.288 | 99.288 | 99.232 | 99.229 | 99.240 | 99.151 | 99.133 | 99.074 | 99.051 | 99.013 | 98.935 | 98.962 | 98.977 | 98.977 | 98.977 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 92 Mauritius | 96.248 | 96.046 | 96.033 | 95.793 | 95.386 | 95.332 | 95.247 | 95.334 | 95.086 | 95.089 | 95.043 | 94.925 | 94.737 | 94.737 | 94.737 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 93 Mexico | 93.762 | 93.452 | 93.519 | 93.243 | 93.158 | 93.247 | 93.180 | 93.525 | 93.783 | 93.609 | 93.546 | 93.713 | 93.927 | 93.927 | 93.927 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 94 Moldova | 98.293 | 98.155 | 98.035 | 97.880 | 97.831 | 97.965 | 97.917 | 98.015 | 97.844 | 97.795 | 97.846 | 97.812 | 97.840 | 97.840 | 97.840 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 95 Mongolia | 94.676 | 94.894 | 94.623 | 94.680 | 94.232 | 92.682 | 92.799 | 92.279 | 91.987 | 87.741 | 85.320 | 78.710 | 88.779 | 88.779 | 88.779 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 96 Morocco | 97.983 | 98.043 | 97.764 | 97.662 | 97.604 | 97.488 | 97.387 | 97.440 | 97.304 | 97.258 | 97.059 | 97.272 | 97.276 | 97.276 | 97.276 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 97 Mozambique | 99.898 | 99.876 | 99.880 | 99.892 | 99.884 | 99.868 | 99.873 | 99.860 | 99.851 | 99.825 | 99.838 | 99.789 | 99.541 | 99.541 | 99.541 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 98 Myanmar | 99.721 | 99.703 | 99.621 | 99.652 | 99.614 | 99.616 | 99.717 | 99.705 | 99.636 | 99.583 | 99.687 | 99.635 | 99.372 | 99.372 | 99.372 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 99 Namibia | 98.613 | 98.541 | 98.488 | 98.235 | 98.239 | 98.237 | 97.537 | 97.762 | 97.776 | 98.013 | 97.670 | 98.238 | 97.530 | 97.530 | 97.530 |
| CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 100 | Nepal | 99.861 | 99.850 | 99.863 | 99.840 | 99.873 | 99.872 | 99.825 | 99.774 | 99.734 | 99.710 | 99.695 | 99.655 | 99.582 | 99.582 | 99.582 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 101 | Netherlands | 82.273 | 82.304 | 82.111 | 82.477 | 82.683 | 83.005 | 83.039 | 83.570 | 82.640 | 83.561 | 83.985 | 83.756 | 84.371 | 84.371 | 84.371 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 102 | New Zealand | 86.757 | 86.672 | 86.686 | 86.994 | 87.413 | 87.459 | 87.356 | 88.148 | 88.499 | 88.687 | 87.801 | 88.141 | 87.897 | 87.897 | 87.897 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 103 | Nicaragua | 98.797 | 98.701 | 98.714 | 98.762 | 98.736 | 98.713 | 98.782 | 98.777 | 98.782 | 98.703 | 98.788 | 98.821 | 98.753 | 98.753 | 98.753 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 104 | Niger | 99.939 | 99.935 | 99.931 | 99.947 | 99.952 | 99.952 | 99.945 | 99.933 | 99.917 | 99.907 | 99.863 | 99.863 | 99.854 | 99.854 | 99.854 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 105 | Nigeria | 98.880 | 98.814 | 98.813 | 98.824 | 98.935 | 99.005 | 99.020 | 99.245 | 99.118 | 99.102 | 99.100 | 99.128 | 99.168 | 99.168 | 99.168 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 106 | Norway | 86.805 | 84.393 | 85.370 | 85.541 | 85.041 | 84.916 | 81.594 | 81.938 | 80.625 | 85.627 | 84.338 | 81.956 | 85.396 | 85.396 | 85.396 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 107 | Oman | 82.806 | 78.595 | 81.960 | 81.240 | 75.828 | 74.127 | 75.598 | 77.525 | 75.421 | 73.686 | 73.077 | 73.926 | 75.654 | 75.654 | 75.654 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 108 | Pakistan | 98.785 | 98.759 | 98.652 | 98.628 | 98.562 | 98.465 | 98.495 | 98.529 | 98.536 | 98.562 | 98.579 | 98.602 | 98.615 | 98.615 | 98.615 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 109 | Panama | 97.087 | 97.003 | 97.227 | 96.788 | 96.599 | 96.740 | 96.719 | 96.237 | 96.059 | 95.730 | 95.798 | 95.622 | 96.471 | 96.471 | 96.471 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |
| 110 | Papua New Guinea | 99.090 | 98.993 | 98.880 | 98.933 | 98.978 | 98.572 | 98.914 | 98.872 | 98.972 | 98.872 | 98.951 | 98.743 | 98.744 | 98.744 | 98.744 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 111 Paraguay | 98.912 | 98.884 | 98.898 | 98.986 | 98.960 | 98.935 | 98.867 | 98.854 | 98.734 | 98.695 | 98.722 | 98.703 | 98.656 | 98.656 | 98.656 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 112 Peru | 98.416 | 98.484 | 98.183 | 97.906 | 98.060 | 97.633 | 97.769 | 97.215 | 96.935 | 97.397 | 97.147 | 97.078 | 96.883 | 96.883 | 96.883 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 113 Philippines | 98.645 | 98.672 | 98.649 | 98.660 | 98.813 | 98.754 | 98.658 | 98.702 | 98.600 | 98.613 | 98.543 | 98.457 | 98.363 | 98.363 | 98.363 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 114 Poland | 87.857 | 87.542 | 87.445 | 87.517 | 86.830 | 87.017 | 86.995 | 87.716 | 86.907 | 86.884 | 87.592 | 87.487 | 88.164 | 88.164 | 88.164 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 115 Portugal | 89.912 | 90.791 | 90.522 | 90.219 | 91.057 | 91.024 | 91.714 | 91.938 | 92.843 | 92.909 | 93.122 | 93.173 | 93.192 | 93.192 | 93.192 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 116 Puerto Rico | | | | | | | | | | | | | | | |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 117 Qatar | 0.029 | 4.851 | 10.705 | 7.031 | 0.867 | 16.072 | 26.361 | 31.345 | 35.721 | 34.990 | 29.604 | 40.397 | 28.332 | 28.332 | 28.332 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 118 Romania | 92.966 | 92.635 | 92.899 | 92.888 | 92.332 | 92.303 | 92.623 | 93.707 | 93.838 | 93.380 | 93.598 | 94.426 | 94.479 | 94.479 | 94.479 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 119 Russian Federation | 83.115 | 82.524 | 82.476 | 82.267 | 81.611 | 81.605 | 81.065 | 82.629 | 81.571 | 80.560 | 79.849 | 80.467 | 81.313 | 81.313 | 81.313 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 120 Rwanda | 99.931 | 99.935 | 99.935 | 99.937 | 99.939 | 99.936 | 99.941 | 99.938 | 99.938 | 99.930 | 99.922 | 99.915 | 99.913 | 99.913 | 99.913 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 121 Saudi Arabia | 76.511 | 77.128 | 73.132 | 73.774 | 72.239 | 75.791 | 73.854 | 72.266 | 70.189 | 72.088 | 69.377 | 71.510 | 69.204 | 69.204 | 69.204 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 122 Senegal | 99.345 | 99.293 | 99.275 | 99.214 | 99.383 | 99.341 | 99.371 | 99.453 | 99.083 | 99.036 | 99.118 | 99.088 | 99.068 | 99.068 | 99.068 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 123 Serbia | 88.528 | 88.528 | 88.528 | 88.528 | 88.528 | 88.812 | 88.842 | 90.072 | 90.081 | 89.290 | 90.369 | 90.140 | 91.691 | 91.691 | 91.691 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 124 Sierra Leone | 99.836 | 99.831 | 99.843 | 99.877 | 99.831 | 99.861 | 99.859 | 99.866 | 99.852 | 99.815 | 99.789 | 99.758 | 99.737 | 99.737 | 99.737 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 125 Singapore | 82.177 | 88.087 | 89.243 | 88.796 | 88.984 | 93.175 | 88.244 | 82.328 | 82.729 | 86.260 | 89.222 | 83.753 | 83.762 | 83.762 | 83.762 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 126 Slovak Republic | 88.507 | 88.428 | 88.645 | 88.467 | 88.542 | 89.228 | 88.964 | 90.055 | 89.419 | 89.935 | 90.466 | 90.381 | 91.093 | 91.093 | 91.093 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 127 Slovenia | 87.827 | 87.761 | 87.584 | 87.510 | 87.253 | 87.324 | 86.476 | 88.204 | 88.214 | 88.427 | 88.688 | 89.186 | 90.222 | 90.222 | 90.222 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 128 Somalia | 99.933 | 99.934 | 99.937 | 99.939 | 99.942 | 99.942 | 99.946 | 99.949 | 99.949 | 99.952 | 99.954 | 99.956 | 99.958 | 99.958 | 99.958 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 129 South Africa | 87.753 | 86.276 | 84.911 | 86.206 | 85.372 | 84.964 | 84.207 | 84.228 | 85.350 | 85.670 | 85.937 | 86.221 | 85.752 | 85.752 | 85.752 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 130 South Sudan | | | | | | | | | | | | 99.835 | 99.825 | 99.825 | 99.825 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 131 Spain | 88.047 | 88.016 | 87.547 | 87.249 | 87.585 | 87.527 | 88.719 | 90.216 | 90.849 | 90.893 | 91.094 | 92.004 | 92.084 | 92.084 | 92.084 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 132 Sri Lanka | 99.108 | 99.113 | 99.020 | 99.043 | 99.061 | 99.038 | 99.057 | 98.988 | 98.989 | 98.851 | 98.790 | 98.842 | 98.632 | 98.632 | 98.632 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |

(continued)

Table A.2.11 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 155 | Venezuela, RB | 88.020 | 88.308 | 90.932 | 90.300 | 90.207 | 90.865 | 89.983 | 89.749 | 90.557 | 89.534 | 90.454 | 90.518 | 90.518 | 90.518 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 156 | Vietnam | 98.624 | 98.484 | 98.274 | 98.149 | 98.083 | 98.064 | 97.841 | 97.438 | 97.296 | 97.502 | 97.440 | 97.126 | 97.126 | 97.126 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 157 | West Bank and Gaza | 99.437 | 99.389 | 99.119 | 98.725 | 98.979 | 98.979 | 99.128 | 99.138 | 99.126 | 99.171 | 99.106 | 99.106 | 99.106 | 99.106 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 158 | Yemen, Rep. | 98.714 | 98.626 | 98.541 | 98.492 | 98.439 | 98.508 | 98.452 | 98.342 | 98.463 | 98.749 | 98.846 | 98.456 | 98.664 | 98.664 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 159 | Zambia | 99.748 | 99.737 | 99.741 | 99.730 | 99.737 | 99.790 | 99.767 | 99.735 | 99.723 | 99.704 | 99.636 | 99.617 | 99.574 | 99.574 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |
| 160 | Zimbabwe | 98.519 | 98.698 | 98.858 | 98.716 | 98.773 | 98.859 | 99.125 | 99.389 | 99.158 | 98.980 | 99.193 | 98.805 | 98.798 | 98.798 |
| | CO2 emissions (metric tons per capita) | | | | | | | | | | | | | | |

Source: Author's own calculations based on World Bank (2018)

See World Bank (2018), the World Development Indicators

<http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>

<https://data.worldbank.org/indicator/SI.POV.GINI?locations=US>

Methodic note:

CO2 emissions was turned, higher scores with the CO2 emissions are lower scores in the tabulation here

Status: April 30, 2018

Appendix A.3 Overview and Summary: Documentation of the Transformed (Rescaled) Indicators and Aggregated Dimensions (Subdimensions) for Identified Countries and Country Groups (Years 2002–2016)

The comparative analysis of democracy and quality of democracy in global context focuses in more particular on fifteen countries or country groups. These are: Brazil; China; India; Indonesia; Japan; Nigeria; Russian Federation (Russia); USA; European Union (EU15); European Union (EU28); Nordic countries; OECD (OECD35); Latin America (Latin America 17); Asia (Asia15); and World122² (for further details see once more Chapter 2).

All indicators for aggregated country groups (with more than one country, for example the European Union or OECD) are weighted by population.

In Appendix A.3, in the following Table A.3.1, for those identified fifteen countries or country groups again all indicators and aggregated dimensions (or subdimensions) (see Appendix A.2) are documented in an overview and summary format.

²“World122” refers to those 110 countries with no missing indicators.

Acronyms used for aggregated dimensions (subdimensions) in Table A.3.1 have the following meaning:

1. FREE pol = Political Freedom;
2. FREE eco = Economic Freedom;
3. EQUAL inc = Income Equality;
4. EQUAL gen = Gender Equality;
5. HDI re-des = Human Development Index (HDI) Re-Engineered, Redesigned;
6. DEVELOP non-pol = (Sustainable) Development Non-Political;
7. SD comprehensive = Sustainable Development Comprehensive.

In context of the dimension (subdimensions) of sustainable development, the indicator-specific acronyms have the following meaning:

1. SD (Sustainable Development) Life Exp: Life expectancy at birth, total (years);
2. SD (Sustainable Development) Edu Tert: School enrollment, tertiary (% gross);
3. SD (Sustainable Development) Gdp p Cap: GDP per capita, PPP (constant 2011 international \$)
4. SD (Sustainable Development) CO2 Em low: CO2 emissions (metric tons per capita).

Table A.3.1 Documentation of the transformed (re-scaled) indicators and aggregated dimensions (sub-dimensions) for identified countries and country groups (years 2002–2016). Scores: 0 = possible minimum, 100 = empirically observed maximum.
The higher the scores, the better the contribution for democracy (statement of tendency)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Brazil | FREE pol | 72.373 | 73.098 | 72.204 | 73.122 | 73.146 | 72.371 | 72.371 | 72.784 | 72.422 | 72.977 | 73.583 | 74.501 | 74.501 | 73.777 |
| China | FREE pol | 18.564 | 18.564 | 16.728 | 18.369 | 18.006 | 18.200 | 17.451 | 17.424 | 17.424 | 17.644 | 17.813 | 18.006 | 17.282 | 16.919 |
| India | FREE pol | 68.506 | 69.956 | 73.149 | 74.842 | 75.566 | 75.204 | 76.291 | 75.566 | 74.842 | 74.117 | 74.310 | 74.310 | 74.723 | 73.443 |
| Indonesia | FREE pol | 56.200 | 56.563 | 55.812 | 58.912 | 61.693 | 61.693 | 62.804 | 62.973 | 62.055 | 63.504 | 63.504 | 63.504 | 62.949 | 63.724 |
| Japan | FREE pol | 89.194 | 88.832 | 88.107 | 88.882 | 87.964 | 87.964 | 87.964 | 87.964 | 87.964 | 87.602 | 86.877 | 86.515 | 87.626 | 88.595 |
| Nigeria | FREE pol | 47.972 | 47.972 | 48.890 | 48.165 | 50.465 | 52.300 | 50.168 | 48.837 | 48.231 | 51.281 | 51.914 | 50.028 | 49.303 | 47.922 |
| Russia | FREE pol | 41.712 | 41.349 | 40.212 | 34.111 | 33.244 | 31.602 | 29.326 | 28.189 | 25.747 | 26.109 | 26.303 | 25.192 | 24.467 | 22.245 |
| USA | FREE pol | 91.636 | 93.085 | 92.191 | 92.773 | 92.554 | 92.411 | 92.604 | 92.604 | 92.967 | 92.604 | 90.742 | 89.824 | 90.186 | 88.131 |
| EU15 | FREE pol | 93.017 | 92.450 | 92.861 | 92.820 | 92.849 | 93.037 | 92.549 | 92.490 | 92.211 | 92.059 | 91.864 | 91.586 | 91.545 | 90.948 |
| EU28 | FREE pol | 91.194 | 90.577 | 91.033 | 91.129 | 91.129 | 91.512 | 91.190 | 91.178 | 90.876 | 90.720 | 90.492 | 90.193 | 89.621 | 88.958 |
| Nord Cs | FREE pol | 99.081 | 99.403 | 99.029 | 99.230 | 98.822 | 98.972 | 98.814 | 98.872 | 98.341 | 98.750 | 98.797 | 98.798 | 98.592 | 98.733 |
| OECD35 | FREE pol | 87.637 | 87.889 | 87.863 | 88.148 | 88.233 | 87.884 | 87.490 | 86.997 | 86.632 | 86.183 | 85.872 | 85.075 | 84.673 | 84.120 |
| LA17 | FREE pol | 69.469 | 69.859 | 69.638 | 69.519 | 70.105 | 68.881 | 67.791 | 66.838 | 66.040 | 65.821 | 65.985 | 65.813 | 65.450 | 64.994 |
| Asia15 | FREE pol | 43.211 | 43.705 | 44.093 | 45.520 | 45.741 | 45.331 | 44.797 | 46.053 | 46.084 | 46.311 | 46.676 | 46.200 | 45.814 | 45.224 |
| World122 | FREE pol | 54.006 | 54.284 | 54.581 | 55.328 | 55.618 | 55.246 | 54.619 | 55.001 | 54.666 | 54.658 | 54.790 | 54.384 | 54.007 | 53.530 |
| Brazil | FREE eco | 68.643 | 67.866 | 67.863 | 67.256 | 64.757 | 65.518 | 65.415 | 66.002 | 66.336 | 66.081 | 64.719 | 63.839 | 62.694 | 60.640 |
| China | FREE eco | 62.868 | 61.561 | 62.716 | 63.205 | 63.024 | 63.526 | 63.690 | 62.252 | 63.133 | 63.016 | 63.459 | 63.846 | 64.066 | 63.677 |
| India | FREE eco | 62.907 | 63.073 | 66.585 | 64.441 | 65.385 | 65.224 | 64.955 | 64.622 | 66.045 | 65.882 | 65.235 | 64.806 | 66.371 | 67.259 |
| Indonesia | FREE eco | 64.371 | 61.774 | 63.905 | 63.622 | 64.452 | 64.289 | 65.270 | 68.068 | 68.454 | 68.513 | 69.552 | 70.658 | 70.327 | 71.048 |
| Japan | FREE eco | 80.223 | 77.957 | 79.948 | 83.386 | 82.673 | 82.132 | 81.314 | 81.750 | 81.150 | 81.409 | 80.704 | 81.255 | 81.319 | 81.208 |
| Nigeria | FREE eco | 57.829 | 57.771 | 59.231 | 62.553 | 65.349 | 63.385 | 62.623 | 64.818 | 65.959 | 65.084 | 65.289 | 64.845 | 65.566 | 66.621 |
| Russia | FREE eco | 60.781 | 63.414 | 62.418 | 63.627 | 64.060 | 63.109 | 63.175 | 63.496 | 63.715 | 64.151 | 64.048 | 64.601 | 64.821 | 67.596 |
| USA | FREE eco | 89.207 | 89.484 | 89.062 | 89.566 | 90.164 | 89.401 | 88.037 | 85.777 | 85.394 | 85.215 | 84.286 | 84.390 | 85.485 | 85.042 |
| EU15 | FREE eco | 79.623 | 79.739 | 79.469 | 79.692 | 79.732 | 79.416 | 79.127 | 79.170 | 79.086 | 78.259 | 78.682 | 79.204 | 79.363 | 79.391 |
| EU28 | FREE eco | 77.419 | 77.645 | 77.785 | 78.183 | 78.356 | 78.291 | 78.217 | 78.354 | 78.477 | 77.868 | 78.290 | 78.941 | 79.135 | 79.218 |
| Nord Cs | FREE eco | 81.603 | 81.084 | 80.941 | 81.658 | 81.773 | 82.104 | 81.706 | 82.294 | 82.486 | 81.374 | 81.763 | 82.591 | 82.190 | 83.284 |
| OECD35 | FREE eco | 80.321 | 80.390 | 80.362 | 81.282 | 81.450 | 81.339 | 80.765 | 80.675 | 80.592 | 80.104 | 79.998 | 80.564 | 80.755 | 80.347 |
| LA17 | FREE eco | 69.789 | 69.267 | 68.615 | 68.670 | 68.024 | 68.074 | 67.779 | 68.279 | 68.580 | 67.893 | 67.261 | 66.832 | 66.373 | 66.151 |
| Asia15 | FREE eco | 62.787 | 62.143 | 64.067 | 63.951 | 63.969 | 63.906 | 64.200 | 63.831 | 64.810 | 64.784 | 64.904 | 65.012 | 65.711 | 66.009 |
| World122 | FREE eco | 66.429 | 66.127 | 67.204 | 67.453 | 67.575 | 67.396 | 67.478 | 67.330 | 67.833 | 67.654 | 67.595 | 67.686 | 68.084 | 68.223 |
| Brazil | EQUAL inc | 49.403 | 50.119 | 51.432 | 51.790 | 52.625 | 53.461 | 54.415 | 55.012 | 55.012 | 55.967 | 56.444 | 56.205 | 57.876 | 58.115 |

(continued)

Table A.3.1 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| China | EQUAL inc 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.258 | 68.974 | 68.974 | 68.974 | 68.974 | 68.974 |
| India | EQUAL inc 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 | 77.327 |
| Indonesia | EQUAL inc 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 | 72.196 |
| Japan | EQUAL inc 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 | 81.026 |
| Nigeria | EQUAL inc 71.480 | 71.480 | 71.480 | 71.480 | 71.480 | 71.480 | 71.480 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 | 68.019 |
| Russia | EQUAL inc 74.821 | 71.599 | 71.241 | 70.048 | 70.406 | 68.854 | 69.690 | 71.838 | 72.196 | 71.838 | 70.764 | 70.525 | 71.718 | 74.344 | 74.344 |
| USA | EQUAL inc 71.122 | 71.122 | 71.002 | 71.002 | 71.002 | 70.286 | 70.286 | 70.286 | 71.122 | 71.122 | 71.122 | 70.406 | 70.406 | 70.406 | 70.406 |
| EU15 | EQUAL inc 80.413 | 80.411 | 80.409 | 81.151 | 81.037 | 80.428 | 80.621 | 80.540 | 80.283 | 80.608 | 80.789 | 80.201 | 80.177 | 80.185 | 80.195 |
| EU28 | EQUAL inc 80.590 | 80.520 | 80.479 | 81.021 | 81.203 | 80.786 | 80.972 | 80.970 | 80.734 | 81.127 | 81.218 | 80.648 | 80.695 | 80.700 | 80.706 |
| Nord Cs | EQUAL inc 86.803 | 86.800 | 86.798 | 86.708 | 87.527 | 87.234 | 87.446 | 87.559 | 87.379 | 87.270 | 87.138 | 86.501 | 86.731 | 86.731 | 86.731 |
| OECD35 | EQUAL inc 75.499 | 75.410 | 75.769 | 75.860 | 75.976 | 75.688 | 75.589 | 75.538 | 75.682 | 75.725 | 75.332 | 75.332 | 75.254 | 75.226 | 75.207 |
| LA17 | EQUAL inc 53.640 | 54.481 | 56.393 | 56.499 | 56.936 | 57.396 | 58.089 | 58.632 | 58.881 | 59.738 | 60.161 | 60.115 | 60.869 | 61.263 | 61.267 |
| Asia15 | EQUAL inc 73.019 | 73.080 | 72.979 | 72.998 | 73.025 | 73.135 | 73.149 | 73.238 | 73.432 | 73.429 | 73.748 | 73.809 | 73.853 | 73.937 | 73.951 |
| World122 | EQUAL inc 72.163 | 72.164 | 72.221 | 72.275 | 72.293 | 72.315 | 72.399 | 72.524 | 72.591 | 72.666 | 72.912 | 72.901 | 72.977 | 73.042 | 73.037 |
| Brazil | EQUAL gen 76.976 | 76.976 | 76.976 | 76.976 | 78.082 | 79.259 | 78.765 | 78.294 | 78.576 | 81.282 | 81.753 | 81.659 | 80.706 | 80.824 | 80.471 |
| China | EQUAL gen 77.188 | 77.188 | 77.188 | 77.188 | 78.153 | 80.918 | 81.259 | 80.953 | 80.776 | 80.624 | 81.271 | 80.353 | 80.235 | 79.529 | 79.294 |
| India | EQUAL gen 70.718 | 70.718 | 70.718 | 70.718 | 69.835 | 71.294 | 72.365 | 72.412 | 72.824 | 75.788 | 77.071 | 75.941 | 78.118 | 80.353 | 78.706 |
| Indonesia | EQUAL gen 76.953 | 76.953 | 76.953 | 76.953 | 77.059 | 76.153 | 77.412 | 77.824 | 77.576 | 77.541 | 77.800 | 79.118 | 80.118 | 80.235 | 81.294 |
| Japan | EQUAL gen 71.729 | 73.224 | 73.882 | 75.847 | 75.941 | 75.694 | 75.847 | 76.753 | 76.635 | 76.824 | 76.447 | 77.459 | 78.824 | 77.647 | 77.294 |
| Nigeria | EQUAL gen 71.812 | 71.812 | 71.812 | 71.812 | 72.024 | 74.576 | 73.882 | 71.235 | 70.718 | 74.294 | 76.106 | 75.188 | 75.059 | 75.647 | 75.412 |
| Russia | EQUAL gen 79.647 | 79.647 | 79.647 | 79.647 | 80.776 | 82.282 | 82.200 | 82.776 | 82.788 | 82.118 | 82.153 | 81.494 | 81.647 | 81.294 | 81.882 |
| USA | EQUAL gen 82.847 | 82.847 | 82.847 | 82.847 | 82.376 | 84.459 | 84.388 | 87.188 | 87.200 | 86.741 | 86.965 | 87.800 | 87.059 | 84.941 | 84.471 |
| EU15 | EQUAL gen 82.314 | 82.201 | 82.369 | 83.426 | 84.834 | 85.531 | 85.833 | 86.021 | 86.322 | 85.878 | 86.262 | 87.998 | 89.053 | 88.116 | 88.733 |
| EU28 | EQUAL gen 82.063 | 81.779 | 81.879 | 82.713 | 83.905 | 84.622 | 84.936 | 85.082 | 85.290 | 84.991 | 85.373 | 86.842 | 87.787 | 87.152 | 87.819 |
| Nord Cs | EQUAL gen 92.245 | 91.766 | 92.517 | 93.168 | 93.714 | 94.550 | 94.905 | 95.064 | 95.618 | 96.292 | 96.128 | 96.901 | 96.688 | 95.692 | 95.476 |
| OECD35 | EQUAL gen 78.873 | 79.250 | 79.305 | 80.268 | 80.680 | 81.504 | 81.718 | 82.865 | 83.010 | 82.908 | 83.374 | 84.392 | 84.902 | 83.931 | 84.044 |
| LA17 | EQUAL gen 76.933 | 77.169 | 77.174 | 77.500 | 78.370 | 79.381 | 79.576 | 79.487 | 79.455 | 80.953 | 82.013 | 82.461 | 82.345 | 82.522 | 82.522 |
| Asia15 | EQUAL gen 74.587 | 74.615 | 74.614 | 74.654 | 74.816 | 76.461 | 77.014 | 77.025 | 77.152 | 78.060 | 78.858 | 78.358 | 79.251 | 79.745 | 79.188 |
| World122 | EQUAL gen 75.711 | 75.788 | 75.788 | 75.984 | 76.292 | 77.588 | 77.952 | 78.113 | 78.213 | 79.006 | 79.596 | 79.604 | 80.224 | 80.406 | 80.110 |
| Brazil | HDI re-des 36.760 | 37.612 | 38.249 | 38.874 | 39.107 | 40.745 | 42.354 | 42.866 | 43.231 | 45.261 | 45.916 | 46.446 | 47.322 | 47.605 | 47.439 |
| China | HDI re-des 33.494 | 34.554 | 35.454 | 36.130 | 36.752 | 37.181 | 37.476 | 38.184 | 38.888 | 39.441 | 40.350 | 41.452 | 44.292 | 45.678 | 45.892 |
| India | HDI re-des 28.586 | 28.908 | 29.194 | 29.340 | 29.790 | 30.486 | 31.212 | 31.720 | 32.477 | 34.069 | 34.683 | 34.748 | 35.410 | 35.989 | 36.076 |

(continued)

Table A.3.1 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Indonesia HDI re-des | 32.042 | 32.505 | 32.801 | 33.127 | 33.294 | 33.603 | 34.572 | 35.370 | 35.863 | 36.682 | 38.015 | 38.362 | 38.472 | 36.728 | 36.830 |
| Japan HDI re-des | 55.104 | 55.610 | 56.394 | 56.890 | 57.765 | 58.179 | 58.054 | 57.696 | 58.140 | 58.562 | 59.341 | 59.901 | 60.312 | 60.540 | 60.649 |
| Nigeria HDI re-des | 21.961 | 22.179 | 22.673 | 23.044 | 23.321 | 23.586 | 23.837 | 24.084 | 24.072 | 24.436 | 24.623 | 24.826 | 25.045 | 25.218 | 25.158 |
| Russia HDI re-des | 48.389 | 49.735 | 50.213 | 51.105 | 52.067 | 53.218 | 53.921 | 53.859 | 54.175 | 55.054 | 55.308 | 56.100 | 56.280 | 56.635 | 56.610 |
| USA HDI re-des | 64.456 | 65.277 | 65.842 | 66.315 | 66.601 | 67.098 | 67.506 | 68.169 | 70.010 | 70.741 | 70.556 | 69.003 | 68.618 | 68.624 | 68.748 |
| EU15 HDI re-des | 56.842 | 57.304 | 57.939 | 58.365 | 58.927 | 59.234 | 59.252 | 59.088 | 59.911 | 60.701 | 60.743 | 60.789 | 61.451 | 61.832 | 61.950 |
| EU28 HDI re-des | 54.435 | 55.060 | 55.850 | 56.458 | 57.163 | 57.673 | 57.969 | 57.954 | 58.707 | 59.370 | 59.346 | 59.376 | 59.917 | 60.299 | 60.444 |
| Nord Cs HDI re-des | 62.814 | 64.358 | 65.725 | 66.321 | 66.498 | 66.264 | 65.576 | 64.743 | 65.539 | 66.081 | 65.644 | 65.253 | 65.277 | 65.523 | 65.653 |
| OECD35 HDI re-des | 55.547 | 56.176 | 56.815 | 57.326 | 57.867 | 58.342 | 58.588 | 58.821 | 59.964 | 60.677 | 60.953 | 60.864 | 61.220 | 61.560 | 61.665 |
| LA17 HDI re-des | 38.972 | 39.537 | 40.091 | 40.552 | 40.931 | 41.851 | 43.219 | 43.505 | 44.104 | 45.260 | 45.812 | 46.277 | 46.851 | 47.128 | 47.071 |
| Asia15 HDI re-des | 31.344 | 31.934 | 32.433 | 32.864 | 33.313 | 33.818 | 34.299 | 34.869 | 35.501 | 36.445 | 37.138 | 37.650 | 39.006 | 39.576 | 39.689 |
| World122 HDI re-des | 36.622 | 37.154 | 37.638 | 38.062 | 38.519 | 39.039 | 39.534 | 39.945 | 40.575 | 41.351 | 41.851 | 42.192 | 43.079 | 43.508 | 43.536 |
| Brazil DEVELOP | 36.953 | 37.287 | 37.759 | 38.052 | 38.426 | 39.302 | 39.980 | 40.118 | 40.491 | 41.587 | 41.903 | 42.102 | 42.402 | 42.304 | 42.020 |
| non-pol | | | | | | | | | | | | | | | |
| China DEVELOP | 35.455 | 35.816 | 36.143 | 36.441 | 36.866 | 37.486 | 37.755 | 38.106 | 38.483 | 38.792 | 39.407 | 39.874 | 40.966 | 41.562 | 41.860 |
| non-pol | | | | | | | | | | | | | | | |
| India DEVELOP | 34.042 | 34.184 | 34.318 | 34.424 | 34.537 | 34.966 | 35.300 | 35.519 | 35.903 | 36.736 | 37.088 | 37.072 | 37.564 | 38.074 | 38.040 |
| non-pol | | | | | | | | | | | | | | | |
| Indonesia DEVELOP | 36.199 | 36.397 | 36.544 | 36.728 | 36.876 | 36.968 | 37.467 | 37.809 | 38.068 | 38.326 | 38.864 | 39.318 | 39.582 | 39.183 | 39.443 |
| non-pol | | | | | | | | | | | | | | | |
| Japan DEVELOP | 50.778 | 51.193 | 51.695 | 52.253 | 52.685 | 52.933 | 52.834 | 52.341 | 52.822 | 52.949 | 53.277 | 53.766 | 54.117 | 54.222 | 54.349 |
| non-pol | | | | | | | | | | | | | | | |
| Nigeria DEVELOP | 31.713 | 31.841 | 32.285 | 32.408 | 32.593 | 32.989 | 33.046 | 32.592 | 32.600 | 33.099 | 33.361 | 33.376 | 33.492 | 33.602 | 33.489 |
| non-pol | | | | | | | | | | | | | | | |
| Russia DEVELOP | 43.100 | 43.498 | 43.997 | 44.504 | 45.384 | 46.290 | 46.895 | 46.723 | 47.054 | 47.412 | 47.563 | 47.854 | 48.046 | 48.146 | 48.167 |
| non-pol | | | | | | | | | | | | | | | |
| USA DEVELOP | 55.979 | 56.509 | 57.066 | 57.578 | 57.954 | 58.348 | 58.389 | 58.509 | 59.353 | 59.730 | 60.028 | 59.723 | 59.760 | 59.846 | 59.985 |
| non-pol | | | | | | | | | | | | | | | |
| EU15 DEVELOP | 53.030 | 53.206 | 53.610 | 54.078 | 54.673 | 55.068 | 55.114 | 54.598 | 55.020 | 55.473 | 55.446 | 55.559 | 56.053 | 56.263 | 56.510 |
| non-pol | | | | | | | | | | | | | | | |
| EU28 DEVELOP | 50.997 | 51.238 | 51.713 | 52.224 | 52.887 | 53.397 | 53.601 | 53.211 | 53.594 | 54.031 | 54.023 | 54.142 | 54.612 | 54.876 | 55.160 |
| non-pol | | | | | | | | | | | | | | | |

(continued)

Table A.3.1 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|-----------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nord Cs | DEVELOP | 58.581 | 59.045 | 60.055 | 60.728 | 61.263 | 61.651 | 61.383 | 60.430 | 60.888 | 61.452 | 61.327 | 61.194 | 61.438 | 61.618 | 61.799 |
| | non-pol | | | | | | | | | | | | | | | |
| OECD35 | DEVELOP | 50.680 | 51.021 | 51.522 | 52.018 | 52.510 | 52.914 | 52.986 | 52.805 | 53.391 | 53.797 | 54.044 | 54.182 | 54.516 | 54.719 | 54.892 |
| | non-pol | | | | | | | | | | | | | | | |
| LA17 | DEVELOP | 37.816 | 38.108 | 38.639 | 38.920 | 39.314 | 39.911 | 40.505 | 40.518 | 40.899 | 41.624 | 42.000 | 42.255 | 42.497 | 42.590 | 42.523 |
| | non-pol | | | | | | | | | | | | | | | |
| Asia15 | DEVELOP | 35.063 | 35.294 | 35.488 | 35.699 | 35.950 | 36.407 | 36.678 | 36.950 | 37.303 | 37.766 | 38.200 | 38.448 | 39.088 | 39.471 | 39.606 |
| | non-pol | | | | | | | | | | | | | | | |
| World122 | DEVELOP | 38.430 | 38.656 | 38.917 | 39.175 | 39.477 | 39.911 | 40.157 | 40.266 | 40.602 | 41.018 | 41.331 | 41.532 | 41.975 | 42.229 | 42.301 |
| | non-pol | | | | | | | | | | | | | | | |
| Brazil | SD compre- hensive | 54.663 | 55.193 | 54.982 | 55.587 | 55.786 | 55.837 | 56.175 | 56.451 | 56.456 | 57.282 | 57.743 | 58.302 | 58.451 | 58.221 | 57.898 |
| China | SD compre- hensive | 27.010 | 27.190 | 26.436 | 27.405 | 27.436 | 27.746 | 27.977 | 27.778 | 27.954 | 28.218 | 28.610 | 28.940 | 29.124 | 29.241 | 29.002 |
| India | SD compre- hensive | 51.274 | 52.070 | 53.733 | 54.633 | 55.051 | 55.266 | 55.252 | 55.905 | 55.734 | 55.789 | 56.061 | 55.594 | 55.937 | 56.398 | 55.741 |
| Indonesia | SD compre- hensive | 46.200 | 46.480 | 46.178 | 47.820 | 49.284 | 49.330 | 50.135 | 50.391 | 50.061 | 50.915 | 51.184 | 51.411 | 51.265 | 51.066 | 51.583 |
| Japan | SD compre- hensive | 69.986 | 70.012 | 69.901 | 70.568 | 70.325 | 70.449 | 70.399 | 70.153 | 70.393 | 70.275 | 70.077 | 70.140 | 70.872 | 71.408 | 72.622 |
| Nigeria | SD compre- hensive | 39.843 | 39.906 | 40.588 | 40.287 | 41.529 | 42.645 | 41.607 | 40.715 | 40.415 | 42.190 | 42.637 | 41.702 | 41.398 | 40.762 | 42.643 |
| Russia | SD compre- hensive | 42.406 | 42.424 | 42.104 | 39.308 | 39.314 | 38.946 | 38.111 | 37.456 | 36.400 | 36.761 | 36.933 | 36.523 | 36.256 | 35.473 | 35.206 |
| USA | SD compre- hensive | 73.807 | 74.797 | 74.628 | 75.176 | 75.254 | 75.380 | 75.497 | 75.557 | 76.160 | 76.167 | 76.038 | 75.232 | 74.792 | 75.016 | 74.058 |
| EU15 | SD compre- hensive | 73.024 | 72.828 | 73.236 | 73.449 | 73.761 | 74.052 | 73.831 | 73.544 | 73.615 | 73.766 | 73.655 | 73.573 | 73.799 | 73.606 | 73.442 |
| EU28 | SD compre- hensive | 71.095 | 70.908 | 71.373 | 71.667 | 72.093 | 72.454 | 72.395 | 72.194 | 72.235 | 72.375 | 72.257 | 72.167 | 72.402 | 72.248 | 72.059 |
| Nord Cs | SD compre- hensive | 78.831 | 79.224 | 79.542 | 79.979 | 80.043 | 80.311 | 80.099 | 79.628 | 79.614 | 80.101 | 80.062 | 79.996 | 80.015 | 80.073 | 80.266 |
| OECD35 | SD compre- hensive | 69.158 | 69.455 | 69.693 | 70.083 | 70.371 | 70.399 | 70.238 | 69.901 | 70.012 | 69.990 | 69.958 | 69.629 | 69.595 | 69.419 | 69.129 |

(continued)

Table A.3.1 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|-----------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| LA17 | SD compre- hensive | 53.643 | 53.983 | 54.138 | 54.219 | 54.709 | 54.396 | 54.148 | 53.678 | 53.470 | 53.722 | 53.993 | 54.034 | 53.974 | 53.842 | 53.759 |
| Asia15 | SD compre- hensive | 39.137 | 39.500 | 39.791 | 40.610 | 40.846 | 40.869 | 40.738 | 41.501 | 41.694 | 42.039 | 42.438 | 42.487 | 42.644 | 42.643 | 42.415 |
| World122 | SD compre- hensive | 46.218 | 46.470 | 46.749 | 47.251 | 47.547 | 47.579 | 47.388 | 47.634 | 47.634 | 47.838 | 48.060 | 47.958 | 47.991 | 47.879 | 47.645 |
| Brazil | Life Exp | 84.066 | 84.530 | 84.978 | 85.415 | 85.846 | 86.274 | 86.700 | 87.120 | 87.531 | 87.924 | 88.292 | 88.631 | 88.942 | 89.227 | 89.227 |
| China | Life Exp | 86.467 | 86.959 | 87.415 | 87.825 | 88.188 | 88.509 | 88.801 | 89.066 | 89.307 | 89.530 | 89.736 | 89.935 | 90.127 | 90.317 | 90.317 |
| India | Life Exp | 75.197 | 75.660 | 76.127 | 76.604 | 77.091 | 77.588 | 78.088 | 78.588 | 79.072 | 79.536 | 79.973 | 80.376 | 80.745 | 81.080 | 81.080 |
| Indonesia | Life Exp | 79.034 | 79.248 | 79.469 | 79.699 | 79.936 | 80.175 | 80.410 | 80.642 | 80.867 | 81.086 | 81.299 | 81.510 | 81.716 | 81.918 | 81.918 |
| Japan | Life Exp | 96.779 | 97.012 | 97.333 | 97.208 | 97.679 | 97.899 | 97.994 | 98.402 | 98.297 | 97.998 | 98.598 | 98.877 | 99.181 | 99.485 | 99.485 |
| Nigeria | Life Exp | 55.566 | 56.046 | 56.611 | 57.237 | 57.895 | 58.552 | 59.182 | 59.773 | 60.321 | 60.834 | 61.333 | 61.834 | 62.343 | 62.861 | 62.861 |
| Russia | Life Exp | 77.278 | 77.182 | 77.684 | 77.754 | 79.175 | 80.195 | 80.625 | 81.498 | 81.683 | 82.683 | 83.144 | 83.745 | 83.941 | 84.136 | 84.136 |
| USA | Life Exp | 91.289 | 91.408 | 91.943 | 91.943 | 92.180 | 92.536 | 92.597 | 93.014 | 93.193 | 93.312 | 93.431 | 93.431 | 93.431 | 93.431 | 93.431 |
| EU15 | Life Exp | 93.532 | 93.607 | 94.234 | 94.449 | 94.922 | 95.203 | 95.408 | 95.675 | 95.976 | 96.561 | 96.537 | 96.837 | 97.310 | 97.503 | 97.498 |
| EU28 | Life Exp | 92.082 | 92.186 | 92.778 | 92.982 | 93.426 | 93.698 | 93.953 | 94.259 | 94.595 | 95.207 | 95.220 | 95.553 | 96.015 | 96.258 | 96.263 |
| Nord Cs | Life Exp | 93.323 | 93.653 | 94.114 | 94.301 | 94.628 | 94.747 | 95.026 | 95.264 | 95.527 | 96.087 | 96.187 | 96.522 | 96.893 | 97.181 | 97.182 |
| OECD35 | Life Exp | 91.992 | 92.167 | 92.661 | 92.809 | 93.164 | 93.443 | 93.631 | 93.946 | 94.166 | 94.451 | 94.593 | 94.804 | 95.088 | 95.253 | 95.243 |
| LA17 | Life Exp | 85.717 | 86.063 | 86.392 | 86.708 | 87.013 | 87.312 | 87.606 | 87.896 | 88.183 | 88.465 | 88.740 | 89.006 | 89.263 | 89.513 | 89.512 |
| Asia15 | Life Exp | 80.828 | 81.242 | 81.641 | 82.025 | 82.393 | 82.749 | 83.095 | 83.433 | 83.757 | 84.066 | 84.358 | 84.632 | 84.889 | 85.130 | 85.115 |
| World122 | Life Exp | 81.340 | 81.666 | 82.074 | 82.400 | 82.807 | 83.189 | 83.535 | 83.923 | 84.257 | 84.607 | 84.899 | 85.192 | 85.469 | 85.705 | 85.660 |
| Brazil | Edu Tert | 17.278 | 19.383 | 20.447 | 21.698 | 21.698 | 25.703 | 29.690 | 30.922 | 30.922 | 36.283 | 37.769 | 38.777 | 41.142 | 42.249 | 42.249 |
| China | Edu Tert | 10.679 | 13.054 | 14.953 | 16.143 | 17.113 | 17.403 | 17.482 | 18.798 | 19.993 | 20.766 | 22.696 | 25.181 | 32.886 | 36.227 | 36.227 |
| India | Edu Tert | 8.534 | 8.911 | 9.170 | 9.958 | 11.011 | 11.011 | 12.621 | 13.444 | 14.954 | 19.086 | 20.342 | 19.945 | 21.319 | 22.437 | 22.437 |
| Indonesia | Edu Tert | 12.365 | 13.381 | 13.874 | 14.407 | 14.454 | 14.875 | 17.282 | 19.250 | 20.204 | 22.128 | 25.594 | 26.119 | 25.966 | 20.250 | 20.250 |
| Japan | Edu Tert | 42.334 | 43.276 | 44.730 | 45.894 | 47.676 | 48.268 | 48.121 | 48.154 | 48.485 | 50.029 | 51.310 | 52.106 | 52.900 | 52.900 | 52.900 |
| Nigeria | Edu Tert | 8.049 | 8.049 | 8.226 | 8.687 | 8.687 | 8.687 | 8.687 | 7.914 | 8.408 | 8.408 | 8.408 | 8.408 | 8.408 | 8.408 | 8.408 |
| Russia | Edu Tert | 55.826 | 59.020 | 58.963 | 60.620 | 60.814 | 61.834 | 62.580 | 62.977 | 62.977 | 63.866 | 63.546 | 65.117 | 65.666 | 67.119 | 67.119 |
| USA | Edu Tert | 66.233 | 67.886 | 68.012 | 68.530 | 68.504 | 69.320 | 70.970 | 73.954 | 78.668 | 80.417 | 79.181 | 74.144 | 72.353 | 71.629 | 71.629 |
| EU15 | Edu Tert | 49.397 | 50.555 | 51.341 | 52.043 | 52.528 | 52.882 | 52.481 | 53.174 | 54.848 | 56.204 | 56.636 | 56.579 | 57.779 | 58.253 | 58.237 |
| EU28 | Edu Tert | 47.035 | 48.534 | 49.743 | 50.909 | 51.779 | 52.286 | 52.840 | 53.745 | 55.188 | 56.100 | 56.200 | 55.971 | 56.757 | 57.128 | 57.122 |

(continued)

Table A.3.1 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
|-----------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nord Cs | 62.112 | 66.046 | 68.550 | 69.381 | 68.435 | 66.743 | 64.706 | 64.016 | 65.321 | 65.960 | 64.666 | 63.156 | 62.550 | 62.486 | 62.466 | |
| OECD35 | 48.891 | 50.258 | 50.994 | 51.809 | 52.424 | 53.046 | 53.739 | 55.308 | 57.885 | 59.322 | 59.809 | 59.092 | 59.479 | 59.833 | 59.825 | |
| LA17 | 22.520 | 23.827 | 24.732 | 25.510 | 25.952 | 27.973 | 31.505 | 32.407 | 33.427 | 36.243 | 37.428 | 38.362 | 39.801 | 40.475 | 40.454 | |
| Asia15 | 10.242 | 11.397 | 12.271 | 12.909 | 13.571 | 14.341 | 15.184 | 16.265 | 17.430 | 19.602 | 21.057 | 21.974 | 25.421 | 26.509 | 26.479 | |
| World122 | 20.344 | 21.407 | 22.123 | 22.765 | 23.362 | 24.141 | 25.120 | 26.115 | 27.277 | 28.960 | 29.961 | 30.458 | 32.585 | 33.391 | 33.295 | |
| Brazil | GDP p Cap | 8.937 | 8.924 | 9.322 | 9.509 | 9.776 | 10.260 | 10.673 | 10.555 | 11.240 | 11.576 | 11.688 | 11.929 | 11.883 | 11.338 | 10.842 |
| China | GDP p Cap | 3.336 | 3.648 | 3.993 | 4.422 | 4.956 | 5.632 | 6.144 | 6.689 | 7.364 | 8.028 | 8.617 | 9.239 | 9.864 | 10.491 | 11.133 |
| India | GDP p Cap | 2.028 | 2.152 | 2.285 | 2.458 | 2.644 | 2.860 | 2.927 | 3.131 | 3.405 | 3.584 | 3.732 | 3.922 | 4.167 | 4.448 | 4.710 |
| Indonesia | GDP p Cap | 4.728 | 4.886 | 5.061 | 5.276 | 5.491 | 5.760 | 6.024 | 6.220 | 6.520 | 6.832 | 7.152 | 7.455 | 7.733 | 8.015 | 8.322 |
| Japan | GDP p Cap | 26.199 | 26.543 | 27.119 | 27.567 | 27.941 | 28.371 | 28.047 | 26.531 | 27.638 | 27.657 | 28.116 | 28.720 | 28.854 | 29.237 | 29.563 |
| Nigeria | GDP p Cap | 2.269 | 2.441 | 3.182 | 3.208 | 3.382 | 3.519 | 3.642 | 3.792 | 3.982 | 4.066 | 4.128 | 4.236 | 4.385 | 4.384 | 4.205 |
| Russia | GDP p Cap | 12.064 | 13.003 | 13.992 | 14.941 | 16.212 | 17.626 | 18.559 | 17.102 | 17.865 | 18.612 | 19.234 | 19.439 | 19.235 | 18.650 | 18.574 |
| USA | GDP p Cap | 35.846 | 36.537 | 37.570 | 38.471 | 39.118 | 39.437 | 38.952 | 37.540 | 38.170 | 38.493 | 39.056 | 39.434 | 40.070 | 40.812 | 41.185 |
| EU15 | GDP p Cap | 27.597 | 27.751 | 28.242 | 28.602 | 29.332 | 29.979 | 29.866 | 28.415 | 28.909 | 29.338 | 29.055 | 28.951 | 29.265 | 29.739 | 30.114 |
| EU28 | GDP p Cap | 24.188 | 24.459 | 25.031 | 25.483 | 26.283 | 27.033 | 27.115 | 25.860 | 26.338 | 26.802 | 26.617 | 26.604 | 26.978 | 27.510 | 27.947 |
| Nord Cs | GDP p Cap | 33.007 | 33.376 | 34.509 | 35.280 | 36.432 | 37.301 | 36.996 | 34.950 | 35.770 | 36.196 | 36.080 | 36.082 | 36.389 | 36.903 | 37.311 |
| OECD35 | GDP p Cap | 25.756 | 26.102 | 26.789 | 27.359 | 28.012 | 28.535 | 28.394 | 27.209 | 27.841 | 28.258 | 28.457 | 28.696 | 29.094 | 29.595 | 29.926 |
| LA17 | GDP p Cap | 8.678 | 8.722 | 9.150 | 9.439 | 9.827 | 10.267 | 10.547 | 10.213 | 10.702 | 11.071 | 11.269 | 11.462 | 11.490 | 11.396 | 11.247 |
| Asia15 | GDP p Cap | 2.962 | 3.163 | 3.388 | 3.658 | 3.975 | 4.366 | 4.619 | 4.909 | 5.316 | 5.668 | 5.998 | 6.345 | 6.708 | 7.089 | 7.473 |
| World122 | GDP p Cap | 8.183 | 8.390 | 8.718 | 9.020 | 9.388 | 9.789 | 9.945 | 9.797 | 10.191 | 10.487 | 10.694 | 10.927 | 11.183 | 11.428 | 11.653 |
| Brazil | CO2 Em | 97.118 | 97.247 | 97.143 | 97.097 | 97.126 | 97.028 | 96.859 | 97.056 | 96.663 | 96.539 | 96.330 | 96.102 | 95.934 | 95.934 | 95.934 |
| | low | | | | | | | | | | | | | | | |
| China | CO2 Em | 95.283 | 94.467 | 93.656 | 92.890 | 92.168 | 91.609 | 91.029 | 90.543 | 89.674 | 88.599 | 88.310 | 88.101 | 88.122 | 88.122 | 88.122 |
| | low | | | | | | | | | | | | | | | |
| India | CO2 Em | 98.502 | 98.463 | 98.411 | 98.343 | 98.258 | 98.146 | 97.961 | 97.769 | 97.824 | 97.699 | 97.507 | 97.299 | 97.299 | 97.299 | 97.299 |
| | low | | | | | | | | | | | | | | | |
| Indonesia | CO2 Em | 97.803 | 97.762 | 97.646 | 97.648 | 97.659 | 97.485 | 97.245 | 97.085 | 97.239 | 96.151 | 95.989 | 96.959 | 97.158 | 97.158 | 97.158 |
| | low | | | | | | | | | | | | | | | |
| Japan | CO2 Em | 84.919 | 84.679 | 84.388 | 84.720 | 84.826 | 84.588 | 85.114 | 86.422 | 85.589 | 85.323 | 84.816 | 84.591 | 84.973 | 84.973 | 84.973 |
| | low | | | | | | | | | | | | | | | |
| Nigeria | CO2 Em | 98.880 | 98.814 | 98.813 | 98.824 | 98.935 | 99.005 | 99.020 | 99.245 | 99.118 | 99.102 | 99.100 | 99.128 | 99.168 | 99.168 | 99.168 |
| | low | | | | | | | | | | | | | | | |

(continued)

Table A.3.1 (continued)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Russia | 83.115 | 82.524 | 82.476 | 82.267 | 81.611 | 81.605 | 81.065 | 82.629 | 81.571 | 80.560 | 79.849 | 80.467 | 81.313 | 81.313 | 81.313 |
| CO2 Em low | | | | | | | | | | | | | | | |
| USA | 69.071 | 69.149 | 69.000 | 69.105 | 69.891 | 69.695 | 70.889 | 72.947 | 72.499 | 73.240 | 74.295 | 74.276 | 73.995 | 73.995 | 73.995 |
| CO2 Em low | | | | | | | | | | | | | | | |
| EU15 | 86.658 | 86.534 | 86.538 | 86.700 | 86.747 | 87.102 | 87.466 | 88.490 | 88.224 | 88.791 | 88.964 | 89.218 | 89.883 | 89.877 | 89.867 |
| CO2 Em low | | | | | | | | | | | | | | | |
| EU28 | 87.254 | 87.069 | 87.095 | 87.200 | 87.145 | 87.410 | 87.734 | 88.754 | 88.442 | 88.877 | 89.132 | 89.387 | 89.978 | 89.970 | 89.960 |
| CO2 Em low | | | | | | | | | | | | | | | |
| Nord Cs | 86.295 | 85.301 | 86.026 | 87.325 | 86.146 | 86.726 | 86.771 | 87.645 | 86.184 | 87.931 | 88.752 | 88.451 | 89.572 | 89.577 | 89.583 |
| CO2 Em low | | | | | | | | | | | | | | | |
| OECD35 | 82.764 | 82.618 | 82.547 | 82.643 | 82.794 | 82.778 | 83.214 | 84.346 | 83.963 | 84.272 | 84.609 | 84.722 | 84.974 | 84.974 | 84.974 |
| CO2 Em low | | | | | | | | | | | | | | | |
| LA17 | 95.966 | 95.925 | 95.945 | 95.786 | 95.730 | 95.711 | 95.541 | 95.691 | 95.535 | 95.482 | 95.316 | 95.294 | 95.245 | 95.245 | 95.244 |
| CO2 Em low | | | | | | | | | | | | | | | |
| Asia15 | 97.147 | 96.793 | 96.436 | 96.115 | 95.818 | 95.551 | 95.247 | 94.991 | 94.680 | 94.165 | 93.992 | 93.986 | 93.932 | 93.948 | 93.963 |
| CO2 Em low | | | | | | | | | | | | | | | |
| World122 | 93.830 | 93.585 | 93.374 | 93.224 | 93.075 | 92.934 | 92.836 | 93.005 | 92.728 | 92.503 | 92.468 | 92.524 | 92.580 | 92.609 | 92.638 |
| CO2 Em low | | | | | | | | | | | | | | | |

Source Author's own calculations (see tables in Appendix A.2)
Status: April 30, 2018

References

- Ataç, I., & Rosenberger, S. (Eds.). (2013). *Politik der Inklusion und Exklusion*. Vienna: Vienna University Press.
- Backhaus, K., Erichson, B., Plinke, W., Schuchard-Fischer, C., & Weiber, R. (1987). *Multivariate Analysemethoden: Eine Anwendungsorientierte Einführung*. Berlin: Springer.
- Barth, T. D. (2009). *Theoretische Konzeption und Messung der Demokratiequalität: Brasilien, Südafrika, Australien und die Russische Föderation in vergleichender Analyse 1997–2006* [Theoretical Conception and Measurement of the Quality of Democracy: Brazil, South Africa, Australia, and the Russian Federation in Comparative Analysis, 1997–2006]. Master thesis, “Diplomarbeit”, University of Vienna, Vienna.
- Barth, T. D. (2010). *Konzeption, Messung und Rating der Demokratiequalität. Brasilien, Südafrika, Australien und die Russische Föderation 1997–2006*. Saarbrücken: VDM Verlag Dr. Müller.
- Barth, T. D. (2011). *Die 20 besten Demokratien der Welt. Freiheit – Gleichheit – Demokratiequalität auf einen Blick*. Norderstedt: Books on Demand.
- Bast, G., Carayannis, E. G., & Campbell, D. F. J. (Eds.). (2015). *Arts, Research, Innovation and Society*. New York, NY: Springer. <http://www.springer.com/business+%26+management/technology+management/book/978-3-319-09908-8>.

- Beetham, D. (1994). Key Principles and Indices for a Democratic Audit. In D. Beetham (Ed.), *Defining and Measuring Democracy* (pp. 25–43). London: Sage.
- Beetham, D. (Ed.). (1994). *Defining and Measuring Democracy*. London: Sage.
- Beetham, D. (2004). Freedom as the Foundation. *Journal of Democracy*, 15(4), 61–75.
- Beetham, D., Byrne, I., Ngan, P., & Weir, S. (Eds.). (2002). *Democracy Under Blair: A Democratic Audit of the United Kingdom*. London: Politico's Publishing.
- Blasche, G. W. E., & Campbell, D. F. J. (2013). Cross-Retirement (Cross-Employed Cross-Retired) and Innovation. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzundis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 508–513). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_255.
- Blunden, J., Arndt, D. S., & Hartfield, G. (Eds.) (2018). State of the Climate in 2017. Special Supplement to the Bulletin of the American Meteorological Society 99 (8), Si-S332. <https://doi.org/10.1175/2018BAMSStateoftheClimate.1> and <https://www.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/state-of-the-climate/>.
- Bollen, K. A. (1986). Political Rights and Political Liberties in Nations: An Evaluation of Human Rights Measures, 1950 to 1984. *Human Rights Quarterly*, 8(4), 567–591.
- Bollen, K. A. (1993a). Liberal Democracy: Validity and Method Factors in Cross-National Measures. *American Journal of Political Science*, 37(4), 1207–1230.
- Bollen, K. A. (1993b). Political Democracy: Conceptual and Measurement Traps. In A. Inkeles (Ed.), *On Measuring Democracy: Its Consequences and Concomitants* (pp. 3–20). New Brunswick, NJ: Transaction Publishers.
- Bollen, K. A., & Paxton, P. (2000). Subjective Measures of Liberal Democracy. *Comparative Political Studies*, 33(1), 58–86.
- Brand, U., Brunnengräber, A., & Schrader, L. (2000). *Global Governance: Alternative zur neoliberalen Globalisierung*. Münster: Westfälisches Dampfboot.
- Budge, I., & Farlie, D. J. (1983). *Explaining and Predicting Elections: Issue Effects and Party Strategies in Twenty-Three Democracies*. London: George Allen & Unwin.
- Budge, I., Klingemann, H.-D., Volken, A., Bara, J., & Tannenbaum, E. (2001). *Mapping Policy Preferences: Estimates for Parties, Electors, and Governments, 1945–1998*. Oxford: Oxford University Press.

- Bühlmann, M. (2013a). Innovations of Direct Democracy. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1033–1039). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_483.
- Bühlmann, M. (2013b). The Beauty and the Beast? A Tale of Democratic Crises and Globalization. *International Journal of Social Ecology and Sustainable Development*, 4(1), 44–65. <http://www.igi-global.com/article/beauty-beast-tale-democratic-crises/77346>.
- Bühlmann, M., Merkel, W., & Wessels, B. (2008). *The Quality of Democracy. Democracy Barometer for Established Democracies* (Revised Version 20.03.2008). National Center of Competence in Research: Challenges to Democracy in the 21st Century (Working Paper No. 10a). <http://www.nccr-democracy.uzh.ch/nccr/publications/workingpaper/10>.
- Bühlmann, M., Merkel, W., Müller, L., & Weßels, B. (2011, December 16). The Democracy Barometer: A New Instrument to Measure the Quality of Democracy and Its Potential for Comparative Research. *European Political Science*. <https://doi.org/10.1057/eps.2011.46> and <http://www.palgrave-journals.com/eps/journal/vaop/ncurrent/abs/eps201146a.html>.
- Buonanno, L., & Nugent, N. (2013). *Policies and Policy Processes of the European Union*. Houndmills: Palgrave Macmillan.
- Carroll, L. (1865). *Alice's Adventures in Wonderland*. London: Macmillan.
- Campbell, D. F. J. (1992). Die Dynamik der politischen Links-rechts-Schwingungen in Österreich: Die Ergebnisse einer Expertenbefragung. *Österreichische Zeitschrift für Politikwissenschaft (ÖZP)*, 2, 165–179.
- Campbell, D. F. J. (1994). European Nation-State Under Pressure: National Fragmentation or the Evolution of Suprastate Structures? *Cybernetics and Systems: An International Journal*, 25(6), 879–909. <http://www.informaworld.com/smpp/title~db=all-content=g770888219>.
- Campbell, D. F. J. (1996). *Links- und Rechtsschwingungen in den westlichen Demokratien ab 1945*. Dissertation, University of Vienna, Vienna.
- Campbell, D. F. J. (2002). Zur Demokratiequalität von politischem Wechsel, Wettbewerb und politischem System in Österreich. In D. F. J. Campbell & C. Schaller (Eds.), *Demokratiequalität in Österreich* (pp. 19–46). Opladen: Leske + Budrich.
- Campbell, D. F. J. (2007). Wie links oder wie rechts sind Österreichs Länder? Eine komparative Langzeitanalyse des parlamentarischen Mehrebenensystems Österreichs (1945–2007). *SWS-Rundschau*, 47(4), 381–404.

- Campbell, D. F. J. (2008). *The Basic Concept for the Democracy Ranking of the Quality of Democracy*. Vienna: Democracy Ranking. <http://www.ssoar.info/ssoar/handle/document/29063> and http://democracyranking.org/wordpress/ranking/basic_concept.pdf.
- Campbell, D. F. J. (2010). *Key Findings (Summary Abstract) of the Democracy Ranking 2010 and the Democracy Improvement Ranking 2010*. Vienna: Democracy Ranking. http://democracyranking.org/wordpress/ranking/2010/data/Key%20findings%20of%20the%20Democracy%20Ranking%202010_A4.pdf.
- Campbell, D. F. J. (2012). Die österreichische Demokratiequalität in Perspektive [The Quality of Democracy in Austria in Perspective]. In L. Helms & D. M. Winerither (Eds.), *Die österreichische Demokratie im Vergleich* [Austrian Democracy in Comparison] (pp. 293–315). Baden-Baden: Nomos. http://www.uni-klu.ac.at/wiho/downloads/QoD-Text_12.pdf.
- Campbell, D. F. J. (2013). *Conceptualizing and Measuring the Quality of Democracy in Global Comparison: Freedom, Equality, Sustainable Development, and Political Self-Organization (Political Swings, Government/Opposition Cycles) in 151 Countries (Democracies, Semi-democracies and Non-democracies), 2002–2008. Habilitationsschrift*. Vienna: University of Vienna (Habilitationsschrift).
- Campbell, D. F. J., & Sükösd, M. (Eds.). (2002). *Feasibility Study for a Quality Ranking of Democracies*. Vienna: Global Democracy Award. http://www.democracyranking.org/downloads/feasibility_study-a4-e-01.pdf.
- Campbell, D. F. J., & Barth, T. D. (2009). Wie können Demokratie und Demokratiequalität gemessen werden? Modelle, Demokratie-Indices und Länderbeispiele im globalen Vergleich [How Can Democracy and the Quality of Democracy Be Measured? Models, Democracy Indices and Country-Based Case Studies in Global Comparison]. *SWS-Rundschau* [Social Scientific Review], 49(2), 208–233.
- Campbell, G. S., & Campbell, D. F. J. (2011). The Semi-aquatic Theory: Semi-aquatic Evolutionary Phase and Environment, Language Development of Modern Humans: With a Short Epilog on Conceptualized Evolution, Social Ecology and the Quintuple Helix. *International Journal of Social Ecology and Sustainable Development*, 2(1), 15–30. <http://www.igi-global.com/bookstore/titledetails.aspx?titleid=47786> and <http://www.igi-global.com/bookstore/article.aspx?titleid=51634>.
- Campbell, D. F. J., Barth, T. D., Pözlbauer, P., & Pözlbauer, G. (2012). *Democracy Ranking (Edition 2012): The Quality of Democracy in the World*. Norderstedt: Books on Demand (Democracy Ranking Association).

- Campbell, D. F. J., & Carayannis, E. G. (2013a). *Epistemic Governance in Higher Education: Quality Enhancement of Universities for Development* (SpringerBriefs in Business). New York, NY: Springer. <http://www.springer.com/business+%26+management/organization/book/978-1-4614-4417-6>.
- Campbell, D. F. J., & Carayannis, E. G. (2013b). Quality of Democracy and Innovation. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1527–1534). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007%2F978-1-4614-3858-8_509.
- Campbell, D. F. J., Carayannis, E. G., Barth, T. D., & Campbell, G. S. (2013). Measuring Democracy and the Quality of Democracy in a World-Wide Approach: Models and Indices of Democracy and the New Findings of the “Democracy Ranking”. *International Journal of Social Ecology and Sustainable Development*, 4(1), 1–16. <http://www.igi-global.com/article/measuring-democracy-quality-democracy-world/77344>.
- Campbell, D. F. J., Carayannis, E. G., & Rehman, S. S. (2015). Quadruple Helix Structures of Quality of Democracy in Innovation Systems: The USA, OECD Countries, and EU Member Countries in Global Comparison. *Journal of the Knowledge Economy*, 6(3), 467–493. <https://link.springer.com/article/10.1007/s13132-015-0246-7>.
- Campbell, D. F. J., Fabrykowska, A., & Drexler, A. (2017). Innovations in Presidential Elections: The United States, France and Austria in Comparison. In E. G. Carayannis (Ed.), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1–8). New York, NY: Springer. https://link.springer.com/referenceworkentry/10.1007/978-1-4614-6616-1_200083-1.
- Caramani, D. (2015). *The Europeanization of Politics: The Formation of a European Electorate and Party System in Historical Perspective*. Cambridge: Cambridge University Press.
- Carayannis, E. G., & Campbell, D. F. J. (2009). “Mode 3” and “Quadruple Helix”: Toward a 21st Century Fractal Innovation Ecosystem. *International Journal of Technology Management*, 46(3/4), 201–234.
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate to Each Other? A Proposed Framework for a Transdisciplinary Analysis of Sustainable Development and Social Ecology. *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69.

- Carayannis, E. G., & Kaloudis, A. (2010). A Time for Action and a Time to Lead: Democratic Capitalism and a New “New Deal” for the US and the World in the Twenty-First Century. *Journal of the Knowledge Economy*, 1(1), 4–17. <https://link.springer.com/article/10.1007/s13132-009-0002-y>.
- Carayannis, E. G., & Campbell, D. F. J. (2011). Open Innovation Diplomacy and a 21st Century Fractal Research, Education and Innovation (FREIE) Ecosystem: Building on the Quadruple and Quintuple Helix Innovation Concepts and the “Mode 3” Knowledge Production System. *Journal of the Knowledge Economy*, 2(3), 327–372. <http://www.springerlink.com/content/d1lr223321305579/>.
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix Innovation Model: Global Warming as a Challenge and Driver for Innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 1–12. <http://www.innovation-entrepreneurship.com/content/pdf/2192-5372-1-2.pdf>.
- Carayannis, E. G., & Campbell, D. F. J. (2012). *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems: 21st-Century Democracy, Innovation, and Entrepreneurship for Development* (SpringerBriefs in Business). New York, NY: Springer. <http://www.springer.com/business+%26+management/book/978-1-4614-2061-3>.
- Carayannis, E. G., & Campbell, D. F. J. (2013). Mode 3 Knowledge Production in Quadruple Helix Innovation Systems: Quintuple Helix and Social Ecology. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 1293–1300). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_310.
- Carayannis, E. G., & Campbell, D. F. J. (2014). Developed Democracies Versus Emerging Autocracies: Arts, Democracy, and Innovation in Quadruple Helix Innovation Systems. *Journal of Innovation and Entrepreneurship*, 3, 12. <http://www.innovation-entrepreneurship.com/content/pdf/s13731-014-0012-2.pdf> and <http://www.innovation-entrepreneurship.com/content/3/1/12>.
- Carayannis, E. G., & Pirzadeh, A. (2014). *The Knowledge of Culture and the Culture of Knowledge: Implications for Theory, Policy and Practice*. Houndmills: Palgrave Macmillan. http://www.amazon.de/The-Knowledge-Culture-Implications-Practice/dp/1403942439/ref=sr_1_1?ie=UTF8&qid=1403080044&sr=8-1&keywords=carayannis+knowledge+of+culture.

- Central Intelligence Agency. (2011). *The CIA World Factbook 2012*. New York, NY: Skyhorse Publishing. <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html>.
- Central Intelligence Agency. (2013). *The CIA World Factbook 2013* (Electronic Data Base). Washington, DC: CIA. <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html>.
- Central Intelligence Agency. (2018). *The CIA World Factbook 2013* (Electronic Data Base). Washington, DC: CIA. <https://www.cia.gov/library/publications/the-world-factbook/>.
- Clubb, J. M., Flanigan, W. H., & Zingale, N. H. (1990). *Partisan Realignment: Voters, Parties, and Government in American History*. Boulder: Westview Press.
- Coppedge, M., Gerring, J., Altman, D., Bernhard, M., Fish, S., Hicken, A., et al. (2011). Conceptualizing and Measuring Democracy: A New Approach. *Perspectives on Politics*, 9(2), 247–267.
- Cronin, T. E. (1989). *Direct Democracy: The Politics of Initiative, Referendum, and Recall*. Cambridge, MA: Harvard University Press.
- Crouch, C. (2010). *Post-democracy*. Cambridge: Polity Press.
- Cullell, J. V. (2004). Democracy and the Quality of Democracy: Empirical Findings and Methodological and Theoretical Issues Drawn from the Citizen Audit of the Quality of Democracy in Costa Rica. In G. O'Donnell, J. V. Cullell, & O. M. Iazzetta (Eds.), *The Quality of Democracy: Theory and Applications* (pp. 93–162). Notre Dame, IN: University of Notre Dame Press.
- Cunningham, F. (2002). *Theories of Democracy: A Critical Introduction*. New York, NY: Routledge.
- Dahl, R. A. (1971). *Polyarchy: Participation and Opposition*. New Haven: Yale University Press.
- Dalton, R. J., & Wattenberg, M. P. (Eds.). (2002). *Parties Without Partisans: Political Change in Advanced Industrial Democracies*. Oxford: Oxford University Press.
- Danilda, I., Lindberg, M., & Torstensson, B.-M. (2009). *Women Resource Centres: A Quattro Helix Innovation System on the European Agenda* (Paper). http://www.hss09.se/own_documents/Papers/3-11%20-%20Danilda%20Lindberg%20&%20Torstensson%20-%20paper.pdf.
- De Oliveira Monteiro, S. P., & Carayannis, E. G. (Eds.). (2017). *The Quadruple Innovation Helix Nexus: A Smart Growth Model, Qualitative*

- Empirical Validation and Operationalization for OECD Countries*. New York, NY: Palgrave Macmillan.
- De Roeck, M., & Van Rossem, R. (2015). *Fifty Shades of Grey? Conceptualizing and Measuring Political Regimes Using Theories of Democracy 1972–2010* (Working Paper 2015.05). Antwerpen: University of Antwerp.
- Democracy Barometer. (2013). *Democracy Barometer at a Glance*. Aarau: Democracy Barometer. <http://www.democracybarometer.org/>.
- Diamond, L., & Morlino, L. (2004). The Quality of Democracy: An Overview. *Journal of Democracy*, 15(4), 20–31.
- Diamond, L., & Morlino, L. (2005). *Assessing the Quality of Democracy*. Baltimore, MD: The Johns Hopkins University Press.
- Downs, A. (1957/1985). *An Economic Theory of Democracy*. Boston: Addison-Wesley.
- Dubina, I. N., Carayannis, E. G., & Campbell, D. F. J. (2012). Creativity Economy and a Crisis of the Economy? Coevolution of Knowledge, Innovation, and Creativity, and of the Knowledge Economy and Knowledge Society. *Journal of the Knowledge Economy*, 3(1), 1–24. <http://www.springerlink.com/content/t5j8l12136h526h5/>.
- Economist Intelligence Unit. (2011). *Democracy Index 2010. Democracy in Retreat: A Report from the Economist Intelligence Unit*. London: Economist Intelligence Unit. http://graphics.eiu.com/PDF/Democracy_Index_2010_web.pdf.
- Eigelsreiter, B. (2017). Consumerization of IT, Cyber-Democracy and Cyber-Crime: The Inherent Challenges and Opportunities of Different Ends of a Continuum. In E. G. Carayannis, D. F. J. Campbell, & M. P. Efthymiopoulos (Eds.), *Handbook of Cyber-Development, Cyber-Democracy, and Cyber-Defense*. New York, NY: Springer. <https://link.springer.com/referencework/10.1007%2F978-3-319-06091-0>.
- Eurofound. (2013). *EurLIFE Gini Index*. Dublin and Brussels: European Foundation for the Improvement of Living and Working Conditions. <https://www.eurofound.europa.eu/areas/qualityoflife/eurlife/index.php?template=3&radioindic=158&idDomain=3>.
- Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.
- Etzkowitz, H., & Leydesdorff, L. (2000). The Dynamics of Innovation: From National Systems and “Mode 2” to a Triple Helix of University–Industry–Government Relations. *Research Policy*, 29, 109–123.
- European Commission. (2009). *The World in 2025: Rising Asia and Socio-ecological Transition*. Brussels: European Commission. http://ec.europa.eu/research/social-sciences/pdf/the-world-in-2025-report_en.pdf.

- Fischer-Kowalski, M. (1998). Society's Metabolism: The Intellectual History of Materials Flow Analysis, Part I, 1860–1970. *Journal of Industrial Ecology*, 2(1), 61–78.
- Fischer-Kowalski, M., & Hüttler, W. (1999). Society's Metabolism: The Intellectual History of Materials Flow Analysis, Part II, 1970–1998. *Journal of Industrial Ecology*, 2(4), 107–136.
- Fischer-Kowalski, M., & Haberl, H. (Eds.). (2007). *Socioecological Transitions and Global Change: Trajectories of Social Metabolism and Land Use*. Cheltenham: Edward Elgar.
- Fraser Institute. (2009). *Summary Index of the Economic Freedom in the World: 2009 Data Set*. Vancouver, BC: The Fraser Institute. <http://www.free-the-world.com/2009/reports/world/EFWdataset2009.xls> and http://www.free-the-world.com/datasets_efw.html.
- Fraser Institute. (2018). *Economic Freedom in the World*. Vancouver, BC: The Fraser Institute. <https://www.fraserinstitute.org/resource-file?nid=11606&fid=7542>.
- Freedom House. (2011). *Freedom in the World 2011: Methodology*. Washington, DC: Freedom House. http://www.freedomhouse.org/template.cfm?page=351&ana_page=379&year=2011.
- Freedom House. (2012a). *Freedom in the World 2012: Methodology*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2012/methodology>.
- Freedom House. (2012b). *Freedom in the World 2012: Survey Team*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2012/survey-team>.
- Freedom House. (2013a). *Freedom in the World: Aggregate Scores of Political Rights and Civil Liberties, 2003–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/AggregateScores_FIW2003-2013%20%28final%29.xls.
- Freedom House. (2013b). *Freedom in the World 2013: Methodology*. Washington, DC: Freedom House. <http://www.freedomhouse.org/report/freedom-world-2013/methodology>.
- Freedom House. (2013c). *Freedom of the Press: Scores and Status Date 1980–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/FOTP%20Scores%20and%20Status%201980-2013_0.xls.
- Freedom House. (2013d). *Freedom in the World Comparative and Historical Data: Country Ratings and Status by Region, FIW 1973–2013*. Washington, DC: Freedom House. http://www.freedomhouse.org/sites/default/files/Country%20Status%20and%20Ratings%20By%20Region%2C%201973-2013_0.xls.

- Freedom House. (2018a). *Freedom in the World: Aggregate and Subcategory Scores*. Washington, DC: Freedom House. <https://freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores#.UuErFLQo71I>.
- Freedom House. (2018b). *Freedom of the Press: The Historical Freedom of the Press Data*. Washington, DC: Freedom House. <https://freedomhouse.org/report-types/freedom-press>.
- Fukuyama, F. (1989). The End of History? *The National Interest* (Summer), 3–18. <http://www.cla.wayne.edu/polisci/kdk/Comparative/SOURCES/fukayama.htm>.
- Fukuyama, F. (1992). *The End of History and the Last Man*. London: Penguin Books.
- Gastil, R. D. (1993). The Comparative Survey of Freedom: Experiences and Suggestions. In A. Inkeles (Ed.), *On Measuring Democracy: Its Consequences and Concomitants* (pp. 21–46). New Brunswick, NJ: Transaction Publishers.
- Geissel, B., Kneuer, M., & Lauth, H.-J. (2016). Measuring the Quality of Democracy: Introduction. *International Political Science Review*, 37(5), 571–579. <http://journals.sagepub.com/doi/pdf/10.1177/0192512116669141>.
- Gerring, J., Bond, P., Barndt, W. T., & Moreno, C. (2005). Democracy and Economic Growth: A Historical Perspective. *World Politics*, 57(3), 323–364.
- Giebler, H., & Merkel, W. (2016). Freedom and Equality in Democracies: Is There a Trade-Off? *International Political Science Review*, 37(5), 594–605. <http://journals.sagepub.com/doi/full/10.1177/01925121166642221>.
- Goldman Sachs. (2007). *Global Economic Paper No: 153*. New York, NY: Goldman Sachs. <http://www.chicagobooth.edu/alumni/clubs/pakistan/docs/next11dream-march%20'07-goldmansachs.pdf>.
- Goldman Sachs. (2011). *Global Economics Paper No: 208*. New York, NY: Goldman Sachs. <http://blogs.univ-poitiers.fr/o-bouba-olga/files/2012/11/Goldman-Sachs-Global-Economics-Paper-208.pdf>.
- Gottweis, H. (1998). *Governing Molecules: The Discursive Politics of Genetic Engineering in Europe and the United States*. Cambridge, MA: The MIT Press.
- Guerel, S. (2017). *Der Kauz* [The Codger]. Vienna: TEXT/RAHMEN. <https://www.textrahmen.at/die-autorinnen/simon-guerel/>.
- Haberl, H., Fischer-Kowalski, M., Krausmann, F., Weisz, H., & Winiwarter, V. (2004). Progress Towards Sustainability? What the Conceptual Framework of Material and Energy Flow Accounting (MEFA) Can Offer. *Land Use Policy*, 21(3), 199–213.
- Haberl, H., Fischer-Kowalski, M., Krausmann, F., Martinez-Alier, J., & Winiwarter, V. (2009). A Socio-metabolic Transition Towards

- Sustainability? Challenges for Another Great Transformation. *Sustainable Development*, 17, 20–42.
- Hadenius, A., & Teorell, J. (2005). Cultural and Economic Prerequisites of Democracy: Reassessing Recent Evidence. *Studies in Comparative International Development*, 39(4), 87–106.
- Heinisch, R., Holtz-Bacha, C., & Mazzoleni, O. (Eds.). (2017). *Political Populism: A Handbook*. Baden-Baden: Nomos.
- Harding, S., Phillips, D., & Fogarty, M. (1986). *Contrasting Values in Western Europe: Unity, Diversity and Change*. Studies in the Contemporary Values of Modern Society. Houndmills: MacMillan.
- Hausmann, R., Tyson, L. D., & Zahidi, S. (Eds.). (2009). *The Global Gender Gap Report 2009*. Geneva: World Economic Forum. http://www3.weforum.org/docs/WEF_GenderGap_Report_2009.pdf; http://www3.weforum.org/docs/WEF_GenderGap_Report_2008.pdf; http://www3.weforum.org/docs/WEF_GenderGap_Report_2007.pdf; and http://www3.weforum.org/docs/WEF_GenderGap_Report_2006.pdf.
- Held, D., McGrew, A., Goldblatt, D., & Perraton, J. (1999). *Global Transformations: Politics, Economics and Culture*. Cambridge: Polity Press.
- Held, D. (2006). *Models of Democracy*. Stanford: Stanford University Press.
- Helms, L. (2007). *Die Institutionalisierung der liberalen Demokratie. Deutschland im internationalen Vergleich*. Campus: Frankfurt.
- Helms, L. (2013). Innovation and Democracy. In E. G. Carayannis (Editor-in-Chief), I. N. Dubina, N. Seel, D. F. J. Campbell, & D. Uzunidis (Associate Editors), *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship* (pp. 928–933). New York, NY: Springer. http://link.springer.com/referenceworkentry/10.1007/978-1-4614-3858-8_262.
- Helms, L. (2016). Democracy and Innovation: From Institutions to Agency and Leadership. *Democratization*, 23(3), 459–477. <http://www.tandfonline.com/doi/abs/10.1080/13510347.2014.981667>.
- Hemlin, S., Allwood, C. M., & Martin, B. R. (2004). *Creative Knowledge Environments: The Influences on Creativity in Research and Innovation*. Cheltenham: Edward Elgar.
- Heritage Foundation. (2013). *2013 Index of Economic Freedom*. Washington, DC: Heritage Foundation. <http://www.heritage.org/index/> and <http://www.heritage.org/index/explore>.
- Heritage Foundation. (2018). *Index of Economic Freedom*. Washington, DC: Heritage Foundation. <https://www.heritage.org/index/explore?view=by-region-country-year>.

- Hooghe, L., & Marks, G. (2001). *Multi-level Governance and European Integration*. Lanham: Rowman & Littlefield Publishers.
- Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable Development: Mapping Different Approaches. *Sustainable Development*, 13, 38–52.
- Huddleston, T., Niessen, J., Chaoimh, E. N., & White, E. (Eds.). (2011). *Migrant Integration Policy Index III*. Brussels: British Council and Migration Policy Group. http://www.mipex.eu/sites/default/files/downloads/migrant_integration_policy_index_mipexiii_2011.pdf.
- Huntington, S. P. (1991). *The Third Wave: Democratization in the Late Twentieth Century*. Norman: University of Oklahoma Press.
- Huntington, S. P. (1997). After Twenty Years: The Future of the Third Wave. *Journal of Democracy*, 8(4), 3–12.
- IDEA/International Institute for Democracy and Electoral Assistance (Beetham, D., Carvalho, E., Landman, T., & Weir, S.). (2008). *Assessing the Quality of Democracy: A Practical Guide*. Stockholm: International IDEA. <http://www.idea.int/publications/aqd/index.cfm>.
- IMF/International Monetary Fund. (2011). *World Economic Outlook, April 2011: Tensions from the Two-Speed Recovery Unemployment, Commodities, and Capital Flows*. Washington, DC: International Monetary Fund. <http://www.imf.org/external/pubs/ft/weo/2011/01/pdf/text.pdf>.
- Inkeles, A. (Ed.). (1993). *On Measuring Democracy: Its Consequences and Concomitants*. New Brunswick, NJ: Transaction Publishers.
- Jacobson, L., Holtom, P., Knox, D., & Peng, J. (2011). *China's Energy and Security Relations with Russia: Hopes, Frustrations and Uncertainties*. Stockholm: Stockholm International Peace Research Institute (SIPRI). <http://books.sipri.org/files/PP/SIPRIPP29.pdf>.
- Kaiser, R., & Prange, H. (2004). The Reconfiguration of National Innovation Systems—The Example of German Biotechnology. *Research Policy*, 33, 395–408.
- Kagan, R. (2003). *Of Paradise and Power: America and Europe in the New World Order*. New York, NY: Knopf.
- Kates, R. W., et al. (2001). Environment and Development: Sustainability Science. *Science*, 292(5517), 641–642.
- Kesselman, M. (1973). Order or Movement? The Literature of Political Development as Ideology. *World Politics*, 26(1), 139–154.
- Klingemann, H.-D., Volken, A., Bara, J., Budge, I., & McDonald, M. (2006). *Mapping Policy Preferences II: Estimates for Parties, Electors, and Governments*

- in Eastern Europe, European Union and OECD 1990–2003*. Oxford: Oxford University Press.
- Kneuer, M. (2016). E-Democracy: A New Challenge for Measuring Democracy. *International Political Science Review*, 37(5), 666–678. <http://journals.sagepub.com/doi/full/10.1177/0192512116657677>.
- Knutsen, C. H. (2010). Measuring Effective Democracy. *International Political Science Review*, 31(2), 109–128.
- Knutsen, C. H. (2012). Democracy and Economic Growth: A Survey of Arguments and Results. *International Area Studies Review*, 15(4), 393–415.
- Krastev, I., & Holmes, S. (2012). Putinism Under Siege: An Autopsy of Managed Democracy. *Journal of Democracy*, 23(3), 33–45.
- Kübler, D. (2015). De-nationalization and Multi-level Governance. In D. Braun & M. Maggeti (Eds.), *Comparative Politics: Theoretical and Methodological Challenges* (pp. 55–89). Cheltenham: Edward Elgar.
- Lancet Commission. (2017, October 19). The Lancet Commission on Pollution and Health. *The Lancet*. <http://societyforindoorenvironment.net/sites/default/files/pdf/Landriganetal2017TheLancetComissionsHealthAsiaReview.pdf> and http://gahp.net/wp-content/uploads/2017/03/PE_InfoLancetSummary.pdf.
- Laponce, J. A. (1981). *Left and Right: The Topography of Political Perceptions*. Toronto: University of Toronto Press.
- Lauth, H.-J. (2004). *Demokratie und Demokratiemessung. Eine konzeptionelle Grundlegung für den interkulturellen Vergleich*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Lauth, H.-J. (2010). Möglichkeiten und Grenzen der Demokratiemessung. *Zeitschrift für Staats- und Europawissenschaften*, 8(4), 498–529.
- Lauth, H.-J. (2011). Qualitative Ansätze der Demokratiemessung. *Zeitschrift für Staats- und Europawissenschaften*, 9(1), 49–77.
- Lauth, H.-J. (2016). The Internal Relationships of the Dimensions of Democracy: The Relevance of Trade-Offs for Measuring the Quality of Democracy. *International Political Science Review*, 37(5), 606–617. <http://journals.sagepub.com/doi/full/10.1177/0192512116667630>.
- Lauth, H.-J., & Schlenkrich, O. (2018). Making Trade-Offs Visible: Theoretical and Methodological Considerations About the Relationship Between Dimensions and Institutions of Democracy and Empirical Findings. *Politics and Governance*, 6(1), 78–91. <https://www.cogitatiopress.com/politicsandgovernance/article/view/1200>.
- Levine, D. H., & Molina, J. E. (2011). *The Quality of Democracy in Latin America*. Boulder, CO: Lynne Rienner Publishers.

- Lijphart, A. (1984). *Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries*. New Haven: Yale University Press.
- Lijphart, A. (1999). *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven: Yale University Press.
- Lord, C. (2004). *A Democratic Audit of the European Union*. Houndmills, Basingstoke: Palgrave Macmillan.
- Lundvall, B.-E. (Ed.). (1992). *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter Publishers.
- Luther, K. R., & Müller-Rommel, F. (Eds.). (2005). *Political Parties in the New Europe: Political and Analytical Challenges*. Oxford: Oxford University Press.
- Marshall, T. H. (1964). *Class, Citizenship, and Social Development: Essays*. Garden City, NY: Doubleday.
- Mayne, Q., & Geißel, B. (2018). Don't Good Democracies Need "Good" Citizens? Citizen Dispositions and the Study of Democratic Quality. *Politics and Governance*, 6(1), 33–47. <https://www.cogitatiopress.com/politicsandgovernance/article/view/1216>.
- Merkel, W. (2010). Das Ende der Euphorie. Kehren die Diktaturen zurück? Theoretische und empirische Befunde. *WZB-Mitteilungen*, 127, 36–39. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.187.1917&rep=rep1&type=pdf#page=36>.
- Merz, M., & Sormani, P. (rédacteurs). (2016). *The Local Configuration of New Research Fields: On Regional and National Diversity*. Cham: Springer.
- Mitterlehner, B. (2014). Cyber-Democracy and Cybercrime: Two Sides of the Same Coin. In E. G. Carayannis, D. F. J. Campbell, & M. P. Efthymiopoulos (Eds.), *Cyber-Development, Cyber-Democracy and Cyber-Defense: Challenges, Opportunities and Implications for Theory, Policy and Practice* (pp. 207–230). New York, NY: Springer.
- McFaul, M. (2002). The Fourth Wave of Democracy and Dictatorship: Non-cooperative Transitions in the Post-communist World. *World Politics*, 54(2), 212–244.
- Meyer, T. (2009). *Was ist Demokratie? Eine discursive Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- MIPEX/Migrant Integration Policy Index. (2013). *Migrant Integration Policy Index*. Brussels: British Council and Migration Policy Group. <http://www.mipex.eu/>.
- Møller, J., & Skaaning, S.-E. (2010). Beyond the Radial Delusion: Conceptualizing and Measuring Democracy and Non-democracy. *International Political Science Review*, 31(3), 261–283.

- Morlino, L., & Quaranta, M. (2016). What Is the Impact of the Economic Crisis on Democracy? Evidence from Europa. *International Political Science Review*, 37(5), 618–633. <http://journals.sagepub.com/doi/full/10.1177/01925121166639747>.
- Muller, T. C., Isacoff, J. F., & Lansford, T. (Eds.). (2012). *Political Handbook of the World*. Washington, DC and London: CQ Press (Sage).
- Müller, W. C., & Strøm, K. (2000). Conclusion: Coalition Governance in Western Europe. In W. C. Müller & K. Strøm (Eds.), *Coalition Governments in Western Europe* (pp. 559–592). Oxford: Oxford University Press.
- Müller, W. C., & Strøm, K. (Eds.). (2000). *Coalition Governments in Western Europe*. Oxford: Oxford University Press.
- Munck, G. L. (2009). *Measuring Democracy: A Bridge Between Scholarship and Politics*. Baltimore: The Johns Hopkins University Press.
- Munck, G. L. (2014). *What Is Democracy? A Reconceptualization of the Quality of Democracy*. Political Concepts: Committee on Concepts and Methods. Working Paper Series (Working Paper 60, May 2014). [http://www.concepts-methods.org/Files/WorkingPaper/60%20Munck%20\(2014\).pdf](http://www.concepts-methods.org/Files/WorkingPaper/60%20Munck%20(2014).pdf).
- Munck, G. L. (2016). What Is Democracy? A Reconceptualization of the Quality of Democracy. *Democratization*, 23(1), 1–26. <https://www.tandfonline.com/doi/full/10.1080/13510347.2014.918104?scroll=top&needAccess=true>.
- Munck, G. L., & Verkuilen, J. (2002). Conceptualizing and Measuring Democracy: Evaluating Alternative Indices. *Comparative Political Studies*, 35(1), 5–34.
- Nelson, R. R. (Ed.). (1993). *National Innovation Systems: A Comparative Analysis*. Oxford: Oxford University Press.
- Niemi, R. G., Mueller, J., & Smith, T. W. (1989). *Trends in Public Opinion: A Compendium of Survey Data*. New York: Greenwood Press.
- Nussbaum, M. (2000). *Women and Human Development: The Capabilities Approach*. New York, NY: Cambridge University Press.
- Obama, B. (2017, January 9). The Irreversible Momentum of Clean Energy. *Science, Policy Forum*. <https://doi.org/10.1126/science.aam6284> and <http://science.sciencemag.org/content/early/2017/01/06/science.aam6284.full>.
- OECD. (2010). *OECD Factbook 2010: Economic, Environmental and Social Statistics*. Paris: OECD.
- OECD. (2013). *OECD Stat Extracts: Social and Welfare Statistics*. Paris: OECD. <http://stats.oecd.org/Index.aspx>.

- O'Donnell, G. (2004). Why the Rule of Law Matters. *Journal of Democracy*, 15(4), 32–46.
- O'Donnell, G. (2004b). Human Development, Human Rights, and Democracy. In G. O'Donnell, J. V. Cullell, & O. M. Iazzetta (Eds.), *The Quality of Democracy: Theory and Applications* (pp. 9–92). Notre Dame, IN: University of Notre Dame Press.
- O'Donnell, G. (2005). Why the Rule of Law Matters. In L. Diamond & L. Morlino (Eds.), *Assessing the Quality of Democracy* (pp. 3–17). Baltimore: The John Hopkins University Press.
- Paslack, R. (1991). *Urgeschichte der Selbstorganisation. Zur Archäologie eines wissenschaftlichen Paradigmas*. Wiesbaden: Vieweg.
- Pechar, H., & Andres, L. (2011). Higher-Education Policies and Welfare Regimes: International Comparative Perspectives. *Higher Education Policy*, 24(1), 25–52.
- Pelinka, A. (2008). Democratisation and De-democratisation in Austria. In E. Fröschl, U. Kozeluh, & C. Schaller (Eds.), *Democratisation and De-democratisation in Europe? Austria, Britain, Italy, and the Czech Republic—A Comparison* (pp. 21–36). Innsbruck: Studienverlag (Transaction Publishers).
- Peters, B. G. (1998). *Comparative Politics: Theory and Method*. London: MacMillan.
- Pickel, S., & Pickel, G. (2006). *Politische Kultur- und Demokratieforschung. Grundbegriffe, Theorie, Methoden. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Piketty, T. (2015). *The Economics of Inequality*. Cambridge, MA: Harvard University Press.
- Poier, K. (2001). *Minderheitenfreundliches Mehrheitswahlrecht. Rechts- und politikwissenschaftliche Überlegungen zu Fragen des Wahlrechts und der Wahlsystematik*. Vienna: Böhlau.
- Prainsack, B., Schicktan, S., & Werner-Felmayer, G. (2014). *Genetics as Social Practice: Transdisciplinary Views on Science and Culture*. Farnham: Ashgate.
- Przeworski, A., Alvarez, M. E., Cheibub, J. A., & Limongi, F. (2003). *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990*. Cambridge: Cambridge University Press.
- Roberts, A. L. (2010). *The Quality of Democracy in Eastern Europe: Public Preferences and Policy Reforms*. Cambridge: Cambridge University Press.
- Rothstein, B., & Uslaner, E. M. (2005). All for All: Equality, Corruption, and Social Trust. *World Politics*, 58(1), 41–72.

- Rothstein, B., & Teorell, J. (2008). What Is Quality of Government? A Theory of Impartial Government Institutions. *Governance*, 21(2), 165–190.
- Rhodes, R. A. W. (1996). The New Governance: Governing Without Government. *Political Studies*, XLIV, 652–667 <http://law.hku.hk/gl/rhodes.pdf>.
- Rifkin, J. (2004). *The European Dream: How Europe's Vision of the Future Is Quietly Eclipsing the American Dream*. Cambridge: Polity Press.
- Rosenberger, S. (Ed.). (2010). *Asylpolitik in Österreich. Unterbringung im Fokus*. Vienna: Facultas.
- Rosenberger, S., & Seeber, G. (2008). *Wählen*. Vienna: Facultas WUV (UTB).
- Saward, M. (Ed.). (2000). *Democratic Innovation: Deliberation, Representation and Association*. London: Routledge.
- Schlattl, G. (2013). The Quality of Democracy-Concept vs. the Quintuple Helix: On the Virtues of Minimalist vs. Maximalist Approaches in Assessing the Quality of Democracy and the Quality of Society. *International Journal of Social Ecology and Sustainable Development*, 4(1), 66–85. <http://www.igi-global.com/article/quality-democracy-concept-quintuple-helix/77347>.
- Schedler, A. (2006). *Electoral Authoritarianism: The Dynamics of Unfree Competition*. Boulder, CO: L. Rienner Publishers.
- Schlesinger, A. M., Jr. (1986). *The Cycles of American History*. Boston: Houghton Mifflin.
- Schmidt, M. G. (1983). Politische Zusammensetzung der Regierungen. In M. G. Schmidt (Ed.), *Westliche Industriegesellschaften: Wirtschaft – Gesellschaft – Politik* (pp. 371–375). Munich: Piper Verlag.
- Schmidt, M. G. (2006). *Demokratiethorien. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Schmidt, M. G. (2010). *Demokratiethorien. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Segert, D., & Machos, C. (1995). *Parteien in Osteuropa. Kontext und Akteure*. Opladen: Westdeutscher Verlag.
- Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Share, D. (1999). From Policy-Seeking to Office-Seeking: The Metamorphosis of the Spanish Socialist Workers Party. In W. C. Müller & K. Strøm (Eds.), *Policy, Office, or Votes? How Political Parties in Western Europe Make Hard Decisions* (pp. 89–111). Cambridge: Cambridge University Press.
- Sodaro, M. J. (2004). *Comparative Politics: A Global Introduction*. With contributions by D. W. Collinwood, B. J. Dickson, J. L. Klesner, & T. D. Sisk (2nd ed.). New York: Mc Graw Hill.

- Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., Summerhayes, C. P., Barnosky, A. D., Cornell, S. E., Crucifix, M., Donges, J. F., Fetzer, I., Lade, S. J., Scheffer, M., Winkelmann, R., Schellnhuber, H. J. (2018, August 9). Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), 1–8. <https://doi.org/10.1073/pnas.1810141115> and <http://www.pnas.org/content/early/2018/08/07/1810141115/tab-article-info> and <http://www.pnas.org/content/pnas/early/2018/08/07/1810141115.full.pdf>.
- Strøm, K., & Müller, W. C. (1999). Political Parties and Hard Choices. In W. C. Müller & K. Strøm (Eds.), *Policy, Office, or Votes? How Political Parties in Western Europe Make Hard Decisions* (pp. 1–35). Cambridge: Cambridge University Press.
- Strøm, K., Müller, W. C., & Bergman, T. (Eds.). (2004). *Delegation and Accountability in Parliamentary Democracies*. Oxford: Oxford University Press.
- Süskind, P. (1985). *Das Parfum* [The Perfume]. Zurich: Diogenes.
- UNDP/United Nations Development Programme. (2007). *Human Development Report 2007/2008: Fighting Climate Change: Human Solidarity in a Divided World*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2007-8/>.
- UNDP/United Nations Development Programme. (2009). *Human Development Report 2009: Overcoming Barriers: Human Mobility and Development*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2009/>.
- UNDP/United Nations Development Programme. (2010). *Human Development Report 2010: 20th Anniversary Edition. The Real Wealth of Nations: Pathways to Human Development*. New York: Palgrave Macmillan. <http://hdr.undp.org/en/reports/global/hdr2010/>.
- UNDP/United Nations Development Programme. (2011). *Human Development Report 2011: Sustainability and Equity: A Better Future for All*. New York, NY: United Nations (United Nations Development Programme). http://hdr.undp.org/en/media/HDR_2011_EN_Complete.pdf.
- UNDP/United Nations Development Programme. (2013). *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World*. New York, NY: United Nations. http://hdr.undp.org/en/media/HDR_2013_EN_complete.pdf and <http://hdr.undp.org/en/reports/global/hdr2013/>.
- UNDP/United Nations Development Programme. (2016). *Human Development Report for Everyone*. New York, NY: United Nations. <http://hdr.undp.org/en/content/human-development-report-2016-human-development-everyone> and

- http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf.
- U.S. Census Bureau. (2013). *Selected Measures of Household Income Dispersion: 1967 to 2010 (Table A-3)*. Washington, DC: U.S. Census Bureau. <http://www.census.gov/hhes/www/income/data/historical/inequality/IE-1.pdf>.
- Vadrot, A. B. M. (2011). Reflections on Mode 3, the Co-evolution of Knowledge and Innovation Systems and How It Relates to Sustainable Development: Conceptual Framework for “Epistemic Governance”. *International Journal of Social Ecology and Sustainable Development*, 2(1), 44–52. <http://www.igi-global.com/bookstore/article.aspx?titleid=51636>.
- Vadrot, A. B. M. (2014). *The Politics of Knowledge and Global Biodiversity*. Abingdon: Routledge.
- Veld, R. J. in 't. (2010a). *Knowledge Democracy: Consequences for Science, Politics, and Media*. Heidelberg: Springer. <https://link.springer.com/book/10.1007/978-3-642-11381-9>.
- Veld, R. J. in 't. (2010b). Towards Knowledge Democracy. In R. J. in 't Veld (Ed.), *Knowledge Democracy: Consequences for Science, Politics, and Media* (pp. 1–11). Heidelberg: Springer. https://link.springer.com/chapter/10.1007/978-3-642-11381-9_1.
- Wagner, C. S., Roessner, D., Bobba, K., Klein, J. T., Boyack, K. W., Keytond, J., et al. (2011). Approaches to Understanding and Measuring Interdisciplinary Scientific Research (IDR): A Review of the Literature. *Journal of Informetrics*, 165, 14–26.
- Walter, F., Rosenberger, S., & Ptaszyńska, A. (2013). Challenging the Boundaries of Democratic Inclusion? Young People's Attitudes About the Distribution of Voting Rights. *Citizenship Studies*, 17(3), 464–478. <http://www.tandfonline.com/doi/abs/10.1080/13621025.2012.707008> and http://inex.univie.ac.at/news-einzelansicht/article/article-online-challenging-the-boundaries/?tx_ttnews%5BbackPid%5D=61650&cHash=e08c9f5c67a73acbb8d4aa45f0aa8fed.
- Wegren, S. K., & Konitzer, A. (2008). Prospects for Managed Democracy in Russia. *Europe–Asia Studies*, 59(6), 1025–1047.
- Wilkinson, R. G., & Pickett, K. (2010). *The Spirit Level: Why Equality Is Better for Everyone*. London: Penguin Books.
- Winiwarter, V., & Knoll, M. (2007). *Umweltgeschichte*. Köln: Böhlau.
- Winslow, M. (2010). *Environmental Quality, Economic Growth, and Democracy: An Empirical and Theoretical Examination of the Linkages*. Saarbruck (Saarbrücken): Lambert Academic Publishing.

- Whitehead, L. (1998). Comparative Politics: Democratization Studies. In R. E. Goodin & H.-D. Klingemann (Eds.), *A New Handbook of Political Science* (pp. 353–371). Oxford: Oxford University Press.
- World Bank. (2010). *World Development Indicators* (Web-Based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2>.
- World Bank. (2011). *World Development Indicators* (Web-Based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2>.
- World Bank. (2013). *World Development Indicators* (Web-Based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=world-development-indicators>.
- World Bank. (2018). *World Development Indicators* (Web-Based Online Database). Washington, DC: World Bank. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on>.
- World Economic Forum. (2018). *The Global Gender Gap Report*. Cologny/Geneva: World Economic Forum. http://www3.weforum.org/docs/WEF_GGGR_2017.pdf and https://en.wikipedia.org/wiki/Global_Gender_Gap_Report.
- World Inequality Database. (2018a). *World Inequality Database*. WID <http://wid.world/>.
- World Inequality Database. (2018b). *World Inequality Report 2018*. WID. <http://wir2018.wid.world/>.
- World Meteorological Organization. (2017, October 30). The State of Greenhouse Gases in the Atmosphere Based on Global Observations Through 2016. *WMO Greenhouse Gas Bulletin*, 13. https://ane4bf-datap1.s3-eu-west-1.amazonaws.com/wmocms/s3fs-public/ckeditor/files/GHG_Bulletin_13_EN_final_1_1.pdf.

Index

A

Advanced democracies 10, 35, 46, 56, 93, 161, 221, 301
Advanced economies 11, 14–16, 34, 35, 46, 53, 93, 105, 106, 108, 132, 160, 167, 171, 172, 174, 177, 183, 184, 191, 209, 214–218, 220, 221, 223, 302, 304, 324, 327, 328, 330, 334, 339, 341
Africa 97, 108, 109
America 11, 93, 95, 98, 105–107, 143, 187, 230, 284, 331
American 10, 31, 46, 98, 103, 108, 137, 142, 161, 164, 188, 196, 230, 232, 233, 239, 289, 294, 297, 301, 337, 338
Application 5, 8, 14, 16, 21, 25, 54, 59, 92, 106, 192, 193, 237, 342

Asia 47, 49, 51, 88, 95, 106–110, 151, 152, 155, 161, 162, 164, 166, 170, 171, 173–175, 179, 180, 182, 183, 185–189, 191, 192, 199, 306, 307, 309, 317–319

Autocracy 339

B

Basic conceptual dimensions 14, 32, 39, 51, 55, 227, 281, 284
Basic conceptual dimensions of democracy 31
Basic dimensions 14, 29, 31, 32, 36, 39, 47, 51, 55, 227, 281, 283–287, 302
Basic dimensions of democracy 90, 285, 286
Basic rights 12, 13, 18, 24, 31

Brazil 47, 51, 88, 93, 95–97, 108,
151, 152, 159–166, 168, 173,
175, 178, 179, 182, 183, 185,
188, 199, 317, 319

C

Change of head of government 57
China 47, 51, 88, 93, 95–97, 107,
108, 151, 152, 155, 159–166,
168–171, 173–175, 178–180,
182, 183, 185, 186, 188–195,
199, 303, 307, 309–311,
317–319
CO₂ emissions 44, 85, 87, 126,
135, 136, 138, 141, 145, 146,
182–184, 188, 189, 193, 201,
203, 206, 209, 214, 217, 219,
221–223, 317, 327, 328, 332,
338
Co-evolution 34, 54, 171, 192,
216–218, 265, 275, 282, 302,
342, 344
“Comprehensive sustainable devel-
opment” 42, 47, 127–131,
137, 138, 141, 143, 145, 146,
168–173, 188, 207, 214, 219,
220, 317, 325, 327, 335, 337,
338
Conceptualization 8, 14, 42, 49, 60,
85, 127, 135, 168, 281, 282,
286, 312, 313, 321, 337, 338,
340
Conceptualization of democracy 1,
8, 9, 12, 31, 34, 53, 129, 208,
293, 326
Conservative welfare regimes 94,
102, 143, 145–148

Control 8, 14, 23, 31–33, 36, 39,
44, 48, 51, 54, 55, 142, 176,
227, 228, 230, 235, 236, 281,
285, 286, 318

D

Definition of democracy 12, 21, 31,
127
Democracy/Democracies 1–3,
10–18, 20, 21, 23, 29–32, 34,
35, 43–48, 53, 54, 56–58, 76,
88–90, 93, 100–102, 126,
129, 130, 138, 161, 189–191,
200, 208, 216, 217, 221, 230,
231, 234, 235, 241, 275, 276,
281, 282, 286, 301, 303, 307,
315–317, 320, 326, 330–335,
339–342
Democracy as innovation enabler
2, 14, 17, 35, 50, 52, 58, 59,
206, 220, 223, 281, 312, 328,
333, 338, 339, 342, 344
Democracy innovation 331, 341,
342
Democracy measurement 3–5, 29,
32, 60, 239, 240, 282, 283,
312, 313, 315–317, 336, 337
Democracy of knowledge 14, 35, 58,
339, 344
Democratization 16, 181, 200, 201,
203, 214, 276, 283, 303, 307,
327, 330, 331
Developing economies 13–16, 34,
35, 46, 106, 108, 161, 170,
171, 174, 183–185, 191, 209,
214, 215, 220, 223, 327, 328,
330, 339

- Development 3, 10, 13, 14, 16, 17, 25–27, 29, 30, 34–36, 46, 53–56, 58, 60, 75, 76, 80, 87, 88, 90–92, 95, 101, 102, 104, 106, 107, 109, 121, 123, 132, 133, 135, 136, 139, 145, 164, 165, 167–170, 172–174, 176, 179, 184–188, 190–193, 200–202, 208, 209, 214, 215, 218, 220, 221, 223, 224, 237, 263, 276, 282, 283, 285, 287, 302–304, 306, 307, 309, 312, 315, 316, 318, 324–330, 336, 338–342
- E**
- Ecology 223, 332
- Economic development 14, 15, 35, 53, 187, 216, 219, 303, 307, 324, 330, 339, 342
- Economic freedom 42, 87, 116–118, 137, 138, 144, 155, 159, 160, 186, 187, 189, 193, 207, 216, 217, 219, 221, 283, 284, 286, 288, 291, 293, 294, 297, 301–303, 306, 309, 311, 313, 319–321, 323–325, 329, 335, 337
- Economic growth 14, 16, 35, 138, 139, 167, 168, 187, 188, 236, 330, 339, 341
- Economy 13, 14, 24–26, 30, 35, 58, 98, 104–106, 108, 109, 128, 133, 135, 136, 161, 167, 182, 187–192, 194, 201, 202, 206, 208, 209, 216–218, 221–223, 234, 236–238, 285, 286, 302, 304, 317, 318, 321, 322, 324–326, 332, 339
- Education 29, 30, 87, 104, 132, 133, 174–178, 193, 220
- Emerging economies 15, 106, 107, 132, 160, 170, 171, 215, 311, 341
- Enabler of innovation 58, 59, 206, 220, 223, 312, 328, 338, 339
- Environment 14, 25, 30, 55, 85, 141, 182, 206, 285, 332, 333
- Environmental pollution 182, 185, 201, 206, 209, 219, 222
- Equality 5, 8, 12, 14, 18, 24, 31–33, 36, 39, 42, 47, 51, 54, 55, 85, 90–92, 97, 99, 100, 107–109, 117, 120, 135, 137, 139, 141, 145, 146, 161, 181, 185, 186, 217, 218, 224, 227, 281, 283–288, 291, 293, 294, 296–298, 301–304, 306, 309, 311, 315, 323, 324, 329, 337, 342
- EU15 47, 51, 88, 93, 95, 98–100, 103, 106, 107, 115, 117–120, 122, 125, 127–134, 136, 138–144, 146, 147, 161, 171, 174, 175, 180, 184, 199, 287, 288, 291, 293, 294, 297, 301, 321, 335, 337, 338
- EU28 47, 51, 88, 93–95, 98–100, 107, 115, 117, 119, 120, 122, 125, 127–129, 131–134, 136, 141–144, 146, 147, 161, 171, 175, 180, 184, 199, 287, 291, 293, 294, 301, 302, 335, 337, 338
- Europe 8, 11, 35, 94, 98–100, 102, 103, 105, 106, 126, 128, 130,

- 131, 133, 136, 141, 142, 147,
187, 230, 232, 233, 284, 287,
288, 330, 331
- European 31, 56, 97–100, 102, 103,
106, 126, 128, 130, 133, 142,
143, 145, 147, 148, 202, 232,
233, 287, 289, 294, 298, 301,
333, 337, 338
- European Union (EU) 22, 26, 47,
51, 88, 93, 94, 97–103, 106,
115, 119, 120, 122, 125,
128–130, 133, 134, 136, 137,
142, 145–147, 161, 163, 174,
186, 287, 288, 291, 293, 294,
301, 302, 331, 335–338
- Evolution 3, 57, 104, 218, 237, 238,
339, 341
- Evolution of democracy 10, 17, 192,
302, 332, 344
- Evolution of quality of democracy
340
- F**
- Freedom 4, 12, 14, 18, 20, 24,
30–33, 36, 39, 42–44, 47, 51,
54, 55, 76, 85, 87, 89–92, 97,
99, 100, 107–109, 115, 116,
139, 141, 145, 146, 152, 160,
171–174, 185–187, 190, 196,
203, 216–218, 227, 238–241,
265, 276, 277, 281, 283–288,
291, 293, 294, 296–298,
301–304, 306, 307, 309, 311,
313, 314, 319, 320, 323, 324,
329, 334, 337, 342
- Freedom house 2, 4, 10, 11, 23, 35,
43–45, 60, 76, 80, 84–87, 89,
190, 195, 196, 227, 238–241,
265, 276, 277, 310, 313, 314,
319, 320, 334
- G**
- GDP per capita 87, 122, 124, 127,
131, 132, 134, 135, 137, 138,
141, 144, 163, 165, 168, 173,
178–184, 188, 189, 192, 193,
195, 214, 216–218, 221–224,
303, 315, 317, 322, 323,
327–329, 338
- Gender equality 30, 42, 86, 119–
121, 131, 137, 138, 141, 146,
162, 163, 173, 189, 190, 193,
214, 217, 219, 222, 223, 236,
283, 284, 286, 288, 291, 293,
294, 296–298, 303, 304, 306,
309, 311, 313, 317, 321–324,
327, 328, 335, 337
- Gini 315
- Gini coefficient 44, 85–87, 315, 322
- Gini index 44, 85–87, 124, 127,
131, 165, 168, 315, 322, 323
- Global comparison 1, 2, 8, 9, 38,
46, 49–53, 60, 75, 80, 85, 88,
102, 105, 281, 282, 286, 302,
312, 313, 315, 322, 331
- Global democracy 26, 283
- Global quality of democracy 168
- Good governance 321, 342
- Governance 13, 14, 18, 21, 24–26,
34, 59, 99, 236–238, 242,
306, 331, 334, 337, 342
- Government/opposition cycles 5,
6, 10, 12–14, 18–21, 23–26,
31, 32, 34, 35, 43, 55–59,

- 83, 104, 227, 228, 230–238, 241–243, 263–265, 274–277, 282, 286, 314, 331, 333, 334, 337, 341, 342
- Growth 96, 116, 134, 139, 165, 168, 172, 176–178, 183, 184, 190, 194, 203, 206, 207, 209, 219, 221–223, 323, 325, 327, 328
- H**
- HDI re-designed 87, 121, 125, 130, 141, 163–167, 206, 214, 219, 324, 327
- Human development index (HDI) 3, 29, 42, 87, 88, 101, 105, 121–123, 125, 126, 130, 137, 138, 141, 163–167, 189, 193, 206, 207, 214, 219, 317, 324, 325, 327
- Human rights 3, 12, 13, 18, 24, 26, 27, 29–31, 34, 54, 55, 285
- I**
- Income equality 42, 86, 117–120, 126, 131, 132, 135–138, 141, 146, 161–163, 173, 179–181, 184, 186–189, 193, 207, 214, 217, 219, 221, 222, 224, 283, 284, 286, 288, 291, 293, 294, 296–298, 302–304, 306, 309, 311, 315, 321–324, 327, 329, 335, 337, 342
- India 15, 47, 51, 88, 93, 95–97, 107, 108, 151, 152, 155, 161, 162, 164–166, 168–171, 173, 175, 178, 179, 181–183, 185, 188–192, 194, 199, 231, 307, 309–311, 318, 319, 322
- Indonesia 47, 51, 88, 93, 95–97, 109, 151, 152, 155, 159, 161, 162, 164–166, 168–171, 173, 175, 178, 179, 181–183, 185, 199
- Industrialization 105
- Industry 58
- Inequality 85, 136, 137, 185, 188, 192, 207, 218, 224, 304, 306, 311, 315, 323, 329
- Innovation 14, 17, 26, 33–35, 52, 54, 58–60, 103, 104, 106, 136, 155, 168, 172, 182, 192–194, 206, 216, 220, 223, 238, 301, 328, 332–334, 339, 341, 342, 344
- J**
- Japan 11, 47, 51, 88, 93, 96, 97, 105, 106, 115, 117–120, 122, 125–131, 133, 134, 136, 163, 171, 174, 180, 184, 199, 232, 331, 335
- K**
- Knowledge 9, 14, 30, 34, 35, 43, 58–60, 82, 86, 103, 104, 106, 132–134, 139, 141, 174–178, 193, 206, 216, 217, 219, 220, 223, 285, 301, 328, 333, 339, 344
- Knowledge democracy 14, 35, 58–60, 105, 106, 132–134, 174, 175, 206, 208, 216, 217, 220, 301, 326, 328, 338, 339, 342

Knowledge economy 58, 59, 105,
106, 133, 134, 139, 174, 192,
206, 208, 217, 220, 223, 301,
325, 328, 339, 342

Knowledge production 33, 60, 136,
177, 178, 182, 193, 223, 332,
333, 339, 341

Knowledge society 58, 59, 105, 106,
133, 134, 139, 206, 208, 217,
220, 223, 301, 325, 328, 339

L

Latin America 15, 47, 49, 51, 88,
95, 106–108, 110, 151, 152,
155, 159, 161, 162, 164, 166,
170, 171, 173–175, 178–180,
182, 183, 185–189, 191, 192,
194, 195, 199, 306, 307, 309,
317–319, 330, 332

Liberal welfare regimes 94, 102, 143,
144, 146, 147

Life expectancy 43, 87, 88, 122, 124,
127, 131, 132, 135, 138, 141,
145, 146, 163, 165, 168, 173,
174, 189, 192–194, 218, 219,
221, 317, 338

M

Measurement of democracy 2–4, 14,
38, 49, 53, 75, 80, 82, 135,
172, 282, 286, 312, 316, 331,
338, 340

N

Newly industrialized countries 107,
108, 160, 170, 171, 174, 191,
220, 223, 231, 276, 328

Newly industrialized economies 107,
160

Nigeria 47, 51, 88, 93, 96, 97, 109,
151, 152, 159, 161–163, 165,
166, 169, 173, 175, 178–183,
185, 199, 322

Non-democracies 15, 18, 34, 43–48,
54, 57, 76, 88–90, 129, 189,
190, 200, 221, 231, 241,
264, 265, 275, 281, 282, 286,
315–317, 321, 330, 332, 333,
335, 339, 340, 342

Non-political development 194, 209,
219, 220, 326

Nordic countries 47, 51, 88, 94,
96, 98, 100–103, 107, 115,
117–120, 122, 123, 125, 127,
129–138, 143–148, 160, 161,
163, 164, 171, 174, 175, 180,
183, 184, 199, 294, 296–298,
301, 302, 319, 320, 322, 329,
335, 336, 338

O

Organization of economic co-operation
and development (OECD)
11, 16, 17, 22, 34, 46, 47, 51,
53, 56, 88, 92, 93, 95–97,
102, 104–110, 115–122, 125,
128, 129, 131–136, 143, 151,

- 152, 155, 159–165, 167–181,
183–185, 188, 194, 199,
200, 209, 213–224, 301–304,
321–324, 326–330, 332–335,
340, 341
- P**
- Party change of head of government
43, 57, 241, 243, 264, 265,
275, 277
- person change of head of government
43, 241, 275
- Political 4, 5, 10–15, 20–25, 27,
29–36, 39, 42–44, 47, 51, 52,
55–58, 84, 86, 87, 89, 90, 97,
99, 104, 108, 109, 124–127,
129–132, 134, 135, 137, 138,
141, 142, 146, 160, 165–174,
178, 182, 185, 187, 189–195,
207, 208, 219–221, 223, 227,
230–243, 263–265, 275, 277,
281, 282, 284–286, 293, 306,
307, 309, 311, 313, 314, 317,
318, 320–322, 324–326, 328,
330, 333–335, 337–339, 342,
344
- Political freedom 35, 42, 43, 45,
47, 87–89, 115, 116, 127,
130, 131, 137–141, 146, 152,
155, 159, 160, 162–164, 166,
168–172, 174, 181, 187–196,
202, 203, 207–209, 214, 216,
217, 219–221, 227, 238, 240,
241, 265, 274–277, 283, 284,
286, 288, 291, 293, 294,
296–298, 301–303, 306, 307,
309–311, 313, 314, 317–321,
323–327, 329, 330, 332, 333,
335, 337, 341, 342
- Political left/Right swings 14, 35, 56,
228, 230, 232, 233, 237, 241,
243, 277, 334
- Political swings 14, 35, 43, 51, 56–
58, 228, 230, 232–235, 237,
238, 241, 277, 286, 333–335,
341, 342
- Political system 10, 13, 14, 24–26,
30, 32, 57, 109, 135, 182,
190, 230–234, 236, 237, 241,
264, 275, 284, 334
- Q**
- Quadruple Helix 33, 59, 60, 182,
285
- Quadruple Helix innovation systems
59
- Quality 8, 14, 18, 22, 24, 25, 32,
45, 84, 85, 89, 109, 127, 128,
130, 132, 136, 138–140,
145, 173, 175–177, 208, 217,
230–232, 234, 236, 239, 277,
289, 291, 297, 309, 315, 316,
320, 322, 325, 331, 332, 341,
342
- Quality of democracy 1–4, 7–9,
12–15, 17, 18, 21, 23–26,
29–36, 38, 39, 42–60, 75, 80,
82–85, 88, 90, 101, 102, 108,
127–130, 133, 135, 137–142,
145, 168, 172, 181, 182, 200,
203, 209, 227, 232, 233, 240,
241, 263, 275–277, 281–289,
291, 293, 294, 297, 298, 301,
302, 304, 306, 309, 312–318,

324, 326, 330–332, 334–342, 344
 Quintuple-dimensional 1, 12, 14, 33, 36, 39, 51, 54, 55, 58, 59, 227, 281, 282, 284, 313, 334
 Quintuple Helix 33, 59, 60, 182, 223, 286, 333
 Quintuple Helix innovation systems 58, 59, 135, 202, 332, 339

R

Research 1, 2, 5, 9, 14, 16, 30–32, 38, 47, 50–55, 58–60, 89, 91, 92, 94, 104, 108–110, 129, 218, 227, 265, 281–283, 285, 294, 307, 312–316, 324, 334, 340, 342
 Russia 47, 51, 88, 93, 95–97, 108, 110, 151, 152, 155, 161–166, 168–171, 173, 175, 178–183, 185, 186, 192–196, 199, 242, 309–311, 319, 341

S

Scandinavia 242
 Self-governance 12, 18, 20, 21, 24, 25, 31, 34
 Self-government 12, 18–21, 24, 25, 31, 34
 Self-ruling 12, 18, 20, 21, 24, 25, 31, 34
 Semi-democracies 34, 43–48, 54, 76, 88–90, 200, 231, 264, 265, 275, 276, 281, 282, 286, 315–317, 321, 335, 339, 340
 Social-democratic welfare regimes 102, 103

Social ecology 55, 56, 59, 135, 223, 332, 333
 Society 5, 6, 13, 14, 24–26, 30, 35, 43, 55, 56, 58, 59, 85, 98, 104–106, 109, 128, 131–133, 135, 136, 162, 167, 173, 176, 179, 182, 187–192, 194, 201, 202, 206, 208, 209, 217, 218, 221–223, 234–238, 302, 317, 318, 322, 323, 325, 326, 332, 333, 339

Sustainable development 14, 16, 25, 26, 29, 32, 34–36, 39, 42, 47, 51, 55, 56, 85, 87, 90–92, 97, 99, 100, 106–109, 121, 124–132, 134, 135, 137, 138, 140–142, 145, 146, 163, 165–174, 178, 182, 185–195, 201, 206–208, 216–220, 222, 223, 227, 234, 237, 281, 285–287, 302, 306, 317, 318, 324–326, 328, 329, 334, 335, 337–339, 341

T

Technology 16, 134, 144, 174, 175, 177, 192, 200
 Technology diffusion 134, 144, 174, 175, 177, 192
 Tertiary education 130, 132–134, 137, 138, 144, 174–178, 189, 193, 195, 206, 209, 214, 216, 219, 220, 222, 317, 327, 338
 Theory 2, 3, 5, 12, 13, 18, 23, 26, 29, 30, 34, 38, 44, 54, 55, 59, 172, 238, 243, 277, 282, 284, 286, 304, 316, 317, 330, 339, 340

Theory evolution 341

Theory of democracy 3, 9, 12, 15,
18, 50, 54, 164, 170, 191,
282, 283, 316, 334

Triple Helix 58, 59

U

United States (U.S.) 47, 51

W

Wealth 16, 87, 132, 134, 135, 141,
179–181, 184, 185, 192,
216–219, 221, 303, 304, 315,
322, 323, 342

Welfare regimes 94, 98, 102–105,
132, 137, 143–148

World 3, 4, 13, 15, 16, 21, 29, 43,
44, 46–48, 51, 53, 54, 56, 60,
75, 76, 80, 82, 84, 87, 88,
92–102, 105–110, 121, 124,
127, 129, 131, 132, 134, 135,
138, 144, 145, 151, 152, 155,
159–170, 172–182, 184–187,
192, 196, 199–203, 206–209,
213–224, 227, 239, 240, 242,
243, 265, 277, 281–283, 287,
288, 297, 298, 301–303, 306,
312, 313, 317–321, 323–336,
338, 340–342

World-wide democracy 2, 15, 29, 54,
60, 340