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A Taxonomy of Post-communist Economies After 30 Years of Reforms

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Introduction

The concept of transition from one economic system to another implies an identification of a starting point as well as a destination. In the case of economic transition from the countries under communist rule with mostly centrally planned economies, the starting point can be found within the Soviet Union model as well as each country's own history. Meanwhile, understanding the destination can be only based on the knowledge about the existing market systems, in general, rather than on (inexistent) previous historic experience of such a transition. By default, both reform strategists within the post-communist countries, and foreign analysts tend to think of destination as being a "perfect" democracy with an economic system similar to the best performing industrialised market economies of Western Europe, Northern America, Japan and, perhaps, Australia, and New Zealand.

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In the euphoria of dramatic historic changes of late 1980s—early 1990s it was easy not to recognise that the destination of post-communist transition could be different. The family of the existing market (or mostly market) economies includes various kinds of systems. Democratic countries with liberal market economies have different levels of productivity and living standards, different proportions of the public sector, different safety net provisions, and different regulatory mechanisms. On the other hand, successful market economies are not always democracies, at least in the Western meaning of this word. For example, Singapore is a well-performing free-market economy with an authoritarian political regime.

The countries, which do not fall into the category of mostly liberal market systems are also characterised by different proportion of public and private ownership, different principles of economy-governing legislation and government regulation, different levels of performance, stability, prosperity, and social welfare. In countries, such as Latin American ones, economic and political instability, considerable, but not always reasonable government involvement in economic life, and endemic corruption have remained important and pressing features for decades and centuries. There have been examples, such as Argentina, of rapid economic growth followed by drastic decline. From time to time, some of these economies were engaged in comprehensive and largely successful economic reforms, which were supposed to improve their predominantly market systems. Meanwhile, rapid and intensive reforms were followed by periods of slow and gradual change.

By the late 1990s, post-communist countries in transition had demonstrated substantial differences in the speed, sequence, and success of their economic reforms towards a "perfect" market system situation. The question was then, and is now—after 3 decades of reforms,

- whether the transition has been ongoing, and whether the transitional economies (or some of them) have been on their further way to a desirable "perfect" market economic system;
- or whether the transition was already over by the end of the first decade of reform:

 or is it over by now, with each of the former communist countries transformed to a particular type of a market economy, analogous to one of the existing forms, although at some distance from the "perfect" one?

In the letter case, further transformation to a perfect system can take substantial time.

This chapter is a considerable extension of a project attempted at answering this question based on the experience and data available more than 20 years ago (Kazakevitch, 1998). Then, only one Economic Freedom data set was available—for the year 1998; and the data on post-communist countries was incomplete. This project is based on the Economic Freedom data sets for 21 years.

Why Economic Freedom Data?

First, this data comprehensively ranks economic systems based on various qualitative indicators. Then, there is a visible correlation between the level of economic freedom and the welfare of the nation, measured as GDP per capita. This is true for all countries and, separately, post-communist countries (see Figs. 2.1 and 2.2). Therefore, improving economic freedom is a desirable goal.

The available data allows for tracing the progress of reforms from 1998 to 2018. In addition, compared to (Kazakevitch, 1998), the range of post-communist countries is extended from the former Soviet Bloc countries, including Former Soviet republics and post-communist countries of Eastern and Central Europe. China and other countries still ruled by communist countries were not considered in 1998, for the reason that those countries did not declare that they were in the process of post-communist transformation. Today it is clear that some aspects of their reforms towards market economies and economic freedom have been more successful than in some "officially" post-communist economies. In addition, some countries that used to be parts of former Yugoslavia are also included because, unlike in 1998, consistent data for most of them is now available. The only post-communist country that is and should not

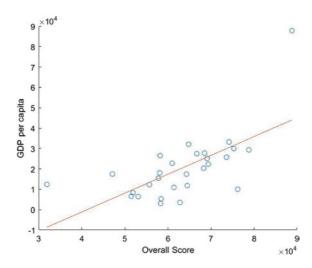


Fig. 2.1 The relationship between economic freedom and GDP per capita: correlation, linear regression, and scatter plot for post-communist countries in 2018 (*Source* Statistical estimation by the author based on *Index of Economic Freedom*, https://www.heritage.org/index/explore?view=by-region-country-year&u=636916527549820517. *Notes* 27 observations; correlation coefficient: 0.6430)

be included is East Germany because the data for East Germany is not collected separately from the whole Germany. Even though the former communist part of Germany has experienced enormous economic and social problems, in terms of economic mechanism, this part of the now united country has expediently achieved the West German and European Union Standards due to considerable financial assistance and implementation of West German federal laws and regulations.

After removing missing variables or for some countries, the total number of countries included in the database is 132. This covers more than 90% of the world's population and 99% of the world's GDP.

The simplest way to interpret the Economic Freedom data is comparing countries based on the integrated scalar economic freedom indicator or on its categories reflecting different aspects of economic freedom. After excluding incomplete data, the following categories are taken into consideration: property rights; corruption; government spending; business

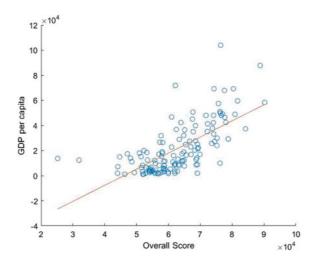


Fig. 2.2 The relationship between economic freedom and GDP per capita: correlation, linear regression, and scatter plot for all countries in 2018 (Source Statistical estimation by the author based on Index of Economic Freedom, https://www.heritage.org/index/explore?view=by-region-country-year&u=636916527549820517. Notes 132 observations; correlation coefficient: 0.6731)

freedom; monetary freedom; trade freedom; investment freedom; and financial freedom. Based on the comprehensive qualitative analysis of the survey data, the authors of the survey assign a quantitative rating (0–100) for each category for each country. Using these ratings an integrated rating (0–100) is produced for each country, where 100 is the maximum level of economic freedom. Based on those ratings, 4 groups of countries are also identified: "free", "partly free", "mostly not free", and "not free".

This data is already rich enough for comparing the dynamics of post-communist systems from 1998 to 2018, in association with selected countries characterised by similar levels of economic freedom. To make this comparison, the countries are ranked from 1 to 132—from the highest to the lowest rating for 1998, and separately—for 2018. Then, the countries are sorted from 1 to 132 with respect to the year 2018. As a result, we can see how the rank has changed from 1998 to 2018 (Table 2.1).

Table 2.1 The dynamics of post-communist systems from 1998 to 2018, in association with countries characterised by similar levels of economic freedom

Country	Rank 1998	Rank 2018
Hong Kong	1	1
Singapore	65	2
New Zealand	93	3
Switzerland	4	4
Australia	6	5
Ireland	10	6
Estonia	14	7
United Kingdom	5	8
Canada	24	9
United Arab Emirates	15	10
Iceland	17	11
Denmark	31	12
Luxembourg	104	13
Sweden	49	14
Georgia	112	15
Netherlands	3	16
United States	8	17
Lithuania	12	18
Chile	9	19
Malaysia	81	20
Norway	44	21
Czech Republic	25	22
Germany	47	23
Finland	51	24
Korea, South	35	25
Latvia	75	26
Japan	20	27
Israel	28	28
Austria	40	29
Botswana	54	30
Romania	98	31
Uruguay	23	32
Jamaica	33	33
Kazakhstan	121	34
Rwanda	68	35
Colombia	39	36
Armenia	108	37
Peru	56	38
Malta	118	39
Poland	43	40
Bulgaria	114	41

(continued)

Table 2.1 (continued)

Country	Rank 1998	Rank 2018
Cyprus	26	42
Bahrain	7	43
Belgium	45	44
Thailand	32	45
Panama	41	46
Hungary	84	47
Costa Rica	38	48
Turkey	64	49
Spain	58	50
Philippines	72	51
Jordan	34	52
Mexico	94	53
Slovenia	48	54
Albania	92	55
Azerbaijan	119	56
Indonesia	52	57
France	76	58
Guatemala	37	59
Portugal	89	60
El Salvador	19	61
South Africa	11	62
Kyrgyz Republic	53	63
Italy	74	64
Kuwait	103	65
Paraguay	42	66
Côte d'Ivoire	106	67
Fiji	78	68
Uganda	46	69
Morocco	120	70
Dominican Republic	79	71
Bosnia and Herzegovina	131	72
Croatia	105	73
Oman	96	74
Honduras	85	75
Burkina Faso	88	76
Tanzania	69	77
Nicaragua	101	78
Tunisia	50	79
Cambodia	67	80
Guyana	99	81
Namibia	95	82
Nigeria	29	83

(continued)

Table 2.1 (continued)

Country	Rank 1998	Rank 2018
Moldova	82	84
Tajikistan	122	85
Russia	126	86
Belarus	127	87
Gabon	71	88
China	97	89
Trinidad and Tobago	16	90
Mali	61	91
Greece	66	92
Belize	73	93
Barbados	30	94
Madagascar	90	95
Benin	60	96
Ghana	83	97
Swaziland	59	98
Haiti	116	99
Mongolia	62	100
Senegal	2	101
Bangladesh	102	102
Kenya	77	103
India	107	104
Pakistan	13	105
Zambia	57	106
Nepal	21	107
Mauritania	80	108
Burma	115	109
Lesotho	70	110
Egypt	87	111
Lebanon	110	112
Vietnam	124	113
Ethiopia	109	114
Argentina	18	115
Guinea	63	116
Malawi	27	117
Cameroon	111	118
Ukraine	123	119
Uzbekistan	130	120
Brazil	100	121
Iran	128	122
Chad	113	123
Ecuador	55	124
Suriname	125	125

(continued)

Country	Rank 1998	Rank 2018
Turkmenistan	129	126
Mozambique	36	127
Algeria	86	128
Bolivia	22	129
Zimbabwe	117	130
Cuba	132	131
Venezuela	91	132

Table 2.1 (continued)

Source Ranking by the author based on *Index of Economic Freedom*, https://www.heritage.org/index/explore?view=by-region-country-year&u=636916527549820517 Post-communist and communist countries are highlighted in Bold fonts

One can notice a few visible shifts. Estonia had achieved the highest rank out of the post-communist economics already in 1998. By 2018 it has moved to the group of top 10 in the world. Georgia has moved from the rank 112 (mostly unfree) to 15 (mostly free). This is due to swift reforms undertaken by President Saakashvili, including cutting red tape that made running business difficult; inviting foreign investments; simplifying the tax code, but tackling tax evasion; and starting a privatisation campaign. Latvia, Romania, Kazakhstan, Albania, and Azerbaijan have considerably improved their ratings, joining mostly free economics. Bosnia and Herzegovina and Croatia have also improved their ranks, while Mongolia dropped it from 62 to 100. Finally, Bulgaria, due to swift adoption of the EU regulation and practices has moved from 114 to 41.

Meanwhile, for most of the countries their shift is insignificant. This means that they had achieved a particular, high or low standing in terms of economic freedom, but their standing has not radically changed since 1998. These are Lithuania, Czech Republic, Poland, Slovenia, Kyrgyz Republic, Moldova, Tajikistan, Russia, Belarus, Vietnam, Ukraine, Uzbekistan, Turkmenistan, and Cuba.

Why Cluster Analysis?

The cluster analysis gives further insight into the economic freedom standing of the post-communist countries, compared to the dynamics of the integrated index. The qualitative data associated with each of the economic freedom categories allows for much more than its original use. It gives an opportunity to undertake a structured comparative analysis of economic systems included in the survey, and classify them as a multidimensional vector criterion rather than a scalar rank. Then, falling of a particular country into a particular group (cluster) can be interpreted as closeness of that country, in terms of its socio-economic system, to other members of the corresponding group.

For the purpose of such an analysis, the Economic Freedom survey data is associated with the following characteristics of economic mechanism.

Property rights. This includes legislated, and protected by law, private ownership. In the case of perfect market system all types of transactions and activities with private property can be permitted by the default. An owner has a right protected by law, to decide how a particular property will be used, to receive income generated by its use, transfer property rights by sale, gift, or will, and keep the income in the case of sale. If a system is different from a perfect one, certain kinds of restrictions on property use and transfers may be imposed beyond reasonable regulation justified by national security, safety and health standards, and environment conservation. Furthermore, some types of property and business activities (such as land, mineral resources, infrastructure utilities, defence industries, education, and health care) can be excluded from private ownership. Consequently, transactions of the corresponding assets can be restricted or forbidden. In some countries, property rights legislation can exist, but not indorsed, or can be distorted by corruption. Finally, property rights can be inexistent, or monopolised by the government.

Government integrity and corruption. Corruption is an obstacle to economic freedom by inducing a shift from competitive business decisions to the ones of vested interest to corrupted officials at different levels of government. The more corruption and the less government integrity, the less is trust in public institutions, the higher are costs of running business, the less efficient are economic decisions, and in the worst situations, parts or the whole economy are paralysed. The lack of

government integrity caused by such practices reduces public trust in economic activities, and increases the costs of running business.

Government spending. The government spending component in GDP includes government procurement of goods and services as well as welfare entitlement transfers. The greater proportion of GDP government spends, the lesser proportion is left for competitive and efficient market.

Business freedom. It is defined by entrepreneurial rights and corporate legislation. In liberal market economics rules for establishing and running business are simple and easily observable.

However, regulations can be restrictive, include unreasonably complex rules and bureaucratic procedures making establishing new businesses difficult. Other forms of restriction include price control, administrative barriers to entry, non-competitive government recruitment, and in worst cases excluding considerable parts of the economy from private business entrepreneurship.

Due to incomplete information for some countries, we also include, in this characteristic, the freedom of workers to sell their labour force and to join independent unions.

Monetary freedom. Monetary freedom combines a measure of price stability with an assessment of price controls. Both uncontrolled inflation and price controls distort market activity. Price stability without microeconomic intervention is the ideal state of a free market according to *Index of Economic Freedom*. These are defined by the existence of an independent central bank or a comparable institution setting an interest rate base, and controlling inflation; free entrepreneurship in the banking sector; and supply-demand determination of market interest rates.

International trade freedom. This characteristic concerns restrictive tariffs and quotas, export taxes and other barriers to import and export. Alternatively, non-market control can prevail in the determination of the directions and volumes of trade and exchange rate.

Investment freedom. Domestic and foreign investors are concerned with investment climate in a particular country. In addition to monetary freedom, this includes if there is an established securities market; if return on investments are determined by the market and not by the government; if there are non-discriminatory opportunities to invest on

a competitive basis; if international in and out transactions or holdings are unreasonably restricted by the government; and if the government bodies are involved in credit allocation. Alternatively, non-market control can prevail in the determination of direction and volume of investments.

Financial freedom. This indicator measures the development of capital market; to what extent the government intervenes and regulates banks and financial services; and to what extent the government influences allocation of credit.

For each country and each year of observation, the above-mentioned characteristics together form vectors of values between 0 and 100. These vectors are used for a taxonomy of countries according to their predominant economic mechanisms. The method of Hierarchical Cluster Analysis (Kaufman & Rousseeuw, 1990) is used to classify the countries included in the survey (excluding missing values). The method attempts to identify relatively homogenous groups of cases (countries) based on the included characteristics. A statistical algorithm is used that starts each case (country) in a separate cluster, and then combines clusters until only the specified number of clusters is left, and each of the cases (countries) belongs to one or another cluster. The ranking of courtiers according to the integrated Countries' Economic Freedom indexes can be in a different order, compared to countries' appearance in clusters. This is essentially because clusters are based on the relative magnitude of distance of different variables from each other, not just on the value of the integrated index.

Attempts were made to obtain interpretable classifications based on 5 to 10 cluster brackets. For the purpose of this study, the eight-cluster classification, out of which 5 clusters contain post-communist and communist countries, appear to be the most interpretable. Meanwhile, the following comments preceding the discussion of the obtained classification may help to not misinterpret the results.

Generally speaking, belonging to a particular cluster reflects the relative closeness of the countries included in this cluster to each other in terms of economic freedom. However, it cannot be so with regard to two neighbouring clusters. The neighbouring clusters can be different in a limited number of characteristics, and each of the characteristics can deviate from a "perfect" market system not always in the same direction.

Table 2.2	Clusters	including	post-communist	and	communist	countries,	and
examples of other countries with comparable economic mechanisms							

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Estonia	Albania	Azerbaijan	Turkmenistan	Cuba
Australia	Armenia	Belarus	Uzbekistan	Venezuela
Austria	Bosnia and	China	Uruguay	
	Herzegovina			
Belgium	Bulgaria	Mongolia	Iran	
Canada	Poland	Belarus	Nicaragua	
Denmark	Croatia	Romania	Zimbabwe	
Finland	Czech Republic	Russia	Ethiopia	
France	Georgia	Kyrgyz		
		Republic		
Germany	Hungary	Moldova		
Iceland	Lithuania	Tajikistan		
Ireland	Latvia	Argentina		
Japan	Kazakhstan	Ecuador		
New Zealand	Romania	El Salvador		
Netherlands	Slovenia	India		
Norway	Israel	Indonesia		
Sweden	Italy	Kenya		
Switzerland	Costa Rica	Malaysia		
United	Luxembourg	Malta		
Kingdom				
United States	Mauritania	Mexico		
	Paraguay	Peru		
	Portugal	Argentina		
	South Africa	Bolivia		
	Spain			
	Chile			
	Colombia			
	Cyprus			
	Greece			

Source Cluster analysis by the author based on *Index of Economic Freedom*, https://www.heritage.org/index/explore?view=by-region-country-year&u=6369 16527549820517

Post-communist and communist countries are highlighted in Bold fonts

Closeness between countries, in terms of the proposed taxonomy based on the Economics Freedom measurements, does not always mean their closeness in terms of the level of economic and technological development, GDP per capita, or other indicators of living standards.

(See below as Estonia appears in the range of the most developed market economies in terms of economic freedom, while being quite behind them in terms of living standards). The only reason the countries are associated with each other is the comparability of their economic mechanisms at the times of the survey, in terms of the above-mentioned Economic Freedom characteristics. The positioning of a post-communist country in a particular cluster can be also interpreted as a momentum (existent or not) towards further development (or otherwise).

The ratings of the elements of Economic Freedom are based on a comprehensive qualitative analysis of countries included in the survey. They also depend on structured criteria and in most cases seem to be pretty well justified. Nevertheless, some of the ratings can be attributed to rather subjective opinions of researchers with regard to specific information on a particular country. As a result, some countries are in clusters they, intuitively, should not be. In addition, the reforms continue on, and what was true even at the time of the most recent survey is sometimes no longer the case.

All those deficiencies, however, do not distort the overall picture significantly, nor do they undermine the methodology or conclusions suggested in this chapter. Keeping in mind all the above considerations let us consider the former and currently communist countries within the suggested taxonomy of economic systems. The 5 relevant clusters are presented in Table 2.2.

Cluster 1 includes the countries with developed market mechanisms. Belonging to this cluster could be considered as a desirable destination for post-communist countries in their transformation into market economy. Estonia is the only post-communist country, which so far has joined this family of "perfect market systems". Estonia has been praised, in the academic literature and media, as the most successful post-communist economy (see, for example Rahn, 2015). Soon abandoning its communist regime and gaining independence from the Soviet rule, this small nation has adopted the basic constitutional right to hold property. There are no significant restrictions on selling or exchanging property, and the individuals can structure the property holdings that they choose. At the same time the country adopted legislation on privatisation and implemented it swiftly and successfully.

Country's labour market and labour rights have been established according to liberal market economy standards. Workers have the right to form and join independent labour unions, and the regulation of wages in the private sector has been eliminated. Entrepreneurial rights are observed through reasonable procedures such as registration of companies. Price control has been almost completely eliminated. Meanwhile prices for some essential commodities and utilities are regulated, including electricity, energy inputs, and passenger transport.

Financial markets and investors' rights have been established and observed. There is no regulatory control on return on investments. The EU standards of the monetary system have been established and implemented, including the central bank with reserve functions. There are no restrictive barriers of capital inflow or outflow except taxation on repatriated profit.

Cluster 2 includes the largest number of post-communist countries: Albania, Armenia, Bosnia and Herzegovina, Bulgaria, Poland, Romania, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Lithuania, Latvia, and Slovenia. These countries have more or less successfully built market economies, but with some limitations.

One of the most considerable limitations is the unfordable level of social security outlays, particularly analysed in (Aidukaite, 2011). This is mainly due to the atavisms of the Soviet/Communist type welfare state, which implies that the voting population expect welfare guarantees from the political power they support. Another limitation—the duality of economies analysed in (Berend & Bugaric, 2015; Bugaric, 2015). The proportion of black and grey economies as well as the level of corruption, and tax evasion in those countries considerably exceed those of Western democracies. These features are endemic to transitional economies belonging to Cluster 2, and cannot be overcome during the lifetime of one generation, and in the meantime restrict business freedom and economic growth.

Cluster 3 includes Azerbaijan, Belarus, China, Mongolia, Belarus, Russia, Kyrgyz Republic, and Moldova. Politically they all demonstrate features of authoritarianism, as in China; authoritarianism with simulated elements of democracy, as in Russia, Kazakhstan, and Belarus; or "imperfect" democracy, as in Romania. The economic systems formed

in those countries are characterised in the literature as state capitalism. Those countries have managed to develop quasi-market economies, but with high proportion of state ownership, including state-owned corporations in the key industries (Ahrens & Hoen, 2019; Becker & Vasileva, 2017). Particularly, In China, the very notion of private ownership is not accepted, and different forms of quasi-private ownership have been legislated instead, including cooperatives, joint ventures, and land use rights. In the area of international trade, governments control the export of major commodities, and impose arbitrary constraints on export and import. Different levels of restriction on labour mobility are exercised; and the formation and practice of independent labour unions are constrained. Foreign investments are heavily regulated, and the monetary systems, including foreign exchange are controlled by governments rather than independent reserve banks and foreign exchange markets.

Cluster 4 includes Turkmenistan and Uzbekistan. These two former soviet republics are further away from democracies and market economies. They have retained the state ownership over major enterprises and banking systems, allowing small business activities. Prices for basic food items are controlled. International trade and foreign exchange are in the hands of the governments. There is no workers' right for unionism. Overall, there is almost no economic freedom in either of these countries.

Cluster 5 consists of only two countries, Cuba and Venezuela. In the absence of data on North Korea, Cuba is the only communist country with a one-party system where market economic reforms are in a rudimental state. Meanwhile Venezuela under Chavez and Madura has been moving in the opposite direction—from a middle-income market economy to a centrally controlled and failing system.

Looking at the clusters, the post-communist economies are associated with, a conclusion follows that they have joined one of two broader families of countries. One of them includes countries with long economic histories of established market economic systems or successful developing nations (Clusters 1 and 2). In terms of economic freedom classification, they are either mostly free (Cluster 1); or free, but with restrictions regarding some economic freedom characteristics. (Cluster 2). Another family of countries mostly consists of less successful

developing nations and South American regimes (Clusters 3 and 4). They are market economies, but with substantial constraints and institutional failures (Cluster 3), or mostly unfree (Cluster 4).

Both families of countries have experienced considerable periods of structural, institutional, and regulatory adjustments, which have lead to ether successful or quite less successful outcomes.

In conclusion, looking at the dynamics of post-communist countries in the recent 20 years, one can see that, from the current positioning in terms of economic freedom, a long journey should be expected towards further improvements.

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