

The Changing Academy – The Changing Academic Profession
in International Comparative Perspective 10

Futao Huang
Martin Finkelstein
Michele Rostan *Editors*

The Internationalization of the Academy

Changes, Realities and Prospects

 Springer

The Internationalization of the Academy

The Changing Academy – The Changing Academic Profession in International Comparative Perspective 10

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As the landscape of higher education has in recent years undergone significant changes, so correspondingly have the backgrounds, specializations, expectations and work roles of academic staff. The Academy is expected to be more professional in teaching, more productive in research and more entrepreneurial in everything. Some of the changes involved have raised questions about the attractiveness of an academic career for today's graduates. At the same time, knowledge has come to be identified as the most vital resource of contemporary societies.

The Changing Academy series examines the nature and extent of the changes experienced by the academic profession in recent years. It explores both the reasons for and the consequences of these changes. It considers the implications of the changes for the attractiveness of the academic profession as a career and for the ability of the academic community to contribute to the further development of knowledge societies and the attainment of national goals. It makes comparisons on these matters between different national higher education systems, institutional types, disciplines and generations of academics, drawing initially on available data-sets and qualitative research studies with special emphasis on the recent twenty nation survey of the Changing Academic Profession. Among the themes featured will be:

1. Relevance of the Academy's Work
2. Internationalization of the Academy
3. Current Governance and Management, particularly as perceived by the Academy
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Michele Rostan
Editors

The Internationalization of the Academy

Changes, Realities and Prospects

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Hiroshima University, Japan
Seton Hall University, USA
University of Pavia, Italy

Futao Huang
Martin Finkelstein
Michele Rostan

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Contents

1	The Internationalisation of the Academic Profession	1
	Futao Huang	
2	Concepts and Methods	23
	Michele Rostan, Martin Finkelstein, and Futao Huang	
3	A Profile of CAP Participating Countries and a Global Overview of Academic Internationalization in 2007–2008	37
	Michele Rostan, Martin Finkelstein, and Futao Huang	
4	Internationalization of the Academy: Rhetoric, Recent Trends, and Prospects	55
	William K. Cummings, Olga Bain, Gerard A. Postiglione, and Jisun Jung	
5	The International Mobility of Faculty	79
	Michele Rostan and Ester Ava Höhle	
6	The International Dimension of Teaching and Learning	105
	Hamish Coates, Ian R. Dobson, Leo Goedegebuure, and V. Lynn Meek	
7	The Internationalization of Research	119
	Michele Rostan, Flavio A. Ceravolo, and Amy Scott Metcalfe	
8	Regionalisation of Higher Education and the Academic Profession in Asia, Europe and North America	145
	Futao Huang, Ulrich Teichler, and Jesús Francisco Galaz-Fontes	
9	Gender and Faculty Internationalization	183
	Agnete Vabø, Laura Elena Padilla-González, Erica Waagene, and Terje Næss	

10 Internationalization and the New Generation of Academics 207
Jisun Jung, René Kooij, and Ulrich Teichler

11 Patterns of Faculty Internationalization: A Predictive Model..... 237
Martin Finkelstein and Wendiann Sethi

**12 The Internationalization of the Academy:
Findings, Open Questions, and Implications**..... 259
Michele Rostan, Futao Huang, and Martin Finkelstein

Appendix: The Changing Academic Profession: Questionnaire..... 281

Notes on Editors 297

Notes on Contributors 299

Chapter 1

The Internationalisation of the Academic Profession

Futao Huang

Globalisation is transforming knowledge production processes, universities and the academic profession. The centre of gravity of scientific research and development is subtly shifting from the United States to Asia and, to a lesser extent, to Europe (Cumplings 2009). Moreover, developed and developing nations across the globe are investing in their national systems of higher education as the key engines of human resource development and ultimately their future economic competitiveness. As knowledge production becomes a global rather than a national enterprise, nations have a huge stake in ensuring that their universities (and the academics in them) are active participants and leaders in this new globalised “industry”; and to the extent that a nation’s universities and its academic workforce train the next generation, they have an equally huge stake in these trainers developing an international perspective and capability in their students – the next generation of leaders. Universities in developing countries are seeking not only to reverse the historic “brain drain” that has benefited the United States and other Western economies but to create “world-class universities” of their own and ipso facto an indigenous world-class academic profession and workforce – which by definition implies the development of an academic profession that is part of the increasingly global community of research and scholarship. A key instrument of these national economic initiatives is “internationalisation” of higher education systems and their human resource foundation, the academic profession.

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1.1 The Internationalisation of Higher Education and the Academic Profession

1.1.1 *Initiating a Global Conversation on the Internationalisation of Higher Education*

Over the past decade, a global conversation has begun about the internationalisation of higher education. According to Knight (2003a), internationalisation of higher education at the national, sector and institutional levels is the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of postsecondary education. An “unpacked” definition also drawn from Knight (2004, 2006) suggests that higher education’s internationalisation is the process of integrating, infusing and incorporating at the national, sector and institutional level (a) the relationships between and among nations, cultures and countries; (b) the diversity of cultures that exist within countries, communities and institutions; and (c) a worldwide scope, into (a) the role and objectives of higher education for a country or the mission of an institution, (b) the elements or tasks that characterise a national higher education system or an individual institution (i.e. teaching, research, service) and (c) the offering of courses or programmes domestically or in other countries. Internationalisation of higher education is both a response to globalisation as well as an agent of globalisation. Internationalization is changing the world of higher education and globalization is changing the process of internationalization (Knight 2003b).

According to Teichler (1999, 2004, 2009), the internationalisation of higher education (IHE), first, has two aspects: (a) a growth of specific international border-crossing operations (e.g. student and staff mobility, foreign-language teaching and learning, cooperative research activities, area studies) and (b) a trend towards universalisation, globalisation, internationalisation and regionalisation of the substance and functions of higher education that might go beyond border-crossing mobility and cooperation. This later aspect refers to internationalisation at the core of higher education, i.e. an emphasis on the international dimension in regular teaching and learning, as well as in research activities, and to policies strengthening the international dimension of these core activities.

Second, IHE is characterised not only by a gradual trend of increasing international activities, or by a stronger international dimension for higher education’s core activities, but also by substantial qualitative changes or “leaps”. These “leaps” refer to three changes or trends: (a) from a vertical or hierarchical pattern of cooperation and mobility towards international relationships on more equal terms, (b) from casuistic actions towards systematic policies of internationalisation and (c) from disconnection of specific international activities and internationalisation of the core activities towards an integrated internationalisation of higher education.

Reviewing the literature on the internationalisation of higher education over a decade, Kehm and Teichler (2007) argue that the analysis on the international dimension of higher education has become more complex because it focuses on the

links between various internationally oriented activities such as mobility, knowledge transfer, cooperation and international education. As a consequence, the core of internationalisation in higher education consists of institutions, people – including academics – and knowledge. Screening a wide range of publications, seven broad themes on higher education internationalisation are identified:

1. Mobility of students and staff
2. Mutual influences of higher education systems
3. Internationalisation of the substance of teaching, learning and research
4. Institutional strategies of internationalisation
5. Knowledge transfer
6. Cooperation and competition
7. National and supranational policies as regards the international dimension of higher education

The author of this chapter holds the view that the internationalisation of higher education is basically the process of carrying out exchange activities in education and research of various kinds among universities and institutions in different countries. Fully fledged international exchange in higher education is typically regarded as an activity in the higher education sector, developed on the premise of the existence of a nation after modern states were established in Europe. The form, content and pattern of the exchange vary across time. For example, from a historical and comparative perspective, the so-called pattern of government-led activities, where internationalisation of higher education was promoted with centrally controlled plans, financial support and state-controlled management up to the 1970s, has been dramatically replaced by that of joint initiatives between the governments and private sectors and, in a few countries, by university-led activities since the 1980s. In particular, since the 1990s, progress in economic terms and with other forms of globalisation has been accompanied by active exchange among universities in various countries within a limited region, as in Europe,¹ while cross-border internationalisation and standardisation of curriculums, transnational education, quality assurance of higher education and global linkage and cooperation between higher education institutions are notable developments. Moreover, international exchange, which was fundamentally human exchange consisting mainly of students, teachers and scholars up until the 1970s, has drastically changed to include joint research activities, the movement of university curriculum and university campuses from one country to another, mutual accreditation of programmes and degrees among universities beyond national borders as well as the affiliation or linkage of universities since the 1980s and especially the 1990s. Furthermore, the current internationalisation

¹The striking example is the Erasmus Program (European Region Action Scheme for the Mobility of University Students) which was established in 1987 by the European Union with the aim to promote university student exchange within European countries. It is estimated that there are currently 2,199 higher education institutions participating in Erasmus, together with other projects related to or developed from Erasmus, across the 31 countries involved in the Socrates program and over 1.6 million students have already taken part.

of higher education mainly comprises three components: first is human exchange and personal mobility across borders, mainly of students, teachers and researchers; second is the exchange and accreditation of programmes, courses and degrees, including the sharing of curriculums and especially the development of transnational programmes; and third is research project activities, including the organisation of international conferences and joint research, mainly for presenting research results and academic exchange.

1.1.2 Focusing on the Internationalisation of the Academic Profession

Within these global conversations, several specific themes concerning the internationalisation of the academic profession have begun to emerge:

- Academic mobility: mobility flows and statistics, impact of mobility on careers, vertical and horizontal mobility and virtual mobility with the help of information and communication technology (ICT)
- Internationalisation of the substance of teaching, learning and research, that is, the internationalisation of the main academic activities: internationalisation of curricula, internationalisation at home, the role of foreign-language knowledge and teaching in a foreign language
- Institutional strategies of internationalisation: networks and partnerships (i.e. the role played by academics in establishing these networks and partnerships)
- Knowledge transfer: the contribution of research to increasingly international system of innovation and mobility of programmes rather than students
- Cooperation and competition: networks and strategic alliances, brain drain, brain gain and brain circulation

Surprisingly, however, compared with a substantial literature on the study of globalisation, transnational higher education, the internationalisation of higher education and even the Europeanisation of higher education as discussed earlier, little is known about the nature of, and especially of what changes have happened to, the internationalisation of academic profession worldwide especially subsequent to the international survey by the Carnegie Foundation for the Advancement of Education in 1992. So far as the author has been able to discover, over the last decades, the limited major existing research on the theme can be summarised as follows.

Spurred largely by the launching of the first International Survey of the Academic Profession by the Carnegie Foundation for the Advancement of Teaching in 1992 – and reinforced 15 years later by the Changing Academic Profession Survey in 2007 – a discernible stream of empirical inquiry on the internationalisation of the academic profession is slowly taking shape. Welch identified three distinctive aspects of the internationalisation of the academic profession: mobility across borders both for study and employment purposes; participation or involvement in international teaching and/or research activities; and attitudes towards the

value of international connections and intercultural relations. Based on these, he developed three sets of indicators of internationalisation from the 1992 Carnegie study: the proportions of academic staff who had their highest degree from another country, the extent of academics' international connections and academics' perceptions of the importance of such links. Welch's analysis of the internationalisation of the academic profession is carried out both at the system and at the individual level. He addresses both differences in the degree of internationalisation across systems and in the impact of possessing a foreign higher degree on several aspects of the academic life, that is, differences between two subgroups of academics labelled as "peripatetic" and "indigenous". Issues examined in relation to mobility include gender differences, distribution among disciplines, patterns of employment (full- vs. part-time contracts), participation in international education-related activities, job satisfaction and preference for teaching vs. research (Welch 1997).

El-Khawas's contribution (2002) focuses on two issues: (a) the mechanisms by which academics include an international dimension in their work and (b) the opportunities and constraints that new academics face in building careers that include international components. Several forms of international support mechanisms investigated by the Carnegie study are considered. International travel for research and study – including trips abroad for study or research and serving as faculty in another country – is considered as one of the major forms of international involvement. Two other well-recognised indicators of international involvement are having research published in another country and conducting research with academics from other countries. Finally, academics' influence on the content of the curriculum in their university or department – including cross-national perspectives in teaching and provision of international sources of teaching materials – is also considered. These indicators of international involvement are complemented by others referring to academics' value orientations supporting the ideal of having an international perspective such as the importance of having international contacts and keeping up with research published in other countries. Although the analysis is carried out at the individual level, variation by country in academics' international involvement is also taken into account, and factors enhancing or hindering it are reviewed.

Seemingly the first book-length treatment of the internationalisation of the academic profession was published by Schwietz (2008). He collects data from faculty at nine public universities in Pennsylvania, United States, and provides a descriptive and correlational analysis that explores faculty attitudes, beliefs and experiences relating to internationalisation. Furthermore, the book also reviews the extent to which faculty incorporate an international perspective into their teaching, research and scholarship; determines what relationships exist between faculty characteristics, campus climate and attitudes, beliefs and behaviours; and examines patterns to describe or predict faculty members' orientation to internationalisation. In addition, policy implications are considered for different sectors interested in internationalising higher education.

Huang addresses the theme of the internationalisation of the academic profession at several levels: individual, institutional, sector and system. Moreover, he also

focuses on a case study of Japan and deals with the issues concerning change in the internationalisation of the academic profession, comparing – when possible – results from the Carnegie study and the CAP survey. For example, in his recent publications, three dimensions of internationalisation of the academic profession at the individual level are addressed: (a) international education, especially at the doctoral level (number of faculty members with overseas doctorates); (b) publications (average numbers of articles or books published abroad or published in foreign languages by all faculty members); and (c) views on international exchange activities. At the institutional level, other dimensions are taken into account, that is, aspects of institutions' international activities such as mobility of students across countries, international teaching activities and international research activities. Four items concerning international activities at respondents' institutions are touched on: (a) lectures given by foreign faculty members, (b) hosting international meetings and seminars, (c) accepting international students and (d) sending local students abroad. Finally, at the sector level (public vs. private) and at the system level, the composition of faculty, distinguishing between foreign and native academics (number of foreign faculty and their countries of origin), is considered (Huang 2007b, 2009a, b).

According to Finkelstein et al. (2009), the internationalisation of the academic profession refers to the increasing permeability of national boundaries in faculty research and teaching and to the increasing mobility of students and faculty across borders. Two broad aspects of faculty internationalisation are considered: (a) the extent to which faculty internationalises the content of their academic work as reflected in the extent to which they integrate international perspectives into their course content and the extent to which their research is international in scope or focus and (b) the extent to which faculty internationalises the scholarly networks within which they work as reflected in collaboration on research projects with international colleagues, co-authorship of scholarly publications with foreign colleagues and publication in foreign countries. These aspects are chosen because they constitute the basic dimensions of faculty work and because they permit broad comparability with the Carnegie survey. As a consequence, the focus is on the extent to which international perspectives shape the content of teaching or research and on the extent to which national boundaries restrict faculty professional networks. These authors aim at understanding the nature and extent of individual faculty internationalisation in their teaching and research by investigating the determinants or the predictors of faculty internationalisation.

The internationalisation of the academic profession is addressed by Cummings and Bain (Cummings and Bain 2009) at an individual level by focusing on academic work and on the relationships with academics of other countries. Drawing from both the Carnegie study and the CAP survey, several key indicators of academic internationalisation in comparative and historical perspective are selected. To illustrate this, in comparing data cross-nationally, the authors refer to the CAP survey as distinguishing between academics' beliefs and their actual behaviour. Two variables – emphasising international perspectives or content in courses and research characterised as international in scope or orientation – are considered as expressing faculty beliefs about the importance of an international emphasis in their teaching and research. Two other variables – international collaboration and publishing in a

foreign country – are used as indicators of international practice. These two last items together with publishing in a foreign language are used to compare academics' international practices over time. The article aims both at describing the current level of internationalisation of the US academy and to understand which factors dispose individual academics to see their work as internationally linked.

1.2 The Purpose of This Volume

Based on the above review, at least two reasons can be seen to indicate the need for a fresh study.

First, over the period from 1992 to 2007, there had been rapid and tremendous changes in the roles and nature of the academic profession worldwide from the perspective of internationalisation. As stated earlier, these new changes occurred in the knowledge-based society, from its accompaniment by economic globalisation, marketisation of higher education, expanding transnational or borderless higher education services and the process of Europeanisation of various fields, and which were affected by various new internal and external pressures or factors that fundamentally differ from those prior to 1992.

Second, due to the fact that no previous research had been done of a multinational, empirical analysis of the nature and extent of internationalisation of the academic profession across 19 nations across 4 continents based on responses to a comprehensive, common survey administered to faculty samples in 2007–2008, there is therefore an opportunity for a study which is able to provide an overall picture of the changing internationalisation of the academic profession in comparative and empirical perspectives.

It is worth emphasising that, based on discussions on such terms as internationalisation of higher education and transnational higher education, the author of the chapter regards the internationalisation of the academic profession as a process of personal mobility across borders physically and virtually, jointly undertaking various forms of educational and research activities or, in a broad sense, of academic activities between different countries at a tertiary level. This volume concentrates on major components as follows.

First is an empirical one: to chart empirically the extent to which internationalisation has proceeded in various countries around the world and what different forms it has taken and to provide a longitudinal perspective on developments across several clusters of countries in the major world regions for which we have both 1992 and 2007 data.

Second is the cross-border or transnational mobility of faculty, educational programmes and institutions, including sending faculty abroad and accepting foreign faculty. This specifically includes an examination of mobility in education and academic careers. Also, descriptions of internationalisation of teaching, learning and research are covered.

Yet, while special focus will be placed on the two aspects mentioned above, an account of the academic profession's opinions and their views on changes in internationalisation of higher education is included.

In short, this volume is mainly concerned with an international and empirical analysis of the nature and extent of internationalisation of the academic profession across 19 nations across 4 continents based on major findings from national surveys undertaken in each individual country and region with a closely similar questionnaire in 2007–2008, though some data obtained from the 1992 survey would be also used in some chapters to make a comparative study in the changing academic profession between 1992 and 2007.

While we have already described the broad parameters of the global conversation on the internationalisation of higher education and highlighted the distinction to be drawn between internationalisation of the larger enterprise and of its human resource foundation, it behoves us before moving ahead to assist the reader in two further ways. First is in navigating through the often treacherous terrain of terminology. The past decade has seen the coining of a whole series of new terms to reflect the emerging new developments in the international arena: globalisation, transnational higher education, regionalisation, border-crossing, etc. Moreover, once one crosses national boundaries, both concepts and nomenclature for identifying the academic profession shift. Most readers will find this mix confusing and require some navigation tools before they can join us on our journey. Second, it is important to remember that while we may be discussing it more now (or with greater urgency), internationalisation in higher education is hardly new: after all, students were following teachers (or vice versa) across the principalities of medieval Europe eight centuries ago. Taking the proper measure of current developments requires that we bring to them a certain historical perspective. Within this context, we can then locate this volume more clearly and sketch out an overview of its organisation and contents.

1.3 The Vocabulary of Internationalisation and Its Terms for the Academic Profession

There are numerous definitions that can be assigned to the term “academic profession” according to different contexts and research purposes. Its meaning can be interpreted in both a broad sense and a narrow sense. A definition of the academic profession in a broad sense refers to all persons who teach or conduct research or produce publications based on scholarly research at higher education institutions or research institutes inside or outside colleges or universities. In a narrower sense, the academic profession is defined as faculty members, including professors, associate professors, lectures or assistant professors who are mainly involved with teaching and research activities in higher education institutions.²

²In the United States, the term is used to refer to instructional and research staff. Ironically, in the United States, academic staff refers specifically to nonfaculty professional staff, while in Europe this would typically be the term applied to university teaching staff. This volume places an emphasis on discussion of the academic profession in a narrow sense.

Since the early 1990s, there have appeared several terms relating to internationalisation and internationalisation of higher education, some of which are used in a similar sense to, or even used interchangeably with, the term internationalisation. They include globalisation, regionalisation, transnational, borderless or cross-border education. In this section, we examine the differences in terms and their interrelationships (e.g. between internationalisation and globalisation) and then treat the meanings of other terms, including regionalisation, transnational higher education and internationalisation of higher education.

1.3.1 Internationalisation vs. Globalisation

Before we move to the discussion of the meaning of internationalisation of higher education in the later part of this section, it is necessary to identify the relationship or the similarity and difference between internationalisation and globalisation, as the meanings of the two terms are easily confused.

Internationalisation and globalisation can be described in a vast number of ways. The term “internationalisation” was first recorded in around 1883.³ Literately, the prefix “inter” of “internationalisation” comes from a Latin word which originally means “between or mutual” (among others). When a “nation” is taken as a nation-state in a political sense or a country with its own independent political system and distinctive culture, “international” can be interpreted as “between or among countries”, and its verb form “internationalise” can be translated as “making relationships, effects or exercising the scope for international action” or specifically “bringing under international control or protection”. It is safe to say that “internationalism”, “internationalise” and “internationalisation” all derive from “international”. It means ideas and actions to promote cooperative initiatives and coexistence between or among nations, transcending their differences on the presupposition that distinctive cultural traditions inherent to nation-states and their people exist. This is the opposite of chauvinism and nationalism, which value the existence of race or nation itself and take a hostile approach to other races and other nations in an exclusive manner. It can also be distinguished from cosmopolitanism and universalism, which try to directly connect individuals with the world, ignoring the presence of nations. Consequently, its noun form “internationalisation” means the “action or process” of internationalising. More precisely, “internationalisation” places emphasis on transferring to other nations or especially to international society beyond the

³The earliest meaning of internationalisation largely differs from its modern usage. According to the Oxford English Dictionary (OED 1961 edition), the first definition given for the word internationalise is “to render international in character or use. ...Spec. in modern politics, to bring (a country, territory, etc.) under the combined government or protection of two or more different nations”. An example is given in the dictionary of “An earnest appeal to the Government of Berlin to unite with Britain in internationalizing the Congo”.

boundary of the nation, accepting relationships among nations, impacts on and from other nations or mutual influences and relationships at a national level.

In contrast, the term “globalisation” is of much more recent vintage, having been used since the latter half of the 1960s. Over the past decades, there has been a huge and multifaceted literature on defining and interpreting the term. For example, as early as 1990, Giddens saw globalisation as “a shift in our very life circumstances; it is the way we now live”. He pointed out that it is characterised as a global system of communication, knowledge and culture, movements of people and trade in commodities (Giddens 1990). Noticeably, Robertson, who was the first sociologist to define the term globalisation, suggested that globalisation “refers both to the compression of the world and the intensification of consciousness of the world as a whole”; in other words, it covers the acceleration in concrete global interdependence and in consciousness of the global whole (Robertson 1992). In 2002, Grunzweig and Rinehart developed a similar definition by arguing that globalisation is “the process and consequences of instantaneous world-wide communication made possible by new technology. The consequences include an explosive growth in the quantity and accessibility of knowledge and the continually increasing integration and interdependence of world financial and economic systems” (Grunzweig and Rinehart 2002). According to Stiglitz, globalisation is defined as the closer integration of the countries and peoples of the world, brought about by the enormous reduction of costs of transportation and communication, and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge and people across borders (Stiglitz 2002).

With regard to the link between internationalisation and globalisation, Scott affirmed that there is a dialectical relationship between internationalisation and globalisation. Internationalisation reflected – and may still reflect – a world order dominated by national governments. However, globalisation is a different phenomenon. It reflects not only the processes of global competitiveness between the great market blocks of the United States, the European Union and the East-Asian countries, it also involves intensified collaboration as a global division of labour between low-cost mass manufacture and services, provision of labour and high-value technology and innovation, or sometimes their co-location, most notably in the ex-communist bloc (Scott 2000).

The author of this chapter differentiates between the concepts of internationalisation and globalisation in the following ways. First, while internationalisation was first used in the latter nineteenth century, it has attracted increasing attention especially since the 1960s, whereas globalisation came into consideration mainly during the latter part of the 1960s. Second, globalisation aims principally at establishing a single or universally acknowledged model, beyond countries and cultures, while internationalisation emphasises an exchange or communication between different countries and cultures. Third, internationalisation occurs with the precondition that the political, economic and cultural salience of different countries exist, whereas globalisation proceeds on the assumption that nations and national cultures are of decreasing significance.

There is, however, a close relationship between the two terms. With the rapid progress of economic globalisation, advancement of new technology and increasingly

frequent exchanges between countries and cultures, some activities that once were conducted between countries or cultures (i.e. at an international level) are likely to reach a global level, possibly resulting in universally accepted standards or values.

1.3.2 Regionalisation

Commonly, the term “regionalisation” is the tendency to form regions or the process of doing so. It is often used in opposition to globalisation, meaning a world that is less connected, with a stronger regional focus. From an economic perspective, Mucchilli regarded globalisation and regionalisation as two opposing market forces. According to him, “globalization for countries and for firms is characterized by openness of economies and a global market in which firms’ strategies focus on efficient resource seeking along with synergies and standardization in market offerings. Regionalization for countries and firms is characterized by preferential trading arrangements among countries and a regional network approach to resources, markets, and organization for firms” (Mucchilli et al. 1998). In this sense, it is likely to assume that regionalisation is a form of internationalisation – rather than a form of globalisation.

Undoubtedly, the current Europeanisation can serve as a typical example to illustrate the meaning of regionalisation. As indicated by Hix, “this is a process of change in national institutional and policy practices that can be attributed to European integration” (Hix and Goetz 2000). This definition connects quite well to one by Börzel, namely, that Europeanisation is a process by which domestic policy areas become increasingly subject to European policymaking (Börzel 1999). In other words, regionalisation could be considered as the process in which a notionally non-regional subject (be it a culture, a language, a city or a nation) adopts a number of regional features. In this volume it refers to the growth of a regional identity of higher education systems or of the academic profession over and above national identities and characteristics on the continent.

1.3.3 Transnational Higher Education

There are many views on transnational higher education. For example, according to UNESCO, the term “transnational education” is generally defined as that “in which the learners are located in a country different from the one where the degree-granting institution is based” (UNESCO-CEPES 2000). Accordingly, if “transnational higher education” is regarded as a part of postsecondary and tertiary education and training, it may take any of the forms listed below (GATE 1999):

- Branch campuses: campuses set up by an institution in another country to provide its educational or training programmes to foreign students.
- Franchises: an institution (A) approves provision by an institution (B) in another country of one or more of A’s programmes to students in B’s country.

- Articulation: the systematic recognition by an institution (A) of specified study at an institution (B) in another country as partial credit towards completion of a programme at institution A.
- Twinning: agreements between institutions in different countries to offer joint programmes.
- Corporate programmes: programmes offered by large corporations for academic credit from institutions, which often involve credit transfer across national borders.
- Online learning and distance education programmes: those distance education programmes that are delivered through satellites, computers, correspondence or other technological means across national boundaries.
- Study abroad: a student from institution (A) travels to take courses at institution (B) in a different country and to live there for a fixed period of time.

Moreover, Knight argues that “transnational” and “borderless” as well as “cross-border” education are terms that are being used to describe real or virtual movement of students, teachers, knowledge and educational programmes from one country to another. While there may be some conceptual differences between these terms, they are often used interchangeably (Knight 2002).

The author of this chapter argues that as the definition of transnational higher education varies widely, it can take different forms according to individual countries and regions. Since in many non-English-speaking countries there is no equivalent term for transnational higher education, many of these countries adopt other usages to denote the similar meaning. For example, in China transnational education is often identified as *Zhongwai Hezuo Banxue* in Chinese, meaning “co-operation between China and foreign countries in operation or management of higher education institutions in order to offer various educational programs”. In fact, even in an English-speaking country like Australia, the term “transnational higher education” is defined in a much broader sense. It denotes any education or training at the higher education level provided beyond national or regional borders through mobility of people, programme or institution. Accordingly, this definition includes the so-called international education (often referred as “onshore education” in Australia) provided to international students coming to Australia; and it also covers distance learning or e-learning delivered to students living outside Australia. Furthermore, a variety of terms similar to “transnational”, such as “off-shore”, “cross-border” and “borderless”, are sometimes used interchangeably. However, what should be emphasised here is that, differing from international education programmes or personal mobility across borders, transnational higher education focuses more on the movement of educational programmes and campuses from one country to another country based on profit-making activities. In a major sense, it is a totally new form of internationalisation of higher education since the latter part of the 1980s. In most cases, it refers to the movement of such programmes or branch campuses from developed English-speaking countries to developing or emerging countries.

1.4 The Internationalisation of the Academic Profession in the Historical Perspective

As early as the twelfth century, when the first universities came into existence in Europe (though the origins and the early history of the first universities are disputed), there has been faculty mobility across regions or borders, though they may not be considered as the same national borders as we have nowadays. From a historical perspective, the changes in internationalisation of the academic profession can be practically assigned to four phases. And the most noticeable characteristics of the internationalisation in each phase fall into five categories: context, drivers, aims, major forms, area and dimension (Huang 2007a).

1.4.1 The First Phase

In the first phase from the thirteenth century to the eighteenth century, as no nation-state existed,⁴ strictly speaking, there was no real meaning to internationalisation of the academic profession between nations or across national borders.⁵ The original internationalisation of the academic profession occurred by means of the uniform extension of Christendom in Europe and the Americas, through to the age of industrialisation and to the era of emergence of modern nation-states from the end of the eighteenth century. The major drivers for it were religious, utility and academic factors. Its aims lay in the expansion of Christianity and the spread of medieval culture as prescribed by the “seven liberal arts”, and especially Christian culture and values. The major form lay in the mobility of people, including university faculty and scholars moving mainly between different regions and areas of Europe. According to De Ridder-Symoens, with the emergence of the twelfth-century universities in Europe, academic pilgrimage, including students as well as scholars, also came into being:

The geographical mobility of students and teachers reached its peak (in absolute terms as well as proportionately) in the latter half of the sixteenth century and the first half of the seventeenth century... We can truly say that the first decades of the sixteenth century were

⁴The nation-state is a state that self-identifies as deriving its *political legitimacy* from serving as a *sovereign* entity for a *country* as a sovereign territorial unit. The state is a *political* and *geopolitical* entity; the nation is a cultural and/or *ethnic* entity. The term “nation-state” implies that the two coincide geographically, and this distinguishes the nation-state from other types of state, which historically preceded it. Arguably, most theories see the nation-state as a nineteenth-century European phenomenon, facilitated by developments such as mass *literacy* and the early *mass media*. However, historians also note the early emergence of relatively unified states, and a sense of common identity, in Portugal and the Dutch Republic.

⁵Strictly speaking, there was no such thing as an academic profession until the German developments in the mid-nineteenth century. Up till then the academic world was sparsely populated by transient scholars and students – almost all of whom were clergymen, lawyers or medical doctors.

the golden age of wandering scholars. Intellectuals and humanists traveled all over Europe from east to west and north to south from one center of learning to another, attracted by famous professors or other men of renown. (De Ridder-Symoens 1992)

As for its area and dimension, it was initiated in a European dimension, from Paris and Bologna in western Europe towards England, Northern and Eastern Europe and to North America in the seventeenth century. The most obvious impact of internationalisation over this period is the creation of relatively uniform medieval universities in different regions and continents through faculty mobility across regions and continents, modelled on the University of Paris in particular. Moreover, the mobility of faculty and scholars enjoyed a uniform international language – the Latin language – commonly accepted teaching contents, such as the “seven liberal arts”, other ancient and religious subjects as well as generally adopted academic degree systems.

1.4.2 The Second Phase

The second phase emerged in Europe in the nineteenth century and is typically associated with the creation of a uniform national culture and national higher education systems. Internationalisation of the academic profession occurred then in reality. Compared to the previous phase, it reflected its social contexts: the advancement of the scientific revolution; the establishment of modern nation-states; colonisation of Africa, America, Asia and other continents; and the breakout of two world wars. The driving forces were mainly concerned with academic, cultural and political factors, with an aim of building up national academic or higher education systems through a process of international activities. The mobility of faculty and scholars still played a dominant role in the process but was gradually supplemented by new forms such as the introduction of foreign-language-taught programmes in home institutions; the delivery of a wide range of programmes or courses with international perspectives and contents, including area studies, foreign history, geography and politics; and teaching abroad by university faculty. As the centres of learning were shifted from France to Germany from the end of the eighteenth century and then to the United States since the end of World War II, the movement of faculty and scholars took place across borders not just within the same region or continent but also between different regions and continents, including Asia, Africa and Latin America.

The traditional way of faculty mobility, especially in regard to national policies concerning the internationalisation of higher education in modern nation-states, was the most effective instrument in the creation of a national academic profession and in the spread of academic systems and higher education systems abroad. To illustrate this, by the nineteenth century, when the German university model had become the world standard, many students and scholars from different parts of the world, including the United States, came to Germany for study and research. Veysey describes it as follows:

Aspiring Americans who visited Germany and returned with the phrase ‘scientific research’ on their lips compounded this phrase from elements of German theory and practice which had had very different contexts in their original habitat... the German ideal of “pure” learning

largely unaffected by utilitarian demands, became for many Americans the notion of “pure science,” with methodological connotations which the conception had often lacked in Germany. ...The numerical peak of American study in Germany was reached in 1895-96 ... In one or another, Germany could appeal to every sort of academic American. (Veysey 1965)

As a consequence, Johns Hopkins was the first US university to apply the German university model. Another typical example can be found in the early Meiji era (1868–1912) in Japan. At that time the Japanese central government dispatched many university students abroad, mostly to the United States, the United Kingdom, France and Germany. At the same time, the government also hired many excellent foreign scholars to work in Japanese national universities and institutions. In 1876 alone, there were 78 foreign faculty members who were involved in professional and language teaching activities, in most cases using foreign languages (MOE 1992). By employing foreign faculty in Japanese universities and sending Japanese faculty and students abroad for advanced studies and research, Western academic norms and conventions concerning the academic profession were gradually imported into Japan.

One of the most distinguished impacts resulting from the internationalisation of academic profession throughout the period from the nineteenth century to the end of World War II was the production of the two representative types of academic professional systems based on the German model and the Anglo-Saxon model, respectively. As suggested by Ben-David (1992), the German model is characterised by integration of teaching and research activities, being the more research oriented, while the Anglo-Saxon model is specifically concerned with teaching activities. These two models have made a profound impact on the formation of the modern systems of the academic profession in a great many countries since the nineteenth century in Asia and Africa in particular.

However, it should be noted that the real internationalisation of academic profession sometimes occurred in a negative way, aimed at the suppression of traditions and conventions of the academic profession in colonies in particular. To illustrate this, the importation or transplantation of languages, teaching programmes, academic norms and standards through military government or policies of colonisation were sometimes used to accelerate the adoption of foreign imports and the decline or the disappearance of national languages, cultures and academic traditions.

1.4.3 The Third Phase

In the third phase from 1947 to 1991, the internationalisation of the academic profession occurred in the background of the Cold War (1947–1991). Largely affected by political and ideological factors, internationalisation of the academic profession was also considered as one of the effective instruments to facilitate economic development and to build up a national modern academic system and higher education system in many countries, especially in developing countries. With regard to its major forms, in addition to faculty mobility between countries at

an individual level, various new attempts were made in some countries for a further internationalisation of the academic profession in wider fields. They included a particular emphasis on the mobility of faculty or academic experts across borders that were supported by public funding or governments on the basis of national programmes of cooperation, development and technical assistance, international cooperative research activities and co-publications with international colleagues at both national and policy levels (de Wit 2002).

One of the biggest changes in adopting a foreign language as medium of instruction is that there was an increased tendency to introduce English-taught programmes in some western European countries in striking contrast to the similar emphasis on the importance of learning the Russian language and its curriculum in the communist world, including eastern European countries and some countries in Asia. In a major sense, the internationalisation of the academic profession throughout the period was accompanied by political tensions and ideological conflicts between the two different worlds. As the Cold War existed primarily between the Soviet Union and its satellite states, and the powers of the Western world, particularly the United States, almost all the activities concerning the internationalisation of the academic profession were carried out separately in the two worlds. Little evidence exists of faculty mobility between the countries of these two different worlds, nor are there many examples indicating international collaboration being undertaken by members of the academic professions across the two worlds. Compared to the previous phases, the internationalisation of the academic profession occurred more at a supranational level, in an ideological and political sense.

Internationalisation of the academic profession from 1947 to 1991 featured the period of conflicts and high tensions of ideological values and political beliefs between the two worlds. The Soviet model exerted significant influence since the early 1950s on the establishment of modern academic professions in many eastern European and Asian countries, including the German Democratic Republic (former East Germany) and the People's Republic of China. In sharp contrast, the US model effected few changes in the systems of the academic profession in western European countries but influenced some Asian and many Latin American countries, such as Japan and Brazil throughout the period. In addition, it is very interesting to note that especially in some developing and third world countries, a very large number of high-level university faculty, researchers and scholars benefited from activities concerning the internationalisation of the academic profession, such as dispatching young faculty to the Soviet Union and other eastern European countries or to the United Kingdom and the United States for further study or research and by inviting university faculty and scholars from the Soviet Union or the United States to their home institutions. These were perhaps the most noticeable effects of internationalisation of the academic profession over the period.

Since the latter part of 1940s, the remarkable contribution made by the Fulbright Program in supporting and facilitating the mobility of the academic profession cannot be overemphasised. Founded in 1946 and sponsored by the US Department of State, the initial reach of this programme had been primarily European countries, but now the programme operates worldwide. According to the data for grants under

the Fulbright Program from 1947 to 1962, the total grants to Americans amounted to 21,300, including 3,312 professors, 2,259 researchers, 4,117 teachers and 11,612 students, while the total grants to non-American citizens for travel to the United States amounted to 34,381, including 1,260 professors, 5,014 researchers, 4,713 teachers, 18,564 students, 485 specialists and 4,345 for study in the US schools abroad. Those non-American citizens came from nearly 50 countries, including Argentina, Australia, Denmark, Iraq, Ireland, Israel, Italy, Japan, Korea, Nepal, the Netherlands, Norway, Peru, Portugal, the Philippines, Sweden, Turkey, the United Kingdom and Uruguay (Johnson and Colligan 1965).

Today, Fulbright has become the most widely recognised and the most prestigious international exchange programme in the world, supported for more than half a century by the American people through an annual appropriation from the US Congress and by the people of the partner nations (<http://fulbright.state.gov/>, Retrieved on 13 May 2010).

1.4.4 The Fourth Phase

In the fourth phase starting from the early 1990s, the break-up of the Soviet Union and the demise of the bifurcated world, the social contexts in which the internationalisation of the academic profession has been occurring became increasingly diverse and more complicated. First, since the early 1990s, with the exception of the United States, the great majority of countries have experienced a rapid and massive expansion in enrolments at the level of tertiary education. Some countries have shifted from the stage of elite higher education to that of mass higher education, as in the United Kingdom and China, while other countries have moved from the stage of mass higher education through to post-massification of higher education and now to near universal access – as in Japan and South Korea.

Second, with implementation of neo-liberal economic and social policies, reforms have been launched in many countries to reduce public funding of higher education and to constitute a stronger system of public accountability. In some countries, individual higher education institutions, including university faculty, are asked to be more adaptable and responsive to such dramatic external pressures. Due to the constraints of public budgets, higher education institutions are expected to generate more revenues from diversified sources, which are basically driven by market-oriented mechanisms. Hence, rising market pressures and competition have inevitably led to substantial changes in the nature and the inherent characteristics of the academic profession, including the international activities in which academic professionals are involved.

Third, the importance of economic globalisation cannot be overestimated. With the rapid progress of economic globalisation, the internationalisation of the academic profession has encountered unprecedented challenges. Policy and practice concerning internationalisation of the academic profession in individual countries are not only affected by national policy, character and identity but are also influenced by

calls and pressures from regional or even global organisations like the WTO. Various factors, especially the rapidity of economic globalisation, the advancement of information technology and the introduction of market-oriented mechanisms, exert an increasingly significant influence on almost all aspects of international activities of the academic profession in individual countries.

Finally, since the early 1990s, there has appeared a new trend for developed and developing nations across the globe – and especially for non-English-speaking nations – of seeking to develop national strategies for enhancing the capacity of national higher education systems to be more competitive internationally. Subsequently, more and more institutions have been encouraged and supported in order to enhance their quality in research and education with the aim of becoming world-class universities and therefore increasing their ability to compete internationally. Thus, compared with what had happened prior to the early 1990s, the ongoing internationalisation of the academic profession is much more strongly driven by both economic and academic factors in a more competitive environment and at a global level.

Apparently, the situation in developed countries differs from that in developing countries. In many developed countries, particularly English-speaking countries such as the United Kingdom, Australia, the United States and other Western countries, internationalisation of the academic profession is linked to commercial activities that are driven by an entrepreneurial spirit. Conversely, in the majority of developing countries in Asia, Africa and Latin America, internationalisation is more affected by academic factors, for example, in dispatching faculty members abroad for advanced studies or research as part of efforts to enhance the quality of their education and research activities.

With regard to the form of the internationalisation of the academic profession, it includes three aspects. First is a transition from technical assistance for developing countries by developed countries to a growing global competition. Second is a transition from personal mobility and transplantation of national higher education models or systems within particular countries to internationalisation of programmes, the emergence of transnational education and building up quality assurance systems at a global level. Third is the increasingly important role of English language in teaching and research activities in many non-English-speaking countries.

With respect to its dimensions, nationally oriented or organised programmes have basically been gradually replaced by institution-based projects in most countries and by exchange programmes initiated by regional or international organisations. However, in most non-Western countries, government-oriented policies and links or cooperation between governments and institutions are still strongly emphasised. For example, with rapid economic globalisation and academic cooperation between Japan and other countries, more and more Japanese universities have established numerous bi- and multilateral cooperation agreements between Japanese and foreign institutions. In particular the number of agreements with US institutions constitutes the biggest share of the total, followed by those with Chinese institutions; based on these agreements, there have been increased academic exchange activities undertaken between Japan and other countries at an institutional level.

1.5 Organisation and Framework of This Volume

The volume consists of three parts.

Part I (Chaps. 2, 3, and 4) identifies similarities and differences in internationalisation of university academics or faculty among the 19 countries that participated in the 2007–2008 international survey based on a common questionnaire and provides a set of national rankings on multiple indicators of internationalisation. It also focuses on changes in the nature and extent of internationalisation in nine countries that participated in both the 1992 Carnegie survey and the 2007 CAP survey based on the major findings from the similar questions in the two surveys.

Part II (Chaps. 5, 6, and 7) examines major aspects and dimensions of the internationalisation of academic profession, including the international mobility of faculty and the international dimension of faculty's teaching and research activities in individual nations, regions and at the global level by using sets of the variables concerned.

Part III (Chaps. 8, 9, 10, and 11) achieves a comparative understanding of faculty internationalisation from wider perspectives by focusing on several specific aspects. First, it looks at the distinctive characteristics of the internationalisation of the academic profession in three emerging regions: Asia (focusing on China, Hong Kong Special Administrative Region of People's Republic of China, Japan, Malaysia and South Korea), Europe (especially Finland, Germany, Italy, the Netherlands, Norway, Portugal and the United Kingdom as reflected in the ERASMUS project and the Bologna Process) and North America (Canada, the United States and Mexico as reflected in NAFTA). Second, it touches on the internationalisation among academic women across regions and nations. Third, it deals with internationalisation indicators among the newest entrants to the academic professions worldwide. Finally, it develops patterns of academic profession and identifies the similarities and differences of a subgroup of academic "internationalists" across 19 CAP countries.

The volume concludes (Chap. 12) by discussing major findings, issues and implications for both research and policy.

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Chapter 2

Concepts and Methods

Michele Rostan, Martin Finkelstein, and Futao Huang

2.1 Introduction

This chapter describes the sampling and data collection procedures for the Changing Academic Profession survey of 2007–2008, as well as the nature of the survey instrument. It provides an overview specifically of that section of the instrument focusing on indicators of faculty internationalization. Following an overview of those indicators, we provide a more detailed analysis of data quality assurance.

2.2 Research Methods

2.2.1 Research Questions

The CAP study addressed four research questions:

1. To what extent is the nature of academic work and the trajectory of academic careers changing?

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2. What are the external and internal *drivers* of these changes?
3. To what extent do changes differ between countries and types of higher education institutions?
4. How have the academic professions responded—attitudinally and behaviorally—to changes in their external and internal environment?

2.2.2 *Participating Countries*

The following 19 countries participated by conducting national surveys during 2007–2008 with a common sampling frame and instrument: Argentina, Australia, Brazil, Canada, China, Hong Kong (SAR), Finland, Germany, Italy, Japan, Malaysia, Mexico, the Netherlands, Norway, Portugal, South Africa, South Korea, the United Kingdom, and the United States of America. Each national study includes a national context background paper and a survey of the academic profession.

2.2.3 *The CAP Sample*

The reference population of the CAP Survey is composed of professionals in higher education institutions that offer a baccalaureate degree or higher (Type A of the OECD classification or Level 5A of the ISCED-97) and professional researchers in public research institutes. Participating country research teams were invited to cover a common population defined as all academics identified as working at least halftime in public institutions of higher education, as well as private institutions where they are a significant component of the national system, that offer first degrees, and to include in the reference population researchers in public research institutes focused on basic research. Further, participants in the project decided on a minimum “effective” sample size of 800 *returned* questionnaires with most items answered. Three countries—Canada, South Korea, and the United States—administered the survey online; the remaining 16 administered paper version either through the post or distributed in local academic staff university mailboxes. Since only a few countries included professional working at public research institutes, after the preliminary version of the data file was released, it was decided to include in the final data set only academics working at universities or other higher education institutions. Table 2.1 provides basic information on the CAP sample: number of respondents, percentage of academics by type of institution, and response rates, by country.

2.2.4 *Development of the Survey Instrument*

Several sets of considerations underlay the design of the survey instrument. In terms of item content, the design sought to include a critical mass of questions related to each of the CAP project’s three major themes: relevance, internationalization, and

Table 2.1 CAP sample characteristics by country

	<i>N</i>	Percent employed in universities	Percent employed in other institutions of higher education	Response rate
Argentina	826	100	0	26
Australia	1,381	69	31	25
Brazil	1,147	49	52	25
Canada	1,152	100	0	17
China	3,612	85	15	86
Finland	1,452	77	23	28
Germany	1,265	83	17	32
Hong Kong	811	100	0	13
Italy	1,701	100	0	35
Japan	1,408	22	78	23
Korea, Republic of	900	18	82	13
Malaysia	1,226	80	20	30
Mexico	1,973	35	66	55
Netherlands	1,167	54	46	18
Norway	1,035	93	7	36
Portugal	1,323	73	27	4
South Africa	750	99	1	
United Kingdom	1,663	94	7	15
United States	1,146	74	26	21
Total	25,938	74	26	

Source: CAP data September, 2011

Note: Canada, Korea, and United States used an online version of the survey

managerialism. The items on managerialism which included perceptions of the power and influence in campus decision-making (governance) of various internal and external constituencies, institutional policies and practices on budgeting, evaluation of academic personnel, teaching and research, and faculty self-perceptions of their own power and influence in their institutions and local academic units were consolidated in one of six sections of the survey. Items related to faculty internationalization, on the other hand, were distributed over what became separate sections on faculty teaching and research activities, respectively, as well as on a career history and mobility, and on their demographic background (including citizenship and educational background). Similarly, items related to the “relevance” theme were distributed over the separate sections on faculty teaching and research activities as well as over their career history.

A second set of considerations derived from the modes available for assessing *change over time* on a wide variety of dimensions of academic work and careers. We identified at least three approaches to assessing change: (1) questions that directly inquired about changes or the degree of change since the respondent’s initial entry into full-time academic work, (2) questions in 2007–2008 that replicated word for word those asked in earlier surveys which would allow for direct comparisons between years, and (3) disaggregating responses to 2007–2008 survey items by

career age (or stage) to allow for generational comparisons.¹ In the first case, we planned to cross-tabulate perceptions of change with respondent career age (or stage), allowing us to align level of perceived change with years of experience in the profession (effectively partialing out any “experience” effect). In the case of repeated earlier questions, we sought in particular to include verbatim a number of items directly from the 1991–1992 First International Survey of the Academic Profession. This would allow for comparisons across countries on the very same items (Altbach 1996). Finally, based on the earlier work of Finkelstein et al. (1998), we sought to apply what had proved to be an illuminating lens of generational analysis to the assessment and interpretation of change.

A third set of considerations stemmed directly from the comparative focus of the project. In order to draw comparisons across national systems, we needed to pose questions that allowed for the development of common metrics and equivalencies across national systems. That required us to pose questions in a form or format that would be answerable across very different contexts and systems. Thus, for example, we allowed each national team to specify their own national systems for academic rank, and based on these national designations, we later were able to group position in terms of senior rank versus junior rank. A final set of considerations concerned survey length. Previous experience with national surveys had suggested that an instrument requiring any more than 30–40 min for completion would seriously depress response rates. We strove therefore to limit the length of the instrument—cutting out questions that were deemed nonessential.

The 19 CAP countries agreed to a core set of items that defined a core instrument included by all 19 national teams. Individual countries were allowed, however, to supplement their national instrument with questions deemed especially critical or relevant to their individual system.

2.3 CAP Survey Data and Indicators of Internationalization

In the CAP master questionnaire, there are 14 questions directly related to the internationalization of the academic profession which translate into 37 discrete variables: 13 refer to academics’ educational background and career, 12 to academic work, 5 to languages, either academics’ mother tongue or second language, 1 to institutional governance, and 6 to academics’ citizenship and residence.² These 37 variables can be clustered around 5 discernible academic activity categories as follows:

- *Mobility across borders* ($n = 19$), including whether the country in which academics earned their degrees was the country of their current employment or not (eight variables), whether they considered and took concrete actions to move to

¹Such differences may, of course, reflect differences between historical generations in their values and perceptions quite beyond any differences in actual descriptive conditions.

²The text of the 14 questions referring to international issues from which the 37 variables are derived is provided in Appendix A with the full text of the CAP International Master Questionnaire.

an academic position in another country (two variables), whether they spent periods abroad since the award of their first degree (three variables), and their citizenship and country of residence at three points in their life—at birth, first degree, and currently (six variables)

- *Teaching* ($n = 7$), including the presence or absence of international perspectives or contents in their courses, the “official” language of instruction at their current institution, whether they taught courses abroad in the current or previous year, the language they primarily employed in their own teaching, whether first language/mother tongue or another language, and the specific other language primarily used in teaching, and the number of international students³
- *Research* ($n = 5$), namely, research collaboration with international colleagues, the international scope or orientation of their primary research, whether international organizations served as source of research external funding, the language primarily employed in research, whether first language or mother tongue or another language, and the specific other language primarily used in research
- *Dissemination* ($n = 4$), namely, publications which are (a) published in a “foreign” language, (b) coauthored with colleagues located in other countries, (c) published in a foreign country, and (d) online or electronically published
- *Decision-making role* ($n = 1$), namely, the actor—individual faculty or another relevant actor—who has the primary influence on establishing international linkages at home institution

Three of these items, namely, research collaboration with foreign academics, publishing in another country, and publishing in a “foreign” language, were used in the Carnegie study (Altbach 1996) and have been replicated in the CAP survey.⁴

The set of items related to the country in which academics earned their degrees has been used to determine which higher education systems are net exporters or importers of academic labor (Welch 1997). One or more of the above-mentioned items have been used to study academics’ participation or involvement in international activities (Cummings and Bain 2009; El-Khawas 2002; Welch 1997), academics’ influence on the international content of curricula (El-Khawas 2002), the internationalization of the content of academic work (Finkelstein et al. 2009), the internationalization of scholarly networks (Finkelstein et al. 2009), and changes in the internationalization of the academic profession (Huang 2009). Some of them— or very similar items—such as funds received from international agencies, international perspectives in curricular content, and international books, have been used for assessing higher education institutions’ internationalization (Horn et al. 2007), or others, such as international coauthorship, have been used for assessing the internationalization of academic research (Vincent-Lancrin 2006). Finally, as

³As will be discussed, teaching abroad is considered more an indicator of the internationalization of teaching than an indicator of academic mobility.

⁴The Carnegie study provided information on the proportions of academic staff who had their highest degree from another country (Welch 1997); as the CAP Survey provides this information as well, we can say that there is a fourth item of the Carnegie questionnaire that has been replicated in the CAP study.

English shapes the work of individual academics and of their institutions because of its international role in teaching, research, scholarship, knowledge dissemination, and circulation through journals, books, and the Internet (Altbach 2006), five of the mentioned variables allow us to assess its use by academics both as mother tongue or as a second language in teaching and research (Rostan 2011).

While several of the items included in the CAP questionnaire have already served to study different aspects of the internationalization of the academy, they also appear to be well suited to study those more or less specific aspects of the internationalization of both the academic profession and higher education on which the debates of the recent past have focused (Kehm and Teichler 2007), such as the impact of mobility on academic careers; vertical and horizontal academic mobility (Teichler 2004); brain drain, brain gain, and brain circulation (Robertson 2006); virtual mobility with the help of ICT (Joris et al. 2003); internationalization at home (Crowther et al. 2000; Wächter 2003) and the internationalization of curricula (Van der Wende 1996); academics' role in establishing institutional and research networks, partnerships, and alliances (Knight 2006); knowledge transfer across borders (Teichler 2009); academics' contribution to an increasingly international system of innovation (Cummings 2009); and higher education systems' international attractiveness (Welch 1997).

Internationalization of higher education is a process occurring at multiple levels: that of the individual, the academic unit, the discipline, the institution, the sector, the national system, and the supranational, that is, regional or global. Insofar as the CAP survey collected data at the individual level, issues related to individual academics' internationalization of their work, and professional activities can be addressed. Beyond the individual level, however, it is also possible to aggregate the individual level data to one or more higher levels, including ultimately the internationalization of national and regional higher education systems. Contrary to the Carnegie Study data set, though, the CAP data set includes few variables addressing directly or indirectly internationalization at the institutional level, that is, information collected from individuals about their institution's international activities. As a consequence, analysis at this level must be relatively sketchy. Moreover, also unlike the earlier Carnegie Study, the CAP Survey didn't investigate academics' value orientations toward, and opinions about, internationalization.

At the individual level, CAP items can be used to study several aspects of academics' internationalization such as study or employment mobility, attitude toward international mobility, international travelling, internationalization of teaching contents, international research collaboration or the establishment of international scholarly networks, international orientation of research, international dissemination of research results, and international fund-raising ability. At the system level, other dimensions can be investigated such as the composition of faculty by nationality, the international attractiveness of a higher education system, the status as net importer or exporter of academic talent of a national higher education system, international knowledge transfer, and changes in the internationalization of the academy across generations. At the regional or global levels, the CAP Survey

items allow us to address aspects such as vertical or horizontal international mobility and both student and faculty brain drain or brain circulation. Some CAP Survey items can be used as indicators, or to build indicators, of aspects of internationalization at more than one level. Information on the extent to which actors wield influence in establishing international linkages can be used to determine the existence or scope of a systemic approach to internationalization both at the institutional and at the national levels. Primarily employing a specific language either as mother tongue or as second language in teaching and/or research may say something about the status of that language at several levels. Primarily employing a global or regional “lingua franca” in teaching and/or research can shed light on the internationalization of teaching and research both at the individual and at the system levels. The extent of international transfer of research funds provides information on the internationalization of academic research at both national and supranational levels. The increase of international students reported by teachers can be used as an indicator of perceived change in higher education internationalization both at the national and supranational levels.

2.4 Data Coding and Analysis

2.4.1 Coding

An international codebook was created for the core survey by a team of research associates at the International Center for Higher Education Research (INCHER) at Kassel University in Germany. International comparability of the various national data files required a number of coding modifications to accommodate differences in terminology across national systems. Thus, for example, differences in how various national systems operationalize academic ranks required that we collapse academic rank categories in the international data file to senior (e.g., associate and full professor in Italy, Japan, and the United States) and junior (e.g., assistant professor and others in Italy, Japan, and the United States). Similarly, despite the rather high level of institutional differentiation in systems like the United States, Japan, or China,⁵ the institutional-type variable was dichotomized as university—specifically including, in, for example, the US case, Research I and II universities and PhD-granting I and II universities in the traditional Carnegie scheme (Carnegie Council for Policy Studies 1994)—and other 3- or 4-year first-degree-granting institutions. In countries such as Italy, where the higher education system is dominated by universities, only universities have been included in the CAP study.

⁵Reflected historically in the nine-step classification of the Carnegie Foundation for the Advancement of Teaching and the myriad missions of institutions carrying the label of university in the United States as compared to the much clearer and more singular meaning of the term university in most other national systems.

2.4.2 Data Cleaning

The Kassel team and the CAP Methods Group reviewed basic frequency and crosstabs for data incongruities and engaged in a two-stage data cleaning process. In the first stage, individual country teams were asked to prepare “data quality” reports and answer specific questions based on perceived incongruities or large amounts of apparently missing data. Following this general data cleaning initiative, the coeditors of this volume undertook a detailed review of the data for all 19 countries on those items directly related to “internationalization.” That review yielded a series of further questions and a second round of reviews with country teams. Based on these reviews, a final data cleaning proposal was developed by the Methods Group, approved by the national teams, and executed by the Kassel team. The final international data set was released in September 2011.

2.4.3 Sample Weights

The Kassel team solicited basic population data from each of the 19 CAP countries on the national distribution of faculty by institutional type, academic field, gender, and rank. These were used to weight the actual sample values to reflect the basic population parameters across all 19 countries.

2.4.4 Data Analysis

Basic frequency tables were computed on all variables—as coded and/or transformed—across all 19 countries. In addition, frequency distributions were computed separately by rank (junior vs. senior staff) and by institutional type (universities vs. other higher education institutions) in widely distributed table compendia. Several of the chapters in the current volume employ bivariate contingency tables. More advanced multivariate statistical techniques—primarily multiple regression—are employed, however, in a few individual chapters that follow (see, e.g., Chaps. 5, 7, and 11).

2.5 Assessing the Quality of Data and Indicators

To assess the quality of indicators which can be drawn from, or built upon, the CAP data set, we examine the number of academics who didn’t respond to a specific question, thus failing to provide the requested datum. The higher the item response rate, the higher the quality of the indicators which can be built.

Based on the percentage of “no answers,” the 37 variables related to internationalization included in the CAP data set can be divided into five categories (see Table 2.2).

Table 2.2 Percent of nonresponses by variable ($N=25,819$)

Variable	Percent
External funding for research coming from international organizations	23
Number of years spent in the country in which you are currently employed, if different from the country of your first degree	22
Number of years spent in the country of your first degree	17
Publications online or electronically published	17
Publications published in a foreign country	16
Current country of residence	15
Country of residence at the time of first degree	15
Number of years spent in other countries, outside the country of your first degree, and current employment	14
Country of residence at birth	14
Primary research international in scope or orientation	14
Publications published in a language different from the language of instruction at your current institution	13
Publications coauthored with colleagues located in other (foreign) countries	13
Actor having primary influence in establishing international linkages at home institution	12
Current citizenship	10
Citizenship at the time of first degree	10
First language or mother tongue	9
Citizenship at birth	9
Language primarily used in research: first language or another	8
Second language primarily used in research	7
Considered to move to an academic position in another country	7
Taken concrete actions to move to another country	7
Collaboration with international colleagues	7
Language primarily used in teaching: first language or another	6
Second language primarily used in teaching	5
Country of second degree	4
Country of doctoral degree	3
Emphasis on international perspectives or content in courses	2
Number of international students increased	2
Most of graduate students are international	2
Second degree earned in country of current employment	2
Doctoral degree earned in country of current employment	1
Postdoctoral degree earned in country of current employment	1
Country of first degree	1
Country of postdoctoral degree	<1
Teaching abroad	<1
Teaching in a language different from the language of instruction at your current institution	<1
First degree earned in country of current employment	<1

Source: CAP data, September 2011 (unweighted data)

The first category includes 14 variables for which nonresponse to the related question is 5 % of the whole sample or less. Starting from the variable with the highest response rate (more than 99 %), these variables provide information on the following subjects: whether the country in which the respondent earned his or her first degree is the country of current employment, teaching abroad, teaching in a “foreign” language, country of postdoctoral degree, country of first degree, whether the country in which the respondent earned his or her postdoctoral degree is the country of current employment, whether the country in which the respondent earned his or her doctoral degree is the country of current employment, whether the country in which the respondent earned his or her second degree is the country of current employment, current proportion of international graduate students, perceived increase in the number of international students, emphasis on international perspectives or content in academics’ courses, country of doctoral degree, country of second degree, and the second language primarily used in teaching. Indicators built on the basis of these variables can be considered of the highest quality.

The second category includes ten variables. These variables are based on items for which nonrespondents vary between 6 and 10 % of the sample. They provide information on whether the language primarily used in teaching is the academic’s first language or another, collaboration with international colleagues, whether respondents considered moving to an academic position in another country, and if so, whether concrete actions have been taken to do so, the second language primarily used in research by academics, whether the language primarily used in research is the academic’s first language or another, citizenship at birth, first language or mother tongue, citizenship at the time of first degree, and current citizenship. As a small proportion of surveyed academics decided not to provide information on these matters, we can consider indicators built on these variables as of a good quality.

The third category includes eight variables for which the percentage of “no answers” varies between 12 and 15 %. These variables provide information on the actor having primary influence in establishing international linkages at the home institution, the percentage of academics’ publications that—in the 3 years preceding the survey—were published in a language different from the language of instruction at their institution or coauthored with colleagues located in foreign countries, the extent to which academic’s primary research is considered international in scope or orientation, country of residence at birth, years spent in other countries post baccalaureate degree, country of residence at the time of first degree, and current country of residence. Although response rates to related questions are still very high—more than 85 %—the quality of indicators built on these variables must be considered lower than the quality of those identified above.

The fourth category includes three variables for which nonrespondents are around 16–17 %. These variables refer to publications published in a foreign country, publications published online or electronically, and the number of years spent in the country of first degree. Although response rates to the relevant questions approximate 85 %, the quality of derived indicators must be considered lower than the quality of indicators derived from the previous variables.

Finally, there are two variables for which “no answers” amount to 22–23 % of the whole sample. These variables provide information, respectively, on the number of years spent in the country of current employment, if different from the country of first degree, and on external funding for research coming from international organizations. Among indicators of internationalization based on CAP data, those derived from these two last variables must be considered as of lesser, or at the least, more suspect quality.

The incidence of nonresponses varies not only by item but also across countries. Within a comparative analysis, it is useful to identify those countries where the CAP questionnaire’s items provide a strong or a weak basis for investigating the internationalization of the academic profession. There is an initial set of nine variables having less than 10 % nonresponse in all participating countries,⁶ and there is a second set of four variables having more than 10 % nonresponse in only one country.⁷ We can consider all these variables as well suited for a complete and reliable comparison across countries. Information on the other 24 variables is summarized in Table 2.3. The first column provides information on the countries where the proportion of “no answers” varies between 11 and 20 %.

Although the basis for comparative analysis across these countries is somewhat weaker, we can still consider it quite reliable as at least 80 % of the sample in each country did provide relevant information. More severe problems arise from countries listed in the second column, as in these countries the proportion of no answers is higher than 20 %. Inclusion of these countries in comparative analyses must thus be carefully considered variable by variable. Finally, Table 2.3 helps analysts to focus on single countries displaying problems of incomplete information on specific topics.

All in all, it can be said that there are two questions which provide a weak basis for investigating some aspects of academic internationalization. One is the question asking for the percentage of external funding for research coming from international organizations, and one is the question asking for the number of years spent in the country in which the respondent is currently employed, if different from the country of first degree. It has also to be noted that some countries display a high proportion of nonresponses (more than 20 %) on a considerable number of variables, such as the United Kingdom, Australia, Portugal, and the Netherlands (10–14 variables out of 37) and Malaysia, Mexico, and South Africa (6–8 variables out of 37).

⁶These variables provide information on whether the country in which the respondent earned his or her first degree, second degree, and doctoral degree is the country of current employment, the country of postdoctoral degree, teaching abroad, teaching in a language different from the language of instruction at current institution, the emphasis on international perspectives or content in academics’ courses, the increase in the number of international students, and the current proportion of international graduate students.

⁷This is the case of Malaysia for information on whether the country in which respondent earned his or her postdoctoral degree is the country of current employment (19.5 % of no answers), the case of South Africa for information on country of first degree (17.1 %), country of second degree (80.5 %), and country of doctoral degree (47.1 %).

Table 2.3 Participating countries by variables and by percent of no answers

Variables	Percent of “no” answers	
	<20	>20
Considered to move to an academic position in another country	ZA, HK, AU, PT	UK
Taken concrete actions to move to another country	ZA, HK, AU, PT	UK
Collaboration with international colleagues	US	MX
Primary research international in scope or orientation	CA, NO, DE, IT, CN, MY, ZA, PT, US	BR, MX
Publication published in a “foreign” language	JP, DE, US, FI, PT	MY, MX, ZA, CN
Publication coauthored with colleagues located in foreign country	JP, DE, US, FI, PT	MY, MX, ZA, CN
Publication published in a foreign country	JP, DE, US, FI, PT	MY, MX, ZA, CN
Publication published online or electronically	JP, DE, US, FI, PT	MY, MX, ZA, CN
External funding for research coming from international organizations	IT, DE, AU, CA, UK	US, PT, FI, MY, ZA, CN, MX
Actor having primary influence in establishing international linkages at home institution	ZA, CA, FI	AU, PT, UK
Citizenship at birth	CA	UK, AU, PT
Citizenship at the time of first degree	CA	UK, AU, PT
Current citizenship		UK, AU, CA, PT
Country of residence at birth	KR, MY, MX, ZA, DE, UK	CA, AU, PT
Country of residence at the time of first degree	KR, MY, MX, ZA, DE	CA, UK, AU, PT
Current country of residence	KR, MY, MX, ZA, DE	CA, UK, AU, PT
First language or mother tongue	CA	UK, NO, AU, PT
Language primarily used in teaching: first language or another	PT	ZA
Language primarily used in research: first language or another		PT, ZA
Second language primarily used in research	PT	NO
Number of years spent in the country of your first degree	MX, JP, DE, MY, ZA, CN, CA, NO	UK, FI, AU, AR, PT
Number of years spent in the country in which you are currently employed, if different from the country of your first degree	KR, MX, CN, JP, MY, ZA, CA	UK, AR, AU, NO, PT, FI
Number of years spent in other countries (outside the country of your first degree and current employment)	ZA, CN, NO, CA	UK, FI, AU, AR, PT

Source: CAP data September, 2011 (unweighted data)

2.6 Summary

The Changing Academic Profession survey, 2007–2008, intended as a 15-year follow-up on the 1991–1992 International Survey of the Academic Profession, sought to understand how academics perceived dramatic changes in the external environment associated with globalization and the emergence of a knowledge society and the consequences for their careers, working conditions, and behavior. The survey instrument itself consisted of six sections: workload and working conditions, teaching, research and publication, governance and campus management, career progression, and demographics. It was administered by mail in 16 of the countries and online in three countries, to samples selected on common principles, and targeted to yield a minimum of 800 useable responses per country. Each country generated its own data file in which all indigenous categories (idiosyncratic rank structure) were maintained, while an international codebook and associated data set was developed and maintained at the International Center for Higher Education Research (INCHER) at Kassel University in Germany. The international data set sought to develop common metrics on all variables to allow for meaningful comparisons as the 19 CAP participating nations. Generally speaking this required the collapsing of a large number of nationally idiosyncratic categories into fewer common categories. Thus, for example, institutional type was reduced to either “university” (with an important research functions and the full panoply of graduate programs) or “other four-year institution.” Various rank structures in the individual countries were reduced to “junior” and “senior.” In finalizing the international data set, each country provided the breakdown of the professorate in their nation by gender, rank, institutional type, and academic field. That allowed for weights to be calculated for each country to ensure that country samples reflected population parameters.

Some 37 variables appeared scattered throughout the survey instrument related to faculty international activity, ranging widely over internationalization of teaching, research and publication, and physical border crossing for study or professional pursuits. These items include the use of language including English as a medium for teaching and research. These items permit us to construct a wide variety of indicators of faculty international activity. Moreover, we were able to devise at least three approaches to detecting change in faculty international activity over time: (1) the comparison of specific items that appeared in both the 1992 Carnegie and the 2007 CAP survey, (2) specific questions that asked faculty about changes since their initial academic staff appointment, and (3) cross-sectional analyses of various age cohorts and biographical generations of the currently serving academic staff.

So large a data file posed challenges for data cleaning and the handling of missing data. In particular we have sought to analyze the “no answer” problem as it threatens the confidence in the data for specific items and for specific countries. The results of such examinations reported above suggest that while our analyses can proceed with confidence on all but a few survey items and a few countries, there are instances where caution is called for, including items related to international funding and time spent abroad post bachelor as well as few countries with especially large proportion of nonresponses.

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Chapter 3

A Profile of CAP Participating Countries and a Global Overview of Academic Internationalization in 2007–2008

Michele Rostan, Martin Finkelstein, and Futao Huang

3.1 Introduction

This chapter aims first at providing a profile of the characteristics of participating CAP countries in terms of such factors as wealth (GDP per capita and GDP growth), investment in R&D and in higher education as a percentage of GDP, enrollment rates in postsecondary education, etc. In particular, we seek to use these profiles to identify a set of characteristics upon which countries can be grouped in order to make meaningful international comparisons across chapters. To the extent that such a typology can be developed and applied to the various chapters that follow, we will be in a position to draw meaningful conclusions at the end of the volume.

Second, this chapter seeks to provide a basic overview of the aggregate nature and extent of international activity among members of the academic profession globally. While cross-country comparisons are reserved for the chapters that follow, we address here the broad questions: How internationalized is the academic profession, writ large? What aspects of academic work and careers are most internationalized? We explicitly examine teaching and research activity and physical mobility and the use of language as a means for integrating academics into international networks.

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Third, the chapter examines two critical factors that shape faculty involvement in international activity: academic field or discipline and the use of English as a second language among faculty in non-English-speaking countries. Insofar as English has emerged as the lingua franca of global scholarship, is language proficiency and use associated with one or another pattern of international activities? While in some sense, language use is treated in subsequent chapters on teaching and research as an indicator of internationalization, here we seek to examine broadly the extent to which language use, in particular the use of English, shapes the patterns of activity of academic staff.

Finally, the chapter addresses the question of the interrelationship among different types of international activities. To what extent are the various dimensions of internationalization interrelated? Are individual scholars who are high on one also high on all others?

3.2 A Profile of CAP Participating Countries

Building on earlier analysis of international indicators undertaken to portray relevant national differences and trends over time (Cummings 2008), we focus on updated versions of a set of selected indicators to portray the academic profession in their national context, including their relative integration within the newly emerging global (academic) order.

Table 3.1 describes the 19 CAP countries on a variety of macro-level economic, social, and linguistic characteristics, including population size, growth, main languages spoken, relative wealth (GDP per capita), R&D expenditures as a percentage of GDP, ITC integration, and economic integration in the international community.

A glance at the table suggests a significant spread of participating CAP countries on many of these key indicators. In terms of size, they range from about 4 million (Norway) to 1.3 billion (China): five are quite large defined as >100 million (China, Japan, the USA, Mexico, Brazil), seven are moderate sized defined as greater than 30 million and less than 100 million (Italy, Germany, the UK, Korea,¹ South Africa, Argentina, Canada), and seven are relatively small defined as less than 30 million (Malaysia, Hong Kong, Australia, the Netherlands, Portugal, Finland, Norway). Quite beyond absolute size, population growth rate impacts the academic profession – if indirectly –through its effect on the size of the 18–24-year age cohort as does immigration. As we can see from Table 3.1, several of the large countries are also experiencing high growth rates (Mexico and Brazil) while others such as Japan are quite stable (the USA and China are in between). Among the medium and small countries, only Malaysia and South Africa are experiencing high population growth rates. Hong Kong, Australia, and Canada (and, to a lesser extent, the USA and Germany) benefit from influxes of immigrants.

¹ Here and throughout the text, we refer to South Korea or the Republic of Korea.

Table 3.1 Social, linguistic, and economic characteristics of the 19 countries participating in the CAP Survey

	Official or main language(s)	Population (Millions), 2007	Average annual population growth rate (1992–2007)	International migrant stock (% of population, 2005)	GDP per capita, PPP (constant 2005 international \$)	Average annual GDP growth % (1992–2007)	Exports of goods and services (% of GDP, 2007)	Imports of goods and services (% of GDP, 2007)	R&D expenditure (% of GDP, 2007)	Fixed broadband Internet subscribers (per 100 people), 2007	Internet users (per 100 people), 2007
Argentina	Spanish	39.5	1.1	4	12,506	4	25	20	1	6.6	25.9
Australia	English	21.1	1.2	21	33,848	4	20	21	n.a.	22.9	67.9
Brazil	Portuguese	190.1	1.4	0	9,181	3	13	12	1	4	30.9
Canada	English, French	33	1	20	36,074	3	35	33	2	27.5	72.8
China	Chinese	1317.9	0.8	0	5,239	11	38	30	1	5	16.1
Finland	Finnish, Swedish	5.3	0.3	3	33,474	3	46	41	4	30.6	80.7
Germany	German	82.3	0.2	13	33,364	2	47	40	3	23.8	75.2
Hong Kong SAR, China	Chinese, English	6.9	1.2	40	39,958	4	208	197	n.a.	27.4	57.2
Italy	Italian	59.4	0.3	5	28,766	1	29	29	1	17	40.7
Japan	Japanese	127.8	0.2	2	31,660	1	18	16	3	22.2	74.1
Korea, Rep.	Korean	48.5	0.7	1	25,021	5	42	40	3	30.4	78
Malaysia	Malaysian, English	26.6	2.2	8	12,788	6	110	89	n.a.	3.8	55.7
Mexico	Spanish	105.3	1.4	1	13,371	3	28	30	0	4.3	21
Netherlands	Dutch	16.4	0.5	11	37,577	3	74	65	2	33.5	86.1
Norway	Norwegian	4.7	0.6	8	48,800	3	46	30	2	30.5	87.1
Portugal	Portuguese	10.6	0.4	7	21,993	2	32	40	1	14.3	42.2
South Africa	Afrikaans, English, Xhosa, Zulu, and other ⁷	48.3	1.8	3	9,366	3	31	34	1	0.8	8.2
United Kingdom	English	61	0.4	10	34,099	3	27	30	2	25.6	75
United States	English	301.6	1.1	13	43,662	3	12	17	3	23.3	73.5

Source: World Bank, World Development Indicators, <http://databank.worldbank.org/ddp/home.do>Note: *n.a.* data was not available

In terms of economic development, all but one of the CAP countries (China) are in the middle level, but there are wide disparities in GDP per capita: most of the Western European countries together with the USA, Canada, Australia, Japan, and Korea are at the high end with everyone else at the lower end. In terms of economic growth rate, however, China's is exceedingly rapid, followed by Hong Kong, Malaysia, and Korea; Japan, on the other hand, has slowed down considerably. Most of the CAP countries are integrated into the global economy. With the exception of the USA, Japan, and several of the Latin American countries, the rest boast a substantial proportion of GDP focused on imports and exports.

Nearly all the CAP countries are engaged in the information technology revolution, although there are wide differences. One indicator is the percentage of the population reporting broadband subscriptions: from about one-quarter to one-third in the Western countries (Italy and Portugal are on the low side, however) and Japan, Korea, and Hong Kong to less than 10 % in South Africa, the Latin American countries, and China and Malaysia. This pattern is reflected more broadly in the number of Internet users. Generally, the national commitment to innovation is reflected in R&D expenditures as a percentage of GDP. The data show that at the high end (around 3 %) are the USA, Japan, Korea, Hong Kong, Finland, and Germany, while at the low end are the Latin American countries (Argentina, Mexico, Brazil) and South Africa – although there is evidence that those patterns may be changing (Cummings 2008).

Table 3.2 explicitly focuses on the educational profile of the 19 CAP countries, including postsecondary attendance rates (and enrollment ratios) and a variety of financial indicators of investment in postsecondary education. The proportion of the college age cohort actually enrolled often serves as an indicator of the capacity (and attractiveness) of a nation's higher education system. Most of the North American and Western European countries as well as Korea are in the 60–90 % range, while the Latin American countries (Brazil and Mexico), South Africa, as well as some of the less economically mature Asian countries (China and Malaysia) are at the lower end (10–30 %). It should be noted, however, that some countries with very large populations like China, Brazil, and Mexico may report relatively low percentages but nonetheless large absolute numbers of students enrolled (e.g., China's low GER conceals absolute enrollment numbers that exceed the USA).

In terms of public investment in education – and higher education, in particular – Table 3.2 shows that CAP countries expend between 3 and 7 % of their GDP on education: ranging from 3 % in Japan to 7 % in Norway, with nearly everyone else between 4 and 6 %. There was no clear correlation between economic maturity and proportionate expenditure on education – with some of the emerging countries (e.g., Brazil and Malaysia) at the relatively high end and mature economies (e.g., Japan) at the relatively low end.² When we examine public expenditures on education on a per student basis, patterns change somewhat with several developing countries

²In the case of Japan, like the USA, public expenditure is buttressed by high levels of private expenditure, not reflected here.

Table 3.2 Tertiary education enrollment indicators by country, 2007

	Total enrollment	Gross total enrollment ratio: ISCED 5 and 6	Public expenditure on education as % of GDP	Public expenditure per pupil as a % of GDP Tertiary	Educational expenditure in tertiary as % of total educational expenditure	Percentage distribution of public current expenditure on education by level. Tertiary
Argentina	2,208,291	67.7335	5	16	18	18
Australia	1,083,715	75.02188	4	20	23	24
Brazil	5,272,877	30.00577	5	30	16	17
Canada	...	...	5	...	...	...
China	25,346,279	22.05066	...	...	...	...
Hong Kong	194,236	42.16078	6	32	31	33
Finland	309,163	93.78608	4	...	25	24
Germany	...	...	4	38	31	28
Italy	2,033,642	67.1126	4	22	18	17
Japan	4,032,625	57.87009	3	20	18	...
Malaysia	805,136	32.10605	5	50	33	...
Mexico	...	26.29685	5	37	18	18
Norway	215,237	75.94974	7	47	32	34
Portugal	366,729	56.8797	...	...	...	...
Republic of Korea	3,208,591	96.07699	4	9	14	14
South Africa	...	...	5	...	13	13
United Kingdom	2,362,815	58.98949	5	24	17	19
United States	17,758,870	81.62469	5	22	24	...

Source: UNESCO, 2007

Note: ... data not available

(e.g., Mexico and Brazil) at the high end and several affluent countries (Japan, Korea, the USA, Australia) at the lower end. A relatively higher position in per student expenditures suggests that public investment is increasing relative to population size. There is a greater range in terms of the proportion of public expenditures on education specifically targeted to higher education, from a low of 13 % in South Africa to a high of 33 % in Malaysia. The Nordic countries (Norway and Finland) as well as Hong Kong are at the high end (30 % or more on tertiary education); the USA, Australia, and Germany are in the middle (about one-quarter); and the Latin American countries are (Brazil, Argentina, and Mexico) at the lower end. This suggests a pattern in the less mature economies of focusing on primary and secondary education, while the more mature economies are able to focus on tertiary education.

In sum, the CAP countries represent a sufficiently diverse mix of economic, demographic, and cultural profiles to require that we develop a set of categories that at once preserve the main dimensions of difference in national contexts, while, at the same time, providing sufficient parsimony to allow us to speak of a manageable number of groupings.

	English “only”	English “also”	English “no”
Mature	Australia, United Kingdom, United States	Canada, Hong Kong	Finland, Germany, Italy, South Korea, Japan, Netherlands, Norway, Portugal
Emerging		Malaysia, South Africa	Argentina, Brazil, China, Mexico

Fig. 3.1 A typology of the 19 CAP countries by national wealth and official status of the English language

3.2.1 *Developing a Typology for Comparing CAP Countries*

In determining how to compare these 19 diverse countries, we have sought to identify two to three key dimensions of difference which can be used to cluster countries into “meaningful” subgroups. Initially, we employed two such dimensions: national wealth as reflected in income per capita³ and official, or main, language. Overall, national wealth has always emerged as a relevant predictor of international behavior and the distinction between mature and emerging economies seemed a “basic” first principle for differentiating among CAP countries. A second criterion is one of language: insofar as English has emerged as the lingua franca of research and scholarship worldwide, it seems reasonable to assume that use of English is a factor in determining integration into the international community. The 19 CAP countries fall into at least three categories of English language use. For three countries (the USA, the UK, Australia), English is the only official, or main, language; for four others (Canada, Hong Kong, Malaysia,⁴ and South Africa), English is one of two or more “official” languages; and for the remaining 12 CAP countries, English has no official national language status.

Based on indicators of national wealth, and the role of English in national language policy, it becomes possible to develop a 2×3 matrix for classifying CAP countries as displayed in Fig. 3.1. Each country is classified on wealth (mature; emerging) and on language policy (English only; English also, while primary or not; no English) to yield a six-cell matrix. Among the 19 CAP countries, three are “mature” English only; two are “mature” English also; two are “emerging” English also; two-thirds of the remaining 12 “no English” countries are “mature” economies (Finland, Germany, Italy, the Netherlands, Portugal, Japan, South Korea, and Norway) while one-third are “emerging” economies (Argentina, Brazil, China, and Mexico). Among the “no English” countries, it may be further possible to add

³The economies of countries that are classified as “high income” by the World Bank are considered as “mature” while those of countries that are classified as “upper middle income” are considered as “emerging” (<http://data.worldbank.org/about/country-classifications>).

⁴Although English is no more considered an official language in Malaysia, it remains an active second language especially in education and business.

region as a third factor. Certainly there are clearly “Asian” and “European” clusters and also a “Latin American” cluster and a “North American” one.

As we and our participating authors attempt to draw comparisons among CAP countries, we will endeavor in the remaining chapters to employ one or more of the three criteria of wealth (mature versus emerging), language policy, and region as the basis for the analytical clustering of countries.

With these categories in mind, we can proceed to an overview of the data.

3.3 The Internationalization of Academic Activities: A General Overview

Table 3.3 displays the proportionate frequency of academics engaging in various international activities conceived as indicators of internationalization across all 19 CAP countries. A glance at Table 3.3 suggests that the internationalization of the *contents* of teaching and research is the most pervasive aspect of the internationalization of the academic profession at the global level. Most academics “integrate international perspectives into their courses” (62 %) and consider their primary research as “international in scope or orientation (55 %).” Beyond the content of their teaching and research, the second most pervasive aspect of faculty international activity is in the dissemination of knowledge as half of the academics participating in the CAP survey say that within a period of 3 years they have “published in a foreign country” (53 %) or they have “published in a language different from the language of instruction at their current institution” (49 %). The third most pervasive aspect of academic internationalization is international research collaboration. Between one-third and two-fifths of academics are personally involved in establishing international research networks. This involvement takes a variety of forms: 41 % collaborate with international colleagues in research, 36 % employ English as a second language in their research activity, and 31 % have coauthored a work with foreign colleagues (which is also another aspect of international dissemination of knowledge). Other international activities involve a more or less small proportion of academics.

At a very first glance, two findings deserve consideration and further analysis. First, mobility for reasons of study appears to be the most pervasive impetus or motive for academics’ physical international mobility. If we take the CAP sample as a whole, the largest group of respondents who have earned a degree abroad consists of Bachelor candidates. But, if we compare the proportions of academics who have earned a degree abroad by type of degree – first, second, PhD, and postdoc – data show that international mobility is higher for doctoral and postdoctoral studies. Thus, mobility rate is highest among advanced degree candidates. Less than 10 % can be considered “foreign” insofar as they report that the country of their current citizenship is different from the country of their current employment. Second, teaching activities appear to be less internationalized than research ones: the percentage of academics who teach in a “foreign” language, who primarily employ English as second language in teaching and who teach abroad, is always lower – sometimes consistently lower – than 20 %.

Table 3.3 Percent reporting various international activities 2007–2008

	Type of activity	<i>N</i>	Percent
Emphasize international perspective or content in their courses	Teaching	21,269	62
Characterize their primary research as international in scope or orientation	Research	18,290	55
Publish in a foreign country	Dissemination	16,940	51
Publish in a language different from the language of instruction at their current institution	Dissemination	16,940	50
The number of international students has increased since they started teaching	Teaching	20,151	43
Publish online or electronically	Dissemination	16,934	41
Collaborate with international colleagues in their research efforts	Research	19,843	41
Primarily employ English in research as second language	Research	19,319	36
Coauthor a publication with colleagues located in other countries	Dissemination	16,939	31
Individual faculty has the primary influence in establishing international linkages at their institution	Decision making	18,918	28
Earned a postdoctoral degree in a country different from country of current employment	Mobility	2,598	28
Earned a doctoral degree in a country different from country of current employment	Mobility	12,221	24
Earned a first degree in a country different from country of current employment	Mobility	24,091	22
External funding for their research came from international organizations	Research	12,800	18
Considered a major change in their job moving to another country	Mobility	22,429	18
Earned a second degree in a country different from country of current employment	Mobility	15,179	16
Teach in a language different from the language of instruction at their current institution	Teaching	21,994	15
Primarily employ English in research as their mother tongue	Research	19,671	15
Primarily employ English in teaching as their mother tongue	Teaching	20,553	15
Primarily employ English in teaching as second language	Teaching	20,553	14
Currently most of their graduate students are international	Teaching	17,953	10
Teaching courses abroad	Teaching	21,100	9
Country of citizenship is not the country of their current employment	Mobility	21,383	8
Taking concrete actions to make a major change in their job moving to another country	Mobility	22,043	5

Source: CAP data September 2011

Table 3.4 Percent reporting international teaching activities by broad disciplinary fields 2007–2008

	Soft disciplines	Hard disciplines
Emphasize international perspective or content in their courses	66	58
Teach courses in a language different from the language of instruction at their current institution	17	15
Primarily employ English in teaching as their mother tongue	17	13
Primarily employ English in teaching as their second language	13	13

Source: CAP data September 2011

Table 3.5 Percent reporting international research activities by broad disciplinary fields 2007–2008

	Soft disciplines	Hard disciplines
Primary research is international in scope or orientation	56	55
Collaborate with international colleagues in research	35	46
Primarily employ English in research as their second language	26	45
Primarily employ English in research as their mother tongue	18	13
External funding for research comes from international organizations	15	21

Source: CAP data September 2011

Finally, there are two features of academics' work environment that are worth mentioning: a considerable proportion of faculties are exposed to, or part of, a growing global higher education market as more than 40 % of them maintain that the number of international students has increased since they started teaching; moreover, individual faculties still play a role in enhancing or promoting their institution's international relations as 28 % of respondents say that individual faculties have the primary influence in establishing international linkages at their institution.

3.3.1 *The Role of Discipline in Shaping International Activity Patterns*

Although not always (and not always uniformly), academic discipline broadly characterized along the soft to hard dimension⁵ has a strong impact on the internationalization of the academic profession. Looking at international teaching, research, and dissemination activities (Tables 3.4, 3.5, and 3.6), three differences are striking.

⁵Soft disciplines include teacher training and education science, humanities and arts, social and behavioral sciences, business and administration, economics, and law; hard sciences include life sciences, physical sciences, mathematics, computer sciences, engineering, manufacturing and construction, architecture, agriculture, and medical sciences, health-related sciences, and social services.

Table 3.6 Percent reporting international knowledge dissemination activities by broad disciplinary fields 2007–2008

	Soft disciplines	Hard disciplines
Publish in a foreign country	40	60
Publish in a language different from the language of instruction at current institution	37	61
Publish online or electronically	34	46
Publish works coauthored with colleagues located in other countries	21	40

Source: CAP data September 2011

First, teaching is the only activity where academics in the soft disciplines are more internationalized than their colleagues in the hard ones. Although an emphasis on international perspectives and contents in courses is widespread, this is much more so among the “soft” disciplines. Second, in three relevant research activities – international research collaboration, primarily employing English as a second language in research, and receiving funds from international organizations – academics in hard disciplines appear to be more internationalized than their colleagues from the soft ones. Third, the greater internationalization of hard disciplines is even more pronounced with respect to knowledge dissemination activities. Finally, it has to be noted that there is no difference between academics belonging to the two broad disciplinary field groupings when it comes to the international scope or orientation of their primary research.

3.4 The Role of Language in Shaping International Activity

3.4.1 *The Use of English as a Primary or Second Language in Teaching and Research*

We conclude our examination of international activities at the aggregate level with an examination of the role of language. It seems appropriate to begin analyzing differences in the internationalization of the academic profession with an examination of the role played by English at the global level. English has a special international status as it is a widespread medium of instruction, international scholarly and research journals and books are largely published in English, international meetings are in English, and English is used as common language for scientific communication. Briefly, English is considered as the academic contemporary “lingua franca” or the Latin of the twenty-first century (Altbach 2006; Rostan 2011). Thus, in order to address the issue of the internationalization of the academic profession, it is necessary to look at academics’ relationship with English: Are they using it in their activities? Are they using it as their mother tongue or as a second language? As a consequence, we’ll briefly review the status of English globally and in each country,

Table 3.7 Percent reporting the use of English in academic activities 2007–2008 ($N=20,875$)

Both in teaching and research as mother tongue	13
Only in teaching as mother tongue	1
Only in research as mother tongue	1
Both in teaching and research as second language	11
Only in teaching as second language	2
Only in research as second language	23
Neither in teaching nor in research	49

Source: CAP data September 2011

and we'll analyze academics' use of English in each country looking at teaching and research activities focusing on the employment of English as a "primary" and also as a "second" or "other" language as a possible indicator of internationalization.

Globally (Table 3.7), 51 % of the academics involved in the CAP survey primarily employ English for their academic activities: 15 % of the academics use it as their mother tongue and 36 % as their second language. English is much more used as "lingua franca" for research activities than for teaching activities: while 48 % of the academics employ English for research, only 27 % actually use it for teaching. This gap mainly reflects nonnative speakers. Among native speakers, almost all academics use English both for teaching and for research purposes. On the contrary, academics employing English as their second language in research are more than twice as numerous as those who use it as their second language for teaching.

English plays a different role in the internationalization of both higher education and the academic profession depending on the official language of the home country (Tables 3.8 and 3.9). In the three countries participating in the CAP Survey where English is either the official or the main language, the overwhelming majority of academics teach in English as it is their mother tongue, but a significant minority use English for teaching as their second language, while few academics employ a language different from English in their teaching. Briefly, in these countries practically all academics teach using the contemporary "lingua franca," giving institutions and higher education systems a competitive advantage on the global student market.

Secondly, in the four countries with a special bilingual or multilingual context where English is one of the official languages, together with one or more other languages, English is used for teaching by the majority of academics as it is either their mother tongue (in Canada) or their second language (in Hong Kong, Malaysia, and South Africa).⁶ Moreover, a significant minority of academics primarily use a different language for teaching, but there is also a smaller minority who teach in English, it being their second language (in Canada) or their main language (Hong Kong and South Africa). All in all, in these countries 65–75 % of academics teach

⁶It must be noted, though, that many academics from either Australia, the UK, and the USA teach in Hong Kong; nevertheless, see also next note.

Table 3.8 Percent of academics reporting they are primarily employing English in teaching, by country 2007–2008

	English "only"				English "also"				English "no"											
	United Kingdom	United States	Canada	United States	Hong Kong	Malaysia	South Africa	South Africa	Brazil	China	Finland	Germany	Italy	Japan	Netherlands	Norway	Portugal	Total		
Yes (as mother tongue)	84	87	51	17	2	14	0	0	0	0	1	0	0	0	0	0	0	15		
Yes (as other language)	12	14	14	57	72	57	0	1	4	16	4	4	0	0	19	5	28	9	2	14
No	1	2	1	35	26	25	29	100	99	96	83	95	96	100	81	94	71	91	98	72

Source: CAP data September 2011

Table 3.9 Percent of academics primarily employing English in research by country 2007–2008

	English "only"		English "also"			English "no"										
	United Kingdom	United States	Canada	Hong Kong	South Africa	Brazil	China	Finland	Germany	Italy	Japan	Korea, Republic of	Netherlands	Norway	Portugal	Total
Yes (as mother tongue)	85	83	86	52	18	3	14	0	0	0	0	0	0	0	0	15
Yes (as other language)	14	14	12	29	67	82	73	23	42	6	64	48	28	56	58	37
No	1	3	2	19	16	16	13	77	58	94	36	52	72	43	42	48

Source: CAP data September 2011

in English. As a consequence, these countries also enjoy quite a strong competitive advantage at the global level.⁷

In countries where English is either the official, or one official, or the main language, almost all academics, or a very large majority, employ English in research either as it is their mother tongue or their second language (Table 3.9). In these countries, employing English in research cannot be considered as such as an indicator of internationalization in research. The use of English gives academics working in these countries an ipso facto advantage as it is the dominant means of communication in the international scientific community. Yet, when English is an academics' mother tongue, employing it in research doesn't necessarily imply participating in international research networks. Moreover, using English as second language may simply be necessary in order to take part in national research activities.

The countries where English is not an official language can be split into two subgroups. First, there are four countries where a small but sizeable portion of academics (10–28 %) are committed to employing English as the mean of instruction likely as an effort to attract international students and/or to provide domestic students with useful language skills: Finland, South Korea, the Netherlands, and Norway. In these four countries, most academics teaching in English are natives whose mother tongue is the official language of the country or one of the official languages. In the second subgroup, there are eight countries with strong indigenous linguistic identities where English is never, or seldom, used for teaching: Argentina, Brazil, China, Germany, Italy, Japan, Mexico, and Portugal. In half of these countries, academics belong to non-English-based international language communities. In four countries (Italy, Finland, Portugal, and Norway), English is used in research by the majority of academics, and in three other countries (Germany, South Korea, and Brazil), it is used by a significant minority. Finally, in four countries (Argentina, Mexico, Japan, and China) English is used in research by a small minority.

In countries where English is not an official language, the use of it by native-born academics whose mother tongue is not English is a necessary tool for participating in international research. As a consequence, employing English as the second language in research can be considered as an indicator of integration within international research networks. On this basis, two groups of countries can be identified.

⁷ According to a preliminary analysis of CAP data 2010, the role played by English as the second language in these two first groups of countries is somehow different. In three multilingual countries – Hong Kong, Malaysia, and South Africa – many academics (57–71 %) use English for teaching as their second language. In most cases, they are national academics employing a language which is not their mother tongue. So, it can be argued that in these countries the use of English to teach by nonnative speakers may have two goals: (a) introducing an international dimension into teaching and (b) providing a common language for education in a multilingual national context. In Canada, Australia, and the USA, the majority of academics employing English for teaching as their second language – more or less 2 out of 3 – are national citizens, likely belonging to linguistic minorities or having acquired the national citizenship during their career. International academics are a minority, around 1 out of 3. This situation is probably attributable to the historic international attractiveness of the three countries' higher education systems. In the UK most academics employing English for teaching as their second language are international academics, mostly European, witnessing the attractiveness of the UK higher education system, especially at regional level.

The first group includes the seven countries where the percentage of academics employing English as their second language in research is above average (Italy, Finland, Portugal, Norway, the Netherlands, Germany, and South Korea). Academics working in these countries can be considered as well integrated in international research networks. The second group includes the five countries where the percentage of academics employing English as their second language in research is below average (Brazil, Argentina, Mexico, Japan, and China). Academics working in these countries are not well integrated within international research networks.

3.4.2 The Use of English Language and Patterns of International Activity

To what extent, and in what ways, is language use associated with level and/or pattern of international activity?

Table 3.10a presents the cross tabulation of language use in teaching and research by pattern of international collaboration, dissemination, teaching activities, and physical mobility for academics overall. The data suggest that those who engage in international research collaboration and in international dissemination are twice as likely to use English as those that do not collaborate or disseminate internationally (for collaboration, over half compared to one-quarter who do not; for dissemination, 2/5 versus 1/5). However, the integration of an international perspective into the content of one's research was largely independent of language use (the vast majority of all language-use groups undertook such internationalization of research content). Similarly, internationalization of teaching activity and physical mobility for study were largely independent of language use.

When we control for linguistic tradition of country of employment (Table 3.10b, c), we see that most of the shaping influence of English language use on research collaboration and dissemination is localized in the non-English-speaking countries, while much less powerful in shaping international research activity in the English-only or English-also countries. It is, then, primarily – as we would expect – in the non-English-speaking countries where English usage provides entrée into global research networks.

3.5 Discerning Patterns in Internationalization of Teaching and Research, Content, and Networks

3.5.1 Patterns of Integration

It has been argued that the internationalization of higher education consists not only in the growth of discrete international activities but is also reflected in a qualitative dimension based on the interconnection or synergy between various international activities. Globally, 42 % of academics are able to integrate an international

Table 3.10 Percent reporting English use in teaching and research, 2007–2008

	Coll with intl colleagues in res		Coauthored with foreign colleagues		Res is intl in scope		Emphasize intl perspective or content in their courses		Teaching abroad or in a foreign language		Acad mobility for study	
	N	%	N	%	N	%	N	%	N	%	N	%
(a) All countries												
English used												
Both in teaching and research	4,599	51	4,189	38	4,339	57	4,891	62	4,976	11	4,950	7
Only in teaching	268	32	210	21	248	62	664	64	678	9	660	11
Only in research	4,890	57	4,596	45	4,564	62	4,301	65	4,412	11	4,952	4
Neither	8,118	25	6,419	16	7,477	49	9,392	60	9,689	6	9,544	3
(b) English speaking countries												
English used												
Both in teaching and research	4,017	49	3,632	36	3,783	55	4,306	60	4,371	10	4,349	8
Only in teaching	121	46	100	30	115	67	436	61	444	6	438	14
Only in research	1,027	19	901	41	966	61	622	64	636	15	1,047	8
Neither	565	39	480	21	490	51	629	59	637	14	671	9
(c) Non-English speaking countries												
English used												
Both in teaching and research	582	62	557	52	556	66	585	76	605	17	601	5
Only in teaching	147	20	110	13	133	58	228	71	234	13	222	5
Only in research	3,863	57	3,695	46	3,598	63	3,679	65	3,776	10	3,905	3
Neither	7,553	23	5,939	16	6,987	48	8,763	60	9,052	6	8,873	3

Source: CAP data September 2011

Table 3.11 Percent reporting on the internationalization of the contents of academic activities 2007–2008 ($N=16,724$)

Both teaching and research	42
Only in teaching	22
Only in research	13
Neither	23

Source: CAP data September 2011

Table 3.12 Percent reporting the internationalization of research contents and research networks, 2007–2008 ($N=17,708$)

Both research contents and research networks	31
Only research contents	25
Only research networks	12
Neither research contents nor research networks	32

Source: CAP Survey, 2011

Table 3.13 Percent reporting on the internationalization of the contents of academic activities by broad disciplinary fields, 2007–2008

	Soft disciplines ($N=6,610$)	Hard disciplines ($N=8,121$)
In both teaching and research	45	39
Only in teaching	23	20
Only in research	10	16
Neither in teaching nor in research	21	25

Source: CAP Survey, 2011

Table 3.14 Percent reporting on the internationalization of research contents and research networks by broad disciplinary fields, 2007–2008

	Soft disciplines ($N=6,668$)	Hard disciplines ($N=8,382$)
Both research contents and research networks	27	34
Only research contents	29	22
Only research networks	10	14
Neither research contents nor research networks	34	30

Source: CAP Survey, 2011

dimension in the contents of both their teaching and their research and 31 % able to connect the internationalization of the contents of their research and the internationalization of their scholarly networks (Tables 3.11 and 3.12).

3.5.2 *Patterns of Integration by Discipline*

To what extent are there differences in integration by academic field? The data in Table 3.13 suggest that while academics in the soft disciplines are more able to incorporate an international dimension in both their teaching and research activities than their colleagues in the hard disciplines, on the other hand, academics from the hard disciplines are more able to connect the internationalization of research contents and of research networks (Table 3.14).

3.6 Conclusions

This brief overview of the data collected through the CAP international survey shows that the academic profession is highly internationalized as an international dimension is integrated in several academic activities. Most academics incorporate an international perspective in their courses or integrate an international dimension in the contents of their teaching. Again, most academics characterize their primary research as international in scope or orientation. At least half of them have published in a foreign country or in a language which is different from the language of instruction at their current institution.

The process of internationalization, though, doesn't affect the various aspects of the academic profession, and hence of higher education at large, to the same extent. While the internationalization of the contents of teaching and research and the internationalization of academic dissemination are widespread, international research collaboration is less common as only a minority, albeit a substantial one (30–40 %), collaborates with international colleagues in research or publishes works coauthored with colleagues located in other countries. Further, other spheres of internationalization of the academic profession involve decreasing proportions of academics.

Although important, international physical mobility involves a minority of academics (10–20 % of the whole sample). At the aggregate level, some meaningful differences are visible. First, while the internationalization of the contents of both teaching and research is widespread, teaching activities appear to be less internationalized than research ones: the percentage of academics who teach in a “foreign” language at their institution is consistently lower than the percentage of academics publishing in a “foreign” language, and the percentage of academics who primarily employ English as a second language in teaching is much smaller than those who primarily use it as second language in research. Second, one of the main axes of differentiation of the academic profession, namely, discipline, has a strong impact on several aspects of its internationalization. As far as the internationalization of teaching contents and the connection between the internationalization of teaching and research contents are concerned, academics belonging to the soft disciplines appear to be ahead. On the contrary, along several research activities, including dissemination, strong involvement in international knowledge transfer, and connecting research contents and research networks, academics from the hard disciplines are more internationalized. The disciplinary divide doesn't have an impact on the internationalization of research contents.

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Chapter 4

Internationalization of the Academy: Rhetoric, Recent Trends, and Prospects

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4.1 Introduction

Academics work in institutions that are primarily situated in particular nations. Much of their work contributes to the welfare of these nations, but aspects of their work may reach beyond national borders. Constructed interrelations of the national, international, and global purposes and content of higher education have been shifting throughout history—depending on the socioeconomic and political context. Kerr (1990) argued that for the most part the modern history of higher education is driven by two laws—one of internationalization of learning and the other of nationalization of purposes. Scott (1998) proposes that, in the age of globalization, higher education is increasingly locked in national contexts; yet it has the potential of resurrecting (albeit on different terms) its international associations and networks. Focusing on the academic profession, this chapter considers the internationalization of the academic profession as the shift in academic work that takes place in national systems and their constituent institutions on a continuum from a primarily national focus

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to a more borderless or international focus. This shift can be manifest in many aspects of academic work—the increase in the international mobility of students, the increase in the international content of courses, and the increase in the cross-border collaboration of researchers and institutions.

While recently there has been an upturn of public interest in internationalization often constructed as the global competition for brains (Wildavsky 2010), the internationalizing trend is not new. Major catalysts of internationalization include the birth of the research university in the early nineteenth century, the new world order promised after WWI and the collapse of empires, and the cultural diplomacy associated with the emergence of the post WWII cold war. Each of these events was associated with spurts of “internationalization”; though especially in the last case, a clear chasm emerged dividing cross-border flow into the two competing spheres of Eastern and Western bloc internationalism. And following each of these spurts there have been slowdowns or even reversals. Thus, a major issue to consider when thinking about recent trends is whether or not there have been identifiable catalysts. If not, there is little reason to expect much in the way of recent movement toward greater internationalization.

4.2 Rhetoric or Change in Recent Years?

Much of the recent discourse on internationalization of the academy assumes that it is both desirable and inevitable (Altbach 2004; Knight 2004; Welch 2005; Green et al. 2008). But a recent study of the internationalization of US universities and colleges conducted by the American Council on Education (ACE) concludes that the improvements in internationalization efforts as surveyed in 2006 as compared to 2001 are rather modest (Green et al. 2008). The most remarkable area of improvement over the 5-year period is a big jump in the share of the surveyed institutions that offered study abroad programs (91 % vs. 65 %) and more faculty leading study abroad groups (58 % vs. 46 %) (Green et al. 2008). On the downside, stated institutional commitments to internationalization have not noticeably increased, nor has the financial and administrative support improved except in some areas such as study abroad programs. Both the shares of institutions that have undergraduate foreign language requirements and that have an international or global course requirement have decreased (45 % vs. 53 % and 37 % vs. 41 %, respectively). International work does not figure prominently in hiring and promoting faculty across all types of universities and colleges in the USA (Green et al. 2008), even though international faculty collaborations and the incorporation of global perspectives in courses are believed to enhance the quality of teaching and research (see, e.g., Ray and Solem 2009). Given the heightened importance of internationalization promoted by prominent US national groups, such as the American Council on Education (ACE) and the Association of International Educators (NAFSA), support of the study abroad opportunities for undergraduate

students through the Senator Simon Study Abroad Congressional Act, and the national security initiatives that promote critical languages learning, the performance of the US universities and colleges on various aspects of internationalization, according to the ACE survey, is less than lustrous.

Another set of studies by the International Association of Universities (IAU) surveys the importance, rationales, risks, and benefits of internationalization among higher education institutions across the world. According to the surveys conducted in 2003 and 2005, about three quarters (73 %) of the surveyed institutions considered internationalization a high priority for their own institution and less than half (46 %) considered it as a governmental policy priority (Knight 2003, 2006). At the same time, 52 % viewed faculty as the primary catalysts for internationalization versus 24 % for administrators and 20 % for students (Knight 2003). According to the 2009 IAU survey, there were some shifts in rankings of the perceived top benefits of internationalization as compared to the 2005 IAU survey: while international awareness of students/internationalization of students and staff remained the top benefit, strengthened research and knowledge production as the benefit of internationalization moved to the second position in 2009, and more symbolic benefits of internationalization such as cooperation and solidarity as well as enhanced institutional prestige moved up in the ranking of internationalization benefits (Knight 2006; Egron-Polak and Hudson 2010). While the ACE and IAU studies suggest recent shifts in the rationale for internationalization, they do not provide strong evidence for changes in actual practice.

One reflection from the above studies is that the measurement of internationalization often neglects the faculty role in the process: either as catalysts and initiators of internationalization or, to use Clark's terms (Clark 1998), as the critically important "academic heartland," that support and implement internationalization on a daily basis. Hence, faculty are central to the success of higher education internationalization. Whether faculty themselves are internationally minded or striving to be so and are involved in international activities is thus a question. The focus of this paper is to fill this void by exploring with the available survey data whether and how both faculty attitudes and behavior regarding internationalization change over time and what factors may be behind these changes.

4.3 CAP Sample and Variables

The principle unit of analysis for our consideration of the internationalizing trend among faculty is the national academic system. The 2007 CAP survey in conjunction with the 1992 International Survey of the Academic Profession is the data source that will be used to examine the internationalizing trend. While 19 countries participated in CAP, only ten CAP countries participated in both the 1992 and 2007 surveys.

4.3.1 *Dependent Variables*

Data on internationalization is available for the two time periods in only ten higher education systems. In these ten systems, the survey sample design was similar for the two periods. Looking at some of the results for the two time periods, an initial impression is that the sample design in 1992 was somewhat more selective; but this impression may reflect the reality that several of the ten systems have experienced significant expansion since 1992, involving expansion primarily in the layer of less selective institutions that are also relatively less international in their mission and practice.¹

Concerning the internationalization theme, only a handful of questions were asked in both periods, and these mainly focused on research. So this limits our ability to consider *internationalizing trends*. To supplement the trend data, for the 2007 data set we also will consider the *prospects for internationalization* through a comparison of results for different generations of academics—specifically those who began their careers between 2000 and 2007, 1990 and 1999, 1980 and 1989, and before 1980. The first group represents the future of higher education, so if this youngest generation seems to be more engaged than older generations in international activities, we can anticipate this may lead to future change. The prospects analysis will be especially valuable for considering trends in teaching.

In addressing the research questions, it will be important to distinguish between two distinctive meanings of the phrase “more international.” One understanding of this phrase focuses on differences in the proportion of academics that manifest international attitudes or behavior—e.g., 20 % in 1992 compared to 35 % in 2007. A second understanding focuses on the actual number. In several of the academic systems we will be considering, there have been dramatic increases in system size (see Table 4.2). For example, the number of tertiary level teaching staff in Brazil and the Republic of Korea has nearly trebled over this short period. Thus, in these two countries, even if the proportion of academics manifesting a particular behavior is about the same for the two periods, the actual number would be three times as great. Of the ten systems under consideration, only in Germany and the Netherlands has there been relatively little increase in the actual size of the academies. Thus, the major question for our analysis is whether over the 1992–2007 there has been a significant change in the *proportions* and *numbers* of academics reporting more international work patterns.

¹For example, academics in the research university tier of the US system (institutions that grant doctorates in at least some fields) are over twice as likely to engage in international collaboration as their colleagues in the 4-year college tier. Differences of similar magnitude are found in the other CAP countries that could make a distinction between first-tier research-oriented as contrasted to second-tier teaching-oriented institutions.

4.3.2 *Independent Variables (Context and Drivers)*

In terms of the macro factors that are believed to influence internationalization, the literature tends to emphasize both the *context or conditions of change* and the *drivers of change*. Context refers to important ideological, political, and financial factors shaping the performance of national systems at the initial time period; drivers refer to the relative stability or change in these contextual factors over the period of interest. For example, in the early 1990s the ideology of higher education as a public good was still relatively intact, but from that point on an important driving force has been the belief that higher education benefits private individuals at least as much as it benefits the public. As another example, when looking at a sample of ten countries, one looks at the relatively rapid economic growth of Korea is an impressive driver, but this rapid growth takes off from the context in the early 1990s of a relatively low economic level (as presented in Table 4.2 below, the third lowest of the ten countries); thus, the Korean economy as measured in per capita terms remains the third lowest in 2007.

In reviewing the several independent variables, we will adhere to this distinction between the context for change and the drivers of change. Table 4.1 outlines our best judgments on the relative position of the ten higher education systems in terms of a select group of contextual factors and drivers.² In the following discussion, we review the likely relation of each of the identified contextual factors and drivers to the internationalization trend.

4.3.2.1 **Level and Rate of Economic Growth**

Of the ten countries/economies, as reported in Table 4.2, six have been world economic leaders for some time, two (Hong Kong and Korea) transitioned in the 1990s from a middle income position toward economic maturity (though it is notable that Hong Kong's GDP per capita exceeded that in all countries except the USA and Japan), and two are on the brink of this transition. In terms of rate of economic growth over the 1992–2007 period, the second group is most notable experiencing very rapid growth and earning the title of newly industrializing countries (NICs). Brazil and Mexico are sometimes described as near NICs; the actual size of these two economies has expanded, but the population growth rate is also relatively high so the per capita income has not increased that much. The expansion in economies has been accompanied by both the expansion of academic systems and the upgrading of their research productivity as discussed below. Economic growth, as it is associated with the expansion of productivity and the search for new markets, puts pressure on national academies to generate supporting technologies and relevant information, and the academic response may be to seek new partners in foreign settings.

²The selection of particular contextual factors and drivers depends on the analytical topic; for example, an analysis of managerial practices might place greater emphasis on the ideology of public versus private good or the ideology of social equity versus elitism.

Table 4.1 Contextual factors and drivers influencing the internationalization of national systems by country

System	Context				Drivers				Massification:			
	Economic level	Participation in world trade	System size	“International” language	Economic growth	Globalization	system expansion	differentiation	Knowledge production			
Australia	High	High	Moderate	Yes	Moderate	Moderate	Moderate	Some	Moderate			
Brazil	Moderate	Moderate	Moderate	No	Rapid	Moderate	High	High	Low but increasing			
Germany	High	High	Moderate	No	Moderate	Moderate	Moderate and increasing	High	Moderate			
Hong Kong	High	Very high	Small	Yes	Rapid	Very high	High	Moderate	Very high			
Japan	Very high	Moderate	Large	No	Slow	Moderate	Moderate	Some	High			
Korea	Rising	High	Moderate	No	Very rapid	High	High	High	Very high			
Mexico	Moderate	Moderate	Moderate	No	Rapid	Moderate	High	Moderate	Low but increasing			
Netherlands	High	Very High	Small	Yes	Moderate	High	High	High	Moderate			
UK	High	Moderate	Moderate	Yes	Moderate	High	Moderate	Some	High			
USA	Very high	Moderate	Large	Yes	Moderate	Moderate	Moderate	High	Moderate			

Table 4.2 Indicators of gross national product (GNP) per capita in US dollars (\$), percent annual growth, and export trade as a percent of gross domestic product (GDP) by Country, 1992 and 2007

Country	GDP per capita (\$) 1992	GDP per capita (\$) 2007	Average % annual growth	Exports of goods and services: % of GDP, 1992	Exports of goods and services: % of GDP, 2007
Australia	17,158	24,756	3	16	20
Brazil	3,282	4,290	2	11	13
Germany	20,566	25,249	1	24	47
Hong Kong, China	22,263	34,041	3	138	208
Japan	34,801	40,707	1	10	18
Korea	7,841	15,158	5	27	42
Mexico	5,169	6,561	2	15	28
Netherlands	19,354	26,889	2	55	75
UK	19,728	28,915	3	23	27
USA	28,402	38,701	2	10	12

Source: World Bank Economic Indicators, 1992 and 2007

Note: dollar figures are reported in constant year 2000 US dollars

4.3.2.2 Globalization

The extent to which a national economy is integrated with the world economy as indicated by the total value of imports and exports divided by the gross domestic product is one indicator of globalization. In 1992 all ten countries were substantially engaged in the world economy, though in relative terms the USA was toward the low end, and Hong Kong was the most integrated. The USA nevertheless had a comparatively high level of military, social, and cultural integration.

Over the period from 1992 to 2007, Hong Kong, the Netherlands, Germany, Korea, Mexico, and Japan have become relatively more engaged in the global economy, whereas there has been little change for the USA, the UK, Australia, and Brazil. Economic globalization places pressure on universities to internationalize curricula and to generate knowledge that enhances national competitiveness.

4.3.2.3 Massification and Expansion

Table 4.3 provides information on the relative inclusiveness (as measured by the tertiary level gross enrollment ratio) and the scale (as measured by total student enrollment and total teaching staff) of the ten systems under consideration in 1992 and 2007.³ Some systems by 1992 had gone a long way toward massification such as the USA, Germany, and the Netherlands. For these systems the main change

³The UNESCO numbers are for all higher education institutions including junior colleges and technical institutes, whereas the CAP sample only includes institutions that minimally confer bachelor degrees. While the scope for the numbers is thus not strictly comparable, they are at this time the only available numbers.

Table 4.3 Total enrollment in tertiary education, gross enrollment ratios (GER), total teaching staff, and percent increases by country, 1992–2007

Country	1992			2007			Teaching staff	% Increase in total enrollment	% Increase in total teaching staff
	Total enrollment	GER	Total teaching staff	Total tertiary	GER	Total tertiary			
Australia	559,365	0.4	n.a.	1,083,715	0.75	n.a.	n.a.	94 %	n.a.
Brazil	1,591,176	0.1	134,403	5,272,877	n.a.	367,638	367,638	231 %	174 %
Germany	2,033,702	0.35	279,806	2,278,897	n.a.	295,447	295,447	12 %	6 %
Hong Kong, China	85,214	0.19	5,978	194,236	0.42	10,500	10,500	128 %	76 %
Japan	2,899,143	0.3	286,166	4,032,625	0.59	515,732	515,732	39 %	80 %
Mexico	1,302,590	0.13	134,424	2,528,664	0.28	274,618	274,618	94 %	104 %
Netherlands	493,563	0.42	41,217	590,121	0.62	44,632	44,632	20 %	8 %
Republic of Korea	1,761,775	0.4	77,458	3,208,591	0.96	201,851	201,851	82 %	161 %
UK	1,385,072	0.33	89,500	2,362,815	0.58	129,930	129,930	71 %	45 %
USA	14,360,965	0.78	826,000	17,758,870	0.86	1,310,453	1,310,453	24 %	59 %

Source: UNESCO

Notes: Mexico 1993 data, Mexico teaching staff for 1991, and Germany 2007 total tertiary excludes ISCED level 6, and hence GER 2007 (Levels 5 & 6) is not available, Germany teaching staff is for 1993. UNESCO does not provide statistics for Hong Kong, so we report estimates supplied by the Hong Kong research team

Note: *n.a.* data not available for indicated year

since then has been the addition of lower tier institutions to further access. Institutions in a second group (Hong Kong, Korea, and arguably the UK and Australia), over the past 15 years, have made the transition; in this second group, the enrollment rate for Korea doubled to reach 80 %; expansion was also notable in the other countries. A third group (Brazil and Mexico) had low to moderate access. Since 1992, the institutions in this latter group have experienced an impressive infusion of resources and have experienced considerable expansion. Indeed, massification leads to the hiring of additional academic staff, and many of these new staff may be appointed to fields that have international orientations such as global business, international affairs, or the sciences.

4.3.2.4 Massification and Institutional Differentiation

It can be argued that in the increasingly globalized world, ironically it is the institutions of higher education rather than the national systems that compete against each other and are measured and pitched against each other in terms of their attraction for globally mobile students, top-notch faculty and promising young researchers, knowledge production, and placement in the league of “world class universities.” Globalization has curiously led to more differentiation *within* national systems than across them. Teichler (1996) have argued that institutional diversity in Europe produced a similar effect—with more variation among institutions of higher education within countries than across them. There have emerged sectors within systems or within institutions themselves that are more globally aligned and competitive, thus having further “globalized the difference” between those who fit the neoliberal paradigm and those who do not (Slaughter et al. 2010). This prompts close consideration of *institutional* effects on internationalization alongside other system characteristics.

4.3.2.5 System Size

There is immense variation in the size of the ten academic systems. There are over one million academics in the USA compared with less than 50,000 in the Netherlands and only circa 10,000 in Hong Kong. The large size of the US system enables numerous options for in-country collaboration, whereas the smaller size of the Dutch and Hong Kong academies creates pressure for international collaboration.

4.3.2.6 Knowledge Production/Competition

One indicator of the prominence of an academic system is extent to which it contributes to the international body of knowledge through the medium of refereed academic articles (Chapman et al. 2010). Large systems such as the US system might be expected to contribute a greater share. Indeed as illustrated in Table 4.4 in 1990 and

Table 4.4 Relative share of the world total of scientific articles by country, 1990–2007

Country	1990		2000		2007		% Change in world share, 1990–2007
	Number of articles	% World share	Number of articles	% World share	Number of articles	% World share	
World total	508,795	100	632,781	100	758,142	100	
Australia	10,664	2	14,700	2.3	17,831	2	12.2
Brazil	2374	1	6195	1	11,885	2	236
Germany	32,295	6	43,440	6.9	44,408	6	−7.7
Hong Kong, China	995	0	4914	0.8	7127	1	510
Japan	38,570	8	55,413	8.8	52,896	7	−8
Korea	1170	0	9386	1.5	18,467	2	959.3
Mexico	1038	0	2950	0.5	4,223	1	173
Netherlands	10,176	2	12,330	1.9	14,210	2	−6.3
UK	39,069	8	49,485	7.8	47,121	6	−19.1
USA	191,559	38	196,221	31	209,695	28	−26.5

Source: NSB (2010), pp. 5–14. The articles included in this table are those listed in the Science Citation Index and the Social Science Citation Index. Where the authors of an article are from two or more countries, fractions are used to indicate country attribution

down to the present, the USA is the world's greatest contributor, though over the 1990–2005 period, the USA's relative share has decreased, and that of some other systems, notably Korea and Brazil, have increased. Increases in academic research productivity tend to be accompanied by increases in international research collaboration and publications.

4.3.2.7 Language of Instruction

English is often considered the international language of academic communication. Several of the CAP nations use English as the language of instruction (the USA, the UK, Hong Kong, and Australia). In Hong Kong, where most of the population uses Chinese in the home, English is the main medium of instruction in university education. English is also relatively prominent in the Netherlands academy. In contrast are several countries that have instructional languages unique to their country: Germany uses German, Japan uses Japanese, and Korea uses Korean. Mexico uses Spanish and Brazil uses Portuguese.

4.3.2.8 Regionalism

All ten of the countries were participants in one of the major socioeconomic organizations promoting regional ties (the European Economic Union in Europe, NAFTA in North America, Mercosur in Latin America, and ASEAN and APEC in Asia). Of these regional associations, the EU has placed the most emphasis on higher

education through its participation in the Bologna Process and its funds to support cross-border research projects—European Higher Education Area and European Research Area.

4.4 Research Questions

We propose in this chapter to consider the extent to which these powerful and somewhat contradictory forces have over the 15-year period from 1992 to 2007 brought about or failed to leverage “internationalizing” changes in the recruitment, research, and teaching of the academic profession:

1. Has the composition of national academies become more international, and if so what are the contextual factors and drivers behind this change?
2. Has the educational/training history of academics become more international, and if so what are the contextual factors and drivers behind this change?
3. Have the research and publication activities of academics become more international, and if so what are the contextual factors and drivers behind this change?
4. Have the teaching orientations and practices of academics become more international, and if so what are the contextual factors and drivers behind this change?

4.5 Findings on Personal Characteristics

The national origins of academics and the national settings for their training are one theme in internationalization. Where these differ from the country where they work, we can say this is one sign of reducing national barriers, opening up the international flow of academic talent.

4.5.1 Nationality

The percentage of academics that have a country of employment in 2007 which differs from their country of birth is presented in Table 4.5. Countries vary widely in terms of national origins of the professoriate, with institutions in several of the more economically advanced countries being the most open—Hong Kong, Australia, the USA, and the UK. Japan and Korea are the most closed, closely followed by the emerging countries of Mexico and Brazil.⁴

⁴Over the past decade, both Japan and Korea have instituted policies to increase their numbers of foreign-born academics and have achieved some success (Aoki 2005); it is possible that some of the foreign born that were in these national samples did not respond as the questionnaires were in the respective national languages.

Table 4.5 Percent reporting difference between country of birth and employment 2007–2008

Country	Difference
Australia	37
Brazil	1
Germany	7
Hong Kong, China	29
Japan	1
Korea	0
Mexico	5
Netherlands	9
UK	22
USA	17

Source: CAP data March 2011

Smaller systems face greater difficulty in supporting graduate education in all fields and hence are more likely to recruit outsiders to join their academies. Thus, Hong Kong, Australia, and the Netherlands—all countries with comparatively small academic systems—have relatively large representations of foreign-born academics.

Regrettably we do not have similar data from the 1992 survey. We looked at the differences by generation for the 2007 sample, and in general found few striking differences—for example, in the USA there were about the same percent of foreign born among those hired since 2000 as there was for those hired up to 1979. So, despite the rhetoric of internationalization, we might conclude that there has been little change in the receptivity to foreign recruitment. Countries that were open to foreign talent in 1992 are the same as those that were open in 2007.

4.5.2 Training

Next we consider the percentage that were trained in a country other than their country of employment in 1992 compared to 2007—have the markets opened up or closed down? For 1992, the question focused on similarity of country of highest degree and employment. For 2007, the question differed slightly: one question contrasted the country of first degree with country of employment while a second contrasted country of doctoral degrees (for those receiving doctorates) with country of employment. In most of the countries, nearly the entire sample had doctorates; the major exceptions are Brazil and Mexico.

Overall the patterns for the two time periods are similar. Hong Kong was the most open followed by Australia and Korea. But the function of relying on foreign training appears to differ somewhat. Australia especially recruits individuals with foreign degrees who are also foreign born. In contrast, we recall from the previous section that virtually all academics in Korea are native born—so foreign training appears to serve as a proving ground for promising local talent. Korean institutions are unlikely to hire academics that are both foreign born and foreign trained. Hong Kong reflects both functions.

Table 4.6 Percent reporting difference between country of first and doctoral degree and employment, 1992 and 2007

Country	1992		2007	
	Difference: first degree and employment	Difference: doctoral degree and employment	Difference: first degree and employment	Difference: doctoral degree and employment
Mexico	10	7	9	41
Australia	32	33	35	26
Brazil	13	n.a.	2	13
Germany	4	4	8	11
Hong Kong, China	68	84	56	72
Japan	7	7	15	5
Korea	31	31	1	42
Netherlands	5	5	44	14
UK	6	7	43	15
USA	7	11	14	6

Source: CAP data March 2011

Note: *n.a.* stands for “no data available”

System size is a factor, especially for doctoral training. Small countries are less likely to have doctoral training in all fields and hence are more likely to depend on foreign systems for their training—notably Hong Kong and Australia.

Language of instruction also is a factor. Korean institutions of higher education teach mainly in Korean, a language that few foreigners are fluent in, whereas Hong Kong and Australia teach in English. Thus, even if Korea were open to foreign recruitment, there would be few foreign trained capable of teaching in Korean.⁵ In contrast, Hong Kong and Australian IHE teach in English, a language that is spoken by nationals of many countries.⁶ As already noted, the final degree of some academics is a masters or its equivalent, so for a strict comparison of the 1992 findings and the 2007 findings, we need to focus on the subsample for the two time periods whose final degree is a doctorate (as presented in columns 3 and 5 of Table 4.6). The patterns for the two time periods for doctorate subsamples are virtually identical with those for the full samples. Comparing the reliance on foreign doctorates between 1992 and 2007, Mexico shows a big leap toward reliance on foreign doctorates, while for most of the other countries, the changes are moderate. The Netherlands, Germany, the UK, and Korea are slightly up, while the USA, Hong Kong, and Australia are slightly down (though from somewhat more open starting points).

⁵It should be noted that certain Korean IHE lately have begun to hire foreign faculty who do not speak Korean but do speak English, on the assumption that Korean students have sufficient English language skills to understand the lectures of these foreigners. Also there is a new trend for Korean-born faculty to be encouraged to teach in English and for students to take a certain number of courses in English irrespective of the English proficiency of the students or professors.

⁶In the case of Australia, the foreign-born academics are spread across all academic fields, whereas in Hong Kong they tend to be more concentrated in the humanities (especially English) and some of the social sciences.

4.5.3 *Summing Up Personal Characteristics and Training*

If internationalization was the guiding principle, we might expect for all ten academic systems an increase in the cross-border incidence of employment and training. But at least according to the CAP data, for most countries there is no clear trend toward greater or lesser reliance on foreign training over the 1992–2007 period; rather the patterns that were evident in 1992 continue today.⁷ For some countries in-country doctoral training seems to be used as a filter. For example, in the case of the USA, 17 % of the academics are foreign born, but only 7 % had their final training outside the USA. This contrasts with the aforementioned Korean pattern where foreign training serves as a proving ground for locally born academic talent. Australia and Hong Kong appear to rely on foreign training both to test the abilities of talented locals and to recruit compatible foreign-born academics.

4.6 Research

Concerning internationalization of research, there are two indicators that are identical for the two time periods: international collaboration and publishing in a foreign journal. Additionally publishing in a foreign language was asked in 1992, and a similar question—publishing in a language other than that used as the language of instruction at your institution—was asked in 2007. With caution these two can be compared—in most countries the referent is identical, but in the case of Hong Kong, many academics consider Chinese to be their home language whereas English is the language of instruction at their place of employment.

4.6.1 *Work Collaboratively*⁸

International collaboration is the purest measure of international intentions. In 1992 academics in the mature (and recently matured) systems were the most likely to collaborate—the Netherlands, Germany, Hong Kong, and Australia. But in the mature group, the Japanese, Korean, and US systems were somewhat low.

For most mature systems, there is little change in the extent of international collaboration between 1992 and 2007. The biggest upward change is seen in the UK, reflecting the policy emphasis there on strengthening research. Australia also evidences an upward trend. In contrast, there is a modest decline in the percentage of academics engaged in international collaboration in Japan, the USA, the Netherlands, and Hong Kong; these declines may be attributable to an increase in

⁷Hong Kong would appear to be the major exception with a significant increase in the proportion of academics that are domestically recruited—a “localizing” rather than an internationalizing trend.

⁸Note for 2007 we are using % of all who do research.

Table 4.7 Percent of academics who indicate they collaborate with foreign partners in research by country, 1992 and 2007

Country	1992	2007
Australia	57	59
Brazil	24	28
Germany	55	50
Hong Kong, China	65	60
Japan	29	24
Korea	25	30
Mexico	40	35
Netherlands	74	63
UK	43	61
USA	39	33

Source: CAP data March 2011

the proportion of academics working in teaching as contrasted to research oriented institutions. Academic publishing and collaboration are less common in the expanding teaching-oriented sector. Hong Kong is a special case as Mainland China in 1992 was a separate political entity and presented obstacles for collaboration, whereas by 2007 Hong Kong had become part of China and most obstacles had been removed, so a considerable proportion of the collaborative ties of Hong Kong academics are now with mainland Chinese academics and classified as domestic ties.

International collaboration is more common in the smaller systems, specifically Hong Kong, Australia, and the Netherlands. After all, a small system size means fewer people in the home system for the typical academic to collaborate with.

Language of instruction has no clear relation to collaboration. Academics in systems that use English are somewhat more likely to collaborate internationally than are academics in systems that primarily use other languages—yet the USA and Germany are glaring exceptions to this generalization (Table 4.7).

Next we turn to the prospects for international collaboration. If this type of activity is more common among those most recently joining the academy, then it might be projected that international collaboration will become more common in the future. Table 4.8 compares the frequency of international collaboration by country across four generations of academics. For most countries, the youngest generation is actually somewhat less likely to engage in international collaboration than the older generations. Indeed in the cases of Brazil, Korea, Hong Kong, and Australia, the oldest generation, those that joined the profession before 1980, is the most likely to collaborate with foreign partners.

4.6.2 Publish in Another Country

Publishing in another country is most common for academics in mature systems, especially those in Western Europe—the Netherlands and Germany. This practice is also notable in Hong Kong and Australia. In general there is little change in percentage publishing abroad from 1992 to 2007 (Table 4.9).

Table 4.8 Percent of academics who indicate they collaborate with foreign partners by country and year range of first academic job

Country	Year range			
	2000–2007	1990–1999	1980–1989	Before 1980
Australia	38	59	58	65
Brazil	15	28	30	32
Germany	30	55	60	51
Hong Kong, China	50	55	61	63
Japan	0	24	27	22
Korea	33	33	30	23
Mexico	23	35	37	34
Netherlands	40	65	63	65
UK	47	56	64	65
USA	33	27	34	35

Source: CAP data March 2011

Table 4.9 Percent of faculty that publish internationally by country, 1992 and 2007

Country	1992	2007
Australia	67	57
Brazil	33	41
Germany	66	67
Hong Kong, China	83	85
Japan	45	39
Korea	50	50
Mexico	37	61
Netherlands	91	n.a.
UK	51	58
USA	43	28

Source: CAP data March 2011

Note: *n.a.* data not available for given year

Among mature and near mature countries, the highest incidence of foreign publishing is found in the smallest systems—the Netherlands, Hong Kong, and Australia—reflecting the relative scarcity of home country outlets. The low levels of foreign publishing of US and Japanese academics are surprising as is the modest US downturn from 1992 to 2007. The US downturn may reflect the increasing differentiation of the system as between research and teaching institutions and the overall shift from a high research emphasis to a greater emphasis on teaching. The biggest increase in foreign publishing is seen in the emerging countries of Brazil and Mexico—part of their drive to catch up.

Table 4.10 compares the percentages of academics who publish internationally by generation. In the cases of the UK, Australia, and Brazil, the youngest generation is more likely to publish internationally than some of the older generations. But overall there is no clear pattern that emerges from this generational comparison.

Table 4.10 Percent of academics who indicate they publish in foreign journals for ten countries, by year range of first academic job

Country	Year range			
	2000–2007	1990–1999	1980–1989	Before 1980
Australia	59	56	54	65
Brazil	43	44	50	51
Germany	67	75	69	66
Hong Kong, China	83	83	86	91
Japan	32	46	39	36
Korea	55	52	47	37
Mexico	61	61	60	59
Netherlands	n.a.	n.a.	n.a.	n.a.
UK	53	58	58	66
USA	23	26	29	35

Source: CAP data March 2011

Note: *n.a.* data not available for given year range

4.6.3 *Publishing in Another Language*

As noted earlier, the question in 1992 on publishing in a foreign language asked whether your native language and your language of publishing are different, whereas the 2007 question compared the language of your employing institution to your language of publishing—so the two questions are not precisely comparable. The biggest impact of the question difference probably falls on Hong Kong, where most of the academics are ethnically Chinese and consider Chinese to be their native language; yet most work in institutions where English is the language of instruction, and they mainly publish in English which for them is a foreign language (the 1992 question) yet also is the language of instruction (the 2007 question). Thus, the sharp drop from 1992 to 2007 for Hong Kong may be a function of the difference in the wording of the respective questions. For most other countries, the difference in wording has little impact.

The likelihood of publishing in foreign language largely reflects the international acceptability of the system's language of instruction. Academics in English-speaking countries are the least likely to publish in another language. The Dutch, Germans, Japanese, and Koreans are most likely to publish in a language other than their own (Table 4.11).

In roughly half the countries, there is an upward trend. The biggest upward trend is in the two emerging countries of Mexico and Brazil. Publishing in another language is not notable for academics working in systems where the language of instruction is English. Table 4.12 reports on the percent of academics by generation and country who publish in a foreign language. In Korea and Germany the younger generations are more likely to publish in a foreign language, whereas in Brazil, the UK, Japan, and most noticeably the Netherlands, it is the older generations; for the other countries there are no clear differences by generation.

Table 4.11 Percent of academics who have recently published in a foreign language by country, 1992 and 2007

Country	1992	2007
Australia	18	7
Brazil	36	51
Germany	71	79
Hong Kong	67	28
Japan	70	68
Korea	62	62
Mexico	36	57
Netherlands	93	86
UK	14	12
USA	11	10

Source: CAP data March 2011

Table 4.12 Percent of academics who indicate they publish in a foreign language by country and year range of first academic job

Country	Year range			
	2000–2007	1990–1999	1980–1989	Before 1980
Australia	6	8	4	10
Brazil	51	59	60	57
Germany	82	83	78	75
Hong Kong	26	27	32	27
Japan	53	70	73	69
Korea	65	67	58	49
Mexico	57	52	58	52
Netherlands	83	90	83	97
UK	10	11	14	17
USA	9	9	10	13

Source: CAP data March 2011

4.6.4 Foreign Funds to Support Research

Both the 1992 and 2007 surveys asked academics if they had received foreign funding, with the 2007 also seeking specification of the actual amount. A relatively small proportion of academics received international funding in both periods as indicated in Table 4.13, and the actual amounts reported for 2007 were, in most cases, modest. International funding was slightly more common in Europe, probably reflecting the initiatives of the European Union. And in several of the countries, the percentage receiving international funding was up in 2007 relative to 1992—for example, up from 3 to 14 % in the case of Mexico and from 9 to 16 % in the case of the UK.

Table 4.13 Percentage of academics that received funding from a foreign source by country, 1992 and 2007

Country	1992	2007
Mexico	3	14 (14)
Australia	6	10 (8)
Brazil	n.a.	5 (2)
Germany	n.a.	11 (11)
Hong Kong	4	8 (4)
Japan	1	1 (1)
Korea	1	2 (2)
Netherlands	n.a.	16(14)
UK	9	16 (16)
USA	4	6 (4)

Source: CAP data March 2011
 Note: For 2007, first figure is for those receiving external funding; figure in () is for all respondents
 Note: *n.a.* data not available for given year

4.6.5 *Summing Up on Research*

Our review of the indicators of academic involvement in international research endeavors shows little change between 1992 and 2007. Arguably the mature systems already had international research practices in 1992, so for most of these systems, there was little change through 2007. The biggest change toward greater research internationalization is seen in the emerging countries of Mexico and Brazil, followed by Korea and the UK. Small country and hence system size as well as working in a system that does not use English as the language of instruction were both found to have an impact on the likelihood that academics would be involved in international research activities.

4.7 Teaching

No questions on the internationalization of teaching were repeated in the two surveys, so we have no trend data on teaching, but we can get some hints from comparing the different generations of academics as in Table 4.14. It is interesting that the older generations seem to show more interest in emphasizing international content in their courses than do the younger generation—this is opposite from what might be expected if internationalization is a forward trend.⁹

⁹Some possible reasons for this pattern include the likelihood that the younger scholars have had less time to prepare their courses, and to make appropriate international contacts, their course assignments are focused on more foundational courses that have less room for international content,

Table 4.14 Percentage of academics who strongly agree that they “emphasize international content or perspectives” in their courses by country and year range of first academic job

Country	Year range			
	2000–2007	1990–1999	1980–1989	Up to 1979
Australia	28	32	36	45
Brazil	19	26	26	25
Germany	22	31	31	38
Hong Kong, China	26	28	33	39
Japan	18	22	19	21
Korea	23	21	22	16
Mexico	42	42	39	38
Netherlands	15	19	22	26
UK	32	31	24	25
USA	25	24	20	26

Source: CAP data March 2011

While a sizeable number of academics in most countries strive to include international content in their courses, a much smaller number indicate they have engaged in a study abroad program or otherwise taught abroad. In several of the CAP countries, fewer than 10 % indicate an international teaching experience. Teaching abroad is most common for German, Hong Kong, and Australian academics and least common for Japanese academics. In all of the CAP countries, the academics of the youngest generation are least likely to have taught abroad. Thus, there is no indication from the generation comparison that teaching abroad will become more common in the future (Table 4.15).

4.7.1 *Summing Up for Teaching*

Regrettably, there is no trend data for teaching, so we used generation data as a proxy. Actually, in many countries, the older generations are more internationally inclined than the younger generations. We acknowledge the ambiguity in interpreting this finding as reflective of generational rather than developmental differences.

4.8 Conclusion

There is much rhetoric about the inevitability or importance of internationalizing higher education. Additionally the material obstacles (air fares and communication fees) and many of the practical obstacles to international contact have been reduced.

and they have in their graduate training been more exposed to the postcolonial view of international content than their seniors who may have a more idealized view of Western scholarship.

Table 4.15 Percent of academics who indicate they have taught abroad by country and year range of first academic job

Country	Year range			
	2000–2007	1990–1999	1980–1989	Before 1980
Australia	14	16	17	16
Brazil	3	7	6	3
Germany	8	14	21	17
Hong Kong	7	9	14	22
Japan	3	3	6	5
Korea	5	11	11	11
Mexico	5	7	7	9
Netherlands	9	16	18	16
UK	10	13	17	19
USA	9	10	12	12

Source: CAP data March 2011

Table 4.16 Select countries approaches to recruiting foreign-born and foreign-trained faculty

	Open to foreign born	Closed to foreign born
Open to foreign trained	Australia	Korea
Closed to foreign trained	USA	Japan

Yet our look at the practice of academics suggests that they (at least over the 1992–2007 period) have not been moved by this rhetoric. The basic patterns are longstanding, and there are no remarkable changes over the last 15 years. The same contextual factors that accounted for differences in 1992 continue to prevail in 2007. The persisting patterns include the following:

1. Academic systems differ widely in their likelihood of hiring foreign-born academics. Systems in the more mature economies are somewhat more likely to hire foreign born, especially if the systems are relatively small in scale such as Hong Kong and Australia. The British colonial past of these two countries is also a factor.
2. Academic systems also differ widely in their likelihood of hiring foreign-trained academics. Table 4.16 outlines four options and identifies the systems that most clearly favor these options.

Overall there has been little change from 1992 to 2007. The major exception is Mexico which has become much more open to recruiting academics with foreign doctorates.

3. Academic systems differ widely in the extent to which their members engage in foreign collaboration. This is most likely in small systems, in systems that do not conduct their instruction in English, and in systems that are placing a major stress on knowledge competition. There has been little change in the relative position of systems between 1992 and 2007.

4. Academic systems differ widely in the extent to which their members engage in foreign publishing. This is most likely in small systems, in systems that do not conduct their instruction in English and in systems that are placing a major stress on knowledge competition. Overall there has been little change in the relative position of systems between 1992 and 2007, though the greatest increases are seen in the newly industrializing countries of Korea and Hong Kong, followed by Brazil and Mexico.
5. Publishing in a foreign language follows somewhat the same pattern as publishing in a foreign outlet. An interesting nuance is found for Hong Kong where, for many academics, the language of instruction is different than the native language. Thus, a majority of Hong Kong academics publish in a language other than their native language, but a minority publish in a language other than their instructional language (though lately that percent may be going up as more Hong Kong professors seek to publish in Mainland China journals).
6. Despite the rhetoric of internationalization, there is a remarkably small flow of research funds across national boundaries.
7. The limited information available suggests little movement toward an increase in the international content of the courses taught by contemporary academics.
8. In sum, there is not that much change over the recent 15-year period in the proportions of academics manifesting “internationalized” work patterns. While there is much rhetoric, there is little movement toward greater internationalization. And younger recently hired academics are no more likely than more senior academics to exhibit an international bend in their academic work. In truth, as suggested in the introduction, there has been no major recent catalyst favoring the internationalization of the academy. While there are several prominent drivers favoring internationalization of the academy such as globalization and knowledge competition, there also have been powerful but less publicized counterforces such as regionalism, privatization, and financial cutbacks. These different forces have tended to cancel each other out, and hence there has been little forward movement re-internationalization. On the other hand, there has been little backward movement—so perhaps for that internationalists should be thankful.
9. While there have been only modest changes in the proportions of academics engaged in more international work patterns, it should not be forgotten that several of the academic systems under consideration have experienced considerable system expansion. Korea is a notable example with the size of the academy nearly trebling. Thus, while we found there has been little change in the proportion of Korean academics engaged in international collaboration, this actually means that three times as many Korean academics in 2007 are engaged in international collaboration relative to 1992. All of the findings we have reported need to be evaluated both in terms of percentage and numerical change. From the perspective of numerical change, we might conclude that internationalized work patterns are becoming more evident in most of the ten surveyed systems.

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Chapter 5

The International Mobility of Faculty

Michele Rostan and Ester Ava Höhle

5.1 Introduction

International academic mobility is generally conceived as including both students' and faculties' movements across borders. While data on international student mobility in higher education are quite abundant, data on the international mobility of scholars continue to be scant, incomplete, and incoherent (Schomburg et al. 2007; Teichler 1996, 2011). Thus, the results of international surveys, such as the Changing Academic Profession, are especially important as they shed light on a neglected aspect of international academic mobility. In this chapter, the authors focus on the international mobility of faculty or scholars. First, a methodology for studying the international mobility of academics – the sociological *life course* approach – is discussed. Second, by applying this approach to the data of the CAP survey, a two-stage analysis is carried out yielding a six-category typology of academic mobility. Third, the possible factors explaining the various types of mobility are investigated. Finally, the impact of different types of mobility on academics' international activities is also analyzed. In this chapter, the term *mobility* is used to denote a general concept of movement

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across borders, whereas the term *migration* is used to describe mobility across borders *with the intention to settle down* and establish oneself in another country.¹

5.2 How to Study the International Mobility of Academics

Over the last few decades, social, political, and economic processes at the global, regional, and national levels have changed both the geographical patterns and the composition of international migrations and the motivations for migrating. As a consequence, old conceptualizations of international migration and migrants have been questioned, and new typologies of international migration, or migrants, have been proposed (Massey et al. 2009). Indeed, as migrations of different durations have been spreading, the associated motivations for these movements, and the associated migrant characteristics, have changed. Alongside economic, political, and familial motivations, education – and especially higher education – has also become a motive for migration, increasing student mobility. On the other side – looking at the outcome of higher education – international flows of highly skilled and highly educated people searching for a job on a larger-scale labor market have grown (Various authors 2001; OECD-SOPEMI 2007, pp. 60–62).

These recent changes have contributed to dissolution of the traditional dichotomies which have shaped the study of international migration and to further blur the distinction between migration and mobility (King 2002).² The muddying of clear-cut dichotomies – such as internal vs. international migrations, forced vs. voluntary, temporary vs. permanent, and legal vs. illegal – has provided room for a more nuanced understanding of migrations and has highlighted the existence of a plurality of different types of migrations and of migrants themselves.

A similar development can be identified in the study of academic mobility. The need for a fine-tuned understanding of academic mobility taking into account the existence of several different types of academic mobility has been put forward.

¹In using the term “mobility,” we refer to “any kind of movement of people, whatever its length, composition and causes (...) either across an international border, or within a State” (IOM 2004, p. 41). When people cross a state border, international mobility occurs. In using the term “international migration” we refer to a “Movement of persons who leave their country of origin, or the country of habitual residence, to establish themselves either permanently or temporarily in another country” (IOM 2004, p. 33).

²The possibility of drawing clear-cut distinctions between concepts referring to people’s movements has been questioned because “New mobilities have emerged which confound the conventional divide between migration ... and other forms of human spatial mobility” (King 2002). It has been argued that “migration/mobility” can be conceived as a “time-space continuum” along which people’s movements with different degrees of temporariness and/or different motivations can be accommodated. Next to “conventional” migration, other types of movements such as “seasonal or shuttle migration”; “individuals frequently on the move, circulating between two or more countries”; “travel”; “tourism”; and “commuting” must “fit into the continuum, blurring the distinction between migration and other forms of spatial mobility” (King 2002, p. 93). Thus, there is a more general concept of “human spatial mobility” encompassing several forms which are placed along a continuum where clear-cut distinctions are increasingly difficult to draw. “International migration” conceived as a movement across national borders with the purpose of settling in another country is but one of these forms.

According to a qualitative study, different patterns of long-term academic mobility can be identified in order to explore the connections between academic mobility and international migration (Hoffman 2009). The whole range, or “spectrum,” of these patterns shows that in order to study international academic mobility, four dimensions are worth considering.

First, by definition, international mobility entails the crossing of national borders. Yet, a well-grounded analysis of academic international mobility requires one to determine first when in the individual career geographic borders were initially crossed and, then, the frequency of such crossings. This information helps to identify different types of international academic mobility. For instance, it helps to distinguish academics crossing a border to get a job for which they are already qualified from academics who crossed the border to enter higher education as students and who subsequently secured a job in higher education.

Second, the time frame or duration of mobility must also be considered. The time span involved in international academic mobility may vary from the few minutes needed to send an e-mail abroad to a stay lasting several generations. The length of mobility has to be understood as a continuum along which it is possible to distinguish short-term vs. long-term mobility, several degrees of temporariness, and international migration vs. other forms of human mobility. Indeed, it helps to take into account specific cases such as academics who never left their country for more than short periods, yet have experienced repeated short-term international mobility throughout their entire career.

Third, the temporal dimension of mobility also has a subjective side which cannot be captured simply by chronological time, i.e., the perceptions of participating actors. Indeed, expectations of the mobile academic and the receiving institution may or may not converge such as when an institution, welcoming a postdoctoral fellowship holder, conceives their stay as temporary, while the postdoctorate perceives it as a first step to an international career in the receiving country.

Fourth, the national, institutional, and personal contexts of mobility must be taken into account. A variety of contexts, such as geographical regions, occupational sectors, national higher education systems, disciplines or disciplinary cultures, stages of study, and career stages, must be taken into account as one begins to explain mobility and, as such, requires adequate theories to account for their effect upon international academic mobility.

5.2.1 The Life Course Approach

Developments in the research on international migration and on academic mobility converge when one considers the *sociological life course approach* – which has already been applied in fields including education, the labor market, and transition from school to work studies (Mortimer and Shanahan 2006) – as a suitable theoretical and analytical framework to study international mobility (Wingens et al. 2011). The sociological life course approach focuses on the interplay of structure and agency over time, aiming at relating individuals’ life courses to the dynamics of

social structures and institutions. As a consequence, it “conceives of the life course in terms of sequences of age-related status configurations which refer to individuals’ participation in societal fields like education, the labor market, and the family” (Wingens et al. 2011, p. 4).

There are several reasons for considering this approach especially useful for studying international migration and mobility. By conceiving the life course as a sequence of individual events embedded in institutional settings and social structures, the sociological life course approach allows one to link individual movements across space to factors influencing them and to the outcomes they produce. This is a way to account for what is called the “double embeddedness” of migration – that is, the fact that migration is embedded both in the migrant’s life course and in broader social contexts, such as societies and social processes of countries or places of origin and destination (King 2002, p. 101), and the “contexts” within which academic movements are also embedded (Hoffman 2009). As the sociological life course approach is a research perspective focusing on the interplay of structure and agency over time, it allows one to account for both the interdependencies of different life spheres and the interdependencies of different temporal dynamics. In particular, it allows one to account for the interaction of three types of time: (a) the *micro* dynamics of an individual’s biographical time; (b) the *meso* dynamics of institutional and social time, especially those related to age norms regulating schooling, retirement, etc.; and (c) the *macro* dynamics of historical time (Wingens et al. 2011, p. 10).

Consequently, it is possible to understand international migration as a process that cannot be reduced to a single event (i.e., the crossing of a border) but must be considered a lifelong process which affects all aspects of a migrant’s life, as well as the lives of nonmigrants and communities in both sending and receiving countries (Castles 2000, pp. 15–16). Further, both international migration and, more generally, border crossing and spatial mobility can be understood within a wider temporal dimension encompassing not only the migrant’s, or the mobile person’s, life course but also the life course of his/her family, even across generations and specific segments or phases of his/her life such as study and career.

5.2.2 *Types of International Academic Mobility*

In order to study international academic mobility, one defines it as a “movement of academics across state borders.”³ This definition (a) focuses on human physical

³It has been argued that comparative analysis of academic mobility has to deal with the problem of defining academics, that is, to decide which people working in which institution and sector are included within the academy (Teichler 2011). Especially important in the frame of a life course approach is the difference which is drawn across countries between considering doctoral candidates (and sometimes also people holding a postdoctoral position) as academics or as students. In this context we shall adopt the definition of academics which has been established for carrying out the CAP survey and we shall leave to the reader whether to interpret postgraduate studies as advanced studies or early career depending on national circumstances.

mobility across space, setting aside the relationship between “physical” and “virtual” international mobility; (b) considers the existence of states and their capacity to regulate flows of people – both incoming and outgoing – across their borders; and (c) leaves open the time frame or duration of these movements and their motivations.

Methodologically, the sociological life course approach requires the collection of longitudinal, individual-level data (Wingens et al. 2011, p. 6) on events and the points in time when, and places where, these events occurred. The CAP survey provides information on 17 individual statuses each of which is related to an event during the academics’ life course in three spheres of life, namely, family, education, and the labor market. All of them refer to a specific point in time, and 13 of them provide information on the country to which statuses or events are related.⁴ It is worth noting that CAP data allows one to distinguish at least three different time frames of international academic mobility: (1) the time frame of generations, connecting academics’ generation to the generation of their parents and to the generation of their children; (2) the time frame of academics’ entire life course from their birth to the time when the survey was carried out; and (3) the time frame of academics’ career as a specific segment or phase of their life course.

On the basis of the above considerations, and the possibility of comparing the countries associated with individual academics’ events or statuses, it is possible to determine whether an academic along the phases of his or her life has been mobile or not, whether it was for the purpose of study or work, and whether being mobile has been to date a temporary or a permanent experience. In other words, it is possible to identify several types of academic mobility along the entire life course of respondents to the CAP survey.

In order to distinguish mobile from nonmobile academics and to identify different types of mobile academics, several steps are followed in this first stage of the analysis. First, the focus is placed on academics’ entire life course and its different phases (early life/youth, higher education studies, advanced studies/early career, academic work), excluding the time frame of generations. Second, six events throughout academics’ life course, namely, birth; obtaining first, second, doctoral, postdoctoral degrees; and current situation at the time when the survey was carried out and related statuses, were selected for analysis. Third, the study included numerous geographic variables including the country of the academics’ employment at the time the survey was carried out, the country of residence at birth, the countries where first and advanced degrees were earned, and the country of current residence. These selected variables were then compared after having merged the information on first and second higher education degrees and on doctoral and postdoctoral

⁴The events and related statuses are the following: (1) birth (year); (2) first degree (year, country); (3) second degree (year, country); (4) doctoral degree (year, country); (5) postdoctoral degree (year, country); (6) first full-time appointment beyond research and teaching assistant in the higher education/research sector (year); (7) first appointment to current institution beyond research and teaching assistant (year); (8) appointment/promotion to current rank at current institution (year); (9) current employment (year, country); (10) current familial status (year); (11) current natural or social parenthood (year); (12), (13), (14) citizenship (at birth, at first degree, current; country); and (15), (16), (17) residence (at birth, at first degree, current; country).

degrees (i.e., advanced degrees). As a result, it is possible to gain information on (a) whether academics were born in the country of current employment, that is, the country where the CAP survey was carried out, or not; (b) whether first, second, or advanced degrees were earned in the country of current employment or not; and (c) whether academics are living in the country of current employment or not.

Fourth, data show that academics that do not live where they work – likely international commuters – are rare, accounting for only 1 % of the entire sample. Thus, the corresponding variable was dropped from the analysis. Fifth, by combining the information provided by three variables⁵ from the CAP survey, 12 types of international academic mobility emerge, which can be grouped into three categories.

The first category is represented by academics for whom all the events taken into consideration throughout their life occurred in the same country. As their biographies are strictly connected to, or deeply embedded in, one country, we may call them *embedded academics*. This first category accounts for three-quarters of the whole CAP sample (76 %).

Second, there are those who were born in the country of current employment, yet at least one of the aforementioned events occurred abroad. As these people have left the country where they were born in order to earn a study degree, and returned to their country of origin in order to work, we may refer to them as *circulating academics*, or academics circulating for study purposes. This group includes approximately one academic out of six (15 %).

Third, there are academics who were born abroad and crossed the borders of the country of current employment at different stages of their life and for different purposes. Utilizing the definition of international migration provided by the International Organisation for Migration (IOM) which conceives it as a movement across borders with the purpose of settling in the country of destination, we may refer to them as *migrant academics*. This last category accounts for a bit less than one tenth of the whole sample (9 %).

If we consider the first group of academics as *nonmobile* academics, that is, people who never crossed their country's borders, we would be wrong. Among *embedded academics*, 7 % say that – at the time when the survey was carried out – they have taught courses abroad during the current, or the previous, academic year, and 22 % report having spent some periods abroad, that is, in countries outside the country where they earned their first degree and are currently employed. As a matter of fact, a subset of *embedded academics* have crossed the borders of the country where they are employed – and where they were born and earned their first, and subsequent, degrees – one or more times. Thus, they must be considered as mobile.

⁵On the basis of the original variables included in the CAP international data set, three variables have been created: (1) “residence at birth,” distinguishing academics who were born in the country of current employment from those who were born abroad; (2) “study degree,” distinguishing higher education study degrees (first and second) earned in the country of current employment from study degrees – either first or second degrees or both – earned abroad; (3) “advanced degrees,” distinguishing doctoral and postdoctoral degrees earned in the country of current employment from doctoral and/or postdoctoral degree earned abroad and from no doctoral and/or postdoctoral degrees. As two variables have two categories and one has three categories, the possible combinations are 12.

This finding suggests that a second stage of statistical analysis should be undertaken. As the CAP questionnaire collected information on how many years respondents have spent abroad, it is possible to distinguish rather short periods abroad from rather long periods abroad.⁶ As a result, the group of *embedded academics* can be split into three subgroups: (a) academics who never experienced international mobility throughout their life; (b) academics who, while working at the time when the survey was carried out where they were born and where they earned their study degrees, have experienced short-term mobility in their career; and (c) academics who, while working at the time when the survey was carried out where they were born and where they earned their study degrees, have experienced long-term mobility in their career. It is likely that the last subgroup includes both “return migrants,” that is, people who left the country where they were born and studied, worked abroad for rather long periods, and were “back home” at the time of the survey, and highly mobile academics, that is, people who are “always on the move.”

The disclosure of mobile individuals among *embedded academics* opens up the possibility of creating another typology of international academic mobility. This typology is derived from the one encompassing 12 types (see above), and it is based on the notion of experience abroad along academics’ entire life course, assuming that this kind of experience may have an impact on academics’ current work, and, especially, on their current international activities. The typology, first, distinguishes between *nonmobile* and *mobile* academics, and, second, it identifies several types of mobile academics on the basis of two aspects of the temporal dimension of mobility, namely, the phase of the life course when the experience abroad started and its length. As mentioned, academics that were born abroad and crossed the borders of the country of current employment at different stages of their life and for different purposes are considered as migrants (see Table 5.1).

Indeed, information provided by the CAP survey allows one to draw some clear conclusions. At the global level, 42.3 % of academics experience or have experienced some kind of international mobility.

The most frequent type of international academic mobility involves 15.7 % of the whole sample. The related experience abroad starts early in academics’ life course and has a rather short duration; it is aimed at earning study or advanced degrees. As this type of mobility entails circulation of academics-to-be across countries’ borders, one may refer to those involved in it as *circulating for study*.

The second most frequent type of international academic mobility – *short-term academic mobility* – involves 10 % of CAP respondents. An experience abroad during their professional career starts late in life and has a rather short duration, and it is aimed at professional purposes related to academic activities. It entails circulation across countries as well, so one may refer to those involved in it as *academics circulating for work spending short periods abroad*.

⁶In analyzing international mobility, a distinction is made between short-term mobility and long-term mobility. Usually, periods abroad lasting 1 year or less are considered short-term academic mobility while periods lasting more than 1 year are considered long-term mobility (Hoffman 2009). As the CAP questionnaire does not provide information on how many periods abroad respondents have spent but only on the total length of periods abroad, it has been decided to consider short periods abroad those lasting 2 years or less and to consider long periods abroad those lasting more than 2 years.

Table 5.1 Distribution of respondents by type of mobility experience (in percent)

Type of mobility experience	Percent ($N=21,130$)
Nonmobile: no experience abroad throughout entire life course	58
Circulating for study: short term	16
Circulating for work: short term	10
Circulating for work: long term	6
Migration for study: long term	5
Migration for work: long term	6

Source: CAP data September 2011

Note: Due to rounded values, the sum of the items exceeds 100 %

Table 5.2 Proportionate (relative) frequency of five types of academic mobility by country of current employment

Type of mobility	Proportionate (relative) frequency		
	High	Medium	Low
Circulation for study: short term	MY, KR, HK	NO, CA, MX, AR, PT, BR	DE, UK, IT, ZA, AU, FI, JP, NL, CN, US
Migration for study: long term	AU, CA, US	DE, UK, NO, PT, HK, ZA	NL, FI, BR, MY, JP, MX, AR, IT, KR, CN
Circulation for work: short term	IT, JP	BR, KR, FI, NO, DE	US, MY, NL, AU, CA, AR, ZA, UK, PT, CN, MX, HK
Circulation for work: long term	JP, BR, FI, AU	IT, NO, NL, US, UK	CA, PT, DE, KR, ZA, CN, AR, MX, HK, MY
Migration for work: long term	HK, CA, AU, NO	UK, NL, FI, US	DE, MY, ZA, MX, PT, IT, BR, AR, JP, KR, CN

Source: CAP data September 2011

Notes: Country of current employment is also the country of destination in case of migration. The definition of high, medium, and low proportions of mobile academics refers to the average value for each type of mobility, i.e., Low = below average; Medium = between average and one standard deviation above average; High = over one standard deviation above average; average values are provided in Table 5.1

The three less frequent types of mobility – which nevertheless account for a cumulative 16.5 % of the sample – share as a common trait the long duration of the experience abroad. One type refers to experiences starting late in an academics' life and entailing the circulation across countries for professional purposes, identifying *academics circulating for work spending long periods abroad*. Within another type, experience abroad starts late as well and entails working – permanently to date – in a country which is different from country of residence at birth. As academics involved in this type of experience were born abroad, and entered the country of current employment while being already fully qualified for their job, one may refer to them as *late migrants for work*. Finally, a third type of experience abroad starts early in academics' life. As academics involved in it were born abroad, and entered the country of current employment as students, we may refer to them as *early migrants for study*.

The five types of mobile academics are not distributed evenly across countries. Table 5.2 displays the proportions of mobile academics by type of mobility in the

CAP countries. Australia, Canada, the USA, Hong Kong and Norway have the largest proportions of study and labor migrants. Academics from Malaysia, South Korea, and Hong Kong are very mobile for study, whereas academics from Italy, Japan, Brazil, Finland, and Australia are the most active in job circulation.

5.3 Explaining International Academic Mobility

Factors that might explain international academic mobility, or at least are associated with it, pertain to different domains and levels (Altbach 2006; Baumgratz-Gangl 1996; Jöns 2007; Musselin 2004; Teichler 2011; Welch 2008). At the macrostructural level, the international division of labor, international relations between central and peripheral countries, historical turning points, economic growth and national expenditures in R&D, the functioning of national academic labor markets and of higher education systems, national or regional migration policies and the competition for highly qualified labor, and languages and linguistic regions have been identified among the factors hindering or enhancing academic mobility. At a microinstitutional level, the attention has especially focused on the characteristics of higher education institutions, academic disciplines, and research activities, especially those influencing the extent to which scientific research is bound to a particular setting in a specific country and those influencing scientific collaboration, which affect the patterns of academic mobility. At the individual level, personal features, skills, and motivations of scholars, the stage of their career, and the scope and nature of the social networks in which they are embedded, e.g., family ties, friendship, and previous study experience abroad, are thought to influence the decision to become internationally mobile. Briefly, academic mobility is influenced by a large and complex set of factors, and we can expect that different types of international academic mobility are influenced by different sets of factors. On the basis of the typology of international academic mobility presented in the previous paragraph (see Table 5.1), an investigation of the possible determinants of the international mobility of scholars was undertaken through multivariate analysis.

Five multinomial logistic regression models, one for each type of mobility, were built to analyze the net impact of a common set of explanatory factors on the probability of experiencing a specific type of mobility vs. (a) the situation of immobility, that is, no experience of mobility, and (b) all the other types of mobility merged together into a single composite category. This analytical strategy allows one to compare the net effects of each factor upon the different types of mobility.

Possible explanatory factors were divided into three groups. The first group referred to selected structural features of academics' country of employment at the time the survey was carried out and of their country of birth. They included both economic and cultural features: the economic status of the country (mature vs. emerging or less developed) and the status of the English language in the country (English as the only official or main language vs. English as one official language

among others vs. no English as official language).⁷ The second group referred to several aspects of academic work: the type of institution at which academics worked (university vs. other institutions); academic rank (senior position vs. junior or other position); discipline of teaching divided into five broad fields (education and humanities; social sciences, business, and law; science; engineering, manufacturing, construction, and architecture; and medical sciences, health-related sciences, and social services); the emphasis of academics' primary research (whether basic/theoretical or applied/practically oriented or a combination of the two); and their interests for teaching vs. research (whether lying primarily in teaching, in research, in both, but leaning toward teaching, or in both, but leaning toward research). The third group referred to selected biographical features of respondents: gender, age and age cohort (divided into four cohorts), family background in terms of fathers' educational attainment, and educational history, that is, the discipline of highest degree and having or not earned a doctoral and/or a postdoc degree.

In displaying the outcomes of the analysis, this study first looked at experiences of mobility which occurred early in academics' life course and then at those experiences that occurred, or are still occurring, later in their lives. Results should be read taking into account the proportions of academics by type of mobility and country displayed in Table 5.2, and the fact that some family factors thought to have had an impact on mobility, such as respondents' familial status, partners' characteristics, number of children living in the household, as well as tertiary education of the respondents' mothers, proved to be nonsignificant. Further, it must be noted that not all factors are included in each model. Economic and cultural features of the country of birth are considered only when migration is studied because when circulation is at issue, country of birth coincides with country of current employment. Also, characteristics of respondents' advanced studies and work are excluded from the models referring to the early stage of their lives. Similarly, while referring to experiences that occurred early in the life course, age is not considered assuming that at that stage respondents were young.

Table 5.3 reports the estimates of the two models referring to mobility experiences that occurred early in academics' life course.

As far as early mobility is concerned, *circulation* for study – which is especially frequent in three Asian countries (Malaysia, South Korea, Hong Kong SAR) – depends, according to the model, on six factors: (a) the economic status of the country of academics' current employment, which is also their country of birth; (b) the status of the English language in the country of employment; (c) academics' field of study (discipline of highest degree); (d) gender; (e) the cohort within which the respondent was born; and (f) father's level of educational attainment, used as an indicator of academics' family, social, cultural, and economic capital.

⁷The classification scheme for comparing the CAP countries based on wealth and on language policy has been presented in Chap. 3. It has to be noted that the countries of origin of migrant academics who have been interviewed do not necessarily coincide with the countries participating in the CAP survey. The later must be considered as countries of destination of migrant fluxes while the former are more than 100 countries around the world, excluding the 19 participating ones. Some of academics' countries of origin have an income which is lower than "upper middle" and have been considered as "less developed".

Table 5.3 Predictors of two types of “early” academic mobility

	Type of mobility					
	Circulation for study			Migration for study		
	<i>B</i>	Std. err.	Exp (<i>B</i>)	<i>B</i>	Std. err.	Exp (<i>B</i>)
Econ status of country of birth: mature	Not included			-3.03***	0.18	0.05
Econ status of country of emp: mature	0.43***	0.05	1.54	4.16***	0.21	64.31
Country of birth: excl Eng	Not included			-2.30***	0.20	0.10
Country of birth: Eng also	Not included			-2.14***	0.21	0.12
Country of emp: excl Eng	-0.82***	0.08	0.44	3.41***	0.20	30.14
Country of emp: Eng also	1.61***	0.06	5.01	4.01***	0.21	55.14
Gender: male	0.19***	0.05	1.21	-0.14	0.09	0.87
Age cohort:						
Born up to 1950	0.64***	0.07	1.89	0.61***	0.14	1.83
Born 1951–1960	0.71***	0.06	2.03	0.41***	0.13	1.51
Born 1961–1970	0.63***	0.06	1.88	0.37**	0.12	1.45
Father’s educ: college	0.24***	0.05	1.27	0.28**	0.09	1.32
Disc highest degree:						
Educ and hum	0.16*	0.08	1.17	0.02	0.15	1.02
Socl sci, bus, and law	0.26**	0.08	1.29	0.16	0.15	1.18
Science	0.45***	0.08	1.57	0.15	0.15	1.16
Engin, manufact, const, and arch	0.23**	0.09	1.26	-0.10	0.19	0.91
Constant	-2.67***	0.09		-4.89***	0.20	

Source: CAP data September 2011

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

Further, Australia, Canada, and the USA are the most frequent destinations of early *migration* for the purpose of study. Six factors are associated with this type of mobility: (a) the economic status of the country of birth (which is the country of origin) and (b) of the country of current employment (which is the country of destination), (c) the status of the English language in the country of birth and (d) in the country of employment, (e) academics’ age cohort, and (f) father’s education.

In explaining these two first types of mobility, the economic features of countries play the role one would expect. Being born, and working, in an economically mature country increases the probability of circulating for study as it is likely that the country is able to provide its students with enough resources and the necessary legal regulations to study abroad and, at the same time, offer enough job opportunities to call them back. In contrast to academics having circulated for study, the academics having migrated for study remain in the foreign country of study and become academic staff. Compared to emerging and less developed countries, being born in a mature country decreases the probability of migrating for study, while working in a mature economy increases this probability. In short, academics’ early migration for study is part of the flux of moving people from less developed to more developed countries.

The status of the English language in the countries participating in the survey has an impact upon mobility. Circulating for study is an experience primarily involving

academics working in countries where English is not the official language, especially those working in countries where English is one official language among others, such as Malaysia and Hong Kong, much more than those working in countries where English is the only main or official language. The results of the analysis also show that migrants for study move from non-English-speaking countries to English-speaking countries.

Interestingly enough, gender has an impact on early circulation for study but not on early migration for study. It is likely that opportunities to study abroad discriminate against women, while early migration occurs irrespective of gender, possibly as a consequence of decisions involving all the members of a family.

Being born before, or after, the beginning of the 1970s makes a difference as far as both circulation and migration for study are concerned. Being born prior to 1970 seems to increase the probability of circulating or migrating for study compared to those who were born in 1971 or later. Likely, academics that were in their formative years at the beginning of the 1990s were less mobile than their older colleagues. It may be that changes in higher education, notably the expansion of graduate programs, have lowered the need to study abroad in order to get advanced degrees, and that economic change in developing countries might have reduced the need or the willingness of young people to migrate for purposes of study.

Fathers' educational attainment makes a difference as well. Compared to fathers without tertiary education, being children of fathers with tertiary education increases the probability of being internationally mobile. Likely, these fathers (and their families) provide their children with social, cultural, and economic capital to study abroad or to migrate.

Finally, students in medical sciences are less keen to study abroad compared to students of all other disciplines, while field of study does not have an impact on migration for study. It is likely that early migration among academics-to-be depends on factors other than the choice of the field of study in higher education.

Table 5.4 shows the estimates of the three models referring to mobility experiences occurred, or still occurring, later on in academics' life course, when mobility does not depend only on structural and individual factors but also on job and career characteristics.

Short-term circulation for professional purposes, which is most frequent in Italy and Japan, and long-term circulation for the same reasons, which is most frequent in Japan, as well as in Brazil, Finland, and Australia, both depend on nine common factors. Further, working in mature economies, working at universities, and having earned an advanced degree increase the probability of being mobile when compared to the corresponding reference categories.

Using medical sciences as the point of reference, teaching engineering decreases the probability of spending either short or long periods abroad, while teaching social sciences, business, and law has a negative impact only on long-term professional circulation. In all other cases, discipline does not have a significant impact on job circulation.⁸

⁸It might be that the disciplinary groups we are using in analyzing the determinants of academic mobility are too broad and hence too heterogeneous to detect meaningful differences, yet the number of respondents belonging to each type of mobility is too small to further disaggregate disciplinary groups.

Table 5.4 Predictors of three types of “late” academic mobility

	Type of “late” mobility					
	Circulation for work: short term		Circulation for work: long term		Migration for work	
	<i>B</i>	Std. err.	<i>B</i>	Std. err.	<i>B</i>	Std. err.
Econ status of country of birth: mature	Not included		Not included		-2.35***	0.23
Econ status of country of emp: mature	0.87***	0.077	2.39	0.10	2.90***	0.25
Country of birth: excl Eng	Not included		Not included		-1.02***	0.22
Country of birth: Eng also	Not included		Not included		-3.16***	0.25
Country of emp: excl Eng	-0.72***	0.10	0.49	0.10	2.50***	0.24
Country of emp: Eng also	0.11	0.10	1.12	0.15	5.22***	0.24
Advanced degree: yes	0.62***	0.07	1.86	0.09	0.67***	0.14
Institutional type: res univ	0.32***	0.07	1.38	0.22*	0.59***	0.16
Academic rank: senior position	0.35***	0.07	1.42	0.12	0.01	0.12
Discipline of teaching:						
Educ and hum	-0.15	0.10	0.87	0.12	0.16	0.16
Soc sci, bus, and law	-0.14	0.10	0.87	0.12	0.09	0.16
Science	-0.08	0.09	0.93	0.11	0.10	0.16
Engin, manufact, const, and arch	-0.23***	0.11	0.80	0.15	0.13	0.19
Primary res: “basic/theoretical”	0.14*	0.07	1.16	0.38***	0.17	0.11
Primary res: combined	-0.05	0.08	0.95	0.18	-0.24	0.13
Preferences in teach or res:						
Primarily in teaching	-0.44**	0.16	0.65	0.19	-0.82**	0.26
In both but leaning toward teaching	-0.36***	0.10	0.70	0.12	-0.77***	0.15
In both but leaning toward research	-0.06	0.09	0.94	0.10	-0.25*	0.13

(continued)

Table 5.4 (continued)

		Type of "late" mobility					
		Circulation for work: short term		Circulation for work: long term		Migration for work	
	<i>B</i>	Std. err.	Exp (<i>B</i>)	<i>B</i>	Std. err.	Exp (<i>B</i>)	Std. err.
				<i>B</i>		<i>B</i>	
Gender: male	0.02	0.07	1.02	0.34***	0.08	1.40	0.10
Age	0.02*	0.01	1.02	0.04**	0.01	1.04	0.02
Age cohort:							
Born up to 1950	0.07	0.30	1.07	0.06	0.36	1.07	0.48
Born 1951–1960	0.12	0.20	1.17	0.12	0.25	1.13	0.33
Born 1961–1970	0.39***	0.13	1.48	0.33*	0.16	1.39	0.19
Father's educ: college	0.26***	0.06	1.30	0.46***	0.07	1.58	0.10
Constant	-3.95***	0.34		-4.98***	0.41		0.58
						-5.31***	

Source: CAP data September 2011

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

Academics' preferences toward teaching and research, and the type of research they are engaged in, have an impact as well. Personal interests primarily lying in research and characterizing one's own research as basic or theoretical are positively linked with professional mobility. Further, age has an impact, as getting older increases the probability of mobility for professional purposes. Interestingly enough, while controlling for age, a cohort effect still emerges. All other things being equal, belonging to the cohort of those who were born between 1961 and 1970 increases the probability of spending either short or long periods abroad for professional reasons. This suggests that job circulation is a type of mobility, especially involving people who were in their 40s at the time of the survey. Finally, having a father with tertiary education also has a positive impact on job circulation.

Three differences in the determinants of short- and long-term professional mobility are worth mentioning. The most important refers to gender. While long-term circulation is a gendered phenomenon as it is less open to academic women, this is not the case with short-term circulation. All other things being equal, being a woman, rather than a man, does not make a difference in spending short periods abroad. A second difference refers to academic rank. Holding a senior position increases the probability of spending short periods abroad, while it does not have a significant impact on long-term job circulation. Likely, short-term professional mobility, the second most frequent type of international academic mobility, is positively related to academic hierarchy.

Finally, while working in English-only-speaking countries, i.e., the UK, the USA, and Australia, decreases the probability of spending short periods abroad, in all other cases, the status of the English language in the country of academics' employment has no significant impact on job circulation.

As far as job migration is concerned, Hong Kong, Canada, Australia, and Norway are the most frequent destinations of professional migration occurring late in academics' lives. Structural factors also provide some explanation for job migration. Factors and direction of migration fluxes are similar: people move from emerging and less developed to mature economies and from non-English-speaking countries to English-speaking countries. As far as individual factors are concerned, it is worth noting that the educational attainment of fathers has the same positive impact upon late migration than it has on early migration. On the contrary, the impact of gender is different. While early migration for study is not affected by gender, late job migration is less open to women than to men. Further, as one might expect looking at a type of mobility occurring late in academics' life course, age has no impact on migrating for professional purposes. Also, controlling for age, one finds no cohort effect.

Besides academic rank, which does not have an impact on late migration, other factors related to academic work and career have an impact on late migration similar to the one they have on late circulation: having earned an advanced degree abroad, working in universities, and being primarily interested in research increase the chances of migrating. Finally, as it is for early study migration, controlling for all other factors, discipline does not have an impact on professional migration, while combining theoretical and practical orientations in research appears to hinder it.⁹

⁹It is worth noting that if we exclude disciplines from the model, the effect of research emphasis on late mobility is similar to the one resulting for early job circulation, that is, that being especially involved in basic research has a positive impact on mobility.

Table 5.5 summarizes the results of the five multinomial logistic regressions showing the net effect of several predictors, that is, the independent effect of each predictor controlling for all others, on the five types of academic mobility identified.

Looking at the table summarizing the results of this analysis, three main conclusions can be drawn. First, international academic mobility is an *unequal* phenomenon. Migration fluxes have moved, and continue to move, people from emerging and less developed to mature countries and from non-English-speaking countries to English-speaking countries. Professional circulation involves academics from mature countries more than others and academics from non-English-speaking countries more than those working in English-speaking countries. Further, gaining an advanced degree has a positive impact upon international mobility further on in academics' careers. Also, albeit with significant exceptions, international academic mobility is a gendered phenomenon. Finally, family, social, cultural, and economic capital, approximately measured by fathers' higher level of education, increase the chances of being internationally mobile.

Second, the data suggest that some changes in the patterns of international mobility are, possibly, ongoing. Early circulation for study is not limited to European or historical British colonies but involves other countries, especially in Asia and Latin America. The younger generation of scholars show different behavior compared to their older counterparts. All things being equal, the chances of being internationally mobile, either circulating or migrating for study, are lower among academics that were studying and were trained around the beginning of the 1990s than for those who spent the formative stage of their lives in previous historical periods.

Third, professional international mobility appears to be strictly related to research rather than to teaching and, especially, to basic or theoretical research rather than to applied or practically oriented research. International academic mobility and the existence and functioning of scientific international communities centered on basic research seem to be strongly linked.

5.4 The Impact of International Mobility on the Academic Profession

In this section, the relationship between mobility of scholars and the internationalization of the academic profession is analyzed in three main areas, teaching, research, and dissemination, with the assumption that experiences abroad, and different kinds of experience abroad related to international mobility, may have an impact upon academic activities and, hence, on the internationalization of the academic profession.

As indicators of the internationalization of teaching, research, and dissemination, this study utilizes the following variables: (a) teaching courses abroad, (b) collaboration with international colleagues in research efforts, and (c) publications in a foreign country. On one hand, experiences abroad entailing international mobility throughout academics' entire life course are taken into consideration, while, on the other, academic activities performed at the time of the survey, or close to it, are

Table 5.5 Net effects of selected variables on five types of international academic mobility

	Early mobility		Late mobility		
	Circulation for study	Migration for study	Circulation for work: short term	Circulation for work: long term	Migration for work
Econ status of country of birth: mature	Not included	–	Not included	Not included	–
Econ status of country of emp: mature	+	+	+	+	+
Country of birth: excl Eng	Not included	–	Not included	Not included	–
Country of birth: Eng also	Not included	–	Not included	Not included	–
Country of emp: excl Eng	–	+	–	n.s.	+
Country of emp: Eng also	+	+	n.s.	n.s.	+
Institutional type: res univ	Not included	Not included	+	+	+
Academic rank: senior position	Not included	Not included	+	n.s.	n.s.
Highest degree: doctoral	Not included	Not included	+	+	+
Discipline highest degree:					
Educ and hum	+	n.s.	n.s.	n.s.	n.s.
Socl sci, bus, and law	+	n.s.	n.s.	–	n.s.
Science	+	n.s.	n.s.	n.s.	n.s.
Engin, manufact, const, and arch	+	n.s.	–	–	n.s.
Primary res: “basic/theoretical”	Not included	Not included	+	+	n.s.
Primary res: combined	Not included	Not included	n.s.	+	–
Preferences in teach or res:					
Primarily in teaching	Not included	Not included	–	–	–
In both but leaning toward teaching	Not included	Not included	–	–	–
In both but leaning toward research	Not included	Not included	n.s.	–	–
Gender: male	+	n.s.	n.s.	+	+
Age cohort:					
Born up to 1950	+	+	n.s.	n.s.	n.s.
Born 1951–1960	+	+	n.s.	n.s.	n.s.
Born 1961–1970	+	+	+	+	n.s.
Father’s educ: college	+	+	+	+	+
Age (years)	Not included	Not included	0.023	0.035	n.s.
Constant	–2.665	–4.830	–3.954	–4.975	–5.361

Source: CAP data September 2011

Notes: +=regressor increases the probability of being involved in a specific type of mobility instead of being nonmobile or being involved in other types of mobility; –=regressor decreases the probability of being involved in a specific type of mobility instead of being nonmobile or being involved in other types of mobility; not included=variable was not included in the model; n.s.=not significant=regressor is not statistically significant; discipline=discipline of highest degree in circulation for study, and discipline of teaching in the other types of mobility

considered. Thus, the relationship between mobility and activities is conceived in terms of the impact of previous experience on current activities.

In order to assess the impact of experience abroad upon international academic activities, three multivariate models are specified, one for each of the mentioned indicators. In the first model, the dependent variable is dichotomous, academics who have recently taught abroad and those who did not. In the second model, the dependent variable is dichotomous as well, academics who collaborate with international colleagues in research and those who do not. In the third model, the dependent variable distinguishes between academics who publish 50 % or more of their publications abroad, academics who publish less than 50 % of their publications abroad, and academics who do not publish in a foreign country. All the models have the experience abroad related to international mobility as the independent variable. Nonmobile academics are used as the reference category, while the other categories refer to the five types of mobility experience abroad presented in Table 5.1. As the relationship between international mobility and international academic activities likely varies according to both structural and institutional features within which academics are embedded, as well as their individual characteristics, seven control variables are identified. Country of current employment is considered as a proxy of the structural features of the national economy, the labor market, and the higher education system. Further, within the context of this work, the variable *Country* was utilized with the United States serving as the reference category. Discipline of current teaching refers to academics' belonging to broad disciplinary groups or scientific communities. The type of higher education institution where academics are currently serving, their academic rank, their employment situation – whether full time or part time – and their seniority, defined as years of full- and/or part-time employment in higher education institutions, account for the main characteristics of their working condition. Finally, gender refers to an individual trait.

Table 5.6 shows the results of two binomial logistic regressions. First, the impact on teaching abroad of different types of international mobility and related experiences, as opposed to nonmobility, is investigated, net of the effects of the selected control variables. Second, a similar analysis is carried out on the impact of mobility on international research collaboration.

Teaching abroad is an international activity involving a small proportion of academics. Only 9 % of them have taught abroad just before the survey was carried out. Controlling for all other variables, being mobile has a clear and strong impact on the probability of teaching abroad. Further, this impact varies according to type of mobility and experience abroad. The group of academics who are most likely to teach abroad includes *late migrants for work*, that is, people who have experienced long-term mobility rather late in their lives, moving to the country of current employment, while being already qualified to work in higher education.

On the contrary, academics that are least likely to teach abroad, although displaying a strong link to this international activity, as compared to nonmobile academics, are *early migrants for study*, that is, people who have experienced long-term mobility rather early in their lives, entering the country of current employment as students. Academics circulating back and forth from their country of birth and current

Table 5.6 Predictors of faculty participation in international academic activities: teaching and research

	Teaching abroad			Research collaboration		
	<i>B</i>	Std. err.	Exp (<i>B</i>)	<i>B</i>	Std. err.	Exp (<i>B</i>)
Yrs employed in higher education	0.01***	0.00	1.01	-0.01***	0.00	0.99
Circulating for study: short term	1.06***	0.08	2.89	0.96***	0.06	2.62
Circulating for work: short term	0.84***	0.08	2.31	1.07***	0.06	2.91
Migration for study: long term	0.78***	0.12	2.18	0.71***	0.09	2.04
Migration for work: long term	1.23***	0.10	3.43	1.44***	0.09	4.21
Circulating for work: long term	1.05***	0.10	2.86	1.19***	0.08	3.29
Country:						
Argentina	0.54**	0.17	1.72	0.81***	0.13	2.26
Australia	0.41***	0.16	1.51	1.13***	0.12	3.08
Brazil	-1.10***	0.21	0.33	-0.25*	0.13	0.78
Canada	0.06	0.15	1.06	0.82***	0.11	2.26
China	-0.56***	0.15	0.57	-1.27***	0.11	0.28
Finland	0.79***	0.15	2.21	2.02***	0.13	7.52
Germany	0.56***	0.14	1.75	0.67***	0.11	1.95
Hong Kong	-0.43**	0.17	0.65	0.56***	0.13	1.74
Italy	0.30*	0.13	1.35	0.76***	0.10	2.13
Japan	-1.05***	0.19	0.35	-0.59***	0.12	0.56
Korea, Republic of	-0.51**	0.18	0.60	-0.22**	0.12	0.81
Malaysia	-0.81***	0.21	0.45	-0.41***	0.13	0.67
Mexico	-0.42**	0.16	0.66	0.16	0.11	1.18
Netherlands	0.67***	0.16	1.94	1.53***	0.14	4.60
Norway	0.73***	0.14	2.07	0.93***	0.12	2.52
Portugal	-0.08	0.19	0.92	1.45***	0.13	4.25
South Africa	-0.67**	0.25	0.51	0.26	0.14	1.30
UK	0.19	0.15	1.21	1.05***	0.11	2.84
Discipline teaching:						
Educ and hum	-0.00	0.09	1.00	-0.41***	0.07	0.67
Socl sci, bus, and law	0.06	0.09	1.07	-0.33***	0.07	0.72
Science	-0.47***	0.09	0.63	0.29***	0.07	1.33
Engin, manufact, const, and arch	-0.19	0.10	0.83	-0.11	0.07	0.90
Institutional type: res univ	0.04	0.08	1.04	0.77***	0.06	2.16
Academic rank: senior position	0.65***	0.07	1.91	0.52***	0.05	1.68
Emp status: full time	0.12	0.10	1.12	0.28***	0.07	1.32
Gender: male	0.17**	0.06	1.19	0.27***	0.04	1.30
Constant	-3.37***	0.18		-2.22***	0.13	

Source: CAP data September 2011

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

employment, although for different purposes, at different stages in their life, and for periods of different length, fall in between these polar groups. Net of other effects, academics working in seven countries (Finland, Norway, the Netherlands, Germany, Argentina, Australia, and Italy) are more likely to teach abroad than their colleagues working in the USA, while academics working in the other eight represented countries (Mexico, Hong Kong, South Korea, China, South Africa, Malaysia, Japan, and Brazil) are less likely to do so. Further, academics working in three countries, the UK, Canada, and Portugal, do not differ significantly from those working in the USA. Finally, holding a senior position, instead of a junior one, being male instead of female, and having spent more years working in higher education, increase the probability of teaching abroad, while belonging to the broad disciplinary group including life sciences, physical sciences, mathematics, computer sciences, and agriculture, instead of belonging to the medical disciplines, has a negative impact on teaching abroad.

International research collaboration involves many more academics than teaching abroad. Indeed, four academics out of ten (41 %) collaborate with international colleagues in their research efforts (see Chap. 7). International mobility also has a strong impact on international research collaboration. Again, compared to nonmobile academics, *late migrants for work* are the most likely to collaborate with international colleagues, and *early migrants for study* are the least likely to do so, while *circulating* academics stand in between. Net of other effects, taking again the USA as a point of reference, working in 11 countries (Finland, the Netherlands, Portugal, Australia, the UK, Norway, Canada, Argentina, Italy, Germany, and Hong Kong) significantly increases the probability of collaborating with international colleagues, while working in the other four represented countries (Brazil, Malaysia, Japan, and China) decreases it, and working in three countries (South Africa, Mexico, and South Korea) does not make any significant difference. Compared to the medical sciences, belonging to the broad field of science has a positive impact on international research collaboration, while belonging to the two other broad groups of social sciences, business and law and education and the humanities, has a negative impact. No significant difference results for those belonging to the field of engineering, manufacturing, construction, and architecture. Finally, working at universities, instead of other higher education institutions; holding a senior position, instead of a junior; working full time, instead of part time; and being male, instead of female, increase the probability of collaborating with international colleagues, while having worked a greater number of years in the higher education sector decreases it.

While international research collaboration is quite widespread within the academy, international dissemination of research results in the form of publications is even more pronounced. Indeed, more than half of the CAP survey respondents have published abroad. Thirty-four percent have published at least half of their publications, during the 3 years before the survey was carried out, in a foreign country, 19 % have published less than half of their works abroad, while 47 % have not at all published in a foreign country at all.

Table 5.7 shows the results of a multinomial logistic regression investigating the impact of international mobility on publishing in foreign countries. Comparing

Table 5.7 Predictors of faculty participation in international academic activities: dissemination (logistic regressions' estimates)

	Publication abroad: 50 % or more			Publication abroad: less than 50 % (0 % excluded)		
	<i>B</i>	Std. err.	Exp (<i>B</i>)	<i>B</i>	Std. err.	Exp (<i>B</i>)
Yrs employed in higher education	-0.01**	0.00	0.99	-0.01*	0.00	0.99
Circulating for study: short term	0.98***	0.07	2.65	0.76***	0.07	2.14
Circulating for work: short term	0.93***	0.07	2.52	0.60***	0.08	1.83
Migration for study: long term	0.80***	0.11	2.23	0.61***	0.11	1.83
Migration for work: long term	1.55***	0.11	4.71	0.72***	0.13	2.06
Circulating for work: long term	1.18***	0.09	3.24	0.64***	0.10	1.89
Country:						
Argentina	2.20***	0.18	9.03	1.06***	0.15	2.88
Australia	2.09***	0.17	8.07	0.68***	0.14	1.98
Brazil	1.12***	0.18	3.07	0.52***	0.14	1.68
Canada	1.77***	0.17	5.88	0.52***	0.13	1.68
China	0.15*	0.17	1.16	-0.11	0.12	0.90
Finland	3.36***	0.18	28.75	1.27***	0.17	3.55
Germany	2.42***	0.17	11.26	1.17***	0.14	3.23
Hong Kong	3.75***	0.19	42.61	0.47*	0.21	1.61
Italy	2.46***	0.15	11.68	0.69***	0.12	1.99
Japan	1.14***	0.17	3.11	0.09	0.14	1.09
Korea, Republic of	1.87***	0.18	6.51	0.57***	0.14	1.77
Malaysia	1.10***	0.18	3.00	0.29	0.16	1.34
Mexico	2.16***	0.17	8.66	0.68***	0.14	1.97
Netherlands	n.a.			n.a.		
Norway	3.25***	0.18	25.74	0.82***	0.17	2.27
Portugal	3.39***	0.19	29.78	1.4***	0.17	4.22
South Africa	0.93***	0.25	2.54	0.25	0.19	1.28
UK	1.75***	0.17	5.78	0.94***	0.13	2.55
Discipline teaching:						
Educ and hum	-1.19***	0.08	0.30	0.22**	0.09	1.25
Socl sci, bus, and law	-1.26***	0.08	0.28	0.08	0.08	1.09
Science	0.56***	0.08	1.76	0.25**	0.09	1.28
Engin, manufact, const, and arch	0.02	0.09	1.02	0.35***	0.10	1.42
Institutional type: res univ	0.82***	0.08	2.27	0.60***	0.08	1.82
Academic rank: senior position	0.14**	0.06	1.15	0.39***	0.06	1.47
Emp status: full time	0.45***	0.10	1.56	0.25***	0.10	1.28
Gender: male	0.24***	0.05	1.27	0.22***	0.05	1.25
Constant	-3.59***	0.19		-2.79***	0.17	

Source: CAP data September 2011

Note: n.a. = data not available, question was not asked

Note: ****p* < .001, ***p* < .01, **p* < .05

academics more engaged in publishing abroad with those who do not publish in a foreign country, the positive impact of international mobility on this aspect of academic activities' internationalization is again clearly evident. As previously hypothesized, *late migrants for work* are the most likely to publish most of their work abroad, while *early migrants for study* are the least likely to do so, with *circulating* academics filling the space in between. Controlling for all other factors, academics working in all CAP survey participating countries¹⁰ are more likely to publish abroad than their colleagues working in the USA. Likely, American faculties do not really need to publish abroad as they belong to a huge domestic scientific community and can rely on the dominant position that their country has in the international publishing industry, while academics working in other country, albeit for different reasons, need, or want, to publish abroad. Net of other effects, belonging to the broad field of science increases the probability of publishing abroad compared to the medical field, while belonging to the broad field of social sciences, business and law, and education and humanities decreases it, with no significant difference resulting for those belonging to the technical fields. Finally, as it is for international research collaboration, working in universities, holding a senior position, working full time, and being male have a positive impact on publishing abroad, while having worked for a longer period in higher education has a negative impact.

Comparing the relationships between international mobility and the three aspects of international academic activity that have been taken into consideration, it is possible to draw some tentative conclusions.

First of all, international mobility appears to be strongly related to international teaching, research, and dissemination. Insofar as international mobility has been related to different types of experiences abroad throughout academics' career and lifecycle while academic activities were performed at the time when the survey was carried out, it is possible to look at this association in terms of the impact of mobility on academic activities.

Second, different types of mobility and experience abroad have different impacts on the three selected activities. Indeed, some types have a stronger impact on international academic activities while others, although considerable, have a weaker impact.

Third, and interestingly enough, the type of mobility having the strongest effect on all of the mentioned activities is the same, while the type having the weakest effect on them is also the same. *Late migrants for work* are most likely to teach abroad, collaborate with international colleagues, and publish most of their works abroad, while *early migrants for study* are least likely to do so. Thus, *migrant* academics, that is, people who were born in a country which is different from the one in which they currently work and who entered the country at different stages of their lives, diverge in their proclivity for international activities. Academics who were educated "abroad" and entered the country of current employment being,

¹⁰Except for the Netherlands where the question on the percentage of publications published in a foreign country was not asked and China for which data analysis does not yield results significantly different from the USA.

academically, fully qualified appear to be more internationally active, while their migrant fellows, who entered the country as students, although much more internationally active than nonmobile academics, are less active not only than *late migrants* but also than *circulating* academics.

Fourth, controlling for all other factors, some working conditions and individual characteristics seem to play a similar role in relation to international academic activities. Compared to their terms of reference, holding a senior position and being male increases the probability of teaching abroad, collaborating with international colleagues, and widely publishing abroad.

Fifth, besides similarities, some differences are also apparent. A first meaningful difference distinguishes between teaching, on the one side, and research and dissemination, on the other. Net of other effects and compared to their reference category, working at universities and having a full-time appointment have a positive impact on international research collaboration and dissemination, while they do not have any significant impact on teaching abroad. Similarly, seniority in higher education has a positive impact on teaching abroad but a negative one on international research collaboration and dissemination.

Sixth, the analysis performed also casts some light on the impact of disciplines upon international activities. As far as teaching abroad is concerned, clear evidence shows that, net of other effects and compared to the medical sciences, belonging to the field of science, that is, life sciences, physical sciences, mathematics, computer sciences, and agriculture, has a negative impact on this international activity. It seems that academics within the “hard” sciences have fewer reasons, or fewer incentives, to be internationally mobile for teaching. On the contrary, as far as international research collaboration and publication abroad are concerned, data analysis shows that these “hard” scientists appear to be more engaged in these activities than soft scientists.

Finally, looking at CAP data, something can be said also on the geography of academic internationalization. Setting aside the issue of publication abroad, which deserves a deeper analysis, accounting for the characteristics of the publishing industry worldwide, the different spread of new media, and the use of English as “lingua franca,” it is worth noting that when compared to the USA, and controlling for all other factors, working in seven countries, namely, Finland, Norway, the Netherlands, Germany, Argentina, Australia, and Italy, increases both the probability of teaching abroad and of collaborating with international colleagues.

5.5 Conclusion

Data collected through the CAP survey allow us to apply the life course approach to the study of the international mobility of faculty. This improves our understanding of the complexities of scholarly mobility and fits quite well into a growing stream of research on human spatial mobility at the global level.

Our data analysis yields quantitative evidence to support the idea that international academic mobility is a relevant and highly differentiated phenomenon, shaped by a complex set of factors and bearing different impacts upon the internationalization of academic activities, splitting the academic profession not only between mobile and nonmobile academics but also between different types of mobile academics.

Indeed, international mobility has become a part of academic life today as academics having experienced some kind of international mobility throughout their life amount to 42 % of the whole sample. The two most frequent types of mobility, involving a quarter of the CAP sample, entail circulation between countries and rather short periods abroad either for study or for professional purposes. International migration makes up about a tenth of the sample.

Distinguishing experiences abroad occurring early or late in life, identifying a circular pattern of mobility back and forth between the same country as distinct from a linear pattern of mobility linking a country of origin and a country of destination, and acknowledging the existence of temporary experiences abroad of different lengths have proved to be a beneficial way to deal with international academic mobility and its complexities. The analysis of the determinants of international academic mobility has shown, at the same time, that there are a few factors influencing all types of mobility, and that there are meaningful similarities and differences in the factors explaining early vs. late mobility, as well as circulation vs. migration.

Indeed, all types of mobility depend on two factors acting in the same direction. International academic mobility is favored by the economic status characterizing a country, as mature economies act as “engines of mobility” for both circular and linear movements. Other cultural, social, and, possibly, economic resources favoring (any type of) mobility are provided by families where fathers have attained tertiary education.

Comparing the determinants of the two types of mobility occurring early in life, namely, circulation and migration for study, two factors with different effects and two factors with similar effects are worth mentioning.

First is that the role played by English in the countries where it is the only main or official language is different: it hinders circulation for study, but it helps attracting migrants for study. Secondly, gender plays a different role as well. There are unequal opportunities to study abroad for academics-to-be to the detriment of presumably young women, while gender does not have any impact on early migration. Conversely, in the countries where English is one of the official languages among others, it favors both circulation and migration for study. Finally, both circulation and migration for study seem to be historically embedded phenomena as academics of older generations appear to be more mobile, for purposes of study and training, than academics of the younger generation.

Comparing the three types of mobility occurring late in life, namely, short-term and long-term job circulation as well as job migration, it may be pointed out that three factors have similar effects while three factors have different effects. These types of international mobility are favored by earning an advanced degree and by holding a position at a university. Furthermore, personal preferences primarily lying toward research increase the probability of being internationally mobile. Also,

within the countries where it is the main or the official language, English has a differentiated impact: it hinders short-term mobility, favors immigration, and does not have any impact upon long-term job circulation. Holding a senior position within the academic favors short-term mobility while it does not have any impact on the two other types of late mobility. Finally, experiences abroad lasting for long periods, whether going back home or not, discriminate against academic women while this does not happen with short-term experiences.

While occurring in two distinct stages of the life course, the three types of international mobility, which entails a movement back and forth between the native and current employment countries, show a common trait: the younger generation of scholars appears to be less involved in international mobility than older generations. On the contrary, discipline plays a different role: while studying medicine hinders early circulation for study, late circulation is negatively related to teaching engineering.

Finally, although occurring at two different stages of the life course as well, the two types of mobility entailing a movement from a country of origin to a country of destination appear to be largely shaped by the same forces resulting from structural disparities at the global level.

Looking at the other side of the coin, we have analyzed the impact of experiences abroad occurring along academics' life on their current international activities. Scholars' international mobility is positively associated with international teaching, research collaboration, and dissemination. However, different types of mobility and experience abroad have different impacts on international academic activities. The most internationally active academics are *late migrants for work* while the least internationally active academics, besides nonmobile academics, are *early migrants for study*. It is likely that moving to another country, when having deeper intellectual and personal roots in the country of origin and having successfully started one's career there, increases academics' ability to be very internationally active, while moving at an early stage of life does not offer the same potential. In fact, it seems that the timing of migration affects the ability to be internationally active. Thus, the types of international academic mobility identified here are not only shaped by several relevant factors but, in turn, affect the resulting academics' international activities.

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Chapter 6

The International Dimension of Teaching and Learning

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6.1 Introduction: Internationalised Education

In 2011, the International Education Association of Australia celebrated the 25th anniversary of the inception of the full-fee programme for international students with the publication of the book *Making a Difference: Australian International Education* (Davis and Mackintosh 2011). The book provides an overview of the history, development and achievements of international education in Australia as well as abroad. In the introductory chapter, Rizvi (2011) argues that internationalisation has always been an important feature of higher education: ‘From their very beginning, universities have attracted scholars from abroad, stressing the importance of scholarly exchange of ideas. Historical evidence suggests that foreigners travelled long distances to study at ancient universities in India, China and the Middle East...In turn, medieval European universities ... attracted students from Asia and the Middle East ... The notion of exchange of ideas and intercultural learning has always been a part of the mission of higher education’ (Rizvi 2011, p. 1).

Whilst emphasising internationalisation in relation to higher education is quite common, it is also important to recognise that ‘this view of the university as a truly international institution can be contested by putting forward that higher education institutions are very much national institutions as they are regulated by national law, rely primarily on national sources of funding, and have been utilised as important vehicles for nation building. This side of the discussion argues that the contemporary university was born from the nation state, not medieval civilisation’ (Beerens 2004, p. 1).

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Both authors, however, agree that in terms of the internationalisation of higher education at least two phases can be distinguished. During Australia's colonial period (1788–1900), internationalisation mainly occurred through educating the local elite in their mother countries' universities, making them sympathetic to the underlying norms and value system.

In the post-colonial era internationalisation was more fuelled by the ideologies of nation-building and attempts to avert the so-called domino theory in order to prevent the new nations falling into the communist camp. A clear example of this is the often cited Colombo Plan. The Colombo Plan was a scheme under which bilateral aid could flow to developing countries in South and Southeast Asia. It was established in 1950 at a meeting of British Commonwealth foreign ministers in Colombo, Ceylon. Initially there were seven member nations. Australia sought to exert its influence over aspects of regional development, and Australia hoped to use the aid programme to involve the United States in regional affairs and to cultivate diplomatic and commercial relations, amongst other things ([Department of Foreign Affairs and Trade n.d.](#)). As noted by Downer, 'The Colombo Plan occupies a prominent place in the history of Australia's relations with Asia. It is best remembered here for sponsoring thousands of Asian students to study or train in Australian tertiary institutions' (Downer 2005).

Rizvi goes on to identify a third phase, led by Australia and the United Kingdom which is best described as 'moving from aid to trade': the commodification of international education through seeing international students as a revenue source to compensate for declining public investments in higher education in these two countries.

In discussing the internationalisation of teaching and learning in this chapter, we address the different ways in which national systems around the world have developed and how we can assume this has affected teaching and learning. In doing so, we distinguish between the English- and non-English-speaking countries included in the Changing Academic Profession (CAP) project. For our purposes here, English-speaking countries have been taken to be the United Kingdom, Australia, Canada and the United States, notwithstanding Canada's official bilingual status.¹ It is possible to examine some aspects using the CAP data, whilst for others the data available through the CAP project do not suffice. For these we have taken a more qualitative approach.

Many aspects of internationalisation exist in the literature, and according to Knight (1994), they cover political, economic, academic and social aspects. The term 'internationalisation' however means many things to different people and is often confused with globalisation. According to Beerkens, 'globalisation' is much used as a container concept, and one needs to distinguish at least four conceptualisations: geographical, authority, cultural and individual, with globalisation in those conceptualisations equalling increasing interconnectedness, de-territorialisation,

¹In addition to these English-speaking countries, although English is no more considered an official language in Hong Kong, Malaysia and South Africa, it remains an active second language especially in education and business.

convergence or divergence and cosmopolitanisation, respectively (Beerkens 2004). He goes on to define globalisation as ‘a process in which basic social arrangements (like power, culture, markets, politics, rights, values, norms, ideology, identity, citizenship, solidarity) become disembedded from their spatial context (mainly the nation-state) due to the increasing diffusion and expansion of transnational flows of people, products, finance, images and information’ (Beerkens 2004, p. 13). Internationalisation, in turn, can be seen as both a reaction to and a driver for globalisation: ‘Internationalization of higher education reacts to globalization by “making higher education (more) responsive to the requirements and challenges related to the globalization of societies, economy and labor markets” (Kalvermark and Van der Wende 1997). At the same time, by responding in this way, it shapes cosmopolitan citizens, identifies and analyses global problems and creates a consciousness of the world as a whole (Beerkens 2004).

Green (2002, p. 1) maintains that ‘international higher education’ is an ‘umbrella term for the various institutional programmes and activities that are international in nature, such as student and faculty exchange, study abroad, international development activities, foreign language studies, international studies, area studies, joint-degree programmes and comparative studies, among others’.

Green’s list represents perhaps the ‘conventional’ list of what internationalisation comprises. As argued above, in 2012 one certainly would have to add the business dimension of international education to this list. It is important for the subsequent discussion to take to heart Rizvi’s warning that ‘It would be wrong however to characterise this perspective as totally market-driven. Instead it is better viewed for its hybrid form that did not entirely abandon the older ‘development’ rationales for international student mobility, as it continued not only to stress the traditional values of education but also the notions of modernisation, social and cultural development, capacity-building, and the role of education in promoting international and intercultural relations. However, superimposed upon these sentiments emerged a newer discourse of educational markets and institutional reform linked to the concerns of revenue generation for universities, building institutional profile and reputation, diversifying the campus, and the development of human resources for a fast globalising economy’ (Rizvi 2011, p. 3).

Of course, the emphasis placed on the range of aspects of internationalisation has varied between countries, with examples of the extremes demonstrated in the development of internationalisation in Australia on the one hand and Finland on the other. For example, Australia has promoted the internationalisation of its higher education initially through providing it as part of the country’s foreign aid programme and from the late 1970s as ‘trade’, by charging international students tuition fees in a system that had previously had no or extremely low tuition fees. By contrast, the internationalisation of the Finnish education system has been linked closely with the internationalisation of Finnish society as a whole (Dobson and Hölttä 2001). The Finnish language is unique, a factor that has hindered in the process of attracting international students and staff. The concept of internationalisation in a small country with a unique language has to be different that in countries with major international languages.

Many benefits of the internationalisation of higher education have been identified. Adams et al. (2011) provide the following comprehensive listing: the enhancement of public diplomacy and trade; closer relationships with countries in the same region; academic benefits for all students including enhanced quality of education; a culturally rich learning environment and internationalised curricula that enhance study and employment opportunities; enhanced research capacity from the contribution of international research scholars and international research collaboration; student exchange opportunities leading to personal and career development, greater international understanding and awareness amongst students; development of multinational professional and personal networks; enriched community links and increased cultural understanding; and human resource development, institution capacity building and research capability in home countries.

These benefits accrue in the context of education as the key to social and economic development of all nations. But the negative side of internationalisation should also be acknowledged. Meek (2011) reminds us that the market-driven approach to international students might clash with traditional academic values, with the profit motive eclipsing academic ethics (leading, e.g. to accusations of ‘soft marking’). There are also the problems associated with increased workload for academics because of students with relatively low English language skills and the dependence and consequential over-reliance on international student income as a revenue stream (Meek 2011). In addition, Marginson et al. (2010) highlight the fact that the sociocultural assimilation of high numbers of international students is not without its challenges. They were referring here to opportunistic assaults and robberies perpetrated against international students, social isolation and potential exploitation in the labour force.

Clearly these are issues that go beyond what can be covered through a survey such as used for the CAP project. In the remainder of this chapter, we will primarily focus on the internationalisation of teaching and learning and the similarities and differences that can be observed in this respect for the countries involved in the project.

6.2 Analysing ‘International’ Higher Education

There is no doubt that the international dimension of higher education is rapidly changing and all the signs point to this change being permanent and profound for the foreseeable future. The number of students enrolled in programmes outside their country of citizenship increased from about 800,000 in 1975 to 3,700,000 in 2009 (OECD 2011). As noted by the OECD, ‘This rise in the number of students enrolled abroad since 1975 stems from various factors, from an interest in promoting academic, cultural, social and political ties between countries, especially as the European Union was taking shape, to a substantial increase in global access to tertiary education, to, more recently, reduced transportation costs. The internationalization of labor markets for highly skilled individuals gave people an incentive to gain international

experience as part of their studies' (OECD 2011, p. 320). Gallagher (2011) further specifies this by demonstrating that over the decade 1999–2009, the number of internationally mobile students grew at a rate of 9 % annually on average and now equates to 1.6 million students. Growth projections for the decade up to 2020 range from 4.1 to 6.7 million students (Calderon 2010).

The largest numbers of international students are from China, India and South Korea, and Asian students represent 52 % of foreign students enrolled worldwide (OECD 2011). About 77 % of these are studying in OECD countries, and about half are enrolled in five countries: Australia, France, Germany, the United Kingdom and the United States (OECD 2011), with the United States, the United Kingdom and Australia attracting the lion share of this (over 40 %) (Murray et al. 2011). Canada is not amongst the 'big five', but it had about 95,000 enrolments by international university students in 2008 (Kunin and Associates 2009). Australia, the United Kingdom, Austria, Switzerland and New Zealand had the highest percentages of international students amongst their tertiary enrolments in 2009 (OECD 2011).

In absolute terms, the United States has the largest share of international students, at around 18 %, the United Kingdom has 10 %, and Australia, France and Germany each have about 7 % (OECD 2011). Another way to look at international student enrolments is to consider their proportion of all enrolments in a country. This information is summarised for the countries involved in the CAP survey in Table 6.1. Australia finds itself with nearly one-quarter of its university students coming from abroad. The United Kingdom also rates high on this measure, with nearly 21 % of its students being from overseas. Canada has nearly 14 % of its students from abroad (OECD 2011) and 3.4 % in the United States (OECD 2010).

Students make decisions about where they will study for a number of reasons, summarised by the OECD (2011) as language and cultural considerations, geographic proximity and similarity of education systems. They give as examples that 'geographic considerations and differences in entry requirements are likely explanations of the concentration of students from Germany in Austria, from Belgium in France and the Netherlands, from France in Belgium, from Canada in the United States, from New Zealand in Australia, etc.' (OECD 2011, p. 328).

In addition, 'language and academic traditions also explain the propensity for English-speaking students to concentrate in other countries of the Commonwealth or in the United States, even those that are distant geographically' (OECD 2011, p. 328).

The primacy of English was mentioned above. The OECD (2011) has identified language as one of the underlying factors in students' choice of a country of study. They note that 'countries in which the language of instruction is widely spoken and read (e.g. English, French and German) are leading destinations of foreign students, both in absolute and relative terms. The dominance (in absolute numbers) of English-speaking destinations (Australia, Canada, New Zealand, the United Kingdom and the United States) may be largely due to the fact that students intending to study abroad are likely to have learnt English in their home country and/or wish to improve their English language skills through immersion and study abroad' (OECD 2011, pp. 321–322). They add that 'given this pattern, an increasing number of institutions in non-English-speaking countries now offer courses in English to

Table 6.1 Foreign student enrolments by country (CAP survey participants only)

Country	Percent of total enrolments
Australia	25
Canada	14
Finland	4
Germany	12
Italy	3
Japan	3
Korea	2
Mexico	n.a.
Netherlands	7
Norway	7
Portugal	5
United Kingdom	22
United States	n.a.
OECD average	9

Source: Created from Table C3.1, OECD. Education at a Glance 2011

Note: Student enrolments refer to enrolments in tertiary-type A education (ISCED 5A), which are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture. Tertiary-type A programmes have a minimum cumulative theoretical duration (at tertiary level) of 3 years full-time equivalent, although they typically last 4 or more years

Note: *n.a.* data not available

overcome their linguistic disadvantage in terms of attracting foreign students' (OECD 2011, p. 323). Institutions in the Nordic countries, for instance, now offer many programmes in English.

Another factor in decisions about where students prefer to study is the level of fees charged and the cost of living. Of the countries that participated in the CAP survey, in 2009, no tuition fees were charged by Finland and Norway, and in Germany, Italy, Japan, Korea and Mexico, the same level of fees pertained to domestic and international students alike (OECD 2011). In the case of Finland, a new act of Parliament took effect from the start of 2010 that permits fees to be charged (under limited circumstances) to students from outside the European Union/ European Economic Area (Aarvevaara et al. 2009). However, the main purveyors of the business model of international higher education, the countries that charge higher fees for international students compared with domestic students, are the countries in which English is the predominant language: Australia, Canada, the United Kingdom and the United States.

Yet another factor that is relevant in the attractiveness of countries for international students is built on the desire for immigration both from demand and supply perspectives. It is noteworthy that, in 2009, over 30 % of foreign students in Canada changed status from 'student' to 'worker' and just fewer than 30 % in Australia.

Table 6.2 Projected growth in middle class numbers and shares, 2009, 2020 and 2030

	2009		2020		2030	
North America	338	18 %	333	10 %	322	7 %
Europe	664	36 %	703	22 %	680	14 %
Central and South America	181	10 %	251	8 %	313	6 %
Asia Pacific	525	28 %	1,740	54 %	3,228	66 %
Sub-Saharan Africa	32	2 %	57	2 %	107	2 %
Middle East and North Africa	105	6 %	165	5 %	234	5 %
World	1,845	100 %	3,249	100 %	4,884	100 %

Source: Kharas (2010); reproduced from Gallagher (2011)

Approximately a quarter of foreign students in each of the United Kingdom and Germany ‘converted their status from student to employed worker and decided to remain in the country’ (OECD 2011, p. 330).

From the above we can conclude that the motivations for cross-border mobility are many and varied, and that different countries have a different exposure to this growing mobility. There are no indications that this will change. In an insightful analysis of global demographic changes and their consequences for higher education, Gallagher (2011, p. 10) shows that in terms of absolute population growth, ‘the top ranked countries are India, Pakistan, Nigeria, China, the United States, Ethiopia, the Democratic Republic of the Congo, Bangladesh, the Philippines, Indonesia and Egypt. This is a broad canvas’. He continues arguing that in terms of middle class population growth – the major source for tertiary education participation – the Asia-Pacific will be the main source of growth in both absolute and relative terms (see Table 6.2).

There is general agreement amongst higher education policy analysts that despite the rapid expansion of tertiary education systems in the growth countries identified, this capacity growth will not be sufficient to keep pace with the growth in demand for tertiary education. The consequence of this will be a continuation in the growth of cross-border mobility. With the expected continuation of English as the dominant trade language, this also will imply a continued demand for the provision of and exposure to English language programmes. To what extent this, in turn, will mean a continuation of the mobility pattern identified earlier, however, is a moot point. As a consequence of the adverse economic conditions in the United States, we have seen American universities starting to flex their muscle in the international student market. And as Murray et al. (2011, p. 6) argue ‘it would not take many major US universities to be active in recruitment, and using agents, to impact Australia’s Asian source markets’. Likewise there is no denying that increasingly private, for-profit providers start carving out their own niches in this market, contributing to an increased diversity of provision. It would appear likely therefore that both the demand for and supply of international higher education will continue to grow and diversify. Within this context it also appears unlikely that this will not affect the nature and content of teaching and learning in our universities. We will explore this assumption by a more detailed analysis of the CAP data with respect to the impact of internationalisation on teaching and learning.

6.3 Internationalisation in Teaching and Learning and the Academy

This section considers academic staff and their responses to CAP survey questions that relate most directly to teaching and learning. These questions are outlined in Fig. 6.1.

Table 6.3 presents an analysis of several questions from the CAP survey, excluding nonrespondents. That is, 100 % represents only those who responded to the question.

Question C4_5 asked respondents if ‘in your courses, you emphasise international perspectives or content’, and the highest responses (approximately two-thirds and higher) came from academics in seven of the countries examined in this chapter. Highest rates of response of ‘strongly agree or agree’ to the question came from Portugal (where 81 % of academics strongly agreed or agreed that they emphasised international perspectives), with Mexico, Korea, Hong Kong, Australia, Norway and the United Kingdom also having at least 67 % of their academics strongly agreeing or agreeing. The lowest responses came from Japan and Finland (51 %), the United States and Brazil (53 %) and Argentina (58 %). Within the English-speaking bloc, a much lower proportion of academics from the United States strongly agreed or agreed (53 %), compared with Australia, Canada and the United Kingdom (68, 62, and 66 %, respectively).

The interpretation of these data is not straightforward. Whilst it seems ‘logical’ to assume that emphasising internationalisation in teaching and learning indeed would be high on the list of countries like Australia, Canada and the United Kingdom because of their active operation on the market for international students, it does not

Question	Response
In your courses you emphasise international aspects or content (question C4_5)	Five-point scale from ‘strongly agree’ to ‘strongly disagree’
Since you started teaching, the number of international students has increased (question C4_9)	Five-point scale from ‘strongly agree’ to ‘strongly disagree’
Currently, most of your graduate students are international (question C4_10)	Five-point scale from ‘strongly agree’ to ‘strongly disagree’
Are you teaching any courses abroad? (question C5_1)	‘yes’ or ‘no’
Are you teaching in a language different from the language of instruction at your current institution? (question C5_2)	‘yes’ or ‘no’
Which language do you employ in teaching? (question F11_A)	‘first language/mother tongue’ or ‘other language’

Fig. 6.1 CAP survey questions and possible responses to teaching-specific questions on internationalisation (Source: CAP data September, 2011)

Table 6.3 Affirmative responses to six selected CAP survey questions

	Question					
	C4_5	C4_9	C4_10	C5_1	C5_2	F11_A
English-speaking countries						
Australia	68	70	25	15	3	89
Canada	62	54	23	15	9	82
United Kingdom	66	61	31	14	5	86
United States	53	45	7	11	4	86
Central and Southern America						
Argentina	58	23	4	13	8	97
Brazil	53	18	2	4	5	95
Mexico	77	30	6	6	6	92
Europe						
Finland	51	65	8	16	46	80
Germany	61	51	5	14	25	91
Italy	61	41	2	14	25	92
Netherlands	54	57	23	13	47	65
Norway	67	58	9	25	65	75
Portugal	81	69	3	7	17	97
Asia						
China	67	53	10	4	12	96
Hong Kong	72	54	14	11	14	43
Japan	51	12	8	4	12	100
Korea	74	23	8	9	30	81
Malaysia	60	29	11	6	16	22
Africa						
South Africa	59	41	9	4	15	75

Source: CAP data September 2011

Note: Affirmative responses are indicated by answering 'strongly agree' or 'agree' to the question

explain why Portugal would score so high. It might be tempting, because of the low scores of Japan and Finland, to assume a relationship between the uniqueness of a language and the degree of internationalisation in teaching and learning, but again Portugal on the one hand and the United States and Argentina on the other hand would make this assumption untenable. For want of a better explanation, we therefore have to conclude that the differences in degree of internationalisation in teaching and learning as reflected in this question highlight the diversity of higher education provision across systems.

The proposition that 'international students have increased in number' (Question C4_9) was most supported by academics from Australia (70 %), Portugal (69 %) and Finland (65 %). Much lower numbers of academics from Japan, Brazil, Argentina and South Korea strongly agreed or agreed that there had been an increase in international student numbers. As was the case with the question about the emphasis on internationalisation, a lower proportion of academics from the United States strongly agreed or agreed that there had been an increase in international

students, compared with the other English-speaking countries. Whilst the responses show a great diversity across systems, these outcomes are somewhat easier to put into context. Australia, the United Kingdom and Canada, as indicated before, are active on the international student market, and this has had the expected effect. This would not be the case for Mexico, Argentina and Brazil, hence their relatively low scores. A similar case can be made for Japan, Korea and Malaysia, certainly if we take into account that essentially the data reflect the situation in 2006–2007. The high scores of Portugal and Finland can be interpreted within the framework of the European mobility programmes such as Erasmus and Erasmus Mundus, arguing that these two countries have come from a relatively low base, making international students more noticeable. Roughly speaking therefore, the response to this question is reasonably reflective of the international student mobility patterns discussed in the previous section.

On the matter of whether most graduate students are international (Question C4_10), responses of ‘strongly agree or agree’ were much lower across the board. This again is reflective of the patterns identified in the previous section, with cross-border student mobility being concentrated at the undergraduate level. More of the academics from three of the four English-speaking countries strongly agreed or strongly agreed, with the highest proportion (31 %) coming from the United Kingdom. Ten percent or fewer of academics strongly agreed or agreed with the proposition postulated in this question in 12 countries, including the United States (7 %). Responses to this question could be discipline based. For example, the largest single discipline-based groups of international students in Australia are to be found in Business, Administration and Economics, and in this area, for some academics, international students would represent ‘most of the graduate students’. Given the low scores across most countries, this question also serves to underpin the argument presented before that the three countries for which international students are ‘business’ also score the highest on this question: Australia, Canada and the United Kingdom, with the difference with the rest of the CAP countries being significant.

One measure of internationalisation in teaching is the extent to which members of the academic staff teach abroad, and the CAP survey collected information on this aspect via Question C5_1. The highest rates of teaching abroad were reported by academics from Norway (25 %). Of course, the extent of ‘teaching abroad’ will vary between countries according to language of tuition and proximity. For instance, 15 % of Australian academics reported that they had taught abroad in the previous academic year, but for most of this number, the teaching would have been in English, and most usually at an overseas branch campus or partner institute of an Australian university. Several Australian universities have a campus in Asia, as do certain British universities. For many academics therefore, ‘teaching abroad’ may have involved teaching at a different campus of the same university, whereas for others, it could involve a major relocation of base for a period. Similarly, for academics in some European or Asian countries, ‘teaching abroad’ might involve driving relatively few kilometres over a national border to an adjoining country with similar cultural mores and even the same currency. Overall the data support the assumption that international staff mobility is very much alive in the academy. This would be in

particular the case in Europe, demonstrating indirectly the impact and effect of the earlier-mentioned European mobility schemes, in particular Erasmus Mundus which supports not only students moving across Europe but also academic staff.

Not surprisingly, relatively few academics from the English-speaking countries reported that they taught in a language other than the language of instruction at their current institution (Question C5_2). A higher proportion of Canadians responded 'yes' to this question, perhaps because Canada is officially bilingual. Rates of teaching in a different language are also low in most of the Asian countries in the CAP survey, but rather higher than in the English-speaking countries or Southern and Central America. The rate of foreign language is as high as 30 % in Korea, but the countries that stand out on this question are the European countries. For European countries it is the clear reflection of many continental systems adopting English as a medium of instruction in especially the master level programmes.

Finally, the responses to the question 'which language do you primarily employ in teaching' resulted in varying rates of use of the mother tongue/first language. Academics from Malaysia and Hong Kong reported that only 22 and 43 %, respectively, used their first language in their teaching, which most likely is the artefact of the formal change of language referred to above for Malaysia and a similar formal change in Hong Kong since the handover to China in 1997. Outside Asia, it would seem that fewer academics in the Nordic countries teach primarily in their first language. Seventy-five percent of Norwegian academics primarily used their first language and 80 % of Finns, suggesting that 25 and 20 % of these Nordic academics teach primarily in languages other than their first. Amongst European countries, only 65 % of academics from the Netherlands strongly agreed or agreed that they primarily employed their mother tongue in teaching.

At the other extreme, no academic respondents from Japan reported teaching in a language other than their mother tongue, and few from China (96 % used their mother tongue). Similarly, the great majority of respondents from Central and South America taught in their mother tongue.

Overall the responses to this question serve to underline an important point that we raised earlier in this chapter. Despite the fact that there is a lot of emphasis on the international dimension of higher education and teaching and learning (and research even though that is outside the scope of this chapter), first and foremost higher education systems are national systems. The high response scores for teaching in the respondents' first language leave no room for other interpretation.

6.4 Discussion: Are the English-Speaking Countries Uniformly Different from the Rest?

One of the propositions laid down in this chapter has been that aspects of internationalisation and teaching are different in the English-speaking countries compared to the non-English-speaking countries. It is in these countries – Australia, Canada and the United Kingdom – that a business model for international students has been

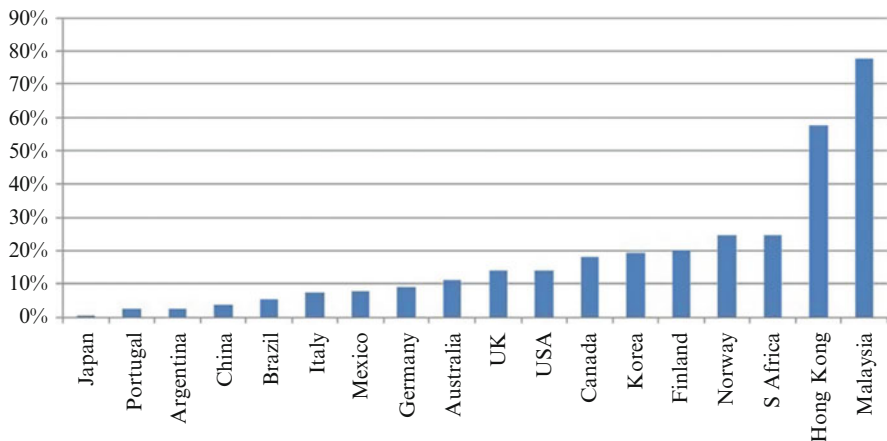


Fig. 6.2 Percentages of academics that teach in another language (Source: CAP data September, 2011)

adopted, with the United States taking a somewhat separate position. Certainly for Australian and British universities, the revenue from these students is critical to their financial well-being. Although this observation is a correct one, discernible patterns between the English-speaking countries and other countries are difficult to find. In fact, there is no uniformity of opinion within the English-speaking group of countries, and clearly, academics from the United States have a different perception of the increase in international student numbers (see CAP Questions C4_5, C4_9 and C4_10).

With respect to these questions, the three other English-speaking countries are closer to each other in their opinions. Differences between the English-speaking countries are lower in academics' responses to questions about teaching abroad and teaching in other languages. Few academics in these countries teach in a different language, and few employ a language other than their mother tongue in teaching. It is highly likely that the reason for use of another language than mother tongue by some teachers is that they are immigrants to their current English-speaking country of domicile.

The English-speaking countries are closest in terms of their academics' responses to CAP Question F11_A, concerning the language used in teaching. Figure 6.2 shows that academics from the English-speaking countries used a language other than their mother tongue at rates ranging from 18 % (Canada) to 12 % (Australia), and the figure shows that the four countries are adjacent in the middle of the graph.

As noted earlier, use of foreign languages in teaching is much more common in Europe, and as also indicated earlier, in many cases, that foreign-language teaching will be English. However, academics in Malaysia and Hong Kong are at the top of all academics in terms of the use of a language other than their mother tongue. Colonial heritage and legislative changes to first language can be seen as viable explanations for this.

When examining the distribution of countries based on their academics' perceptions of matters relating to the internationalisation of teaching, substantive patterns are hard to discern. At the highest level of abstraction, there appear to be quite strong similarities between Australia and the United Kingdom which can be attributed to the leading role in the marketisation of international education. Canada being on a similar trajectory also fits this picture. But respondents from the United States very clearly have a distinctive set of responses to the questions on the internationalisation of teaching. In itself this can be explained by self-sustainability of the American higher education system – to the extent of course that one can speak of one system – and the relative national focus of the country in general. In this respect, the United States is not dissimilar when compared with Japan.

Similarly, at a high level of abstraction, the continental European systems demonstrate some similarities, in particular when one relates this to established European mobility programmes. But, of course, we should also be careful of overgeneralisation. It is tempting to bring the Bologna Process into the equation and argue that this could be interpreted as a force for convergence. However, we also know that there still is vast diversity across Europe, and that the Bologna Process by many countries has been adopted to further specific national higher education policy objectives.

Finally, the trends towards further internationalisation of higher education discussed at the beginning of this chapter have certainly found their way into the academy if one looks at this through the empirical lens of the CAP project. There is no denying that the academy is responding to the combined trends of globalisation and internationalisation. Frankly, it would have been a remarkable outcome if the data had presented a different picture. At the same time, higher education on a global scale is diverse, and the data also show quite a number of idiosyncratic aspects of higher education from a comparative perspective. Again this is very much in line with our common understanding of what drives systems and the individuals working in them. As such, whilst internationalisation is important, national foundations cannot, and probably should not, be ignored.

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Chapter 7

The Internationalization of Research

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7.1 Introduction

The internationalization of higher education has been understood most commonly in the context of research, as this is a key function of the university (Brockhoff 1998). Whether from the point of view of academic mobility, research collaboration, publication, or other forms of knowledge dissemination, we can say that the research function of the university has nearly always been international in scope (Altbach and Teichler 2001), leading some to characterize this current phase as a “re-internationalization” of the academy (Teichler 2004). The modes of this re-internationalization are the same as in previous decades, but the networks of connectivity and the policy infrastructure that enable them have intensified. Teichler (2004) listed the four most common forms of knowledge transfer across national borders as: “knowledge media (books, films, letters, e-mail messages, artifacts, etc.); physical mobility of scholars and students; collaborative research and joint teaching/learning projects; and trans-national education” (p. 13). Each of these aspects is discussed in this volume, with this chapter focusing on the international orientation of researchers, collaborations, and publications.

There are several drivers of change in the internationalization of research, many of which have been explicitly tied to the phenomenon of globalization and the increased connectivity between individuals and among geographic areas. Frølich (2008) notes a “double set of justifications” for the creation and maintenance of this

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knowledge infrastructure: “increased internationalization can be legitimized by referring to improved academic quality by means of internationalization, and increased internationalization can be justified by referring to the need for increased economic performance in the knowledge economy” (p. 107). Students and researchers are more mobile and have greater access to each other through information and communications technologies than in previous decades, enabled by national and regional economic competitiveness policies. These global networks both support and create new opportunities for international exchange, providing the foundation for a global labor market for highly skilled workers and scientists (Allen and van der Velden 2011; Castells 2000).

Yet, a paradox emerges from the efforts by governments to leverage higher education systems as part of national innovation initiatives to promote global economic competitiveness. As internationalization becomes more recognized as a marker for academic quality and economic opportunity, the nation-state must preserve national uniqueness and trade boundaries while simultaneously striving for international relevance (Horta 2009; Ponds 2009; Trilokekar 2010). For some systems, the tension between collaboration and competition has resulted in a reduced use of the local language in teaching, and research as “Englishization” (Byun and Kim 2011) occurs to harmonize with the “lingua franca” of the international higher education community. In other systems, concerns over knowledge spillovers into foreign markets have had ripple effects on local and institutional research policies (Ponds 2009). One response has been to “pool” infrastructure and resources for research across institutional boundaries, creating networks that extend beyond organizational boundaries (Kitagawa 2010). Insofar as it has been shown that characteristics, such as the international mobility of students and researchers, are strongly associated with national innovation (Filippetti et al. 2011), the intensity of internationalization will likely continue to increase, although not evenly across countries or fields of study (Hui and Kiggundu 2011; Wildavsky 2010).

A primary focus of this chapter is the international collaborations of researchers in the countries surveyed by the Changing Academic Profession (CAP) study. We are interested in the relationship between an individual researcher’s orientation toward international topics, productivity, and coauthorship and his or her status as an international research collaborator. This focus is informed by known characteristics of the academic community and the various forms of research collaboration that may be present (Katz and Martin 1997). In the natural sciences, collaboration has been both necessary and desirable, while in some social science fields and the humanities, collaboration is often less important than demonstrating individual expertise. These differences can be seen in the types and frequencies of knowledge products across various disciplines (Franceschet and Costantini 2010). In addition, collaboration has often been measured by coauthorship, but it can also be understood through participation in collaborative grants and community projects. For these reasons, the topic of research collaboration must be approached with caution as disciplinary effects and measurement limitations are important considerations.

Research collaboration has been shown to be associated with higher scientific productivity (Lee and Bozeman 2005), perhaps as a function of the division of labor

among large research teams (Adams et al. 2005). International collaboration, in comparison with intra-institutional and national collaboration, has been shown to have particularly positive effects on researcher productivity and knowledge impact, in the form of publications and citations (Abramo et al. 2009, 2011). Policies to support increased international research collaboration have been created on the supposition of increased domestic research productivity, although policies that sustain research ties across borders may also influence return mobility of academics who have left for employment elsewhere (Baruffaldi and Landoni 2012). In a larger and less politicized sense, understanding the characteristics of international collaborations and the mechanisms that support them is a central component to approaching the world's "grand challenges" through academic investigation (Keenan et al. 2012).

In the following sections we discuss the internationalization of research as seen in the CAP data. First, we look at two basic dimensions of the internationalization of academic research, namely, a focus on the international content of researches and international collaboration in the research process, taking also into account the relationship between characterizing one's research as international in scope or orientation and actually collaborating with international colleagues. Second, we focus on international research collaboration identifying those factors that may explain it, or – at least – are associated with it. Third, we turn to research outputs and their dissemination. On the one hand, we investigate whether collaborating with international colleagues has an impact on individual scientific productivity. On the other, we analyze the relationship between individual collaboration with international colleagues, seen as a more informal dimension of academic internationalization, and international coauthorship, seen as a more formal dimension of the same process.

7.2 International Research Orientation and International Research Collaboration

The CAP survey investigated the main characteristics of academics' primary research asking whether, and to what extent, they would characterize it as basic or theoretical, applied or practically oriented, commercially oriented or intended for technology transfer, socially oriented or intended for the betterment of society, based in one discipline, or multi- and/or interdisciplinary. It also inquired whether, and to what extent, respondents would characterize the emphasis of their primary research as "international in scope or orientation." Most (55 %) agreed or strongly agreed with that characterization making international orientation of research the second most popular aspect of the internationalization of the academic profession at the global level second only to emphasizing international perspectives or content in teaching (see Chaps. 3 and 6).

The survey also investigated whether research efforts were undertaken individually or in collaboration with others, either with persons at other institutions in the same country or international colleagues. Two-fifths of respondents (41 %) indicated that they collaborated with international colleagues in their research efforts.

Table 7.1 Percentage of international emphasis in research and international research collaboration, by country 2007–2008

	International in scope or orientation (<i>N</i> =18,302)	International collaboration (<i>N</i> =19,848)
Argentina	39	43
Australia	68	59
Brazil	30	28
Canada	57	64
China	66	10
Finland	59	69
Germany	50	44
Hong Kong	63	57
Italy	75	59
Japan	49	22
Korea, Republic of	34	29
Malaysia	51	32
Mexico	44	35
Netherlands	61	52
Norway	67	60
Portugal	52	45
South Africa	51	41
United Kingdom	62	60
United States	39	33

Source: CAP data, September 2011

Note: only respondents active in research are considered

Information collected through the survey shed light on several aspects of these two dimensions of academic research internationalization.

Academics characterizing their research as international in scope and academics collaborating with international colleagues in their research projects are unevenly distributed across countries (Table 7.1).

There are some countries, such as Italy, displaying a remarkably high proportion of academics who describe their primary research as international in character. There are other countries, such as Brazil, showing a lower proportion. In some countries, such as Finland, academics appear to be highly involved in international research networks, while in others, such as China, they appear to be almost entirely excluded from them. Moreover, there are countries where academics' attitude toward research and their actual research behavior match almost perfectly, either signaling a high degree of internationalization of research as in the United Kingdom or a low degree of internationalization as in Brazil. In others, attitudes and behaviors sharply diverge, such as in China and Japan.

The disciplinary divide plays a different role in the two considered dimensions of research internationalization. While disciplinary differences are remarkably small in the proportion characterizing their research as international, they are quite large in international research collaboration (Table 7.2). As mentioned in Chap. 3, the proportion of academics whose primary research is considered international in

Table 7.2 Percentage of international orientation of research and international research collaboration, by discipline 2007–2008

	International in scope or orientation (N= 16,121)	International collaboration (N= 17,379)
Educ and hum	56	34
SocI sci, bus, and law	55	36
Science	59	52
Engin, manufact, const, and arch	53	38
Med sci, health sci, and socl ser	52	45
All disciplines	55	41

Source: CAP data, September 2011

Notes: only respondents active in research are considered; the relation between international in scope or orientation and discipline is stochastically significant, ChiSQ=49.111 (sig .000); the relation between international collaboration and discipline is stochastically significant, ChiSQ= 331.615 (sig .000)

Table 7.3 International research collaboration by international orientation of research 2007–2008 (% by column)

	Is your primary research international in scope or orientation?		
Do you collaborate with international colleagues?	Yes (N=9,902)	No (N=7,815)	Total (N= 17,717)
Yes	55	28	43
No	45	72	57

Source: CAP data, September 2011

Note: only respondents active in research are considered; ChiSQ (Pearson)= 1557.660 (sig. 000)

scope or orientation is nearly the same in the soft and the hard disciplines (55 vs. 56 %), while there are more academics collaborating with international colleagues in research in the hard disciplines than in the soft ones (45 vs. 35 %). Just the opposite holds for teaching, as there are more academics who emphasize international perspectives or content in their courses in the soft disciplines than in the hard ones (67 vs. 58 %).

The two dimensions are intercorrelated. The broad characterization of research as internationally oriented is strongly associated with the involvement in international research collaboration (Table 7.3). As expected, there are academics who match an international orientation toward their research with international research collaboration (31 %) and those who do not consider their research as internationally oriented and correspondingly do not collaborate with international colleagues (32 %). Quite surprisingly, though, there are two outlier groups. The first group includes academics who characterize their primary research as international in scope or orientation but do not collaborate with international colleagues (25 %). The second group includes those who collaborate internationally but do not consider their research as internationally oriented or international in scope (12 %). The first group prevails marginally in the soft disciplines while the second group slightly prevails in the hard disciplines.

These findings suggest a possible problem. The meaning attached by respondents to the terms “international in scope or orientation” as used to characterize the emphasis of their research might differ according to discipline, depending on the relevance that national borders have in each discipline.

In disciplines where national borders are more relevant, mostly soft ones such as anthropology, political sciences, or comparative law, international comparisons and perspectives are highly significant, and a stronger emphasis on international perspectives and contents in teaching is expected. As a matter of fact, while the degree of internationalization of the contents of teaching is very high in general, it is higher among academics belonging to the soft disciplines. While research that is considered international in scope or orientation is equally spread among soft and hard disciplines, the ways through which this research is conducted are quite different. Hard scientists collaborate with international colleagues in research more than their colleagues from the soft disciplines. Again the relevance of national borders appears to be different in the two broad disciplinary fields. Borders seem to be much more permeable – that is, less relevant – for hard scientists who are thus more involved in international scholarly networks.

As a consequence, when academics belonging to different disciplines are asked whether they consider their research as international in scope or orientation, they might understand this question differently. Soft scientists may consider the internationalization of research as implying the integration of an international dimension into research contents or research subjects (“internationally oriented”), while hard scientists may consider it as implying international research collaboration (“international in scope”). The fact that there are more academics in the soft disciplines than in the hard ones that consider their research as international in orientation but do not collaborate with international colleagues, and that the opposite is true among academics who collaborate internationally without characterizing their research as international, seems to support this interpretation. Thus, while the question on research emphasis is useful to understand the general characteristics of academic research (see Chap. 11), it is less useful than the one on collaboration to understand variations in the internationalization of research across disciplines.

7.3 Explaining International Research Collaboration

Individual collaboration with international colleagues in research is especially relevant for several reasons (Smeby and Gornitzka 2010). It is a very demanding type of contact because it implies international visibility, ability to attract international funds and other resources, and significant commitment. It engages individual academics in international research networks and communities. It touches upon almost all the aspects of the research process. It implies two types of border-crossing activities: physical mobility, such as traveling, and knowledge transfer through several media. As suggested in Chap. 5, both international migration and international professional circulation, either for long or short periods, are strongly associated with

international research collaboration. Further, collaborating with international colleagues may have an impact on teaching activities in terms of student mobility, especially at the graduate level, and internationalization of contents and perspectives. Finally, within the framework of the CAP survey, the question on international collaboration in research has two characteristics that are worth mentioning: it is one of the most straightforward questions leaving little room for misinterpretation and it has a very low number of nonresponses (6.7 % of the whole sample).

Research collaboration with international colleagues is expected to vary according to the two main axes of differentiation of the academic profession, namely, discipline and institutional type (Clark 1987; Enders 2006). Career stage, that is, academic rank, may play a role as well.

The proportion of faculty members who report international research collaboration varies among disciplinary fields, as well as national contexts (Gornitzka 2008; Luukkonen et al. 1992; Smeby and Gornitzka 2010). Academics in the natural sciences and technology are the most involved in international collaboration, while those in the humanities collaborate least with researchers in other countries (van Raan 1997). Beyond the disciplinary divide, the type of research in which academics are engaged has an impact (Godin and Gingras 2000). It has been shown that international collaboration is higher in experimental research involving large-scale instruments, and that the degree of collaboration may also be a function of the variation of activities along the basic-applied research continuum (Gulbrandsen and Kyvik 2010). Further, academics working at universities are expected to be more involved in research and consequently in international research. It has to be noted though that academics working in the non-university sector may also be involved in research, albeit this research may be local or regional in scope (Edler 2008).

Opportunities to collaborate with international colleagues depend not only on organizational factors such as the type of institution or professional factors linked to field of expertise and to career stage. Two sets of other factors may have an impact: on the one hand, as illustrated below, there are individual biographical features both ascribed and acquired; on the other, there are structural features characterizing the wider context within which research activities are performed.

Gender may play a role because the division of labor between research and teaching activities within higher education institutions may be gendered and because access to international research networks may be less open to women (Fox and Mohabatra 2007) – although it is not always the case that women collaborate less than men (Bozeman and Gaughan 2011). Age is also relevant for at least two reasons. First, active involvement in research has been thought to decline with age, although this pattern may be changing (Stroebe 2010). Second, belonging to a specific historical generation may have an impact on individual opportunities to collaborate with international colleagues (see Chaps. 1 and 10). However, as faculty age, their coauthorship activity – often considered as an indicator of research collaboration – may rise as time in the profession and interaction with colleagues increases (O'Brien 2012). Although indirectly, cultural – both also social and material – resources provided to academics by their family may enhance their abilities and opportunities to collaborate internationally in their career. Education may also

have an impact. It is expected that the higher the level of educational attainment achieved, the higher the opportunity to access international research networks. Within the education and training of academics-to-be, a relevant role may be played by experiences abroad, especially in graduate studies.

On the other hand, the characteristics of the national context where research is carried out are also relevant. Both country size and its level of economic development are considered to have an impact. As already mentioned (see Chap. 4), working in a small country – and hence in a small higher education system – increases the likelihood that academics would be involved in international research activities. Further, both the level of economic development and economic growth may affect international research collaboration, although for various and sometimes opposite reasons according to national characteristics and the differential effects of globalization (Choi 2012; Hwang 2008).

Among structural factors influencing international research collaboration, language plays a special role. Languages operate either as facilitators of, or as barriers to, international cooperation, depending on whether academics located in different countries share a common language. Commonality may be rooted in history – resting on the historic existence of a plurality of vast international linguistic areas. Yet, nowadays it depends primarily on the role that only one language, namely, English, has gained as *lingua franca* in scientific research (e.g., Altbach 2006; Doiz et al. 2012; Slipersaeter and Aksens 2010). As a consequence, both the linguistic tradition of the single country and academics' personal English proficiency may influence international research collaboration. As already mentioned (see Chap. 3; Rostan 2011), English is employed much more as “*lingua franca*” for research activities than for teaching activities. This gap mainly involves nonnative speakers: among native speakers, almost all academics use English both for teaching and for research purposes; on the contrary, twice as many academics employ English as their second language in research as in teaching. Finally, English plays different roles in the internationalization of research depending on a country's linguistic characteristics.

In order to investigate the impact of these factors on international research collaboration based on CAP data, a multivariate model was built. The dependent variable of the model is dichotomous: academics who collaborate with international colleagues in their research efforts and those who do not. The characteristics of respondents' primary research are considered as the main factors explaining differences in international collaboration. Two aspects of these characteristics are considered. First, we consider the disciplinary field within which the respondent's research efforts are undertaken. This is expressed in terms of the discipline of the current academic unit with which they are affiliated at the time of the survey. Discipline is divided into five categories, following the International Standard Classification of Education (ISCED) system for grouping broad educational fields of study (UNESCO 2006): teacher training and education sciences and humanities and arts; social and behavioral sciences, business and administration, economics, and law; life sciences, physical sciences, mathematics, computer sciences, and agriculture; engineering, manufacturing, construction, and architecture; and medical sciences, health-related

sciences, and social services. Second, the emphasis of academics' primary research, whether basic/theoretical or applied/practically oriented, or a combination of the two, is considered.

The impact of research characteristics on international collaboration is controlled by several factors which have been divided into five groups as follows:

1. Personal biographical traits: gender, age (expressed in terms of four age cohorts), and family background in terms of parents' education, either tertiary or not.
2. Respondents' educational attainments in terms of the highest degree they have earned, and whether they have earned an advanced degree abroad, either a PhD or a postdoctoral degree, or both.
3. Two aspects of the academic profession: the type of higher education institution where respondents are working, whether a university or another institution, and academic rank scaled into only two categories: senior versus junior.
4. Language is taken into consideration in terms of the linguistic situation of the country of current employment and of respondents' proficiency. A distinction is made between countries where English is used either as the main or the official language or as one of the official languages and countries where it is not used. Moreover, information on whether respondents primarily use English in research either as their mother tongue or as second language is used.
5. Three structural features of participating countries are considered: country size (small, medium, or large), the economic status of the country (mature vs. emerging), and the relative position of the country in respect of the Asian region.

This last feature has been included into the analysis for two reasons: (a) because of the relevance of the divide between Asia and the rest of the world in many aspects of the internationalization process, including the developments in academic research (see Chaps. 8, 9 and 11) and (b) because of the weight of China both on the international scene and within the CAP international sample. As a consequence, a new variable has been created distinguishing China and the other Asian countries from non-Asian countries.

As shown in Table 7.4, controlling for all the mentioned factors, academics belonging to the broad field of science (life sciences, physical sciences, mathematics, computer sciences, and agriculture) are more likely to collaborate with international colleagues, while academics from education and humanities, social sciences, business, and law are less likely to collaborate. The model's results also show that working in an engineering, manufacturing, construction, and architecture academic unit has a slightly negative impact on international collaboration, but the estimate is not statistically significant, possibly because of the heterogeneity of this broad technological field.

Compared to those primarily engaged in applied or practically oriented research, both academics engaged in basic or theoretical researches and those who combined basic and applied orientations in their research are more likely to collaborate with international colleagues.

Thus, CAP results support the argument that it is within the hard disciplines, and among academics engaged in basic or theoretical research that international research

Table 7.4 The predictors of international research collaboration 2007–2008

	<i>B</i>	Std. error	Exp(<i>B</i>)
Intercept	-2.167***	0.138	
Discipline			
Educ and hum	-0.367***	0.069	0.693
Socl sci, bus, and law	-0.318***	0.067	0.727
Science	0.174**	0.066	1.19
Engin, manufact, const, and arch	-0.104	0.074	0.901
Med sci, health sci, and socl ser – Ref. Cat.			
Research emphasis: basic vs. applied			
Basic	0.236***	0.047	1.266
Combined	0.23***	0.05	1.259
Applied – Ref. Cat.			
Gender			
Male	0.288***	0.043	1.334
Female – Ref. Cat.			
Age cohort			
Born up to 1950	-0.15*	0.074	0.861
Born 1951–1960	0.01	0.064	1.01
Born 1961–1970	0.063	0.057	1.065
Born 1971 and over – Ref. Cat.			
Parents' education			
Parents with tertiary education	0.121**	0.04	1.128
Parents without tertiary education – Ref. Cat.			
Highest degree			
1st degree	-0.865***	0.081	0.421
2nd degree	-0.861***	0.081	0.423
PhD	-0.127*	0.063	0.881
Postdoc degree – Ref. Cat.			
Advanced degree earned abroad			
Yes	0.608***	0.057	1.837
No – Ref. Cat.			
Academic rank			
Senior position	0.565***	0.049	1.76
Junior and other position – Ref. Cat.			
Type of institution			
Universities	0.763***	0.056	2.144
Other institutions – Ref. Cat.			
English used in the country			
No	0.398***	0.062	1.489
Yes, as main lang or off lang – Ref. Cat.			
English as lingua franca in research			
Yes, as mother tongue	0.451***	0.08	1.571
Yes, as other language	0.621***	0.048	1.862
No – Ref. Cat.			

(continued)

Table 7.4 (continued)

	<i>B</i>	Std. error	Exp(<i>B</i>)
Country size			
Small	1.209***	0.069	3.351
Medium	0.591***	0.061	1.805
Large – Ref. Cat.			
Economic status of country of current employment			
Mature	0.221***	0.056	1.247
Emerging – Ref. Cat.			
Asian region			
China	-1.075***	0.092	0.341
Other Asian countries	-0.993***	0.06	0.37
Non-Asian countries – Ref. Cat.			

Source: CAP data, September 2011

Note: *** $p < .001$; ** $p < .01$; * $p < .05$

collaboration is more likely to occur. This notwithstanding, the proposed model sheds light on several other aspects of international research collaboration at the individual level.

Being male and having parents with tertiary education both increase the likelihood of collaborating with international colleagues while belonging to the oldest generation surveyed – that is, people who were born before 1950 and were 57 years old or more at the time of the survey – decreases it.

Education has a clear impact on international collaboration as academics who have earned a postdoctoral degree are more likely to collaborate internationally than colleagues with a lower degree, PhD included. Moreover, having earned an advanced degree abroad has a strong impact on future international collaboration. Working at universities and holding a senior rank both increase the likelihood of collaborating with international colleagues.

Working in a country where English is not the main or the official or one of the official languages fosters international research collaboration. Further, academics primarily using English in research – either as their mother tongue but especially as their second language – are more likely to collaborate with international colleagues.

Among structural factors, country size has a strong impact on international research collaboration as academics working in small countries are more likely to collaborate than their colleagues working in medium size countries who in turn are more active in international collaboration than their colleagues working in large countries. Albeit to a lesser extent, the economic status of the country also plays a role as academics working in mature economies are more likely to be involved in international research collaboration. Finally, at the time when the survey was carried out, working in China or in other Asian countries hindered international research collaboration.

All in all, it can be argued that the prototypical academic figure in international research collaboration is a man, in his mid-50s or younger, working as a professor in a field of the natural sciences at a university in a small, non-Asian and non-English-speaking country with a mature economy. This man comes from a highly educated family and has earned a postdoctoral degree abroad. In his research work, he primarily employs English as his second language.

The results of the multivariate analysis point out some possible drivers of international collaboration in research. The CAP survey is an imperfect tool to study differences across disciplines because it forces analysts to merge together, in broad disciplinary groupings, fields which are quite different from one another. Nevertheless, the analysis of CAP data shows that international collaboration in research is most likely within the broad field of natural science. Further, a quite clear divide emerges between the fields of natural and medical sciences, on the one hand, and the fields of humanities and social sciences, on the other hand. As these findings are controlled for a vast set of other relevant factors, it is possible to conclude that international collaboration among academics is either fostered or hindered by specific traits characterizing each discipline, or each disciplinary field, namely, epistemic and organizational traits. Findings suggest that international research collaboration is more likely to occur in fields where academics share common languages and research programs worldwide.

Findings also suggest that other characteristics of research have an impact on international collaboration. The CAP questionnaire asked respondents to what extent they would characterize their primary research as basic or theoretical and as applied or practically oriented.¹ The results of the multivariate analysis show that, controlling for all other factors, there are two modes of research associated with international collaboration: a mode fully characterized as basic or theoretical but also a mode combining the two main research orientations. Only purely applied research appears to be dissociated with international collaboration, possibly because this type of research is more linked to local settings.

Looking at the possible drivers of international research collaboration, two other findings should be emphasized. First, the characteristics of academics' education influence their subsequent chances of collaborating with international colleagues. Earning an advanced degree abroad, either a PhD or a postdoctoral degree, is one of the factors having the strongest impact on international research collaboration later in academics' careers. This finding suggests that study mobility at advanced levels is a key factor in fostering international research collaboration. Likely, personal resources fostering international research collaboration, such as international

¹The answers to these two independent questions ranged between "very much" and "not at all." This way of inquiring research's characteristics provides the opportunity for a more nuanced understanding of the divide between basic and applied research. At one pole, it is possible to identify a purely basic or theoretical research, that is, a type of research very much characterized as basic or theoretical and not at all as applied or practically oriented. At the opposite pole, it is possible to identify a purely applied research, that is, a type of research very much characterized as applied and not at all as theoretical. In between these two extremes, it is possible to identify several other types of research variously combining basic/theoretical and applied/practically oriented characters.

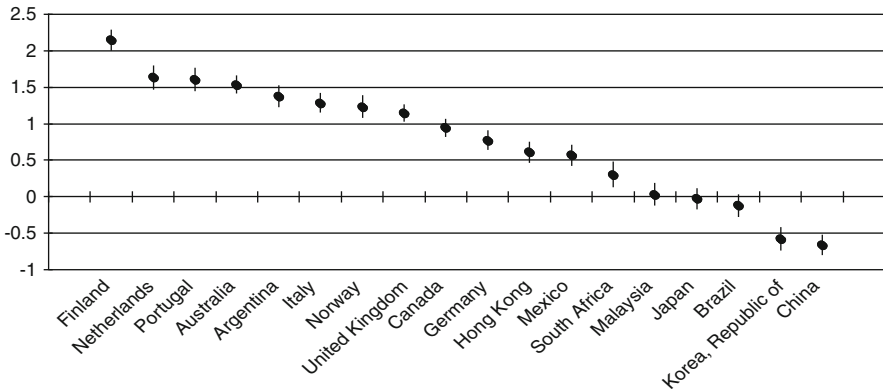


Fig. 7.1 Net effect of the country of current employment on the probability of collaborating with international colleagues in research (parameter estimates with multinomial logistic regression model) (Reference Category: United States of America. Source: CAP Data September, 2011. Notes: the relationship is controlled for factors included in the model presented in Table 7.4 except for context factors; in the figure, β coefficients of logistic regression for each country are presented while in the text we refer to odd-ratios version of estimates, $\exp(\beta)$)

visibility and professional expertise, or the capacity to attract external funding, start to accumulate very early in academics' careers. Further, access to international research networks seems to be favored by having earned an advanced degree abroad.

Second, all other things being equal, the mere size of the country – and hence of the higher education system – where academics work shapes their level of international activity. Academics working in small countries are three times more likely to collaborate with international colleagues than their colleagues working in large countries. Likely, human and other resources available in small systems are simply insufficient to carry out research successfully, especially in some fields.

Results from the analysis not only identify the possible drivers of international research collaboration but also provide some insight into its unequal nature. As we have suggested, international research collaboration is less open to academic women, to academics coming from less educated families, to academics who have not earned an advanced degree, to academics working in emerging countries, and to academics working in Asian countries. Some of the CAP findings suggest that at the time when the survey was carried out international research collaboration displayed a rather elitist character and that international research networks were centered in the Western world.

In order to investigate the geography of international research collaboration, it is possible to exclude from the multivariate model illustrated above the four context factors related to country size, linguistic tradition, Asian region, and economic status while adding to it the 18 countries and the special administrative region – Hong Kong – participating in the CAP survey. Assuming the United States as reference country and controlling for all the mentioned factors, it is possible to investigate the net impact that working in a country has on international research collaboration (Fig. 7.1). Participating countries may be divided

into four groups. The first group includes four countries for which the model does not yield statistically significant estimates: South Africa, Malaysia, Japan, and Brazil. The second group consists of two countries, namely, China and South Korea. Working in these countries has a negative impact on international research collaboration compared to the United States.² The third group includes Mexico, Hong Kong, Germany, and Canada. Academics working in these countries are more or less twice as likely to collaborate with international colleagues than American academics.

Finally, the fourth group includes countries where international research collaboration is very pronounced. In fact, academics working in the United Kingdom, Norway, Italy, Argentina, Australia, Portugal, the Netherlands, and Finland are from three to eight times more likely to collaborate with international colleagues than American academics. Other things being equal, academics from these eight countries are more likely to be involved in international research networks than others.

7.4 International Collaboration, Productivity, and Co-authorship

International research collaboration is a complex process which includes not only the involvement in cooperative networks and the participation in international projects but also the outcomes of such international activity. In fact, collaboration in research with international colleagues may result in the dissemination of findings through publications written alone or together with other authors. Thus international collaboration, scientific productivity, and coauthorship may be related. We can speculate that participating in international research networks could either increase the number of individual scientific products or provide more opportunities for joint publications with colleagues of other countries, or both. In this last section of the chapter, we focus firstly on the relationship between international

²At an advanced stage of the CAP study, a different classification of Chinese institutions of higher education was proposed including within the category “universities” only national public universities while including not only local public colleges but also local public universities – previously considered as “universities” – within the category “other higher education institutions.” As a consequence, authors have rerun the data analysis on international research collaboration in order to check possible differences. No significant difference in results was found between the model including context factors presented in the text and the same model using the new classification of Chinese institutions. Further, the two models without context factors but including participating countries yield almost identical results. The net impact of working in China remains negative, but the corresponding estimate loses statistical significance suggesting the need to be cautious in drawing conclusions. Our interpretation is that although international research collaboration was more frequent in Chinese national public universities, this did not change the overall position of China within international research networks at the time of the survey.

collaboration and productivity and, secondly, on the relationship between international collaboration and international coauthorship.

7.4.1 International Collaboration and Productivity

A growing body of literature addresses the measurement of faculty productivity, as individuals, institutions, and innovation clusters bridging the gap between industry and scientific research find increasing value in the quantification of academic performance indicators. In general, the study of research productivity has focused on the number of scholarly journal articles or books published per individual faculty member during a given time period (Olson 1994; Webber 2011). However, a single indicator of an individual researcher's contributions is hollow at best and a disservice to the academic profession at worst. In addition, publication rates and the perceived value of coauthorship vary across disciplinary fields (Bazeley 2006). As Rhoades (2001) indicated, the prevailing focus on individual performance masks the supportive roles of managerial professionals and other institutional factors. Further, disciplinary, institutional, and systemic stratification may contribute to or inhibit individual scholarly performance.

In their summary of earlier studies on research performance, Dundar and Lewis (1998, p. 614) provided a list of attributes associated with research productivity, as understood by the number of scholarly publications per faculty member. These include individual attributes (innate abilities, personal influences including training) as well as institutional or departmental attributes. The latter are further divided into "institutional structure and leadership" factors and "departmental culture and working conditions." Their typology did not account for research collaboration, or international ties between researchers and units, although recent scholarship attests to the influence of internationalization on research performance (Abramo et al. 2009, 2011).

Indeed, it may be that internationalization has eclipsed other institutional or unit effects on research productivity, or at least, internationalization might be an index of combined effects contributing to research strength. Building upon an earlier finding by Kyvik (1995), Horta and Lacy (2011) found that within the natural sciences, research unit size was not particularly relevant for research output, but faculty in larger units were more likely to publish in international journals, thus positively affecting international visibility of the research. If academic resources and rewards are to be increasingly consolidated into a set of "world-class universities" as suggested by Salmi (2009), then it may be that the degree of internationalization and the research intensity of a given unit (or individual researcher within a unit) will continue to overlap in ways that make it difficult to distinguish one attribute from the other.

For the purpose of this volume, we were interested, first, in the relationship between international collaboration and research performance in the form of scholarly articles and conference papers. Participants in the CAP survey were asked,

Table 7.5 Articles published in an academic book or journal by international collaboration and discipline, 2007–2008

Discipline	International collaboration	N	Mean	Std. error	95 % Confidence interval for mean	
					Lower bound	Upper bound
Educ and hum	Yes	1,207	6.55	0.228	6.1	7
	No	1,981	3.73	0.101	3.53	3.93
Socl sci, bus, and law	Yes	1,352	7.08	0.208	6.67	7.49
	No	2,052	3.84	0.107	3.63	4.05
Science	Yes	2,166	9.43	0.308	8.83	10.04
	No	1,720	5.21	0.17	4.87	5.54
Engin, manufact, const, and arch	Yes	996	8.37	0.38	7.62	9.11
	No	1,376	5.13	0.233	4.67	5.58
Med sci, health sci, and socl ser	Yes	1,212	11.73	0.403	10.94	12.52
	No	1,406	6.66	0.273	6.12	7.19

Source: CAP data, September 2011

“How many of the following scholarly contributions have you completed in the past three years?” with the number of “articles published in an academic book or journal” and the number of “papers presented at scholarly conferences” being two of several possible responses. We have selected these two forms of research output for their relevance to other studies on academic performance, but we recognize as well the importance of authored books, edited books, research reports, professional articles written for newspapers and magazines, and patents secured on a process or invention. Further examination of these other indicators of research performance are warranted, for the reasons outlined above. However, at an initial level of analysis, the examination of articles published in journals and books (including book chapters) and conference papers is wider in scope than many previous studies on research productivity, while still focusing on those aspects which are commonly used to assess individual performance. We analyze these responses relative to a yes or no response to the question “Did you collaborate with international colleagues in this academic year?”³

First we present the results of our analysis of publication rates and international collaboration by field of study.

A one-way between subjects ANOVA was conducted to compare the effect of international collaboration on the publication rates of faculty in the five disciplinary categories (Table 7.5). There was a significant effect of international collaboration on disciplinary publication rates (at the $p < .05$ level) for the five disciplinary groups.

³ Survey participants who were not active in the current academic year of the survey but were active in the previous were asked to consider that year’s activities when marking their selections. It is to be noted that while the question on international collaboration refers to the current academic year or the previous one, the question on scholarly contributions refers to the past three years.

Table 7.6 Papers presented at a scholarly conference, by international collaboration and discipline, 2007–2008

Discipline	International collaboration	N	Mean	Std. error	95 % Confidence interval for mean	
					Lower bound	Upper bound
Educ and hum	Yes	1,207	6.63	0.256	6.13	7.13
	No	1,981	2.99	0.09	2.81	3.17
Socl sci, bus, and law	Yes	1,352	6.8	0.214	6.38	7.22
	No	2,052	3.14	0.105	2.94	3.35
Science	Yes	2,166	7.52	0.214	7.1	7.94
	No	1,720	3.7	0.142	3.42	3.97
Engin, manufact, const, and arch	Yes	996	9.35	0.414	8.54	10.16
	No	1,376	4.96	0.216	4.53	5.38
Med sci, health sci, and socl ser	Yes	1,212	9.93	0.383	9.18	10.68
	No	1,406	5.2	0.218	4.78	5.63

Source: CAP data, September 2011

Across all fields, those faculty who collaborated with international colleagues in the year previous to the CAP study had published more articles in academic books or journals on average when compared with their colleagues in the same field who did not recently collaborate internationally. The international collaborators published almost twice as many articles as those who did not collaborate internationally. Consistent with the literature on disciplinary differences in publication rates, over the 3-year period that the CAP survey participants were asked to consider, those in the medical sciences, health-related sciences, and social services area published the most articles in academic books or journals. Internationally collaborating faculty in this area reported publishing 11.7 articles on average, while those who did not collaborate recently with international colleagues had published 6.7 articles in the 3-year period. In the areas of teacher training and education sciences and humanities and arts (Bazeley 2006), internationally collaborating faculty published 6.5 articles on average over the 3-year period, compared to 3.7 on average by their non-internationally collaborating peers. The pattern is consistent with the other three disciplinary categories.

A similar pattern was found for the rate of conference papers presented by internationally collaborating faculty, by disciplinary category (Table 7.6).

The average rate of paper presentations was again about double for the internationally collaborating faculty compared with their non-collaborating disciplinary peers. Faculty in the medical sciences, health-related sciences, and social services were again more likely to present papers at scholarly conferences than their counterparts in other fields of study, and internationally collaborating faculty in these areas presented 9.9 papers on average over the 3-year period under consideration compared to 5.2 on average by non-internationally collaborating faculty. Internationally collaborating faculty in the engineering, manufacturing,

construction, and architecture group presented 9.3 papers on average, compared with 5 for the non-internationally collaborating faculty. Likewise, non-internationally collaborating faculty in the sciences presented 3.7 papers on average while their internationally collaborating colleagues presented 7.5 papers. In the social and behavioral sciences, business and administration, economics, and law category, international collaborators presented an average of 6.8 papers (compared to their peers at 3.1 papers). The internationally collaborating faculty in teacher training and education sciences and humanities and arts presented 6.6 papers on average compared with 3 papers presented by their non-internationally collaborating colleagues.

7.4.2 International Collaboration and Coauthorship

Coauthorship is considered one of the reliable indirect indicators of international collaboration (Slipersaeter and Aksens 2010). It can be argued that if coauthorship increases, scientific collaboration across national borders has increased. Further, coauthorship gives evidence of the extent to which territorial borders are permeable in both research and higher education activities. If scholars publish together, this means that ideas are not contained within national borders but flow across them. Thus, we can also consider coauthorship as an indicator of knowledge transfer across borders. While collaborating with international colleagues in research efforts may be considered a more informal aspect of the internationalization of the academy, coauthorship with colleagues located in other countries may be understood as a more formal one, based on written communication aimed at disseminating research results through publications.

In addition to data on international research collaboration, the CAP survey collected data on international coauthorship. In particular, respondents were asked what percentage of their publications over the previous 3-year publications were coauthored with colleagues located in other, that is, foreign, countries. Thus, collected data provide the opportunity for a deeper look into the relationship between international research collaboration and international coauthorship, highlighting the actual relation between the informal and formal dimensions of the same phenomenon.

As we have done to investigate the relation between international collaboration and scientific productivity of faculty, we have again used the ANOVA technique to examine how international collaboration either increases or decreases the percentage of products coauthored with colleagues working in a foreign country. Also in this case, we have used the discipline of the current academic unit, coded as usual following the ISCED scheme (UNESCO 2006), as a control variable.

Table 7.7 presents the average percentage values of products coauthored per individual, by response to the question about international collaboration, controlling for discipline of current academic unit. As expected, the table shows a strict relation between international collaboration and coauthorship with colleagues of other

Table 7.7 Percentage of product coauthored with colleagues located in other (foreign) countries by international collaboration and discipline, 2007–2008

Discipline	International collaboration	N	Mean	Std. error	95 % Confidence interval for mean	
					Lower bound	Upper bound
Educ and hum	Yes	1,334	10.46	0.523	9.43	11.48
	No	1,882	1.58	0.237	1.12	2.04
Socl sci, bus, and law	Yes	1,586	17.2	0.625	15.97	18.42
	No	1,881	2.05	0.242	1.57	2.52
Science	Yes	2,386	31.22	0.651	29.94	32.5
	No	1,730	4.4	0.358	3.7	5.1
Engin, manufact, const, and arch	Yes	1,069	20.26	0.822	18.65	21.87
	No	1,295	3.67	0.405	2.88	4.47
Med sci, health sci, and socl ser	Yes	1,088	25.05	0.878	23.32	26.77
	No	1,039	3.8	0.633	2.56	5.04

Source: CAP data, September 2011

countries. Within all the disciplinary groups, the average difference is stochastically significant ($p < .05$).

The first hypothesis about the coherence between the formal and informal aspects of academic internationalization has been widely confirmed by data: people who have experienced international collaboration show an average rate of international coauthorship six times higher than those who have not. Taking in account the difference among disciplines, the impact of international collaboration on coauthorship seems to be more relevant for faculties of social and behavioral sciences, business and administration, economics, and law. For these disciplines, the average rate of international coauthorship is 17.2 % (eight times higher) in the case of international collaboration versus 2 % in the case of non-collaboration. Moreover, the fields of teacher training and education sciences and humanities and arts also show a quite high incidence of international collaboration (a multiplicative factor around seven times higher) and, at the same time, the lowest average degree of international coauthorship, that is, 10.5 % for those who collaborate and 1.6 % for those who do not.

In contrast, the impact of international collaboration on coauthorship is lower for engineering, manufacturing, construction, and architecture. In this case, faculties reporting international collaboration have a rate of coauthorship only five times higher (20 vs. 4 %). Life sciences, physical sciences, mathematics, computer sciences, agriculture, medical and health-related medical sciences, health-related sciences, and social services show a relatively high degree of coauthorship and also a rather strong influence of international collaboration as a multiplicative factor on the probability of joint publication with colleagues from other countries (about six times higher).

In summary, we find that international collaboration is strongly associated with international coauthorship and productivity, which is not surprising. However, there are some differences by discipline in the degree of intensity of this relationship. In fields where the average rate of coauthorship is higher, the relative impact of international collaboration is lower. On the contrary, in the fields where the average rate of coauthorship is lower, international collaboration has a stronger impact on international coauthorship. Overall it can be said that internationalization of research is associated with higher productivity, but we find that disciplinary characteristics are still salient, leading to differences in the magnitude of the effects of international collaboration as seen through the relative incidences of international coauthorship.

7.5 Conclusions

While the CAP dataset is very useful for investigating the relationships among different dimensions of international research collaboration, it also has some limitations. The first concerns the study of international research collaboration over time. Comparing data from the Carnegie and the CAP surveys (see Chap. 4) provides useful insights on changes in international collaborative research efforts. Some countries, however, where internationalization in research is rather intense – such as Finland, Canada, Norway, and Italy – are excluded from the comparison due to the fact that they were not part of the 1992 Carnegie survey, limiting our understanding of change in international research collaboration. Change may be assessed comparing responses of faculty in different age cohorts as well. It has been shown that the younger generation seems to have a higher propensity toward international research collaboration in comparison with their older colleagues. Nevertheless, it is not easy to determine to what extent this depends on the fact that engagement in research decreases with age and to what extent it depends on historical changes in communication technologies and international relations.

Another important limitation is related to the study of international research collaboration across space. The CAP dataset provides no geographical information on the countries where respondents' foreign collaborators or coauthors are located. Consequently no analysis of international networks of research collaboration or coauthorship and of regionalization processes in research collaboration and joint dissemination is possible. Finally, although the geographic scope of the CAP data is good, our ability to draw conclusions on international research collaboration and dissemination within meaningful clusters such as the European Union or less developed countries is limited.

These weaknesses notwithstanding, the CAP study has important strengths. Thanks to the wide range of dimensions of academic life that are addressed, CAP data provide a unique opportunity to investigate the drivers of – or at least the factors associated with – international research collaboration; to detect meaningful differences among academics; to study the relationship between informal aspects of international research collaboration, such as personal collaboration with

international colleagues, and more formal aspects, such as coauthorship in publication; and to analyze the impact of international collaboration on key outcomes such as research productivity.

Summarizing the main results of our analyses, we note that the data confirm the existence of differences among disciplines regarding individual international collaboration practices in research. As shown in previous studies, the analysis points out a divide between the natural and medical sciences cluster, where collaborating with international colleagues is more common, and the cluster formed by the social sciences, business, law, and humanities, where international research collaboration is less frequent. Data also make it possible to assess the consequences of international collaboration, studying its impact on research productivity. The net impact of international collaboration on individual productivity is positive in all disciplines – both those where international collaboration is widespread and those where it is less frequent – with no significant differences among them. In short, international collaboration is generative. More research productivity arises from sharing knowledge and expertise across national borders than from internal collaboration or no collaboration at all. This increase in research productivity is a shared benefit for partnering researchers and their respective national systems.

Our results also support a clear association between the informal and the formal dimensions of international collaboration. Again, in spite of different levels of joint publication of articles, book chapters, and papers with colleagues from other countries across disciplines, there is a positive net impact of individual international collaboration on coauthorship with foreign colleagues in all fields. It is worth noting that while the impact of international collaboration on productivity is very similar across disciplines, collaborating with international colleagues has a higher impact on coauthorship in the humanities and the social sciences and a lower one in the technical and scientific fields. Thus, it seems that informal interpersonal relations are more important for academics working in the “soft” disciplines than in the “hard” disciplines, as they are more conducive to international coauthorship. As international collaboration in the “soft” fields may not be facilitated by large, unit-level research programs but rather negotiated by individual researchers with shared interests, the leveraging effects of international collaboration may be felt more strongly at the individual level: a “more with less” strategy. Further, the individual characteristics necessary for academics in “soft” fields to collaborate internationally may also be a form of research capacity, making them more likely to achieve high levels of research output compared with peers without international collaborators.

Besides discipline, the type of research in which academics are engaged is significant. Both basic/theoretical research and research combining theory and application are associated with international collaboration, while purely applied research is not. Applied research is often linked to local labor markets, manufacturing centers, and natural resources, with partnerships from local governments and industry. These concerns and connections may provide fewer incentives for researchers to seek external collaborators, in that the rewards and funding for applied endeavors are often endemic to specific innovation clusters and regions. Further, applied research leading to commercialized outputs (such as patents and products) may be

incompatible with widespread knowledge sharing prior to the initial stages of technology transfer.

The multivariate analyses reported in this chapter have shown the persistence of inequalities in the internationalization of research at *macro*, *meso-organizational*, and *micro* levels. Starting with structural disparities at the macro level, we have demonstrated the net effect of size of the country of academics' current employment: those who work in small countries are more likely to be involved in international collaboration. At the same time, the CAP data point out the twofold role of the English language in the internationalization of research. On the one hand, English proficiency is a key condition to increase individual international research collaboration. On the other, academics from English-speaking countries are less likely to be involved in international collaboration. English proficiency is a key research capacity for some academics, permitting them to participate in international projects and knowledge dissemination. For researchers who come from an English-speaking country, this proficiency is not so much a strategic research capacity as it is an often unexercised capability, where speaking English is so taken for granted that it is not understood as an asset. Furthermore, in English-speaking countries, the opportunity structures within the educational and innovation systems are perhaps strong enough that fewer researchers feel the need to extend their networks to other countries.

Introducing each country's economic status into the multivariate analyses, we noted a positive net effect of the strength of the domestic economy on individual participation in international research.

All in all, the data suggest that faculty working in small, economically prosperous, and non-English-speaking countries have a higher propensity to collaborate with foreign colleagues.

Moving to the *meso-organizational* level, analyses have shown the positive effects of the type of institution and of the individual rank of respondents within the institution. Faculty working in universities are more likely to be involved in international collaboration, and a higher faculty rank further increases that likelihood.

Finally, individual inequalities still play a crucial role. Firstly, ascriptive dimensions have an important net effect: male faculty are 30 % more likely than female faculty to collaborate internationally, and people with highly educated parents are much more likely to collaborate with international colleagues. The positive function of educational qualifications is important as well. The level of individual educational attainment, all other conditions being equal, seems to significantly increase the opportunities of collaborating internationally. In particular, earning a PhD, or another advanced degree, abroad plays a substantial role. Academics who have spent the last part of their education abroad are more likely to be involved subsequently in international collaboration. Thus, both education and family cultural and social capital influence individual opportunities to be involved in international research. The availability, early in life, of a rich international network of contacts built during study periods spent abroad but also deriving, in some cases, from one's family can be considered as a powerful multiplicative factor facilitating involvement in international research collaboration.

The correlations between faculty characteristics and internationalization of research are perhaps the most important for policy makers, as they highlight aspects likely to affect research productivity and collaboration across all fields. While the findings presented in this chapter show that international collaboration and coauthorship are associated with increased research performance, we cannot determine the relative impact of such collaborative research beyond quantifiable gains in productivity. Policies and programs that enhance academic mobility and international networking capacity will likely foster higher research productivity for those involved, particularly if the opportunities occur early in one's career; however, we cannot say that this will lead to more meaningful research. Strategic research investments would target both researchers with the most to gain from international experiences and research topics that have the greatest potential impact for society at the supranational level. This type of investment would require rethinking the competitiveness agenda of many national innovation systems, so that external collaborations would have wide-reaching benefits.

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Chapter 8

Regionalisation of Higher Education and the Academic Profession in Asia, Europe and North America

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8.1 Introduction

The research on the regionalisation of higher education dates back to the 1970s (Fraginière 1976; Lane 1984). Since the 1990s, increased economic globalisation, the rapid growth of cooperation in the economy and trade and the internationalisation of higher education have generated demand in individual countries for a regional collaborative framework in higher education and other spheres (Mucchilli et al. 1998; Börzel 1999; Hix and Goetz 2000; Agarwala and Prakash 2002; Teichler 1999, 2004; Brooks and Stone 2010; Knight 2011; Neubauer 2012). However, a precise definition of regionalisation is difficult as it can be made from varying perspectives. In this chapter, specifically, regionalisation is understood as a process of working on commonly shared goals and promoting closer collaboration and confidence among member countries in the defined region by establishing generally acknowledged values and standards.

This chapter is mainly concerned with the regionalisation of higher education and the international dimensions or activities of the academy in Asia, Europe and North America. The chapter consists of four sections. The first three sections each present a case study of Asia, Europe and North America, respectively. Further, each

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section contains a brief analysis of policies and strategies for intra-regional cooperation of higher education systems specific to the discussed geographical region, followed by a general overview of the specific international activity of the academic staff, including their mobility, teaching and research and use of foreign languages based on major findings from the Changing Academic Profession (CAP) surveys. The concluding fourth section explores the character of the international dimensions and activities of the academy in each region, identifies major issues concerning academic work and activities from the perspectives of regionalisation and also discusses strategies that can facilitate the development of regionalisation of higher education in specific regions.

8.2 The Case of Asia

Compared to earlier research in Europe and North America, with the exception of a few research papers (Huang 2011; Marginson et al. 2011; Marginson 2012) and the paucity of data grounded empirically in statistical analysis and international surveys, little is known about the regionalisation of higher education in Asia and the international activities undertaken by the academy. Therefore, this case study on Asia is based on two main empirical sources: (1) archival analysis of relevant policy statements of stakeholders and existing studies on the topic and (2) statistical data from the UNESCO and national surveys implemented in 18 countries and Hong Kong in 2007–2008 based on the CAP project. It should be noted that though more up to date figures are now available, this study only uses data on the international mobility of students in 2007, in order to provide comparability with the 2007–2008 CAP data about the international movement of academics. Furthermore, the discussion of Asia refers to five case studies, including Japan, Korea, China, Hong Kong and Malaysia. All five higher education systems took part in the CAP project in 2007–2008, using the common CAP questionnaire, along with 14 other countries representing North America, Europe, Latin America and Africa.

8.2.1 Emergence and Progress of Regionalisation Since the 1960s

Concrete action towards regionalisation began earlier in Southeast Asia than in Northeast Asia. Beginning in the 1960s, considerable initiatives, mainly driven by political factors, emerged designed to establish subregional collaboration and facilitate commitment to regionalisation in the Southeast Asian countries. Those efforts led to the foundation of various regional political organisations. Indeed, two organisations have played major roles in stimulating the regionalisation of

Southeast Asian countries: the Association of South-East Asian Nations (ASEAN), created in 1967,¹ and the Asia-Pacific Economic Cooperation (APEC) which dates from 1989.² Further, to foster educational collaboration, the South East Asian Ministers of Education Organization (SEAMEO), a regional intergovernmental organisation, was established in 1965.³

Fifty years later, as an organisation committed to nurturing human capacities and exploring peoples' fullest potential, the SEAMEO, has worked to further aspirations of development in the region. Its agenda is to improve people's lives through improved quality and equity in education, preventive health education, maintaining culture and tradition, promoting information and communication technologies, language programmes, the alleviation of poverty and the fostering of agriculture and natural resources. In recent years, the SEAMEO has carried out numerous joint projects with East Asian countries, particularly China, Japan and Korea, and has also collaborated with European organisations and individual countries on a wide range of education disciplines.

In order to promote political confidence and commitment to regionalisation, numerous declarations, treaties, conventions and agreements have been made in Southeast Asia. In addition to the official regional organisations, various summits, policy dialogues and task forces have been organised in the region. For example, the establishment of the Regional Institute for Higher Education and Development (RIHED) in 1970, the ASEAN Ministerial meeting in 1971, the Regional Centre for Higher Education and Development in 1993 and the ASEAN University Network in 1995, all clearly illustrate the impetus made by Southeast Asian countries towards the regionalisation of higher education.

Since the late 1990s, closer collaboration between individual countries in Southeast Asia and Northeast Asia has gradually developed in both trade and

¹The six original members of the Association of South East Asian Nations (ASEAN) were Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand. The four members that joined later were Vietnam in 1995, Laos and Myanmar in 1998 and Cambodia in 1999. Since 1997, ASEAN has undertaken various collaborative activities with three East Asian countries, China, Japan and Korea, leading to the emergence of a new regional organisation, ASEAN plus Three (APT or ASEAN+3).

²The idea of APEC was firstly publicly broached by the then Prime Minister of Australia, Mr. Bob Hawke in 1989. Later that year, 12 Asia-Pacific economies met in Canberra, Australia, to establish APEC. The founding members were Australia, Brunei Darussalam, Canada, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Thailand and the United States. In 1991, China; Hong Kong, China and Chinese Taipei joined APEC. Mexico and Papua New Guinea followed in 1993. Chile acceded in 1994. In 1998, Peru, Russia and Vietnam joined, taking the full membership to 21. Between 1989 and 1992, APEC met as an informal senior official and Ministerial level dialogue. In 1993, the then United States President, Mr. Bill Clinton, established the practice of an annual APEC Economic Leaders' Meeting.

³The South East Asian Ministers of Education Organization (SEAMEO) is an intergovernmental organisation of Southeast Asian countries designed to promote regional cooperation in education, science and culture in the region. Currently, it has 11 member countries: Brunei, Cambodia, Indonesia, Laos PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste and Vietnam.

education. In January 2010, the China-ASEAN Free Trade Area (CAFTA)⁴ was officially launched. This created a free trade area four times larger, in terms of population, than the European Union. Specifically focusing on collaboration in tertiary education, the East Asia Vision Group (EAVG) was set up through an initiative of the South Korean government in December 1998. The EAVG is, so far, the closest East Asian nations have come to a preliminary constitutional effort to consolidate the ASEAN+3 (China, Japan, South Korea). A total of 20 intellectuals (two per country) met several times and, in 2001, submitted a landmark prospective report with recommendations on educational cooperation. These recommendations were incorporated into an East Asia Study Group, which submitted another report at a meeting in Cambodia in November 2002 (East Asia Vision Group, 2001; East Asia Study Group, 2002). Indeed, the EAVG's short-term recommendations called for the provision of assistance and cooperation in human resources development and urged cultural and educational institutions to work together to promote a strong sense of regional identity and an East Asian consciousness. In accordance with the final report accepted by the ASEAN+3 leaders in October 2003, 14 recommendations were made in relation to the economic, educational and social/cultural sectors, and, therefore, working groups were established. The educational recommendations covered lifelong learning programmes; credit transfer systems; scholarships and exchange programmes for students, faculty and staff; cooperation in research and development; centres of excellence, including e-learning; and curricular development as the basis of establishing common, regional qualification standards among interested centres and institutions (Yepes 2006).

In the meantime, continuous and rapid expansion of intra-regional trade has allowed three countries, China, Japan and South Korea, to undertake a wide range of collaborative activities in education. The most recent effort of this kind was the launch of the Campus Asia Project in April 2010 (MEXT 2011), aimed at facilitating regional mobility of students, faculty and researchers and developing further collaboration in higher education. Its major priorities are as follows:

- Establishment of a mutual understanding concerning exchange programmes and quality assurance.
- Elaboration of guidelines for exchange programmes, including credit transfer and grading policies.
- Implementation of a pilot programme and identifying the necessary support.
- Enhancement of mutual understanding on university evaluation, including publication of a common glossary of quality assurance, information-sharing on university evaluation and mutual visits to study evaluation activities.

Within the framework of this programme, the three countries have formulated national policies and strategies to further integrate their higher education systems. These initiatives include the provision of financial support to build regional university networks, to design joint curricula and joint degree programmes that combine the three

⁴China-ASEAN Free Trade Area (CAFTA) includes 11 countries: Brunei Darussalam, Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Thailand, the Philippines, Singapore and Vietnam.

countries' cultural and academic strengths and to provide more English-taught degree programmes. Currently, major universities in Japan and Korea are expanding their English language lectures and degree programmes for undergraduate and graduate studies in order to attract more students from other Asian countries (KEDI 2009; MEXT and KEDI 2009).

These initiatives have been influenced considerably by the Bologna Declaration and the subsequent activities in Europe. For, the trilateral collaboration in Northeast Asia shows that these three countries have realised the importance of facilitating mobility, collaboration in educational programmes and the establishment of frameworks for quality assurance on a regional basis, as a means to enable their graduates to work in more than one country, thereby increasing trade and commercial activities in the region. Indeed, these new initiatives differ from their predecessors by placing an emphasis upon operational and practical measures. Several working groups have been formed to promote the regionalisation of Asian higher education through growing intra-regional mobility of students, faculty, researchers, university campuses, higher education services and online learning programmes; through institutional agreements, including an expansion in numbers of both joint higher education programmes and institutional agreements within Asia; through an increasing emphasis on collaborative regional research; and through the establishment of regional university networks and quality assurance frameworks. Altogether, this project can be considered as a first step towards the regionalisation of higher education in Northeast Asia and an early stage in the formation of an Asian Community.

8.2.2 *Individual Mobility in Asia*

8.2.2.1 Student Mobility

According to UNESCO, the proportion of all students from Asia and the Pacific region studying abroad *within (rather than outside) the Asian region* rose from 36 % in 1999 to 42 % by 2007 nearly equalling the proportion studying in North America (43 %). Students from Asia and the Pacific opt for a broad range of host countries. In some countries and territories, such as Indonesia, Japan, Korea, Vietnam, Hong Kong and Macao, students from Asia and Pacific have accounted for more than 90 % of the foreign students (UNESCO Institute for Statistics 2009). In China, Japan and Korea, the lists of the top five countries of origin of foreign students comprise, in addition to the United States, countries of the region, e.g. Vietnam, Thailand, Malaysia, Mongolia and Chinese Taipei⁵ (Editorial Board of China Education Yearbook 2009; MEXT 2008; UNESCO Institute for Statistics 2009).

Among students from the region (also including Macao and Hong Kong) studying outside the region, the top destinations are the English-speaking world, most

⁵Chinese Taipei is the designated name used by the Republic of China (ROC), commonly known as Taiwan, to participate in some international organisations and almost all sporting events.

Table 8.1 International mobility and migration within and outside region in Asia, Europe and North America, by country mean percent^a 2007–2008

Types of mobility and migration ^b	Asia		Europe		Northern America	
	Within	Outside	Within	Outside	Within	Outside
Early immigrants	1	1	2	1	1	2
PhD immigrants	0	1	1	1	1	3
Professional migrants	1	5	3	1	2	3
Study mobile academics	7	14	3	1	5	2
PhD mobile academics	1	8	2	1	3	3
All immigrant/mobile acad.	9	29	11	5	12	13
Non-mobile academics	61		78 ^c		75	

Source: CAP data, September 2011

^aResponses 1 and 2 on a scale from 1=Strongly agree to 5=Not at all agree

^bEarly immigrants, foreign at birth, study in the country of current work (irrespective of location of PhD); PhD immigrants, foreign at birth, study abroad, PhD in country of current employment; professional migrants, foreign at birth, study and PhD abroad, employment in the country of current employment; study mobile academics, citizenship both at birth and currently of the country of current employment, degree abroad, PhD in the country of current employment; PhD mobile academics, Citizenship both at birth and currently of the country of current employment, degree abroad or at home, PhD abroad; and non-mobile academics, citizenship both at birth and currently, degree, PhD all of/in the country of current employment

^cThe figures for all immigrant/mobile academics and for non-mobile academics for Europe are higher than the figures presented above due to the fact that the Norway questionnaire did not differentiate within versus outside mobility

notably the United States, Australia and the United Kingdom. The pattern is different though, for students from Cambodia, Laos PDR and Myanmar, the major host countries are France, Vietnam and Thailand, respectively.

8.2.2.2 Mobility of Academics

Parallel to the rapidly increasing student mobility within the region, there has been a corresponding growth in the regional mobility of academics. For example, according to some data, 717 full-time foreign faculty members were recorded as employed in Japanese higher education institutions in 2003; 431 of them were from Asia, specifically China and Korea (Yamanoi 2007). According to a wider definition, the total number of foreign faculty members in all tertiary education institutions in Japan has increased by 35 % from 4,563 in 1995 to 6,152 in 2010 (MEXT 2010). For example, the number of faculty members from Asia at the University of Tokyo has grown from 23 in 2003 to 45 in 2010 (University of Tokyo 2010). Similarly, the number of professors from China and Japan at Korean higher education institutions has grown from 244 to 728 in 2008, although the share among all foreign professors (24 and 23 %) has not grown.

The CAP survey is a unique source by not confining itself to mobility at a certain historical moment, but rather, it illustrates the migration and mobility of academics over their lifespan. Altogether, as Table 8.1 shows, 39 % of the academics surveyed in Asia have crossed borders for study or research. Interestingly, this rate is higher than

Table 8.2 International mobility and migration within Asian countries and outside Asia, by country mean percent 2007–2008

Types of mobility and migration	China		Hong Kong		Japan		Korea		Malaysia	
	Within	Outside	Within	Outside	Within	Outside	Within	Outside	Within	Outside
Early immigrants	0	0	1	3	0	0	0	0	1	0
PhD immigrants	0	0	0	2	0	0	0	0	0	0
Professional migrants	0	0	3	26	0	0	0	0	2	1
Study mobile academics	1	0	10	27	3	1	6	13	14	31
PhD mobile academics	1	0	1	9	0	2	3	24	1	5
All immigrant/mobile acad.	2	1	15	68	4	3	9	37	18	37
Non-mobile academics	98		17		93		54		44	

Source: CAP data, September 2011

among the academics surveyed in North America (25 %) and Europe (22 %). However, in contrast to the other regions surveyed, most of the border-crossings of Asian academics have been between Asia and other regions (notably for study and doctoral training). The intra-regional migration and mobility of academics surveyed in Asia is slightly lower (9 %) than among those surveyed in North America and Europe.

With regard to the movement of academics among the individual higher education systems in Asia (see Table 8.2), the proportion of academics with a migration and mobility biography is by far the highest in Hong Kong (83 %) and also quite high in Malaysia (56 %) and Korea (46 %). In all three cases, intra-regional mobility holds true for a minority. As Table 8.2 shows, it is highest for Malaysia (18 %), almost as high for Hong Kong academics (15 %) and clearly lower for Korea (9 %). In contrast, cross-border movement is relatively rare among Japanese academics (4 %) and rare among Chinese academics (2 %).

8.2.3 *International Academic Activities: A Comparison Across Regions and Within the Asian Region*

While internationalisation of higher education is often described in terms of physical mobility of persons, such physical mobility can be understood just as one method of transferring knowledge across borders. The CAP survey also explored the extent to which the teaching and research activities, themselves, can be considered international. Unfortunately, no distinction has been made in the CAP questionnaire between regionally oriented and worldwide international activities. Therefore, this section only shows the extent of differences in international teaching and research activities between the regions and within Asia.

Table 8.3 Internationalisation of teaching and students in Asia, Europe and North America, by percentage 2007–2008

Activities	Asia	Europe	North America
International content/perspectives infused teaching	65	63	64
Teaching abroad	7	15	11
Currently, most of your graduate students are international	10	12	12

Source: CAP data, September 2011

Note: Responses 1 and 2 on a scale from 1=Strongly agree to 5=Not at all agree

Table 8.4 Internationalisation of teaching activities and students in Asian countries, by mean country percent 2007–2008

Activities	Country				
	JP	KR	CN	HK	MY
International content/perspectives in teaching	51	74	67	72	60
Teaching abroad	4	9	4	12	6
Currently, most of your graduate students are international	8	8	10	14	11

Source: CAP data, September 2011

Note: Responses 1 and 2 on a scale from 1=Strongly agree to 5=Not at all agree

8.2.3.1 International Aspects of Teaching

Table 8.3 shows a surprising similarity in the extent of involvement in international aspect of teaching *across* regions. On average, 63–65 % of academics in the three regions emphasise international content and perspectives in their teaching. Ten to twelve percent of the academics in the three regions teach a majority of foreign graduate students. In contrast, teaching abroad varies by region: Academics in Asia are, to a lesser extent, involved (7 %) when compared to North America (11 %) and Europe (15 %).

Within Asia (Table 8.4), academics of the various countries differ substantially less in the international aspects of teaching than in the extent of mobility and migration. The data in Table 8.4 shows the highest integration of international aspects into teaching in Korea (74 %) and Hong Kong (72 %), and the lowest in Japan (51 %). Similarly, about one-seventh reported that they taught a majority of foreign graduate students in Hong Kong compared to 8 % in both Japan and Korea. Finally, teaching abroad varied between 12 % of the academics surveyed in Hong Kong and 4 % of those in Japan.

8.2.3.2 International Aspects Research

Table 8.5 suggests that academics in Asia more closely resemble academics in North America than Europe in terms of the international aspects of research. The proportion of those collaborating with international colleagues is lowest in Asia (32 %) as compared to 44 % in North America and 60 % in Europe. This also holds true for co-authoring with colleagues located in other countries (8 % as compared

Table 8.5 Internationalisation of research activities in Asia, Europe and North America, by mean country percent 2007–2008

Activities	Asia	Europe	North America
International scope of research ¹	52	64	47
Do you collaborate with international colleagues? ²	32	60	44
Co-authored with colleagues located in other (foreign) countries ²	8	18	10
Published in a foreign country ²	30	46	26
International research funding ³	5	16	10

Source: CAP data, September 2011

¹ Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

² Affirmative responses

³ Means of adjusted percentages of all research external funds

Table 8.6 Internationalisation of research activities in five countries, by percentage 2007–2008

Activities	Country				
	CN	HK	JP	KR	MY
International scope of research ¹	67	65	47	33	50
Do you collaborate with international colleagues? ²	13	60	24	30	32
Co-authored with colleagues located in other (foreign) countries ²	1	16	8	7	10
Published in a foreign country ²	12	70	20	26	24

Source: CAP data, September 2011

¹ Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

² Affirmative responses

to 10 and 18 %, respectively) and for obtaining international research funds (5 % as compared to 10 and 16 %, respectively). However, the proportion of academics in Asia emphasising the international scope of research and publishing in a foreign country (52 %) is higher than that in North America (47 %), but lower than that in Europe (64 %). We note a similar pattern in regard to publishing in a foreign country (30 % as compared to 26 and 46 %).

The proportion of academics internationally active in research varies, to a greater extent, among Asian countries than the respective proportion active internationally in teaching. Again, we note that academics in Hong Kong are the most internationally active. Indeed, about two-thirds report that their research is international in scope (65 %), collaborate with international colleagues (60 %) and publish in foreign countries (70 %). Also, they are more active in co-authoring publications with colleagues in other countries (16 % as compared to 1–10 % in other Asian countries). However, involvement in international research does not differ substantially among the four indicators, as displayed in Table 8.6, for Japan, Korea and Malaysia. China is a special case. On one hand, two-thirds of the academics in that country underscore that the scope of their research is international (67 %), while, on the other hand, they are least visibly active internationally – in collaboration (13 % as compared to 24–60 %), joint authorship (1 % as compared to 7–16 %) and publishing abroad (12 % as compared to 20–70 %).

Table 8.7 Institutional and personal foreign language use in teaching and research in Asia, Europe and North America, by mean country percent 2007–2008

Activities	Asia	Europe	North America
Institutional language			
Teaching in a language other than primary institutional language of instruction	18	33	6
Publishing in a language other than primary institutional language of instruction	30	53	18
Personal language			
Primary teaching language is not mother tongue	25	16	13
Primary research language is not mother tongue	37	56	25

Source: CAP data, September 2011

It should be noted, however, that there exists a considerable difference in the magnitude of international teaching and research activities within Asian higher education systems when considering institutional type. Indeed, university faculty members were far more involved with these activities than those in “other” higher education institution. Moreover, senior academics conducted more international teaching and research activities than junior academics. This is especially true within the university sector. For example, with respect to the three major international teaching activities mentioned earlier, on average, the percentage of responses from university senior academics was 74, 11 and 13 %, respectively, while the percentage of junior academics’ responses from universities was 67, 7 and 5 %, respectively. Further, with regard to research activities, except for “co-authored with colleagues located in other (foreign) countries”, senior academics from universities were also more involved with all other international research activities than junior staff in universities.

8.2.3.3 Foreign Language Use

As Table 8.7 shows, more Asian academics use foreign languages in their teaching and research activities than North American academics, but fewer than European academics. In teaching in a foreign language (i.e. a language different from that usually spoken in that country), the respective proportions are 18 % in Asia as compared to 6 % in North America and 33 % in Europe. In terms of publishing in a foreign language, 30 % of Asian academic do so as compared to 18 % of North American academics and 53 % of European academics.

The use of foreign language in academic activities varies substantially among Asian countries, as Table 8.8 shows. The proportion of those teaching in another language is substantially higher in Korea (30 %) than in the other countries (12–16 %). Publishing in another language is most widespread in Japan (42 %), but also quite common in Korea (35 %) as compared to the other cases (12–26 %). One should bear in mind that the respective figures for Hong Kong are low because neither English nor Chinese is considered to be a foreign language there.

Undertaking academic activities by using a language that is not the first one or the mother tongue is quite frequent in the Asian countries. As the two bottom lines

Table 8.8 Institutional and personal foreign language use in teaching and research in five countries, by mean country percent 2007–2008

Activities	Country				
	CN	HK	JP	KR	MY
Institutional language					
Teaching in a language other than primary institutional language of instruction	12	14	12	30	16
Publishing in a language other than primary institutional language of instruction	26	12	42	35	18
Personal language					
Primary teaching language is not mother tongue	4	58	0	19	78
Primary research language is not mother tongue	6	67	13	44	84

Source: CAP data, September 2011

of Table 8.7 show, in teaching, this is more widespread in Asia (25 % on average across countries) than in Europe (16 %) and North America (13 %). In research, the use of a language that is not the first language or the mother tongue is more widespread in Asia (37 %) than in North America (25 %), but less than in Europe. As Table 8.8 indicates, the situation within Asia differs widely by country. Most academics in Malaysia (78 and 84 %) as well as in Hong Kong (58 and 67 %) primarily use a language that is not their first or mother tongue in teaching and research. In Korea, this is true for quite a number in research (44 %), but not for so many in teaching. In Japan (0 and 13 %) and China (4 and 6 %), using a language other than one's first or mother language in teaching and research is not widespread.

However, if we make a further analysis of differences in foreign language use by academics from universities by seniority, interestingly, in Asian universities, except for the fact that there is the same percentage of responses from both senior and junior academics to the item "Prime research language not first/mother tongue language", in university sector slightly more junior academics than senior academics seem to employ foreign languages in the four activities discussed above. The CAP international surveys suggest that, on average, the percentages of junior academics from universities who utilised another language that is not their first language or mother tongue in all the four activities are 27, 37, 35 and 46 %, respectively, while the percentages of senior staff in these activities are 21, 34, 34 and 46 %, respectively.

8.3 The Case of Europe

8.3.1 *Major European and International Higher Education Policies*

In outlining the major policies of internationalisation and Europeanization in higher education and research in recent decades, we have to distinguish clearly between higher education policies (including those directed at the higher education system in

general, academic staff at higher education institutions as well as notably teaching and learning), on the one hand, and, research policies (including research and technology across various institutional sectors) on the other. In the former area, a recent study argues that four waves of European higher education policies have stood out after the World War II. These were championed by four different supranational actors, each addressed to different national audiences, and varied in their conceptual underpinnings (Teichler 2010, on the history of higher education in general see Rüegg 2011).

First, in the 1950s, efforts started to facilitate student mobility in Europe with the help of conventions for the recognition of entry qualifications, study periods and degrees of mobile students. The key actor for these activities was the Council of Europe at the outset. Since the 1970s, it has collaborated with the UNESCO European Region in promoting recognition conventions, and, subsequently, with the European Union. Such efforts are visible, most recently, in the Lisbon Convention of 1997 (Teichler 2003). It should be noted that the Council of Europe is a supranational body that was comprised, in the 1950s, of all European countries of that time, except those with a communist regime. Further, the definition of the UNESCO region changed over time. Currently, the European-North America Region (ENA) comprises all of geographic Europe as well as Canada, the United States and Israel.

Second, European market-oriented countries collaborated closely in the 1960s and 1970s in the search of modernisation of higher education, whereby emphasis was put on the expansion and restructuring of higher education with the aim of contributing both to economic growth and the reduction of inequality in education. The key stimulating and coordinating supranational force behind these activities was the OECD – already boasting more than 20 members at that time – mostly European countries but also including Canada, the United States, Australia, New Zealand and Japan. One of the major structural effects of the discussions and recommendations of that time was the upgrading of higher vocational schools to non-university higher education in various European countries and the strengthening of short-cycle higher education in most OECD countries (OECD 1973; Papadopoulos 1994).

Third, the promotion of student mobility was the most visible focus of European higher education policy in the 1980s. The ERASMUS programme, established in 1987, provides funds for the additional cost of studying temporarily in another European country, for short-term teacher mobility and to cover some institutional costs under the condition that partner institutions facilitate mobility administratively, collaborate in the substantive coordination of learning abroad with curricula at home and are willing to recognise study achievements abroad upon return (European Commission 1994). The number of students participating annually increased from a few thousands over time to more than 200,000. The European Union (or its predecessor organisation) is the key actor here. It has only been involved in higher education policy since the mid-1970s and only under the conditions that it respects the existing variety of national higher education system and that it takes actions only in areas not covered similarly by national policies. From the onset, it got involved in European student mobility and started, in 1976, the so-called Joint Study Programme, which eventually was transformed and expanded into ERASMUS. The ERASMUS programme includes all EU countries – 12

countries in the late 1980s, 15 in 1992 and eventually 27 countries in 2004, when many Central and Eastern countries became members, as well as a few additional countries (currently Iceland, Liechtenstein, Norway and Turkey).

Fourth, most European countries have collaborated since the late 1990s in the so-called Bologna Process in establishing a convergent system of cycles of study programmes and degrees, thereby aiming at eventually realising a European Higher Education Area. A similar system of study programmes and degrees is advocated in the Bologna Declaration of 1999 in order to support student mobility – in terms of both making study in Europe more attractive for students from outside Europe and to facilitate intra-European mobility. The Bologna Process is coordinated by the national ministers in charge of higher education, forming a loose network, and sets the agenda for collaboration every 2 years in ministerial conferences. The number of countries involved has increased from 29, in 1999, to 47, in 2010 (most of them from geographical Europe being concurrently members of the Council of Europe).

In summing up the major regional higher education policies in Europe, we note that:

- Emphasis is placed on student mobility.
- Temporary student mobility (mostly half or one academic year) is the focus.
- Student mobility is supported between institutions considered to be on equal terms as far as academic quality is concerned; mobility in Europe should be “horizontal”.
- Efforts are made to facilitate student mobility financially and administratively.
- A strong need is felt to coordinate study in another country and study at home substantively and thereby to increase the chance of the recognition of study achievements at another university upon return to the home university.
- The desire to foster the “European dimension of higher education”.

The discussion on temporary mobility in Europe traditionally has had a stronger curricular focus than, e.g. the respective discussions in the United States. Curricula in European countries tend to be considered as a configuration of many indispensable elements for the competencies eventually to be achieved at graduation. This requires a careful choice of courses being taken abroad in another country in order to be considered equivalent to those otherwise taken at home – no matter whether the students are expected to have clearly contrasting educational experiences in another country or somewhat similar experiences to those at home. This also explains why issues of recognition of study achievements abroad are so high on the agenda in the European discourse on student mobility.

The purpose of the promotion of temporary study in another European country was predominantly international, not regional. Indeed, temporary study in another country of a similar academic quality helps students to understand the variety of academic approaches and cultural environment and to reflect the specific features of one’s home experiences. This can be more easily achieved through mobility in the “neighbourhood”, than across continents. In addition, the hope was expressed occasionally that an understanding of a common European heritage, common elements of a European culture and the development of a European identity could be fostered through intra-European mobility.

Mobility of academic staff played only a limited role in this context. Short-term academic mobility for teaching purposes is promoted as well in the framework of ERASMUS – partly as support for the mobile students and notably as an opportunity to provide international experience to the non-mobile students. In contrast, professional mobility of academics and its implication is addressed predominantly in the domain of research policies.

Finally, it should be pointed out that the discourse on regionalisation of higher education in Europe addresses not only the financial, organisational and curricular frameworks of temporary student mobility but also structural issues. The underlying assumption is that similarities of higher education systems – types of institutions, length of study programme, the role of degrees for further study and for employment, etc. – facilitate mobility and cooperation and possibly even further steps towards regional integration (Curaj et al. 2012). The Bologna Process calls for similarity of study programme and degrees, while officially respecting the curricular variety of study programmes in the various European countries. The interpretations vary, however, whether the Bologna Process is a milestone towards increasing activities in favour of a greater similarity of higher education in Europe in many respects.

8.3.2 Major European and International Research Policies

A European research policy with a strong underpinning of research priorities and research funding had already emerged in the 1950s. The predecessor organisations of the EU had research on the agenda from the onset. Initially, they were primarily active in supporting agricultural and nuclear research. The first joint research centre, established around 1960 in Italy, focussed initially on nuclear research and extended its activities in the 1970s into a broad range of research fields. The support of mobility of young researchers was an integral dimension of research promotion from the outset and eventually was established as an activity in its own right in 1968 in the EC Training Fellowship Scheme.

In the early 1970s, moves started towards the coordination of national research policies in science and technology and the development of a common research policy. This was not confined to the European Economic Community (EEC) of 6 member countries in 1970. Rather, ministers of 19 countries decided in 1971 to cooperate regularly in COST (European cooperation in the field of scientific and technical research). Also, the research promotion agencies and the major consortia of public research institutes cooperated across a wider range of European countries in the European Science Foundation (ESF). Within the EEC, however, various resolutions followed and various committees were set up subsequently, which, among others, do not set priorities for research but provide research funds along those lines. Therefore, emphasis was placed, from the onset, on applied and technology-relevant

research, while national research promotion in the European countries was expected to take care of basic research.

In the 1980s, concern grew about a technological gap with the United States and Japan. Discussion about a “common strategy” and a “Framework Program” of targeted support for science and technology for a period of 4 years began for the first time in 1983. This was accompanied by various specific promotion programmes, e.g. in the field of computers and communication technologies, whereby all the programmes accepted associate member countries from outside the European Community.

When the European Union eventually was established in 1992, a clear legal basis was given to European research promotion and joint research strategies. The EU was given the explicit authority to define a research and innovation policy (de Elera 2006). Since 1995, research promotion of the EU also comprised the economic and social sciences, though on a smaller scale than in most national research promotion schemes in Europe. Support for the mobility of young researchers was substantially extended – eventually under the name “Marie Curie Programme”. A large extension of European research policy, however, was not supported by the national governments having the final say on EU policies in the so-called European Council, i.e. the council of the national governments of the EU.

Finally, around 2000, concern grew again that Europe might fall behind in the wake of growing worldwide competition on the way to the “knowledge economy”. The European Council defined, in March 2000, the so-called Lisbon Strategy, delineating which research policies on the European level should be strengthened, funding of research on the European level should be enlarged and total R&D expenditures in Europe (public on European and national level as well as private) should be raised to 3 % in 2010. By then, the so-called European Research Area should be realised and the European Union should be the “most competitive economy of the world”. The ambitious aims of this research promotion obviously were not reached (cf. the figures in comparative perspective in UNESCO 2010; OECD 2010), but experts agree that funding of research fared much better in Europe in recent years due to the joint aim of moving towards a European Research Area.

Altogether, European policies in the area of research were not monopolised by the European Union and its predecessor organisation, but the substantial monies involved in science policy – far more than a 100 times as much as in higher education policy – had an enormous impact. They created a strong incentive for universities and scholars in the areas of science and engineering to follow the EU priorities, to emphasise the applied nature of research and to strengthen their collaboration with industry. However, controversy persisted about the relative role of national and European research coordination, the balance of basic and applied research, the weight of humanities and social sciences in research promotion, the relative weight of targeted innovation objectives for research, the concentration or decentralisation of research resources, etc. As a high level of agreement has to be reached between European member countries in order to opt for joint policies, symbolic agreements are often more impressive than actual European research policies.

8.3.3 International Student Mobility: Intra-European and Across Regions

Recent available statistics focus on a European region comprising 32 countries: the 27 EU member countries, the four additional ERASMUS-eligible countries – Iceland, Liechtenstein, Norway and Turkey – as well as Switzerland (Teichler et al. 2011). Accordingly, 3.3 % of students in these 32 European countries are citizens of other European countries. The figures presented on study abroad of students from these 32 European countries in other European countries correspond to 2.8 % of the students enrolled in the countries of origin. The number of foreign students from outside Europe studying in these European countries is slightly higher according to these statistics, i.e. 3.6 %. In contrast, students from these European countries studying outside Europe only make up for 0.5 % of all students of these European countries, i.e. less than one-fifth of those studying abroad.

Some European countries collect data on international mobility for the purpose of study – in most cases in addition to data on foreign students and study abroad. A comparison of these data sets allows one to conclude that about one-quarter of foreign students in Europe have not been mobile for the purpose of study but rather had already lived and learnt in the country of study prior to enrolment. Information on foreign inwardly mobile students (defined as students with a nationality different from the country of study who have moved to the country of study for the purpose of study in contrast to foreign non-mobile students who have lived and learnt in the country of study already prior to enrolment) for the academic year 2007 is available for five of the seven countries participating in the CAP survey: They comprise 13.6 % of the students in the United Kingdom, 9.1 % in Germany, 4.7 % in the Netherlands, 2.7 % in Finland and 2.0 % in Norway.

It might be added here that information is collected in some European countries on inwardly mobile students not being foreigners. These students have lived and learnt abroad prior to study and have moved to the country of their nationality for the purpose of study (see Kelo et al. 2006). Available information suggests that they are one-tenth as many as foreign inwardly mobile students. Many of them lived and learnt abroad prior to study and returned to their country of citizenship for the purpose of study. Some of them might have had another citizenship prior to study and later became citizens of the country of study.

As was already pointed out, the institutions in charge of international educational statistics recommend their national partners to not include temporarily mobile students. In reality, some countries include – while other exclude – temporarily mobile students. Overall, we estimate that less than half of the students in Europe who are temporarily mobile are registered in the statistics collected by UNESCO, OECD and EUROSTAT. Available knowledge from other sources suggests that the majority

of inwardly mobile students in Europe coming from other European countries are temporarily mobile. In contrast, this holds true only for a small minority of inward mobile students in Europe coming from outside Europe.

Putting all the available information together, we might estimate for the 32 European countries taken into consideration here:

- About 3 % of the students are foreign mobile students from outside Europe (most of them for degree study).
- Less than half a percent of European students are outward mobile to countries outside Europe.
- About 2 % of the students in these European countries are foreign mobile degree students from other European countries; similarly, the number of European students being degree mobile to other European countries corresponds to 2 % of all students in the country of origin.
- About 3 % of the students are foreign temporarily mobile students from other European countries; similarly, the number of European students being temporarily mobile to other European countries corresponds to 3 % of all students in the country of origin.

As already pointed out, figures on the number of students studying in another country at a certain moment in time cannot be viewed as the best possible measure for the magnitude of students' experience of study in another country. Rather, according to a communication of the 2009 meeting of ministers in charge of the Bologna process, the factual event of having studied in another country during the course of study is the best possible measure. And graduate surveys are the best available source for establishing the frequency of this event.

The graduate surveys recently summarised in a publication focusing on the impact of the establishment of a bachelor-master structure in Europe, show, for some countries included in the CAP survey, the following results: more than 20 % of the graduates in the Netherlands and Norway had studied temporarily in another European country; the respective figures are around 15 % in Germany, about 10 % in Italy and less than 5 % in the United Kingdom. The average of European countries might be estimated to be somewhat higher than 10 %. This comprises temporary mobility only. We have to add the approximately 2 % of European students who pursue an entire study programme in another country. Thus, altogether, at least 12 % of students from these European countries experience study in another country during the course of study, whereby the rate of intra-regional mobility during the course of study is at least 10 % (Schomburg and Teichler 2011).

We do not know how these figures on student mobility to Europe from outside, from Europe to other regions and within Europe would compare to respective figures in other regions in the world, but estimates are possible. In taking the UNESCO, OECD and EUROSTAT data on foreign students and study abroad as a rough approximation for inward and outward degree mobility (i.e. students intending to

study in another country up to award of a degree in contrast to students studying in another country for a short period), we come to the conclusion, first, that inward and outward degree mobility in the 32 European countries analysed here is about three times as high as on average all over the world. Second, we can estimate that the proportion of regional mobility among all international mobility is higher in Europe than in other regions of the world. Third, temporary student mobility across borders is far more frequent in Europe than in other parts of the world. If temporary mobility was included more or less completely in international statistics, one could see that international student mobility – inwards to and outwards from European countries – is even more impressively high in worldwide comparison and that temporary student mobility and intra-regional mobility is even more exceptional in Europe as compared to other regions.

8.3.4 International Academic Mobility: The Lack of Appropriate Statistics

The Science Directorate of the European Commission (i.e. the government body of the European Union in charge of science) commissioned, in the first decade of the twenty-first century, various studies to examine the strengths and weaknesses of statistics on careers and on international mobility of researchers (all information in this section is taken from Teichler 2011). In regard to mobility, they noted that reliable information on genuine mobility, i.e. crossing borders for the purpose of academic activities, is only available across European countries for specific promotion programmes of mobility, notably teaching staff mobility within Europe in the framework of ERASMUS and young researchers' mobility within Europe within the Marie Curie Programme.

According to statistics provided for the academic year 2008, about 32,000 scholars received teaching mobility grants in the framework of ERASMUS for short-term teaching (often 1 or 2 weeks) in another European country, i.e. one-eighth of the figure of ERASMUS students being mobile mostly for half or one academic year. About 1,600 “early stage researchers” were awarded a Marie Curie fellowship. According to the European Commission, the total number of Marie Curie fellowships corresponds to about 4 % of doctorates awarded in the respective countries.

As regards foreign scholars, the conclusion was drawn that the single best statistical source is that on foreign doctoral degrees (not doctoral students, because these figures tend to be incomplete). This might come as a surprise, because doctoral degrees are named in educational statistics as degrees at the successful completion of the highest level of study (ISCED 6 according to the UNESCO definition). Moreover, the Ministers in charge of higher education cooperating in the Bologna Process name doctoral training the third cycle of the Bologna cycle system of study programmes and degrees, and efforts are praised to strengthen and extend doctoral

“programmes” instead of individual supervision. In contrast, doctoral candidates are understood in science and research statistics as early-stage researchers, and the European Commission supports mobility of doctoral candidates (notably, but not exclusively, in science and engineering) with Marie Curie fellowships for “early-stage researchers” (defined as persons with 0–4 years of research experience).

8.3.5 Life-Course Migration and Mobility of the Academic Profession: Findings of the CAP Survey

Given the paucity of international statistics on academic staff mobility, the CAP survey itself is a highly valuable source of information on academic mobility. Actually, the CAP collected information on citizenship and residence at various stages of the life, study and career course. On average, of the seven European countries surveyed in the CAP study, 22 % of European academics have elements of a mobile or migrant career. On average, this is less frequent than among academics in the North America and Asia countries surveyed, but international migration and mobility within the region, as opposed to outside it, is more frequent in Europe (see Table 8.1).

There is a clear difference between Europe and the other regions. Most of the migration and mobility of academics in Europe has taken place within the region, i.e. within Europe. Conversely, about half of North American academics have moved within and outside that region and the majority of academics in Asia have moved across regions. The regional dominance of mobility and migration among European scholars is certainly facilitated by various mechanisms of promoting academic mobility and cooperation in Europe. On the other hand, less need for migration and mobility is felt in Europe than in other regions of the world in order to enhance one’s competencies, to have access to good resources for academic work and to improve one’s economic situation.

One might interpret these data in comparison with different reference groups. The international migration of the academic profession in Europe is clearly higher than the international mobility of university-trained persons in Europe working in nonacademic professional areas. Also, more academics in Europe study abroad and do their doctoral training and work abroad than university-trained persons working in nonacademic professional areas.

Table 8.9 shows that differences by country are substantial. The proportion of those with any migration and mobility background is only 5 % among academics in Italy, on the one hand, and almost half in Norway, on the other hand.

Finally, we note that migration and mobility in the course of study is more often reported by senior academics, both at universities and other higher education institutions than by junior academics at both types of higher education institutions. In part, this is due to the fact that there are the more opportunities for migration and mobility the longer persons are active academically. However, it might also be a selection effect that those who had been internationally mobile are more likely to be promoted to senior positions.

Table 8.9 International mobility and migration of academics within and outside Europe, by country mean percent 2007–2008

Type of Mobility or migration ^a	Finland			Germany			Italy			Netherlands		
	Regular	Other	Total	Regular	Other	Total	Regular	Other	Total	Regular	Other	Total
Early immigrants	1	0	1	8	1	8	1	0	1	1	1	2
Doctoral immigrants	1	0	2	2	0	2	0	0	0	0	0	0
Professional migrants	3	2	5	2	1	3	1	0	1	3	1	4
Study mobile academics	1	0	2	7	2	8	0	0	0	3	1	5
Doctoral mobile academics	1	1	2	1	0	2	2	1	3	1	0	1
Total migrating/mobile academics			12			23			5			13
Total non-mobile academics			88			77			95			87
	Norway			Portugal			United Kingdom			7 EUR countries		
Activity ^a	Regular	Other	Total	Regular	Other	Total	Regular	Other	Total	Regular	Other	Total
Early immigrants	7		7	2	3	5	2	2	4	(2)	(1)	4
Doctoral immigrants	3		3	0	0	0	3	3	6	(1)	(1)	2
Professional migrants	8		8	1	0	1	7	4	11	(3)	(1)	5
Study mobile academics	9		9	5	1	7	1	2	3	(3)	(1)	5
Doctoral mobile academics	18		18	6	1	7	0	0	1	(2)	(1)	5
Total migrating/mobile academics	46		46			19			25	(11)	(5)	22
Total non-mobile academics	54		54			81			75			78

Source: CAP data, September 2011

^a See the definitions in Table 8.1

Note: The data on regional and other international migration and mobility for all European countries comprise only six countries (not including Norway)

Note: Respondents not naming citizenships are classified as home country citizens

Table 8.10 Internationalisation of teaching activities and students in European countries, by mean country percent 2007–2008

Activity	Mean	Country						
		FI	DE	IT	NL	NO	PT	UK
International content/perspectives in teaching*	63	51	61	61	54	67	81	66
Teaching abroad	15	16	14	14	14	26	7	14
Currently, most of your graduate students are international	12	8	5	2	23	9	3	31

Source: CAP data, September 2011

* Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

8.3.6 *International Activities of the Academic Profession in Europe*

8.3.6.1 International Aspects of Teaching

A comparison across the three regions addressed here shows that the proportion of academics in the European countries surveyed are on average as internationally active in two aspects of teaching as their colleagues from other regions. Teaching abroad is even more widespread in Europe than in the other regions (Table 8.3).

As Table 8.10 shows, the majority of academics in all European countries state that international content and perspective play a substantial role in their teaching; the affirmative responses vary by country from 51 to 81 %. Differences by country are more striking in the proportion of academics having taught abroad recently (from 7 to 26 %) and in the dominance of foreigners among their graduate students (less than 10 % in five countries and more than 20 % in two countries).

8.3.6.2 International Aspects of Research

As far as research is concerned, European academics are clearly more active internationally than their colleagues in other regions. As Table 8.5 has shown, the difference is small, as far as the scope of research is concerned, but substantial regarding most international activities.

Table 8.11 suggests that academics of the seven European countries differ strikingly in the extent to which they are involved in most of the international research activities addressed in the survey. In all seven countries, the majority of academics point out that they are international as far as the scope of their research is concerned (ranging from 55 to 75 %). The proportion of those publishing abroad ranges among six countries from 39 to 59 %, whereby in a single country the respective proportion is clearly lower (27 %). Joint publications with foreign authors range from 14 to 24 %, and research funded by international sources ranges from 11 to 19 % in six countries (26 % in the seventh country). Also, research

Table 8.11 Internationalisation of research activities in European countries by mean country percent 2007–2008

Activity	All country Mean	Country						
		FL	DE	IT	NL	NO	PT	UK
International scope of research ¹	64	60	55	75	69	70	56	65
Do you collaborate with international colleagues? ²	44	60	39	59	26	56	34	36
Co-authored with colleagues located in other (foreign) countries ²	18	18	17	16	24	22	18	14
Published in a foreign country ²	46	51	39	47		59	52	27
International research funding ³	16	13	11	18	19	11	26	15

Source: CAP data, September 2011

¹Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

²Affirmative responses

³Means of adjusted percentages of all research external funds

collaboration with foreign scholars varies more substantially between European countries (ranging from 26 to 60 %).

One should bear in mind, though, that the figures presented in Tables 8.10 and 8.11 refer to all academics in the respective countries. A closer look reveals that the extent of involvement in international activities differs strikingly according to the academics' status and institutional base. University professors are, to a higher extent, clearly internationally active. The respective average proportion of international activities referred to among university professors is about one and a half times as high as among junior staff at universities and senior academics at other institutions of higher education, as well as, about twice as high as among junior academic staff at other institutions of higher education.

8.3.6.3 Foreign Language Use

Using a foreign language – mostly English as lingua franca but also other languages – is quite frequent in European higher education. The proportion of academics employing a foreign language in teaching and research is clearly higher than in the other regions with the exception of more frequent teaching in English in Hong Kong and Malaysia. It is generally assumed that English has played an increasing role in teaching and research activities in recent years in Europe as a consequence of growing border-crossing mobility and cooperation.

Altogether, the data presented in Table 8.12 cannot be easily understood as indicators of internationalisation. No distinction has been made in the survey across all countries between English as the academic lingua franca and other foreign languages. Moreover, we do not know whether teaching and research in another language is a rare exception or even clearly modal. Finally, the question regarding the prime language defines foreign not institutionally, but rather individually. If, e.g. a Portuguese scholar employed at a German university teaches and undertakes research

Table 8.12 Institutional and personal foreign language use in teaching and research in European countries, by percentage 2007–2008

Activity	Mean	Country						
		FL	DE	IT	NL	NO	PT	UK
Institutional language								
Teaching in a language other than primary institutional language of instruction	33	46	25	25	47	65	17	5
Publishing in a language other than primary institutional language of instruction	53	58	53	59	71	76	50	3
Personal language								
Primary teaching language is not mother tongue	15	20	9	8	35	25	3	14
Primary research language is not mother tongue	57	64	48	68	67	72	59	17

Source: CAP data, September 2011

Table 8.13 International mobility and migration within North America and outside North America, by percentage 2007–2008

Types of mobility and migration	Canada		United States		Mexico	
	Within	Outside	Within	Outside	Within	Outside
Early immigrants	1	4	1	2	1	0
PhD immigrants	1	6	1	5	1	0
Professional migrants	6	8	1	2	1	1
Study mobile academics	6	4	1	0	7	2
PhD mobile academics	6	4	0	0	2	3
All immigrant/mobile academics	20	27	4	9	12	7
Non-mobile academics	53		87		81	

Source: CAP data, September 2011

in Germany primarily in the German language, this will be counted as “foreign” in the two bottom lines of Table 8.13.

Altogether, Table 8.12 confirms what is known from other studies. Foreign language use in higher education varies substantially by country. It is most frequent in the relatively small northern and central European countries (here Finland, the Netherlands and Norway). It is less widespread in the large European countries and the smaller southern European countries (here Germany, Italy and Portugal), and it is rare in the English-speaking countries (here the United Kingdom), where internationality of academic activities without foreign language use often is believed to be reached by communicating only in the lingua franca.

Again, foreign language use differs by academics’ status and institutional base. It is among university professors about one and a half times as high as among senior academics at other institutions of higher education as well as about twice as high as among junior academic staff at other institutions of higher education. However, in contrast to the international activities discussed, foreign language use among junior staff at universities is almost as high as among university professors.

8.4 The Case of North America

8.4.1 *Emergence and Development of the North America Region*

In an increasingly globalised world, countries engage themselves in internationalisation efforts as a way to deal more effectively with both local and global demands. In this context, the last three decades have seen individual countries not only involved in internationalisation efforts at a global level but also at the level of cross-border “regional” alliances designed to improve their member states’ well-being through collaborative efforts that enhance their competitiveness in relation to countries outside the region (Blumenthal et al. 1996).

The region notion, however, is not simple and unique. Although originally (and largely) associated with geographic criteria, a region can be identified on the basis of a diversity of criteria (historic, social, cultural, economic, etc.) that are used to present and defend the notion that their member states behave, at least partially, in an interdependent way. Countries that are members of a region are assumed to share goals, a framework for their specific interaction (collaboration is usually stressed here), and a set of values and general standards about their involvement in the region. While border-crossing regions can be identified on the basis of factors having to do with their past development, they are also created or strengthened around certain explicit and negotiated purposes, which of late are usually economic. Irrespective of its economic relevance, the region notion incorporates social, cultural and political dimensions as well.

Canada, Mexico and the United States have, as part of North America, a long, historic and common heritage, particularly in the areas where current national borders are located. During the last and current century, two subregions could be “naturally” identified: the United States and Canada as well as the United States and Mexico (Katz 1996). The relationships within these two subregions have culminated in the creation of one formal region with the signing, in 2002, of the North America Free Trade Agreement (NAFTA). This economic treaty, which began effectively in 2004, did not consider higher education as such but incorporated the provision of professional services. According to NAFTA, North America would be a free space by 2005 in which professional service providers and businessman could transit and work in which ever of the three countries they selected.

On the path towards a “knowledge-based economy”, the prospect of economic integration of North America created a considerable amount of pressure on Mexican higher education, as the country lacked, in contrast to the United States and Canada, a “mature” higher education system, an adequate financing scheme, a strong tradition on quality assurance and, finally, highly qualified academics. Following the path recommended when Mexico became a member, during the 1980s, of the Organization for Economic Cooperation and Development (OECD) and the World Trade Organization (WTO), various quality improvement actions (e.g. programme accreditation, professional certification and the improvement of

faculty profiles) became essential to Mexican higher education institutions (Marúm Espinosa 2004).

So, prior to NAFTA, higher education collaboration in the North American region became an issue of interest during the early 1990s. Regional meetings were held at Wingspread (1992), Vancouver (1993) and Guadalajara (1996), and several trilateral reports were issued. One by-product of these meetings was the creation of the Consortium for North America Higher Education Collaboration (CONAHEC) that published a series of comparative reports on diverse aspects of higher education in North America, although not all of them dealt concurrently with all three countries (Maella et al. 1998).

In addition to the creation of various organisations and, concurrently, the arrangement of political-academic events, NAFTA was instrumental in promoting collaborative actions like the Program for North American Mobility for Higher Education, funded by all three North American countries (International and Foreign Language Education Service, US Department of Education 2009). Also, bilateral programmes, like UC-MEXUS established in 1980, gained legitimacy and strength (see University of California Institute for Mexico and the United States 2012).

With the signing of NAFTA, higher education was scheduled to pursue economic internationalisation and regional efforts. Within a complex history of interactions, including substantial asymmetries between the economies of the three nations involved and different higher education structures, North American countries persisted in making efforts to build an agenda for increasing and improving higher education collaboration (Maella et al. 1998).

8.4.2 Mobility of Students and Academics in North America

As pointed out earlier, there has been, before NAFTA, quite a significant relationship between Mexico and the United States, on the one hand, and between Canada and the United States, on the other. In the former case, the relationships centred largely on the training of Mexican graduate students by way of a federal scholarship programme coordinated by the National Council on Science and Technology (CONACYT, Consejo Nacional de Ciencia y Tecnología), while in the case of Canada, it involved both student and faculty exchange in response to initiatives taken mostly at the level of individual scholars and institutions (Egron-Polak 1996).

More specifically, according to UNESCO figures for 2007, the United States receives around 66 and 57 %, respectively, of Canadian and Mexican students studying abroad. Canada, on the other hand, receives about 16 % of United States students studying abroad, and is not one of the five destinations of Mexican, internationally mobile students (UNESCO Institute for Statistics 2009).

With respect to mobility of academics, data are more difficult to obtain, and it is necessary to incorporate figures indirectly related to academics. Indeed, the

number of government funded Mexican students pursuing a graduate degree in Canada and the United States has actually decreased from 2001 (39.7 % considering both countries) to 2010 (32.7 %) (CONACYT 2011). With the United States, on the other hand, figures from the Fulbright program, which supports students and academics going abroad for periods up to 1 year, show that there is no North America region. Together, Canada and Mexico received, in 2009–2010, only 3.7 % of all bursaries (Fulbright Foreign Scholarship Board 2011).

Constituting unforeseen developments, the 9–11 events and a difficult global economic situation have done little to encourage higher education initiatives involving Canada, Mexico and the United States to evolve in a more significant, formal and visible way. So, although North American countries are not involved in a formal common higher education area, as in the case of European countries, the existence of a common economic area opens, despite the obvious differences in their respective higher education systems, an important avenue for collaboration. The extent of it will depend greatly, however, on the destiny of the economy of the region.

8.4.3 Academic Mobility and Migration in North America: The Findings of the CAP Study

8.4.3.1 Mobility and Migration of North American Academics

Globalisation, internationalisation and regionalisation processes have increased significantly during the last two decades and, in parallel with these tendencies, so have the demands for academics to become more global, international and, at the same time, regional. What is the current international and regional status of North American academics? The Changing Academic Project (CAP) provides a lens through which we can look at this situation. It shows the frequency and destination of border-crossing and migration during the life-span – ranging from multiple moves to complete non-mobility. Therefore, mobility and migration within the region can be disentangled from that across regions.

As can be observed in Table 8.1, 25 % of academics in North America were identified as internationally mobile or as migrants, clearly fewer than in Asia (39 %) but somewhat more than in Europe (22 %). More specifically, the mobility and migrations of North American academics is evenly split between within region and across region; in contrast, intra-regional mobility and migration dominates in Europe and cross-regional mobility and migration in Asia.

When data is differentiated according to type of institution and academic rank, a more diverse picture appears. First, academics in North America are more internationally mobile at universities (35 and 30 % for senior and junior faculty, respectively) than in other institutions of higher education (14 and 13 % for senior and junior faculty, respectively). Second, senior academics at universities tend to be

more internationally mobile outside the region than junior faculty (19 vs. 16 %, respectively). Third, such a difference does not exist between mobile senior and junior faculty at other institutions of higher education.

Of the 25 % of academics in North America that reported being internationally mobile, those that were citizens at birth (study and PhD internationally mobile academics) represented 13 %; almost the same proportion (12 %) are immigrants (early and PhD) and professional migrants (see the definition below Table 8.1). Among the immigrant and professional migrant academics, two-thirds (8 %) have moved across regions and one-third (4 %) within the region. In contrast, among study – and PhD – mobile faculty, a smaller proportion has moved cross-regionally (5 %) than within the region (8 %). These differences suggest that immigrant and migrant academics might have a larger academic network which is not confined to the North American region. It also speaks of the attractiveness of these three countries, particularly the United States, for academics trained in other regions of the world.

The spatial patterns of mobility and migration vary substantially by the academics' type of higher education institution. For academics at universities, the above described patterns hold true whereby migration and mobility is more frequent than among academics at other institutions of higher education. For example, the respective figures (inter- vs. intra-regional) for migrant university professors are 13 % versus 5 %, and 7 % versus 10 % for mobile academics. Among academics at other institutions of higher education, however, intra-regional moves are more frequent than interregional moves in the case of migration and professional mobility. The respective figures are 7 % versus 4 % among senior mobile academics and 5 % versus 2 % of junior mobile academics at other institutions of higher education. This suggests that networks and perspectives of academics at other institutions of higher education are more regional and less global than those of academics at universities.

Altogether, we note that mobility and migration is a more widespread phenomenon among academics at universities in North America than among academics at other institutions of higher education, differences between juniors and seniors at both types of institutions are low in comparison. While migration and professional mobility of university academics is predominantly interregional, mobility for study and doctoral work dominates within the region. In contrast, international mobility of academics at other institutions of higher education is to a higher extent concentrated on the region.

8.4.3.2 Mobility and Migration of Academics of the Individual North American Countries

In analysing the situation within the individual countries of the North American region, we note – see Table 8.13 – that academics surveyed in Canada have moved in their career to a much larger extent (47 %) than those in Mexico (19 %) and those in the United States (13 %). The differences are so striking between the three countries that the region means presented above might be viewed as artificial. Notably,

Canadian higher education has a migratory history and current reality of its own (Egron-Polak 1996).

In comparing mobility and migration between universities and other institutions of higher education, we note only small differences in this respect in the United States (15 % vs. 10 % for senior academics and 13 vs. 14 % for junior academics), but substantial differences in Mexico (31 % vs. 15 % as well as 34 % vs. 12 %, respectively). It should be noted that Canadian institutions of higher education were not classified in the CAP survey as either “universities” (i.e. in charge of research and teaching) or “other institutions of higher education” (i.e. predominantly in charge of teaching).

In the case of Canada, the percentage of those mobile and migrants is higher among senior (49 %) than junior university faculty (42 %). This is not the case in the United States (15 % vs. 13 %) and in Mexico (31 % vs. 34 %).

Table 8.13 also shows that the ratio between intra-regional and interregional mobility and migration varies substantially by country. Among academics at Mexican institutions of higher education, the share of those having moved within the region is clearly higher than those across regions (12 % vs. 7 %). The opposite holds true for the United States: Those academics who have moved across regions are more than twice as high than those within the region (9 % vs. 4 %). Canadian academics move often both across regions (27 %) and within the region (20 %). There are close ties on the one hand with the United States, influenced among others by the partial share of their official languages (English and French are the official language in Canada) and on the other hand with the United Kingdom and France and other economically advanced countries with the same languages.

8.4.4 International Academic Activities: A Comparison Across Regions and Within the North American Region

8.4.4.1 International Aspects of Teaching

As already stated above, the CAP study provides information about international aspect of academic activities. However, no distinction has been made in the questionnaire in regard to the spatial dimension of these activities, i.e. whether they focus on the region, address other regions or have a worldwide scope.

Further, in regard to the international aspects of teaching, Table 8.14 shows an interesting contrast for Mexico. On the one hand, academics in Mexico show that their teaching comprises international content and perspectives (77 % as compared to 53 % in the United States and 62 % in Canada). On the other hand, the figures are smallest for Mexico when it comes to teaching-related and learning-related mobility. Only 6 % report that the majority of graduate students are international (as compared to 7 % in the United States and 23 % in Canada). Equally, 6 % in

Table 8.14 International teaching activities of academics in North American countries, by mean country percent 2007–2008

Activity	Canada	Mexico	United States
International content/perspectives in teaching	62	77	53
Teaching abroad	16	6	11
Currently, most of your graduate students are international	23	6	7

Source: CAP data, September 2011

Note: Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

Mexico state that they recently have taught abroad (as compared to 11 % in the United States and 16 % in Canada).

International aspects of teaching play a similar role among academics in the North American countries, both by type of higher education institution and by academic rank both with respect to content of teaching and the proportion of foreign graduate students. In regard to teaching abroad, however, we note that more university professors, both in the United States and Canada, are mobile for the purpose of teaching than junior staff in these countries (13 % vs. 6 % and 17 % vs. 7 %). In Mexico, such a difference does not hold true, however. More academics at Mexican universities teach abroad than those at other institutions of higher education in Mexico.

8.4.4.2 International Aspects of Research

Academics in Canada reported themselves as more internationally involved with as regards three of the aspects of the research addressed in the CAP questionnaire. As Table 8.16 shows, more of them characterise their research as international in scope (57 %) compared to the academics in Mexico (44 %) and the United States (41 %). Also, international research collaboration (64 % as compared to 35 and 33 %) and co-authorship with colleagues located in other countries (14 % as compared to 10 and 6 %) are more frequent among academics in Canada. However, publishing in a foreign country is almost as widespread in Mexico (33 %) as in Canada (35 %), but substantially less frequent in the United States (9 %). Finally, substantially more Mexican academics reported receiving international research funding (14 %) than their colleagues in Canada and the United States (7 % each) (see Table 8.15).

In Canada, senior and junior academics do not differ substantially in the frequency of international research activities. However, more senior academics than junior academics collaborate internationally (67 % as compared to 53 %). In the United States, university professors report that they have an international scope in research and collaborate internationally in research more often than junior academics at universities, as well as academics at other institutions of higher education. It is surprising, though, to note that junior academics at other institutions of higher education in the United States are more internationally oriented in research in various aspects than senior academics of this institutional type.

Table 8.15 International research activities in North American countries, by mean country percent 2007–2008

Activity	Canada	Mexico	United States
International scope of research ¹	57	44	41
Do you collaborate with international colleagues? ²	64	35	33
Co-authored with colleagues located in other (foreign) countries ²	14	10	6
Published in a foreign country ²	35	33	9
International research funding ³	7	14	7

Source: CAP data, September 2011

¹ Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

² Affirmative responses

³ Means of adjusted percentages of all research external funds

Finally, academics (both seniors and juniors) at universities in Mexico are more internationally research oriented than academics (both senior and junior) at other institutions of higher education. For example, an international scope of research is reported by 53 % of university professors, 47 % by junior academics at universities as well as by 38 % of seniors and 33 % of juniors at other institutions of higher education in Mexico.

From a small set of questions, information is available in the CAP study on the target countries of these international research activities. Accordingly, more than ten times as many Canadian research-active academics report that they collaborate with colleagues from the United States (38.0 %) than that they collaborate with colleagues from Mexico (3.3 %). Mexican academics report that they collaborate with colleagues more than four times as often in the United States (10.8 %) than with scholars in Canada (2.3 %). Finally, almost four times as many academics in the United States collaborate with colleagues in Canada (20.8 %) than with academics in Mexico (5.8 %) (Metcalf et al. 2009).

These figures support the impression of North America being composed of two different “subregions”: Canada and the United States, on the one hand, and, on the other, the United States and Mexico. Language, level of development, demographics and higher education sector size and traditions are probably all factors that help explain why this finding.

8.4.4.3 Foreign Language Use

Using another language for teaching and publishing constitutes another measure of the degree to which academics’ work is international. As already pointed out, the CAP survey addressed both the use of a language different from the home country of the institution of higher education and different from the respondents’ first language or mother tongue.

Table 8.16 Institutional and personal foreign language use in teaching and research in North American countries, by mean country percent 2007–2008

Activity	Canada	Mexico	United States
Institutional language			
Teaching in a language other than primary institutional language of instruction	9	6	4
Publishing in a language other than primary institutional language of instruction	20	32	4
Personal language			
Primary teaching language is not mother tongue	18	8	14
Primary research language is not mother tongue	30	30	15

Source: CAP data, September 2011

Teaching in another language is not frequent in any of the North American countries. Only 4 % of the academics in the United States do so as compared to 6 % in Mexico and 9 % in Canada, as Table 8.16 shows. It is worth noting that junior academics in Mexico are more active in teaching in a foreign language than senior academics (11 % vs. 6 % at universities and 7 % vs. 4 % at other institutions of other institutions of higher education). Interestingly, this might signal a generation change in this respect.

Publishing in a foreign language is by far more widespread among academics in Mexico (32 %) and in Canada (20 %) than teaching in a foreign language. In contrast, the proportion of academics in the United States who publish in a foreign language (4 %) is as small as the respective proportion teaching in a foreign language. The respective differences by type of higher education institution and by academics' status are relatively small.

The pattern is different with regard to the proportion of those using primarily a language in teaching and research that differs from their first language and mother tongue. We can assume that many of these, in United States and in Canada as well, are persons who are immigrants and migrants who have moved to the country where they teach and research at the time when the survey has been undertaken. Moreover, some Franco-Canadians might use English as the prime academic language and in reverse some Anglo-Canadians might use French. Thus, it does not come as a surprise to note that teaching in a language different from the first language or mother tongue is most frequent in Canada (18 %) and also clearly more frequent in the United States (14 %) than in Mexico (8 %).

Again, a different pattern can be found in regard to research activities in language different from the first language or mother tongue. The prime language of research is not the first language or mother tongue among both 30 % of academics in Canada and Mexico – in both countries clearly more often than the prime language of teaching. In the United States, the prime language of research is different from the first language or the mother tongue only among 15 % – this is more or less the same as in the case of teaching. Almost four times as many academics in Mexico report that their language of research is not their mother tongue as those stating it

for teaching. This seems to resemble, in most cases, academics in Mexico with Spanish as first language who believe that they have to move to English in order to be involved in international research networks.

8.5 Final Observations

International activities in higher education, until recently, have not been characterised by a regional emphasis. Even though costs incurred might have been an argument in favour of links with neighbours, the academic map, as far as knowledge transfer, cooperation and physical mobility are concerned, has been, for a few decades, more global than regional.

This is understandable, first, in regard to knowledge transfer. Seeking the highest quality and the highest relevance of knowledge, as a rule, is not defined spatially. It is worldwide in principle, as, e.g. has been expressed in the Meiji Oath in Japan as an early strategic case of knowledge-based modernisation policy, and it is even more global today when virtual knowledge dissemination completely overrules any spatial consideration. Second, student mobility has been primarily “vertical”, i.e. from countries considered to be less successful economically and academically to countries considered to be more successful in this respect. In addition, language proficiencies played a major role: language or languages learnt at home in relation to the language taught abroad. This has led to a higher number of students going to countries where English – the lingua franca of academia these days – is the mother tongue or the language of instruction. Last but not least, political factors also have played a role in various respects: legacies of colonialism and political blocks, visa rules, provisions of fellowships, etc. Third, international research collaboration has had two arenas: the larger one was that among locations of similar quality and thematic interest, and was most frequent and intense in the high quality sector, and the smaller one was “vertical”, i.e. primarily assistance for locations of lower academic level gradually to catch up with places of higher quality. Again, these rationales do not reinforce regional cooperation. Fourth, mobility of academics is closely linked to the two above issues. On the one hand, academic and student mobility is often “vertical” in the search for an academically and economically superior place of temporary study or long-term professional migration. On the other hand, mobility of academics often is an integral part of research collaboration, thus being more frequent among high quality places and having a less frequent focus on targeted assistance.

Though it is very challenging to define the term regionalisation of higher education, historically speaking, it began on a substantial scale in the 1950s in Western Europe as well as among the countries linked to the Soviet Union. Many years later, and initially with less strong underpinnings, regionalisation policies followed in other regions of the world, especially in Southeast Asia, Northeast Asia and North America.

In spite of varying conditions, we note some common features of regionalisation of higher education across regions:

- Regionalisation of higher education is primarily a political claim and not primarily a more or less automatic trend. The discussion about the regionalisation of higher education in Asia and Europe mentioned earlier suggests that regionalisation, in contrast to “globalisation”, does not seem to “happen anyway”.
- Experts name similar factors in play for a growing regional emphasis in higher education. First, the more higher education expands and the more is expected to be socially and economically relevant, the more effects of knowledge transfer, cooperation and mobility demand attention. But attention is not only growing regarding the worldwide arena, where views of a vertical order of academia prevail (competition among unequal competitors for top ranks). Attention is growing as well as regards the value of student mobility on a mass scale, the training of students for subsequent professional mobility among neighbour countries, increasing knowledge transfer between higher education and industry on a more limited spatial dimension than the globe. Second, the spreading paradigm of the “knowledge economy” – that the world is characterised by worldwide economic competition increasingly shaped by technologically and economically relevant systematic knowledge – reinforces the idea that individual countries can fare better if they form strategic partnerships for mutual enhancement, whereby regional partnerships are currently more fashionable in contrast to previous colonial ones or political-ideological ones.
- Third, the mechanisms designed for regionalisation of higher education are similar across regions: For example, facilitating study mobility, regional research promotion and cooperation in quality assurance. It is difficult to say to what extent these policies have turned out to be successful or to what extent imitation is in play.

There are two thematic areas, however, where it is not clear whether it is seen as a normal element of regionalisation in higher education and whether similar policies are pursued in the various regions: first, the extent to which national higher education systems should become more similar, e.g. in the structure of degree programmes, in order to achieve the goals on the agenda, and, second, the extent to which powerful supranational coordination is considered desirable or even necessary.

This chapter began by providing an overview on regionalisation trends and policies of higher education in three regions: Asia, Europe and North America. It showed that a regional higher education emphasis started first in Europe, has elicited the most far-reaching joint policy actions and has had the most salient impact on intra-regional knowledge transfer, cooperation and mobility there. In the two other regions analysed, regionalisation trends and policies emerged later have remained more cautious and have not (yet) yielded comparable results. Then it discussed aspects of physical mobility. In regard to the regionalisation of student mobility, the increase of outgoing temporary horizontal mobility is the prime policy objective which was realised with some success but even more ambitious targets: that students in Europe learn from

contrasts and widen their intellectual and cultural competencies by spending a short period in another European country. In other regions, some of the measures established in Europe are adopted without any similar clear priority for “horizontal” and for “short-term” mobility. Currently, the regions vary as well substantially according to the ratio of study abroad among all students and according to the proportions of intra-regional versus interregional student mobility. Statistical material – though far from being adequate to analyse student mobility in a reliable way – suggests that intra-regional mobility is clearly more frequent in Europe than in the other regions; this reflects the fact that the majority of students in the majority of high-quality higher education systems are interested in mobility among countries and partners with a similar level of academic quality. Moreover, “vertical” mobility seems to remain predominantly interregional.

With regard to academic staff mobility, this chapter presents findings of a comparative survey (“The Changing Academic Profession”) on the proportions of academics active in various countries of the three regions discussed who have been mobile, or have migrated during their lifespan, up to the moment when the survey was conducted. Therefore, a distinction is made between intra-regional and inter-regional mobility and migration. The survey provides evidence that the share of intra-regional mobility and migration does not differ substantially between the three regions. In contrast, interregional mobility is the higher the more one expects a higher academic quality than at home in the foreign country.

Both available statistical information on student mobility and the survey findings on mobility and migration of academics show enormous differences in mobility rates between the countries in each of the regions. Some factors which seem to be in play are discussed, but a detailed analysis of the causes of the heterogeneity of the regions in this respect has not been intended.

It should be noted that the report of the findings of a comparative survey on the academic profession undertaken in 2007 was not meant to be a more or less ideal tool for examining the impact of trends and policies of regionalisation in higher education. This would not have been timely anyway, as most of the academics, professionally active in 2007, had formed in their views and activities long before the recent regionalisation policies could have shaped higher education systems. Beyond that, the CAP survey has addressed the international approaches and activities of the academics without any distinction between an intra-region and interregional or a global emphasis. Yet, the results have been presented here in order to show the extent to which the academics’ international approaches and activities vary by country in each of the regions. This extent of homogeneity or heterogeneity is certainly important background information regarding the conditions under which regionalisation policies work.

In all countries, of all three regions, we note that the majority of academics consider their teaching to be international as far as the content and perspectives are concerned. In regard to an international scope of research, we note differences by country across all regions from one-third to three quarters. Further, international research collaboration ranges from 13 to 70 %; international co-authorship from 1 to 24 %; and publishing abroad from 12 to 70 %. The differences within Europe are often interpreted as substantial, although they are smaller than in the other

regions (e.g. international co-authorship ranging from 14 to 24 %). Differences in North America are clearly higher and one often talks about two separate subregions: Canada and United States, on the one hand, and on the other, United States and Mexico, with completely different conditions of interaction. Finally, differences between Asian systems look absolutely extreme at first glance; even if one excludes Hong Kong because of its exceptional situation, the international dimension plays such a diverse role in the four Asian countries that they do not seem to be promising preconditions for strong intra-regional ties for the time being.

Academics are certainly influenced, in many respects, by their national context. It is also obvious that many academics have a worldwide academic arena as a point of reference. Regional trends and policies have led in some instances to remarkable results, most prominently the growth and popularity of temporary “horizontal” student mobility between European countries. It remains to be seen, though, whether an emphasis on a regional identity will become, in the foreseeable future, as important as national and worldwide references for academics.

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Chapter 9

Gender and Faculty Internationalization

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9.1 Introduction

The internationalization of higher education (HE) and research is becoming increasingly important, as higher education becomes an industry in which institutions and countries compete for the best brains, exchange students, and collaborate on research. Rapid globalization and development of information and communication technologies have made it easier to share information and knowledge across borders. Furthermore, international activity is important for the enhancement of individual academic careers. International collaboration is known to contribute to academic prestige and visibility (Fox and Mohapatra 2007). Members of academic disciplines have always been international in the sense of knowledge sharing, publications, conference attendance, and sojourns at academic milieus abroad. Given the rapid and extensive character of globalization, we suggest that academics, although not all of them, can be considered as part of a new global elite of knowledge workers (Luke 2001). Against this backdrop, this chapter addresses the issue of the extent to which female academics are part of these activities and asks whether patterns of gender inequality are reproduced within this “new global landscape.”

Despite improvements in gender equality at lower levels of the academic hierarchy, significant gender imbalances persist at the top levels. Female academics tend to occupy lower ranks and hold fewer upper-level scientific and administrative positions than their male counterparts (Bain and Cummings 2000; Marschke et al. 2007). Horizontal gender differences in academic roles are also evident: Women are

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more concentrated in soft and applied science subjects, the humanities, social sciences, and art, while men are concentrated in the STEM disciplines, first and foremost in the areas of engineering, mathematics, and physics. Such vertical and horizontal patterns of gender segregation in academia are global tendencies (Bagilhole 2007). The explanations for the gendered character of academic life are numerous. However, gender imbalances in terms of internationalization in higher education and research are issues that have been less well explored. Recruiting more women to top positions in research is also an aim for many countries and supranational bodies (such as the EU and UNESCO). To examine the gender dimension in terms of international activity, it is important to better understand the factors that inhibit and promote academic career development in general and for women in particular.

The CAP data offers a unique opportunity to compare international academic activities among men and women, along a range of important variables.

In this chapter, we focus our attention on internationalization at home and abroad, through international research cooperation and teaching activities. By “internationalization at home” we refer to activities such as emphasizing international perspectives or content in teaching and teaching in a language different from the native language that have an international focus but are undertaken while maintaining physical presence in one’s home country. We contextualize the data by presenting figures, to the extent possible, on the overall gender composition in academic fields in the respective countries, as well as indicators on relevant sociopolitical factors, such as women’s participation in tertiary education, the labor force, and politics. Furthermore, social and personal background variables such as marital status and the work role of academics’ partners are examined.

9.2 Theoretical Approach

Gender and internationalization is little studied, and previous work is mainly focused on publishing patterns, which only tell a small part of the story of contemporary academic careers.

Wolfinger et al. (2008) as well as Xu (2008) identify the “pipeline” model as a powerful lens through which we can view and understand gendered patterns in academic careers. The “pipeline model” traces “the volume of flow of females from grade school to graduate school” and so looks at ways of “preventing ‘leakage’ down the line at all stages” (Xu 2008). Marschke et al. (2007) emphasize that female underrepresentation in the academic profession is associated with demographic constraints, such as faculty age structures (and retirement patterns), gender composition among PhDs, faculty attrition rates, and the availability of new faculty positions. For the current situation to change, specific policies and practices are thought to be required, to encourage equality among new hires. As women’s attrition rate during an academic career is greater than that of men, policies regarding equity in promotion, retention, and retirement are also relevant (Schoening 2009).

In explaining the gender gap in the academic profession, two main factors are usually considered. The first is based on family-related variables. It appears that it has been difficult for women to balance academic work requirements as well as marriage, motherhood, and family duties, such as caring for children and aging family members (Schoening 2009; Wolf-Wendel and Ward 2006).

The second factor commonly advanced is working conditions and socialization in the work place. According to Bain and Cummings (2000) the academic “glass ceiling” is rooted in cultural and economic dimensions that vary among different societies, as well as in the particular characteristics of organizational settings, professional communities, and distinctive institutional traditions. Through a combination of these features, male privilege can foster a chilly climate that is unaccommodating for women; these kinds of practices are typically embedded in the academic culture. A wide range of authors have set out the following as key features: gender-biased recruitment and selection, staff development, or promotion policies; the inherent inequity of tenure criteria and biological clocks; gender-biased performance evaluations; pay disparities; hidden and non-flexible workloads; a lack of, or inadequate, mentoring, role modeling, and networking opportunities; competitive rather than collaborative working styles and a lack of collegial support; male dominance in institutional power and inequity in leadership; hostility toward pregnancies and the demands of families; and the devaluation of certain disciplines and types of research (c.f. Hartley and Dobele 2009; Schoening 2009; Wolfinger et al. 2008; Xu 2008).

From an organizational-sociological perspective, the academic system can be understood as structured by two, partly competing, orders: a scientific hierarchy and an institutional hierarchy. What is valued in a scientific career, typically research and publication, is often in tension with tasks academic staff are required by their institutions to perform, such as teaching, supervision, and administration. Women academics tend to be overrepresented among those groups contributing to the latter functions, as teaching staff and tutors and in time spent on administrative duties (Sax et al. 2002). In addition, Leahey et al. (2008) note that men typically have better social networks, and use them more, than women. Against this background, it is relevant to investigate the role of women academics in the “internationalization business,” those institutional initiatives found in many contemporary universities, countries, and regions, which are intended to contribute to the internationalization of higher education, student mobility, and the development of study opportunities suitable for foreign students.

All these perspectives are relevant insofar as they highlight factors that might hamper women’s career development.

Possible drivers of national differences in women’s international academic participation are expected to relate to features of institutional organization and to academics’ personal or family lives. Drivers might include wide-ranging factors, such as the relative number of female academics at institutions, how common it is for women to combine an academic career with marriage or with having children, and patterns among academics’ partners working lives (if they tend to have a partner working full time). Such characteristics not only will reveal how basic features of

the academic demography vary across countries but can offer important empirical indicators about the working conditions of female academics. They are factors that are likely to have a powerful influence on women's approach to furthering their academic career, maintaining a high level of research activity, and going abroad as part of their work. According to Luke (2001) it is the social and cultural character of the nation that shapes the culture of the academy. Social norms and expectations for men and women inevitably vary across nations, exerting influence on common views with respect to dual careers and work/family "multiple role demands," an issue which seems to serve as a particular deterrent to women's participation in international projects (Padilla et al. 2011; c.f. Arthur et al. 2007).

This underlines the importance of understanding how the gendered social identity of the academic profession is constructed in various countries and of addressing the question: Is the role of the internationally oriented, full-time professor one that is primarily associated with typically male features?

The aim of this chapter, then, is primarily to identify gender differences in the academic profession in terms of international activities in general and among different countries and regions, in particular. We start with relatively basic indicators on the extent to which women participate in international research and teaching, international publishing, and internationalization at home (e.g., bringing international topics and perspectives into their teaching or in teaching in other languages).

In the interpretation of our findings, it is important to take into account the fact that the women in our population probably represent a highly selective group, formed through many steps of selection processes. The data set does not include women who drop out because of the barriers they face in their research career. In many countries the overall share of women is very low, both in general and among subgroups of academic staff, and we have therefore chosen to group countries into larger regions, in order to provide a more robust sample for analysis.

9.3 "A Bird's Perspective"

As recently as 1992, the Carnegie Foundation for the Advancement of Teaching's study of the International Academic Profession (Altbach 1996) concluded that academics were mostly middle-aged men, the latter making up anywhere from 90 % of all academic staff in Japan and Korea to 60 % in Brazil.

However, worldwide trends suggest women are increasingly represented at the tertiary level of enrollment; and in many regions and countries, women are more likely to be enrolled than men at this level. According to data from UNESCO,¹ this pattern applies in Central Asia, Central and Eastern Europe, Latin America,

¹ Sex-disaggregated data: a brief analysis of key education and science indicators since the Beijing declaration and platform for action (1995). Canada/Montreal: UNESCO institute for statistics. Information Sheet No. 4. 2010 based on figures from 121 countries. Year 2007 or later if available.

Table 9.1 Percent of female academics in higher education (WHE), 2006, and in high-level (Grade A) positions, 2007, by country

	Finland	Germany	Italy	Netherlands	Norway	Portugal	UK
WHE	45	31	36	29	39	47	40
Grade A	23	12	19	11	18	21	17

Source: “She figures” 2009 Statistics and Indicators of Gender Equity in Science. European Commission. Brussels: Directorate General for Research UK: Based on statistics from 2005

Table 9.2 Women as a percentage of total faculty in higher education and as a percentage of total researchers (head count) by country

	Percentage of total faculty	Percentage of total researchers
Argentina ^a	56	52
Finland	47	31
Germany	35	25
Italy	38	34
Japan	24	14
Korea	25	16
Netherlands	37	26
Norway	44	35
Portugal	50	46
South Africa ^b	43	40
UK	44	38

Source: OECD, Main Science and Technology Indicators, 2012

^aData is from 2007

^bData is from 2008

North America, and Western Europe. It is only when we reach the PhD level that the share of women drops to less than 50 %; among academic professionals it drops to slightly more than one quarter (29 %). Only about 15 % of the countries included in UNESCO data have achieved gender parity in the proportion of research workers, in general.

The CAP study includes countries like Brazil and Argentina, which are among those that have achieved gender parity in the academic profession overall. And, with exceptions like China and Malaysia, most of the Asian countries, like Japan and Korea, have not.

Also within Europe, the range of gender disparities is large: The highest percentages of women academics in higher education are found in Sweden, Latvia, and Lithuania. As regards the seven European CAP countries (Table 9.1), Netherlands has the lowest percentage of female academics in general, as well as in top-level “grade A positions,” with Finland and Portugal having the highest percentages.

While the data is scarce and mainly aggregated, Table 9.2 clearly suggests that vertical and horizontal gender segregation in academia is a global phenomenon.

Among 11 CAP countries – Finland, Germany, Italy, Japan, Korea, the Netherlands, Norway, Portugal, the UK, Argentina, and South Africa – we find a higher number of women academics working in higher education than in research.

The broad political, social, cultural, and economic issues which are thought to influence gender equality vary widely between countries, and countries have active policies to improve gender balance to varying degrees. For instance, Korea and Japan have few women in the academic system; it could be that in these countries women are taught to be shy, quiet, to take care of children and elder people/parents, and not work extra hours (Takemaru 2010). Raising children and looking after parents is considered particularly important in Chinese culture. A study of academic women in Hong Kong found that these women had typically made hard personal decisions, such as postponing children or giving up their social life (Luke 2001).

Large differences should therefore be expected between countries in general and among those included in the CAP survey. In Europe, those having children typically “drop out” for a few years and part-time work is common among women. In the Netherlands, for example, professor positions are more strongly associated with high social status and salary, and tenured positions are more competitive than in many other European countries, all of which is likely to make it more difficult for women to maintain or build on their academic career (Ellemers et al. 2004).²

9.4 International Activities at Home and Abroad

Welch (1997) investigated the peripatetic and indigenous subgroups of the Carnegie survey of the International Academic Profession (Altbach 1996) and found pronounced gender disparities among the peripatetic group across most countries, with the exceptions of Germany, Japan, and Korea. He suggested that “the opportunity to travel and study abroad actively discriminates against women academics. Men take more opportunity to travel and study than women, or are more enabled to do so.” The CAP data provide an opportunity to see what role gender plays nearly two decades later, in an era when the internationalization of higher education has become more mainstream.

9.4.1 Mobility of Faculty Members During Study Periods

Figure 9.1 examines the relationship between the country of current employment and the country where academic degrees were obtained. It is assumed that the country of current employment is highly related to the home country.

It appears that slightly more academic women than men obtained their second and doctoral degrees in the country of their current employment, which implies that

²Thanks to Prof. Peter Maassen University of Oslo for explaining the Dutch case to us.

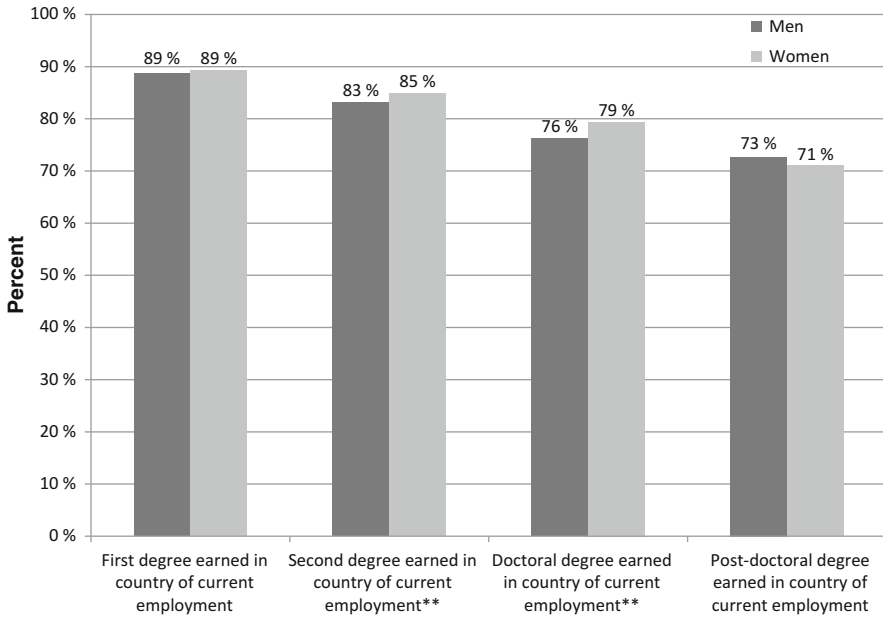


Fig. 9.1 Country of education and current employment by degree level and gender, 2007–2008 (Source: CAP data September, 2011, Notes: *Gender difference significant on the 5 %-level; **Gender difference significant on the 1 %-level)

more men than women went abroad for graduate education (Fig. 9.1). This difference is more important in some countries or regions at the doctoral level – as reflected in Fig. 9.2.

As Fig. 9.2 shows, with the exception of Asia,³ the pattern holds that more male than female academics are mobile in the sense that they completed a PhD in a country different from the one in which they work. Gender differences are particularly marked and statistically significant in Asia and Latin America.

The USA appears to be the country with the highest level of “homegrown” doctoral candidates. As a large nation with a well-developed academic system containing many excellent research institutions in most disciplines and research areas, the USA naturally serves an important role as an importer of researchers and students, rather than an exporter. To climb the American institutional hierarchy, mobility between prestigious institutions is an important part of career dynamics. Academic careers are also characterized by the tenure system as well as extensive use of temporary positions. All in all, this means that a great deal of importance rests on key

³The countries are categorized into the following seven regions: Europe (Finland, Germany, Italy, Netherlands, Norway, Portugal, and the UK), Canada, the USA, Latin America (Argentina, Brazil, and Mexico), Asia (China, Hong Kong, Japan, Republic of Korea, and Malaysia), Australia, and South Africa.

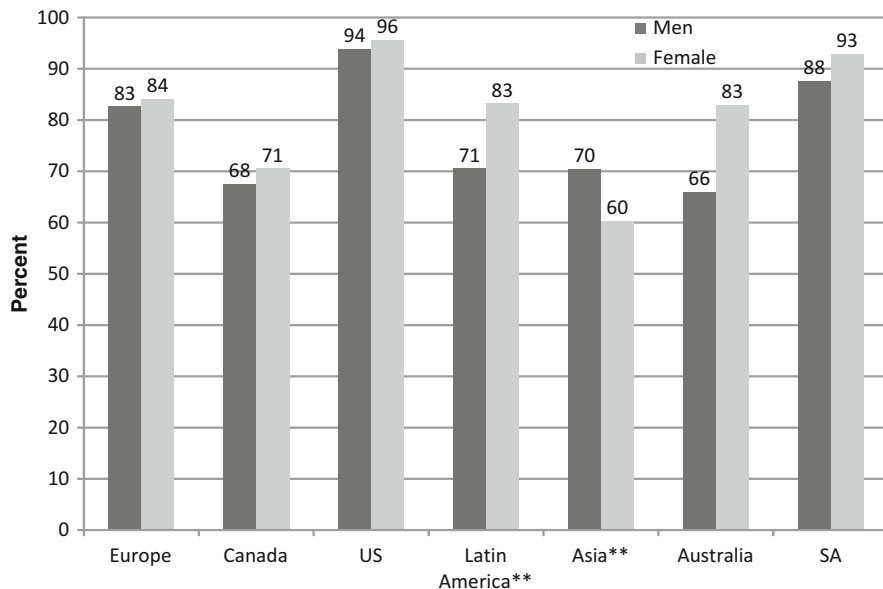


Fig. 9.2 Doctoral degree earned in Country of Current Employment, by region and gender, 2007–2008 (Source: CAP data September, 2011, Notes: *Gender difference significant on the 5 %-level; **Gender difference significant on the 1 %-level)

stages of an academic career in America that determine if one can make a name for oneself institutionally, as a researcher, lecturer, or supervisor.

Having achieved a doctoral degree in a different country from the country of current employment indicates both academic mobility and experience in a foreign academic environment, an experience which we can assume will affect people's research approach throughout their career, predisposing them to be internationally oriented due to the experience, contacts, and networks they have built up.

9.4.2 *International Research Collaboration*

International collaboration and networking is particularly important as academics are increasingly under pressure to publish internationally, preferably in well-known scientific journals. This is often essential for full membership within their home academic community. However, inclusion in informal and formal international academic networks is not only important for publishing and profile but also increasingly important for the allocation of research funding. In general, men continue to take part in international collaboration of some kind more than women, as Table 9.3 shows. Regardless of the level of international collaboration within each region, female faculty reported lower international collaboration than male faculty.

Table 9.3 Percentage of men and women reporting research collaboration with international colleagues, by country and rank 2007–2008

	All ranks		Senior rank		Junior rank	
	Male	Female	Male	Female	Male	Female
Asia	26**	20	29**	24	21*	17
CN	15**	8	19**	12	7	5
HK	64*	54	70	74	54	43
JP	24	17	26	19	17	9
KR	30	29	31	29	28	29
MY	34	29	49	53	27	22
AU	65**	53	84	73	56	49
CA	69**	57	72**	59	58	55
Europe	64**	57	69**	61	59**	54
FI	72	67	83	79	66	65
DE	52**	43	59**	51	47	40
IT	61*	56	63	59	58	53
NL	69**	56	71**	49	67	62
NO	67	62	72	69	57	56
PT	69**	53	87**	53	63**	52
UK	69**	53	73**	60	59*	47
Latin America	41**	30	41**	31	40**	29
AR	55**	41	56	49	55**	39
BR	37**	19	42**	23	28**	12
MX	37**	30	38*	31	34*	22
SA	46**	35	46**	29	47	43
USA	37**	28	43**	32	24	21
Total	45**	40	47**	41	42**	39

Source: CAP data September 2011

*Gender difference significant on the 5 % level

**Gender difference significant on the 1 % level

This situation supports Leahey et al.’s findings (2008) that suggest that academic men have better academic networks and use them more often.

There are large variations among countries in the extent to which international collaboration is an important aspect of research in general and of scientific careers, in particular. This is reflected in regional and country differences; thus, differences in female representation among countries and regions must also be understood in this context.

A consistent pattern is that respondents from the USA and Asian countries report a lower degree of international collaboration than those from Australia, Canada, and Europe. The Latin American countries and South Africa occupy a middle position. We also find significant variations between countries within each region. Academics in Argentina are more involved in international collaboration than their counterparts in Brazil and Mexico; respondents in China report less collaboration than those in Hong Kong, Korea, and Malaysia. The Netherlands, the UK, Germany, and Italy have significantly more men reporting international research activity than women,

while there aren't such significant differences in Finland and Norway. This may reflect the fact that the Nordic countries have placed great emphasis on institutional efforts, policies, and incentives to increase internationalization in research and that the universities and colleges are required to work toward equality between the sexes. For example, in these countries it is expected that doctoral students with young families who take long trips abroad as part of their studies will often need to take their family with them and so require more generous funding.

The USA has a well-developed academic system characterized by excellence of research institutions in most disciplines and research areas and therefore naturally plays an important role as an importer of researchers and students, rather than exporter (Enders and Musselin 2008).

European countries, and especially the small ones, place great emphasis on international cooperation to compensate for their small size (lack of critical mass of researchers in specialized areas) and to ensure adequate quality, knowledge, equipment, and other facilities. They place great emphasis on transnational research cooperation in the respective national research policies, such as European programs and research schools, and special national programs and support, for participation in international networks.

When CAP data is disaggregated by academic rank (see Table 9.3), we found that this pattern remains evident among senior faculty; however, the significance of the gender gap among junior faculty disappears in some countries such as the USA, Canada, Australia, and South Africa. It appears that junior faculty in these countries see more balanced international collaboration by gender, while junior faculty in Europe, Asia, and Latin America still reflect traditional gender disparities.

Women face imposing barriers in seeking to participate in international projects (Arthur et al. 2007). Moreover, Smykla and Zippel (2010) note that even when they attempt such experiences “power asymmetries between collaborators from different countries can affect the research project” (p. 10) and some academic women have experienced “sexism” in international settings.

Significant differences are found between countries when it comes to gendered participation in international collaboration. Some countries are marked by low percentages of women participating in international collaboration, such as Brazil and China, where the percentage of women reporting international collaboration is about half the rate reported for men. One should bear in mind that overall rates of collaboration are low for men in these countries as well, particularly in China where only 15 % of men report research collaboration at an international level.

The highest levels of female participation are found in Australia, Canada, the Netherlands, Finland, Italy, Norway, Portugal, and the UK. In Latin America, Argentina, Brazil, and Mexico have less than 50 % of both men and women taking part in international collaborations. In the USA, only 28 % of female academics and 37 % of male academics report research collaborations with international colleagues, a pattern which should be understood in the context of the American mode of academic internationalization described above.

Given the range and number of prestigious institutions in North America, international activities are not viewed as being as critical as they often are in

European countries, particularly smaller ones. Furthermore, mobility between North American institutions is part of the traditional career dynamic for American faculty: It is generally accepted one should not apply for a first position at the same institution where one has earned a PhD. The tenure system has been argued to be a feature that hinders international mobility among US academic staff (Finkelstein and Cummings 2011).

Differences between men and women academics in international collaboration are also visible among those in senior positions, which might indicate that becoming a full professor does not level out differences in academic work practice between men and women, at least those related to international cooperation. In fact, in total the gender difference was twice as large at the senior level, as at the junior level.

If we focus on the junior level, gender differences in international collaboration are not significant for most countries. Overall, this pattern in the findings might indicate that the modes of international collaboration are changing in general and for younger cohorts of women in particular. For instance, it may be that more attention is being paid to the need to develop international collaboration and networks during researcher training, which may help close gender gaps and raise overall participation in international networks.

Nevertheless, it is important to note that in the case of Argentina, junior female faculty is not participating in international collaboration to the same extent as senior female faculty. In this country we observed the inverse pattern, which can signify a setback for women in academia. Second, academic women, both junior and senior, report significantly less international collaboration than men in countries such as Brazil, Mexico, Portugal, and to a lesser extent the USA, which could indicate that these countries have not yet implemented sufficient measures to address this issue.

In sociological terms, younger generations are often considered carriers of social change, not least because their own ideas about what they expect from careers and life will have consequences for the social structures that take shape. Our data indicates smaller gender differences at the junior levels: This could mean that conditions are becoming more conducive to female academics over time, due to changes in practical economic and cultural preferences about gender and suitability for international academic careers. However, it could also mean that gendered barriers to career progression occur at a later stage, for example, if it takes longer for women to qualify for a professorship.

For junior academics, both men and women, being internationally oriented, add a global dimension to ones' work and identity which we suggest is becoming a more common and necessary element of an academic career. However, this finding does not necessarily imply that gender differences in international research collaboration have leveled out. The CAP data does not contain information about the extent and quality of international research cooperation, for example, how many networks someone takes part in or how often. In order to develop more comprehensive understandings of these gender inequalities, we need to supplement CAP with other data sources. In the EU, the issue of women in science has been on the agenda for the last two decades, as collaboration in education and science is one of the main priorities of the European Commission. Nevertheless, women are still underrepresented in participation in EU

Table 9.4 Percentage of male and female academics from soft and hard disciplines reporting collaboration with international colleagues, by level 2007–2008

	Male	Female
Soft disciplines		
All levels*	40	38
Senior	42	40
Junior	37	37
Hard disciplines		
All levels**	50	44
Senior**	51	42
Junior*	48	45

Source: CAP data September 2011

*Differences are significant at the 5 % level

**Differences are significant at the 1 % level

framework programs; among project leaders FP/(2007–2008), only 22 % are women (Second FP7 Monitoring Report). In Norway, 34 % of the researchers involved in EU projects FP6 were women (Godø et al. 2009).

As will be elaborated below, differences in men and women's collaborative patterns also reflect traditional modes of gender segregation between hard and soft fields of science.

9.4.3 *International Collaboration and Gender Segregation Between Fields of Science*

Academics from hard disciplines appear to be more internationalized than their colleagues from the soft fields. These hard fields also include fewer women. It is reasonable then to suggest that the pattern of gender disparity in international research collaboration can, to a certain extent, be explained due to gender segregation among fields of science.

As we see from Table 9.4, academics from the soft disciplines are less involved in international research collaboration than those representing hard subjects. The CAP data shows, however, that international collaboration was reported to a lesser extent by academic women not only in the soft subjects but within the hard disciplines too, especially at the senior level.

It is a well-known phenomenon that gender segregation can be identified between hard and soft sciences, but one should bear in mind that significant gender segregation patterns usually occur within disciplines, between various fields. The subjects which are regarded as the most socially and scientifically important, and therefore most prestigious, traditionally have the highest share of male faculty members. Typically female-dominated disciplines are often oriented toward public service or the public sector, especially the education sector; female-dominated disciplines are also not as internationally and scientifically oriented as typically male-dominant disciplines. Such gender differences also represent possible explanations for the differences in international orientation we see here.

Table 9.5 Percent who published in foreign country by region, rank, and gender 2007–2008

	All ranks		Senior rank		Junior rank	
	Male	Female	Male	Female	Male	Female
Asia	26**	22	26**	20	26	25
AU	42**	29	47*	35	40**	27
CA	39**	27	40**	27	36	29
Europe	49**	41	48**	41	51**	41
Latin America	30**	24	31**	22	28	26
North America (not including Mexico)	25**	17	26**	17	21	16
USA	11**	6	11*	7	10*	5
ZA	18*	13	20	16	17	9
Total	35**	29	34**	27	37**	31

Source: CAP data September 2011

*Gender difference significant on the 5 % level

**Gender difference significant on the 1 % level

Table 9.6 Percent who coauthored with colleagues in other (foreign) countries by region, rank, and gender 2007–2008

	All ranks		Senior rank		Junior rank	
	Male	Female	Male	Female	Male	Female
Asia	7**	6	7**	4	8	7
AU	18**	12	18	13	18**	12
CA	16**	11	17**	9	13	13
Europe	19**	16	19**	15	20**	15
Latin America	10**	7	10**	6	10*	7
North America (not including Mexico)	12**	7	13**	7	8	8
USA	8**	4	9**	4	4	3
ZA	8**	4	9	5	5	2
Total	13**	10	12**	9	14**	11

Source: CAP data September 2011

*Gender difference significant on the 5 % level

**Gender difference significant on the 1 % level

As is elaborated below, gender differences in faculty internationalization also reveal themselves through gendered modes of international publication.

As we see from Tables 9.5 and 9.6, there is a significantly higher share of men in all regions who report having published in another country and/or with international coauthors. This applies particularly to the pattern at the senior level and is not so pronounced at the junior level in Canada, the USA, Asia, and Latin America, where there is no significant gender difference.

As revealed in other CAP studies (Bentley 2009; Padilla et al. 2011), international collaboration with colleagues was a strong predictor of research productivity, as well as academic rank and time spent on research, although the direction of the relationship of these latter variables was not clear and might be reciprocal (Sax et al. 2002; Bentley 2009). According to several authors (Fox and Mohapatra 2007;

Leahey et al. 2008), the professional capital that academics earn in their career stands out as an important factor to explain research productivity. Bentley suggests that research productivity may be skewed toward a small group of prolific publishers; similar results were found in Canada (Padilla et al. 2011). It seems that there are more female than male academics which have not published any articles or have only published to a limited extent. More prolific productivity might contribute to higher evaluations and therefore higher academic ranks, which in turn contribute to gender gaps.

9.4.4 *Teaching Abroad*

The CAP study also revealed that in the vast majority of academics, 88 % of both men and women emphasize international perspectives or content in their teaching. Given the international nature of most academic disciplines, both as research communities and fields of study, this is perhaps not surprising.

Teaching courses abroad is also an element of internationalization in higher education: On average, 14 % of male and 12 % of female academics (at all levels) reported having done this during the current or last academic year. Among senior academics, 16 % of men and 13 % of women taught abroad. In Japan, Argentina, Brazil, and Canada, we find the most significant gender differences, with the lowest shares of women teaching courses abroad compared with men.

Figure 9.3 shows the relative risk or probability of teaching abroad for females compared to males.⁴

The disparities seem to be greatest in Latin American and Asian countries (plus South Africa); they are much less substantial in English-speaking countries and Europe. There are also a few countries where women are more likely to teach abroad than men – such as Finland and Germany – at least at the senior level.

9.4.5 *Internationalization “at Home”*

As regards responses to a question on whether academics “teach in a language different from the language for instruction at your current institution,” the answers generally reflect broader patterns of national difference. While teaching in a language other than one’s native language is rather unusual on the American continent (both North and Latin America), the CAP data shows that it is very common in smaller European countries like Finland, Norway, and Portugal but also in

⁴The relative risk is simply the ratio of the probability of an event for two different groups of observations. Let A at C be the number of events occurring in groups 1 and 2, respectively, and B and D the number of observations where the event not occurred. Then the relative risk is defined as $(A/(A+C))/(B/(B+D))$. This is different from the odds ratio, which is defined as $(A/C)/(B/D)$.

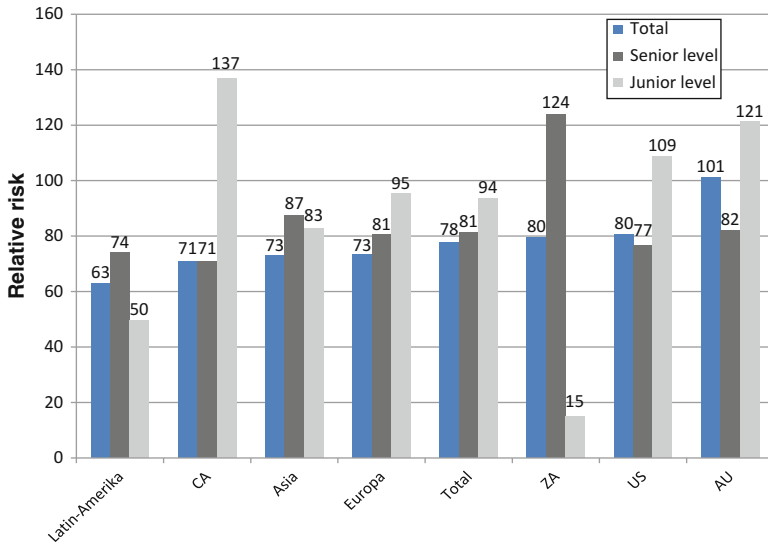


Fig. 9.3 Relative probability of women teaching abroad compared to men, by region and rank 2007–2008 (Source: CAP data September, 2011)

Germany and Italy (see Fig. 9.4). Women academics seem to be taking just as active a part in these activities as men. In China, however, significant differences are found with more women than men reporting teaching in a language different from the main language of instruction. In Germany and Italy the opposite holds, with a significantly larger proportion of men teaching in a language different from the dominant language of instruction.

9.4.6 Background Variables and the Gendered Social Identity of Academics in Various Regions

As elaborated in our theoretical approach, it is reasonable to expect that features of academic women’s personal and family lives will have a powerful influence on their academic career, particularly as regards going abroad as part of their work. Female academics, and, indeed, professional women in general, tend to be more hampered in pursuing their career by their spouse’s employment situation and child care than men in similar professional roles. Ledin et al. (2007) investigated gender differences in career trajectories among applicants to European Molecular Biology Organizations (EMBO) long-term fellowships between 1998 and 2003, using survey data and the Web of science database and found a number of striking gender patterns. Women were likely to have a partner who also held a PhD and worked in science, were more likely to have moved to suit their partner’s career, tended to work fewer hours than their partners, took

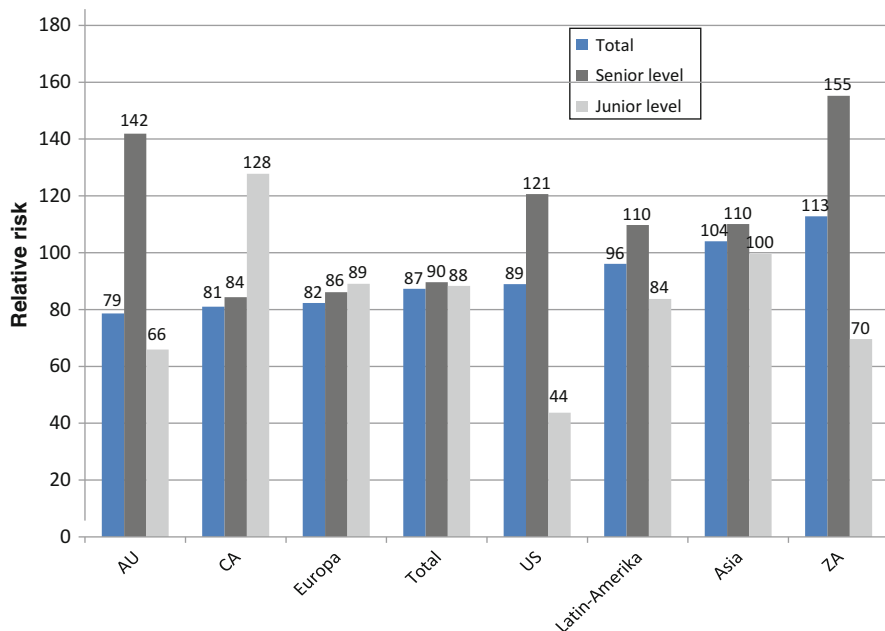


Fig. 9.4 Relative risk or probability of women teaching in another language compared to men, by country/region and rank 2007–2008 (Source: CAP data September, 2011)

the majority of the child care responsibility, published fewer papers, often had higher teaching loads, and had less mentoring support and fewer networks. All of these factors seem likely to contribute to decreased production, competitiveness, and higher drop-out rates among women. Similar patterns were found in a recent Norwegian study of differences in time use between female and male academics employed at Norwegian universities and colleges (Egeland and Bergene 2012).

In contrast, several authors have shown that family-related variables had little direct impact on research productivity in general (Bentley 2009; Padilla et al. 2011; Sax et al. 2002). These authors found that being married had a low but consistent association with higher research productivity; it may be that marriage acts as a valuable personal asset, in terms of additional economic resources and emotional support. These authors emphasized that women scientists are less likely than men to be married; and indeed the data in Table 9.7 confirm that fact in the CAP sample across all nations/regions and across junior and senior ranks. However, the sex-segregated nature of the academic profession in various countries might mean that academic women are atypical in terms of other personal characteristics compared to men and other women in their national contexts. For example, in order for women to climb the academic ladder, they may choose to remain single or to postpone marriage and decisions about having children.

It appears that family-related variables, as well as the type of discipline and type of institution, may have a cumulative or indirect effect on research productivity.

Table 9.7 Percent single by gender, country/region, and rank 2007–2008

	All ranks		Senior rank		Junior rank	
	Male	Female	Male	Female	Male	Female
Asia	9**	20	3**	10	19**	27
AU	9**	23	7**	22	10**	23
CA	10**	25	9**	27	14	22
Europe	13**	18	9**	16	17	19
Latin America	15**	28	11**	26	22**	30
USA	8**	17	6**	18	12	15
ZA	17**	30	15**	29	21	29
Total	11**	21	7**	18	18**	23

Source: CAP data September 2011

Note: Those who have reported “other,” F3=3, on this question is not included in these figures

*Gender difference significant on the 5 % level

**Gender difference significant on the 1 % level

As Clark and Hill (2010) note, “women in tenure-track positions in science disciplines at research-intensive institutions are more likely to acquire tenure if they are unmarried, and/or are childless than their married peers with children.”

Research is widely regarded as a professional role where it is normal and necessary to work beyond standard working hours, to have uninterrupted time to work on one’s projects, and to fulfill the criteria required to stand out and progress. Working conditions are also important when it comes to international activity. Research shows that male academics as well as other academic professional groups are much more likely to have partners who work part time and less likely than women academics to have a partner who also is an academic (Halrynjo and Lyng 2009; Egeland and Bergene 2012). Such a pattern is also confirmed in the CAP data.

Indeed, when it comes to having a partner working full or part time, we find significant differences between male and female academics in all countries: Partners of female academics typically work full time, while men are much more likely to have partners who are not working or work part time. Again, Japan is the most unusual case as most men are likely to have partners not working, followed by Germany and Mexico. The smallest gender differences in partners’ employment status are found in China and Portugal.

Against this backdrop, it seems relevant to look at family life more closely via the CAP data and compare the level of international research collaboration among women who are single and childless with women who are married with children and employed spouses.

As already suggested above, women academics are more often single than men. The differences between male and female academics in this respect are particularly evident in Australia, Brazil, Japan, and Mexico. This pattern is also striking among senior academics: Japan seems to be the extreme case with 41 % of senior female academics being single, in comparison with just 6 % of senior male academics. Japan is followed by Brazil, South Africa, and Canada. The lowest shares of single women employed in senior posts are found in China, Finland, and Norway.

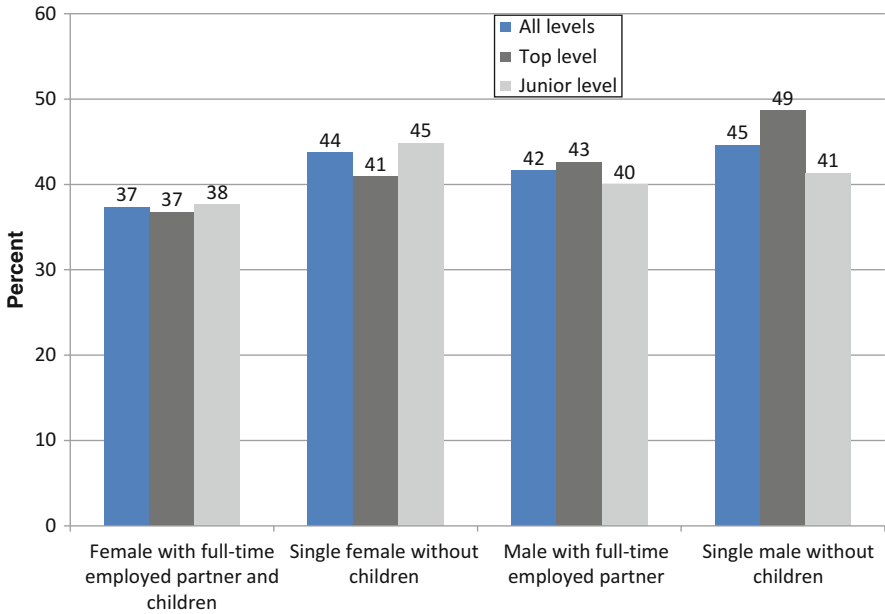


Fig. 9.5 Percent men and woman reporting research collaboration with international colleagues by marital status, children, partners working full time by academic rank 2007–2008 (Source: CAP data September, 2011)

Moreover, the data in Fig. 9.5 suggests that women academics with full-time working partners and children are less likely to take part in international research collaboration than male academics in similar circumstances; they are also less active in international collaboration than single female and male academics without children. At the junior level, women without children are actually collaborating internationally more often than single men without children.

9.5 The Global Gender Gap Index

The differences between male and female academics revealed in the CAP data set can be interpreted in the context of the differences between men and women revealed in the Global Gender Gap Index (GGGI).

As we can see from the table below, we find great variation between countries’ overall ranking on the index and their position on individual indicators, like labor force participation and women in politics (parliament). Women in Mexico have the lowest participation in the labor force (0.55), and in Finland the share is highest (0.96). Women’s participation in the labor force is also fairly low in Italy, Argentina, Japan, and Brazil. As regards women in parliament, Brazil and Japan have the lowest degree of participation, and participation is also low in Italy, Canada, China, the

Table 9.8 Global Gender Gap subindexes

	Labor force participation	Enrollment in tertiary education	Women in parliament
Asia			
CN (61*)	0.88	1.04	0.27
JP (94*)	0.73	0.88	0.13
KR	0.73	0.7	0.17
MY	0.57	1.3	0.11
AU (23*)	0.85	1.3	0.38
CA (20*)	0.9	1.36	0.28
Europe			
DE (13*)	0.87	1	0.49
FI (3*)	0.96	1.24	0.67
IT (74)	0.7	1.41	0.27
NL (17*)	0.87	1.11	0.69
NO (2*)	0.94	1.62	0.66
PT (32*)	0.87	1.22	0.38
UK (15*)	0.84	1.4	0.28
Latin America			
AR (29*)	0.71	1.52	0.63
BR (85*)	0.75	1.29	0.1
MX (91*)	0.55	0.98	0.36
SA	0.76	0.91	0.8
USA (19*)	0.85	1.4	0.2

Source: Global gender gap report. WEF Publications. Retrieved May 11, 2010, from <http://www.weforum.org/pdf/gendergap/report2009.pdf>

“*” refers to the countries position in the ranking made in this report

UK, and the USA. The indicator of women’s enrollment in tertiary education is important here, as it tells us about each country’s potential pool of recruits for the academic profession. On this indicator the female to male ratio varies considerably, from 0.88 (Japan) and 0.98 Mexico to 1.62 Norway.

It is reasonable to suggest we will find a certain correlation between relatively low labor force and political participation among women compared to men and a low proportion of female professors in countries. Indeed, this does seem to be the case, looking at countries with low participation, like Japan and Mexico and vice versa, when we look at high participation countries (Table 9.8).

The national differences in women’s international activities as revealed in the CAP data set correlate fairly well with the ranking of countries on the GGGI; Brazil (85), Mexico (91), and Japan (94) have a lower rank than Norway (2), Finland (3), the USA (19), Canada (20), the UK (15), South Africa (12), Germany (13), Argentina (29), Portugal (32), and Italy (74). One might expect countries with features such as (relatively) low political empowerment of women and a high proportion of women enrolled in tertiary education to eventually see gender differences in academia decrease, although the pace of the development is likely dependent upon factors beyond the demographic and cultural ones discussed here, such as broader economic development and the pace of expansion of higher education systems, as

well as structures of social classes and the extent to which these developments lead to relatively progressive patterns of social mobility.

In other words, a comparison of CAP data and the GGGI suggests that national differences as regards women academics' position in general, and participation in international activities in particular, should be understood in relation to broader national features regarding sociopolitical conditions and the relationship between research policies and family/welfare policies.

9.6 Summing Up

Despite the increasing importance of internationalization and globalization, gender differences in international academic activities have been little studied.

Based on the relatively basic indicators available via the CAP data set, this analysis reveals that many of the traditional gender differences in academic work seem to be reproduced through international academic activities. Male academics are generally more involved in international research collaborations than their female counterparts, while women seem to be more involved in internationalization at home in terms of teaching in a language different from their native language. Typically, we see a tendency for women academics to perform better in terms of the roles or activities that are valued within an institutional hierarchy, while men perform better in relation to activities emphasized in the scientific hierarchy, such as international research collaboration, international publishing, and coauthorship with colleagues abroad. To a certain extent, these gender differences reflect well-established differences that exist between different fields of science when it comes to modes of international collaboration and publication. STEM disciplines are characterized by more international collaboration and publication than the soft or feminized subjects, in the humanities and social sciences.

The data also reveal a tendency for men to teaching abroad more frequently than women. Barriers to international academic activity and time abroad seem likely to limit the realization of women's full international academic potential. The CAP data suggest that some of these barriers are related to marital status, spouses' employment, and parental status: We find that female academics with full-time employed partners and children are less likely to take part in international research collaboration than male academics with or without children and less likely than single female academics without children. Another issue to explore, however, is that women once having decided to go abroad and ace new institutional environments seem to encounter different challenges as compared to men.

Working long hours may well make an international career and extensive travel abroad incompatible with the traditional divisions of labor between men and women that persist in many countries and may help explain why women academics are more active in internationalization at home. The international career path seems to be a less legitimate option for women. The CAP data also reveals that more academic women are single compared to men. The social academic identity of academics, as influenced

by national contexts, appears to include a strongly gendered dimension. The factors that contribute to the traditional gender roles found in countries also interact with the distinctive features of the academic career structures in the different countries. Some academic systems are gender segregated along the education-oriented versus research-oriented tracks, for example, in Mexico which has a low proportion of women at the PhD level. In countries with competitive tenure-track systems, like in the USA, it seems reasonable to suggest that it is particularly risky for women academics to go abroad rather than making a name for themselves at home.

This analysis suggests that gender differences as regards academic internationalization must be interpreted in light of the distinctive cultural and social notions of gender and suitability that exist in different countries and regions; the fit or mismatch between these gender roles and academic career roles is what puts constraints on women's professional development, via issues such as their ability to work long hours, go abroad, and develop a social identity in line with those dominant in the academic profession.

The empirical evidence we find in this article provides a basis for further hypotheses to be explored and tested. The data in this analysis have focused on fairly basic indicators of international activity, international collaboration, international publishing, etc., but we know less about the extent and quality of female academics' relationships and activities, how many networks they have, the role of their networks, and under what working conditions they are trying to internationalize themselves and their careers.

The role women academics play in an ever more international and globalized world, and to what extent typical gender differences between men and women are reproduced at this level, remains a relatively unexplored issue.

The fact that men tend to be more active than women in international research suggests that the glass ceiling, the barriers women face in relation to realizing their academic potential, also must be understood alongside levels and relationships that go beyond the formal national and institutional frameworks. Indeed, we see quite clearly unique national conditions that disadvantage women and some men in relation to being internationally active, as in the USA where it seems like there is a risk of being away posed by the tenure system. The conditions that structure and influence gender inequality in the academic profession at the transnational level, in projects, networking, publishing channels, and sources of funding, must be taken into account, both qualitatively and quantitatively, i.e., what type of "skills" are necessary to become full-fledged members in international researcher networks; in this way we can begin to understand how these international conditions interact with the specific national conditions and structure the behavior of academics, women, and men.

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Chapter 10

Internationalization and the New Generation of Academics

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10.1 Introduction

As the widely used term, “internationalization,” suggests, education organizations have been experiencing a trend toward an increase in the international features of higher education in recent decades (see the analyses in Teekens and de Wit 2007; see also de Wit 2002; Knight 2008; Teichler 2007). In many respects, universities are already international (see Kerr 1990), but in recent years, the diminished influence of national regulations has aided in the enormous growth of visible international activities in higher education. In this context, one tends to refer – in the analysis of how the academic profession is embedded in the internationalization of higher education – to (a) a more rapid speed and a wider spread of knowledge transfer all over the world; (b) a stronger emphasis paid to global knowledge capital and the subsequent comparative analysis; (c) an increase in communication and collaboration across borders on the part of institutions, their subunits, and individuals; (d) growing student mobility; and (e) increasing mobility of the academics themselves (Musselin 2005; Teichler 2004, 2009, 2011).

The aim of this chapter is to establish the extent to which views on international issues of higher education and international activities vary across the generations of academics. This requires concrete definitions on a numerous concepts and measurements of what constitutes a “generation” as well as a choice of the international aspects to be addressed.

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Further discussed below, two concepts of “generations” guide the subsequent analysis. *Biographical generations* are defined as less than 40 years old, 41–55 years old, and older than 55 years.¹ *Status generations* are defined as “senior academics,” or “professors,” and “junior staff” according to a classification generally employed in the CAP project.

The issues addressed regarding internationalization in the subsequent analysis are largely determined by themes covered in the questionnaires. Notably, four questions are raised:

- How much do young/old and junior/senior academics differ in terms of international mobility or migration for study or professional purposes throughout their lives that is in terms of the international aspect of their biographies?
- How much do young/old and junior/senior academics differ with respect to their international activities and to their foreign language use?
- Does the international aspect of the individual’s biography have an impact on the academics’ international activities and their foreign language use?
- Do international biographies as well as international activities and foreign language use effect the way the academics view the situation of the academic profession and act professionally in general?

As in other parts of the overall analysis of the academic profession within the CAP project, differences by country will be examined. Countries are categorized as advanced countries (Canada, USA, Finland, Germany, Italy, Norway, Portugal, UK, Australia, Japan, South Korea, Hong Kong) and emerging countries (Argentina, Brazil, Mexico, South Africa, China, Malaysia).

Finally, it should be added here that the analysis of this chapter concentrates on academics active at “universities,” defined in this project as institutions more or less equally engaged in teaching and research. The available data show that academics at universities are more strongly active in the international arena than academics at other institutions of higher education. The latter are excluded here because national conditions for international activities vary more dramatically by countries in the latter case and a detailed review of these diverse contexts cannot be realized within the space limitation of the analysis.

10.2 Generation of Academics

A generation is a multidimensional concept that combines biographical, historical, sociological, and vocational perspectives. In discussing generations, one usually refers not only to age but also to different historical experiences, different lengths of professional experiences, as well as different positions in the hierarchical structure in the organization.

¹It has to be noted that biographical generations are concurrently historical generations, because the process of “internationalization” was at a different stage when they got to know the world of academia.

One could consider generations, first, merely in *biographical terms*. Many analyses in this domain lay out the typical stages of a human life cycle – youth, adulthood, old age, etc. – as forming a biography. As used in demographics, “cohort” stands for a set of individuals who pass some crucial stage at approximately the same time, like marriage, first employment, and especially birth (Carlsson and Karlsson 1970). Moreover, according to life cycle theories (Erikson 1959; Levinson et al. 1978), adults experience different levels of motivation and capability. For instance, early adulthood might be viewed as being characterized by high achievement motives, individual enthusiasm for one’s job, and possibly readiness for substantial changes in the life course. The academic profession is often named in this context as a profession where career decisions are made at a very late point in time. The age range of the academic profession in most countries stretches from about 25 years to about 65 years. However, both the typical entry age and the retirement age vary by country, and the overall time span of the academic career might be shorter in some countries and longer in others.

Second, generations can be defined *vocationally* in terms of career stages. Length of work in a specific organization, a specific occupational category, or specific economic sector would be in the spotlight. For example, individuals entering a specific organization at the same point in time or occupying the same position within an organization in the same period can be considered as a cohort, irrespective of their age. For instance, Bayer and Dutton (1977) divided academic generation groups, based on their length of experience, into fledglings (under 4 years), maturing (5–10 years), established (11–25 years), and patriarchs (over 25 years). In many international statistical analyses, researchers are described according to years of experience as “early-stage researchers” (less than 4 years), “experienced researchers,” and “senior researchers” (Teichler 2011). Similarly, one could define academic staff according to years of employment at institutions of higher education. Such a measure, however, is dubious in the case of a comparative study of the academic profession because of substantial differences in the career patterns of the academic profession. While, in some cases, academics are often employed after the award of a bachelor degree, in other cases they are employed only after some period of post-doctoral research work. Moreover, it would be difficult to put in perspective years of professional experience outside academia.

Third, any effort in analyzing generational differences of views and activities of academics with respect to international issues cannot succeed in measuring just effects of age and work experience per se. It is obvious that *biographic generational* effects cannot be isolated from *historic generational* effects. Therefore, it is necessary to determine in which historical moment or phase individuals entered a specific age group or stage of their life. Indeed, individual biographies are placed in specific historical contexts and are influenced and shaped by them. Some national studies point out that specific historical circumstances have shaped the values, attitudes, and behavior of academic generations. For instance, Evans (1995) classified academic generations based on major historical changes, such as the rapid expansion of the academic labor market in the 1960s and 1970s of the USA or the sudden decreasing moment of federal research funding. In an international comparative

study on the academic profession, historical developments salient across countries must be taken in account. For example, those who were about 30 years old at the time the survey was conducted experienced a more progressed stage of internationalization than those who were about 30 years in the 1980s. Further, with respect to a certain biographic stage, one has to bear in mind that some academics might have experienced the current internationalization trend during its infancy, while others might have experienced advanced internationalization from the outset of their career. As a consequence, in observing and interpreting differences between biographic generations, one has to take into consideration that the differences observed might be attributable to biographic age and/or to different experiences of the process of internationalization.

Fourth, many sociological studies point out that status and rank are important criteria to define generation in terms of socialization process and role expectations in organizational context. Generations in this respect are highly relevant in academia (see Katz 1973), because academic identity, scholarship, and interpersonal relationships can be changed according to length of service or position (see Enders and de Weert 2004, 2009). Academic careers have strong elements of seniority; the behavior and performance of academics can be explained from their networks, resources, and their power within the individual higher education institution and within the academic community at large. As a consequence, we might assume a strong *status generational* impact as regards international activities: that academics in senior positions can more easily make use of the opportunities of internationalization than academics in junior positions.

In the subsequent analysis, “generational” differences are addressed with the help of two measures: (a) *biographic generations*, which are, to a certain extent, *historic generations*, which are expressed in terms of age, and (b) *status generations*, which are expressed in terms of academic status or rank. Given these definitions, the analysis begins with two competing hypotheses. On the one hand, young academics might be more international in their activities because they are influenced by the progressing internationalization of higher education. On the other hand, the academics in senior positions might be more international because they have better means of undertaking international activities.

The respondents are classified, first, according to age group, those up to 40 years old, those 41–55 years old, and finally those 56 years and older. Those who are up to 40 years old got acquainted with the academic world as students beginning in the late 1980s, at a historical moment that we can consider as the breakthrough of the current internationalization discourse. This would include, for example, the start of massive activities in Western Europe and in Japan to strengthen international activities in higher education, the opening-up policy in China, and the end of the “Cold War” and of the political bloc of communist countries. Those who are 41–55 years old experienced higher education as students when paradigms of higher education expansion and modernization led the worldwide search for best models of higher education and reached the typical age of promotion to senior academic positions at the time of the above-named breakthrough of the current internationalization discourse. Finally, those older than 55 years began to study at a

time when higher education still was strongly shaped by a national emphasis on higher education policies.

Second, the respondents are classified according to status in the subsequent analysis. In this framework, we adopt the classification employed in the CAP project in general: “Senior academics” or “professors” on the one hand, i.e., those occupying a position equivalent to associate professors and full professors in the US higher education system, and junior academics or “junior staff” on the other hand, i.e., those on a lower position such as assistant professors, lecturers, research associates, and assistants.

Of course, “seniority” according to status and seniority according to age overlap. On average, the “professors” surveyed are about 50 years old, while the “junior staff” are about 40 years old. One has to keep in mind, though, that the age composition of the academic profession varies substantially according to the countries included in this comparative study.

10.3 Internationality of Career

For the initial steps of this analysis, we classify the internationality of academics’ careers into six categories based on citizenship, the distinction between immigrant and nonimmigrant mobile academics, the stage of their life when they moved to another country, and the purposes for crossing its borders:

- *Early immigrants*: persons having lived in a country different from that of their current work and also having had in most cases another citizenship who had come to the country of their current academic work sometimes between birth and study (up to the master’s level)
- *PhD immigrants*: persons having lived in a country different from that of their current work and also having had in most cases another citizenship who had come to the country of their current academic work at the beginning or during their doctoral work
- *Professional immigrants*: persons having lived in a country different from that of their current work and also having had in most cases another citizenship who had come to the country of their current academic work for the purpose of academic work at a later stage of their academic career, sometimes after the doctoral award or, if they are not PhD holders, sometimes after their highest degree
- *Study mobile academics*: (nonimmigrant) citizens of the country of current academic work who had been mobile during the course of study (including those who had been mobile both in the course of study and during doctoral work)
- *PhD mobile academics*: (nonimmigrant) citizens of the country of current academic work who had been mobile during the course of their doctoral work (excluding those who had been mobile both in the course of study and during doctoral work)
- *Non-mobile academics*: academics who are neither immigrants nor were mobile during the course of study or during doctoral work (we cannot exclude, however, the possibility that they have worked a while in another country)

It should be noted that information provided by respondents was not consistently complete. In the subsequent analysis, persons who did not state their citizenship were considered as persons having the nationality of the country of their current work.

Table 10.1 displays the international mobility of academics working at universities by status and age in advanced and emerging countries. In regard to academics' status, we note that the international character of the senior academics' career was higher than that of junior academics. As the left part of Table 10.1 shows, the proportion of immigrants and mobile persons among senior academics is slightly higher than among junior academics across all countries. There are substantial variations, however, by country. Clearly, these include higher proportions of young academics at Malaysian, Norwegian, and Dutch universities and also slightly higher proportions of some other countries.

The findings are similar with regard to age group, as the right part of Table 10.1 shows. The oldest group of respondents had been more internationally mobile in their life course and career course than the younger academics. The most striking difference according to age might indicate a *historical change*. The proportion of those from emerging countries who have studied abroad is clearly smaller among the young and middle-aged academics than among the older generation; obviously, it is less important for recent generations of academics in emerging countries to undertake their bachelor and master studies in an economically advanced country in order to embark on a successful academic career.

As the previous chapters have already shown, there are striking variations between countries in regard to migration and international mobility, which are more salient than generational variations across countries. It is clear that the proportion of immigrants in the countries of Australia, Hong Kong, Malaysia, and the Netherlands is higher than it is in other countries, which include Japan, Korea, and certain Latin American countries, across generations. However, high migration and high mobility do not necessarily coincide. Some countries show high student mobility and PhD mobility despite the fact that the proportion of immigrants is low; Korea is among them. Nearly 30 % of academics in Korea experienced PhD mobility; however, the proportion of immigrants is close to zero. This number indicates that it is rare to recruit immigrants as academics except for those who had experienced mobility during their course of study.

10.4 International Activities

Eight aspects of academics' international activities were addressed in the CAP questionnaire. Three refer to the teaching function:

- (a) Emphasizing international content in their teaching,
- (b) Teaching many international graduate students,
- (c) Having taught abroad recently.

Table 10.1 International mobility of academics in universities by status and age, by mean percent, 2007–2008

	Status			Age								
	Seniors		Juniors		56 and older		41–55 years		Up to 40 years			
	Advanced countries	Emerging countries	Advanced countries	Emerging countries	Advanced countries	Emerging countries	Advanced countries	Emerging countries	Advanced countries	Emerging countries		
Early immigrants	4	2	3	4	1	3	5	4	4	5	2	4
PhD immigrants	3	1	2	2	1	2	3	1	2	3	3	3
Professional migrants	8	2	6	8	2	6	10	3	8	6	9	7
Study mobile academics	10	18	13	8	14	11	10	18	13	11	9	9
PhD mobile academics	8	5	8	8	5	7	9	5	8	8	8	6
Non-mobile academics	66	70	68	68	78	71	64	68	65	68	66	71

Source: CAP data, September 2011

Five refer to the research function:

- (d) Research is international in scope or orientation,
- (e) Collaborating in research internationally,
- (f) Having raised research funds abroad or from international sources recently,
- (g) Publishing jointly with foreign colleagues,
- (h) Publishing abroad.

Table 10.2 suggests that about half of the respondents, on average, across countries, report emphasizing international content in their teaching (a), their research as international in scope (d), collaborating with international colleagues (e), and publishing abroad (h). Somewhat fewer academics publish jointly with authors located in other countries (g). Finally, only a few academics teach many international graduate students (b), have taught abroad recently (c), and have raised research funds abroad or from international sources recently (f).

On average across countries, 17 % stated that they do not undertake any of the eight international activities addressed in the survey and 12 % named only a single activity. In contrast, 1 % stated that they were internationally active in all eight areas, 2 % named seven areas, and a further 7 % named six areas. In order to get an aggregate picture, the three variables referring to teaching are merged in Table 10.2, creating an “International teaching index,” with the five variables referring to research being combined to create an “International research index.” Further, all eight variables were combined to create an “International activities index.”

The *status generational* impact obviously plays an important role in this respect. The left part of Table 10.2 indicates a clearly higher international activity index score for senior academics than for junior academics. Senior academics are more international than junior academics both with respect to teaching (1.0 vs. 0.8) and research (2.4 vs. 2.1). The finding can be viewed as surprising, as already discussed above. The CAP survey data as such do not provide any clear reason why more senior academics are internationally active than junior academics. We can assume that they are in a preferential situation to pursue international activities due to more power, better networks, and longer experience.

There is corresponding difference by *biographical generation*. As the right part of Table 10.2 shows, the international activity index is 3.3 each on average for academics at universities 56 years and older and 41–55 years and is slightly lower for those up to 40 years (3.0). This scores that the clout of an experienced academic is very important for the extent of international activities.

The only, and small, difference noted at all by age holds true only for teaching activities (index of 1.0 on the part of the older academics, 1.0 in the middle-age group, and 0.8 in the younger group). As far as the research index is concerned, there is not any noteworthy difference by age.

There are differences according to individual questions. As regards teaching activities, we note that:

- Members of the youngest group less often “emphasize international perspectives or content” in their class (59 % as compared to 66 % each).

Table 10.2 Percent of teaching and research activities and mean international index score for the international activities of academics in universities by status and age, 2007–2008

	Status													
	Seniors						Age							
	Emerging countries		Advanced countries		Juniors		56 and older		41–55 years		Up to 40 years			
	All	Emerging countries	Advanced countries	All	Emerging countries	Advanced countries	All	Emerging countries	Advanced countries	All	Emerging countries	Advanced countries	All	
Teaching														
International content/perspectives infused teaching	70	68	69	61	49	59	69	69	66	66	66	59	60	59
Currently, most of your graduate students are international	14	8	13	12	6	10	14	5	11	14	7	12	12	10
Teaching abroad	18	10	19	8	6	7	19	9	16	15	9	13	8	7
Research														
International scope of research ¹	67	53	63	55	46	52	64	51	60	62	52	59	58	55
Do you collaborate with international colleagues? ²	65	40	58	50	31	43	59	38	53	62	38	55	56	49
International research funding ³	13	8	11	13	6	11	11	7	9	11	9	9	10	9
Coauthored with colleagues located in other (foreign) countries ²	51	28	45	38	21	33	43	24	37	48	22	39	46	40
Published in a foreign country ²	69	52	63	60	42	55	66	24	60	66	47	60	67	61
Internationalization index														
Int teaching index	1	1	1	0.8	0.8	0.8	1.1	1	1	1	0.9	1	0.8	0.8
Int research index	2.7	1.9	2.4	2.3	1.6	2.1	2.6	1.8	2.3	2.7	1.8	2.4	2.5	1.8
Int activity index	3.8	2.8	3.5	3	2.3	2.8	3.6	2.6	3.3	3.6	2.6	3.3	3.2	2.5

Source: CAP data, September 2011

¹Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

²Affirmative responses

³Means of adjusted percentages of all research external funds

- A larger proportion of the eldest academics has “teaching abroad” experience (16 % vs. 8 % and 7 %, respectively).

As regards research activities, we note that there are two survey items among five items in which a higher proportion of the older group is internationally active: emphasis of research as “international in scope or orientation” and “collaboration with international colleagues” in research. In the case of international collaboration, this result makes sense, because an older academic can be expected to have a broader network in the international academic community. However, there is no significant difference in terms of research funding from international sources across generations. Regarding international publications, we even find that the proportion of international joint publications and publishing abroad by the younger group are both higher than they are for the older group (joint publications: 37 % in the 56 and older group vs. 39 % in 41–55 years and 40 % in up to 40 years; publishing abroad: 60 % in the 56 and older group, 60 % in 41–55 years, and 61 % in up to 40 years).

There are a few countries where some international activities are more frequent among the younger academics. More frequent international publishing on the part of the younger academics is most pronounced in four countries, and the respective figures for international joint publications actively, in the three age groups, respectively, are 35, 43, and 51 % for Australia; 43, 44, and 45 % for Japan; 35, 41, and 57 % for Korea; and 35, 37, and 45 % for Mexico. These figures cannot be explained merely by a historic trend of internationalization, but, rather, by *policies* in these countries that place a stronger emphasis specifically on international publication activities.

Further, Table 10.2 shows that fewer academics in emerging countries are internationally active in the area of research than academics in advanced countries. Interestingly, such a difference does not exist in the area of teaching. As the international activity index covers both research and teaching, fewer academics in emerging countries are internationally active, overall, than the academics in advanced countries. But again, we note, both in advanced countries and in emerging countries, that senior academics are more internationally active in research overall than junior academics. We note that this senior-junior gap holds true – viewed on average across countries – for more or less all of the dimensions of international activities addressed in the CAP study. The only exception is research funding, which is reported as often by junior academics as by senior academics.

Finally, we note that the generational gap in academics’ international activities varies among countries. At universities, often, the difference is more striking among economically advanced countries of the West and is smaller in some emerging countries as well as some Asian countries, but there is not any consistent pattern. By and large, we can assume that academics at economically advanced countries were already on the move toward internationalization some while ago, while this is a more recent phenomenon in some of the emerging countries.

10.5 Foreign Language Use

The use of foreign language is often viewed as an indicator of internationalization. However, with contrasting views, a clear distinction has to be made between the use of a lingua franca and a foreign language not known, more or less, globally. Within the framework of this chapter, we define *foreign language use* according to three perspectives. First, a language is considered foreign if it is different from respondents' first language or mother tongue. This is the case for analyses addressing respondents' biographies. Second, a language is considered foreign if it is different from the dominant language used in the country where respondents work. Third, a language is considered foreign if it is different from the language being used at respondents' current institution.

First, academics participating in the CAP survey have been asked to state whether the prime language they use in teaching and research differs from their first language. The left part of Table 10.3 shows that the proportion of academics in both statuses employing another language is more or less identical across countries. Twenty-one percent each of senior and junior academics employ another language in teaching as well as 46 % vs. 45 % in research. The right part of Table 10.3, however, provides a different picture with regard to the respondents' age. A higher proportion of young academics use a language different from their first language both in research and teaching. Among young academics, the respective proportions are 21 % as compared to 15 and 17 % in regard to teaching and 45 % as compared to 40 and 41 % with regard to research.

Second, Table 10.4 shows the proportion of academics stating that they use a foreign language, according to our second definition, in teaching as well as in research. Slightly more senior academics than junior academics use a foreign language for purposes of teaching and research. As the first three lines in the left part of Table 10.4 indicate, the respective proportion varies slightly by the respondents' status (59 vs. 56 %). Looking at the individual countries, we note that foreign language use is most widely spread among academics in the Netherlands (mostly about 40–50 %). In contrast, the use of foreign language in teaching is rare in the Latin American countries surveyed.

Looking at the right part of Table 10.4, we also note that the youngest group of respondents uses a foreign language more than the two elder groups. For instance, in Japan and Korea, the younger generation at universities uses foreign languages to a higher proportion than that of the older generation. In both countries, efforts have been made to recruit junior academics who have demonstrated an international capacity in their research and teaching activities. As well, universities encourage academics to teach their classes in English while at the same time strive to recruit more foreign students.

In the two tables above, foreign language is defined as different from respondents' first language or as different from the predominant language used in a country.

Table 10.3 Percent of academics in universities using foreign language (different from first language) in teaching and research by status and age, 2007–2008

	Age															
	Status				56 and older				41–55 years				Up to 40 years			
	Seniors		Juniors		Advanced countries		Emerging countries		All countries		Advanced countries		Emerging countries		All countries	
In teaching	20	20	21	21	20	20	24	24	15	19	21	21	17	23	20	21
In research	48	42	46	47	41	41	43	39	40	46	41	41	41	53	46	45

Source: CAP data, September 2011

Question F11/12: Which languages do you primarily employ in teaching/research?

Table 10.4 Percent of academics in universities using foreign language (different from the dominant language being used at a current country) in teaching and research by status and age, 2007–2008

	Status						Age								
	Seniors		Juniors		56 and older		41–55 years		Up to 40 years						
	Advanced countries	Emerging countries	Advanced countries	Emerging countries	Advanced countries	Emerging countries	Advanced countries	Emerging countries	Advanced countries	Emerging countries	All countries	Emerging countries			
Teaching and research	27	9	21	19	7	16	24	7	19	25	8	18	19	7	15
Teaching only	3	4	4	3	7	4	4	4	4	3	5	3	3	5	5
Research only	32	38	34	38	31	36	33	36	34	34	37	37	40	40	42
Neither	38	49	41	40	55	44	39	53	43	38	50	42	38	48	38

Source: CAP data, September 2011
 Question F11/12: Which languages do you primarily employ in teaching/research?

However, these criteria don't consider the ordinary language being used in academics' working environment. Therefore, we used the third definition of foreign language as a language different from the one in use at their current institution. In the framework of the CAP survey, the respondents have also been asked whether they use a language different from the language of instruction at their current institution in their teaching and publication activities. We do not know whether the respondents use one or more foreign languages. We also do not know whether they use the foreign language only occasionally or regularly and whether they use it in part of their courses and publications or in all of their courses and publications. The academics have been asked just to state whether they use foreign languages with respect to the two named activities.

As the left part of Table 10.5 shows, compared to junior academics, a higher proportion of senior academics make predominant use of foreign languages (32 vs. 28 %). In contrast, as the right part of Table 10.5 indicates, we do not note any major differences in terms of the predominant use of a foreign language between age groups.

10.6 International Biography and International Activities: A Similar Link Across Generations?

In other chapters of this volume, evidence has been provided that academics who are migrants, and those who have been mobile in their careers, are more likely to undertake international academic activities and to use foreign languages in their academic activities. In the subsequent section of this chapter, we examined whether higher involvement in international academic work is more pronounced among senior or junior academics and among older or younger academics. Actually, this analysis is based on the hypothesis that differences in international engagement are greater among senior and elder academics than among junior and younger academics. While in the past, international academic activities might have been motivated primarily by individual factors, nowadays international academics' activities might be more often perceived as a "must" for all ambitious academics. In order to examine these similarities and differences across generations, we have simplified the outcome variable: the five categories of migrant and mobile academics were aggregated into a single category. Thus, we compare how international academic activities of "mobile" and "non-mobile" academics differ by status and age.

Table 10.6 shows the expected result that a higher proportion of internationally mobile academics are internationally active than those who had not been mobile. There are differences with respect to emphasizing international perspectives in teaching and in research, as well. The differences are large with respect to teaching abroad, collaboration with international colleagues, and publishing.

While we note that professors are more active internationally than junior staff overall, when we factor in as well differences according to international mobility, we note that these gaps in international activities between mobile vs. non-mobile

Table 10.5 Percent of academics in universities using predominant language other than current institution language(s) in teaching and publications by status and age, 2007–2008

	Status		Age															
	Seniors		Juniors				56 and older				41–55 years				Up to 40 years			
	Advanced countries	Emerging countries	All countries	Advanced countries	Emerging countries	All countries	Advanced countries	Emerging countries	All countries	Advanced countries	Emerging countries	All countries	Advanced countries	Emerging countries	All countries			
Teaching and publications	9	2	7	8	2	6	8	3	5	9	2	4	10	1	5			
Teaching (only)	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1			
Publications (only)	27	11	24	23	17	21	26	15	24	26	18	22	30	22	23			
Neither	63	85	68	68	80	72	65	81	70	64	79	73	59	76	71			

Source: CAP data, September 2011

Question C4: During the current (or previous) academic year, are you teaching any courses in a language different from the language of instruction at your current institution? Question D5: Have you ever published your research in a different language from your current institution in last 3 years?

Table 10.6 Percent and index scores of international biography and international activities of academics in universities by status, 2007–2008

Status	Seniors						Juniors					
	Advanced		Emerging		All		Advanced		Emerging		All	
	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile
Teaching												
International content/ perspectives infused teaching	73	62	76	68	75	65	68	57	61	56	65	57
Currently, most of your graduate students are international	19	12	6	7	13	10	16	9	12	8	14	9
Teaching abroad	21	17	17	6	19	12	11	7	10	3	11	5
Research												
International scope of research ¹	73	66	62	58	68	62	63	57	50	52	57	55
Do you collaborate with international colleagues? ²	72	63	58	25	65	44	60	52	37	21	49	37
International research fundings ³	26	22	22	11	24	12	19	20	17	10	18	15
Coauthored with colleagues located in other (foreign) countries ²	53	46	39	14	46	30	47	37	34	14	41	26
Published in a foreign country ²	73	64	66	41	70	53	71	61	56	37	64	49
Internationalization index												
Int teaching index	1.2	0.9	1.1	0.9	1.2	0.9	1.0	0.8	0.9	0.8	1.0	0.8
Int research index	3.0	2.6	2.6	1.6	2.8	2.1	2.7	2.3	2.0	1.4	2.4	1.9
Int activity index	4.1	3.5	3.5	2.4	3.8	3.0	3.5	3.0	2.7	2.1	3.1	2.6

Source: CAP data, September 2011

Note: Mobile = Migrant + Mobile academics; Non-mobile = Non-mobile academics

¹Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

²Affirmative responses

³Means of adjusted percentages of all research external funds

academics are greater among professors than among junior academics. A closer look reveals that the greater gaps in international activities between mobile vs. non-mobile academics at the senior ranks hold true only for academics in emerging countries. The gap is most striking with respect to joint publications with academics from other countries, acquisition of international research funds, and teaching abroad.

By contrast, these mobile vs. non-mobile gaps are more or less the same in the various age groups. However, these gaps are consistently greater among academics in emerging countries than among academics in advanced countries (Table 10.7).

Thus, our hypothesis suggesting greater gaps attributable to mobility among senior academics is called into question completely with respect to academics in advanced countries. It is also called into question with respect to the age of academics in emerging countries, while it is confirmed only with respect to rank in emerging countries. In sum, while mobility and international experience matter substantially for involvement in international activity of university professors in emerging countries, the gap in international activities between mobile vs. non-mobile academics is considerably smaller for junior academics in emerging countries. It might be noted here that international activities are especially rare among academics in China who had not been mobile in their career.

The use of foreign language, defined as a language different from that predominantly employed in the current working institution, is not consistently related to international mobility and experience. This might be explained by the fact that foreign language use in teaching and research predominantly means the use of English as a lingua franca and the use of English as a language is influenced by many factors. For example, it is more frequently used in smaller countries than in larger countries, more frequently in former British colonies and less frequently in Latin American countries, more frequently in science and engineering than in humanities and social sciences.

Table 10.8 shows, however, that mobile scholars at universities, both in advanced and emerging countries, more often employ a foreign language in teaching. In contrast, only mobile scholars in advanced countries employ a foreign language less frequently than non-mobile scholars. Altogether, Tables 10.8 and 10.9 do not indicate any major difference by status and age group of the respondents.

The findings are completely different as regards the *use of a language different from one's mother tongue*. In this respect, as Tables 10.10 and 10.11 show, mobility is associated with more frequent employment of a foreign language almost consistently among all status and age groups in both advanced and emerging countries. There is only one exception: elder non-mobile academics from advanced countries employ a language foreign to them in research as often as their mobile peers of the same age group.

Altogether, we note that a higher proportion of junior academic staff than of professors and a higher proportion of relatively young than of elder academics use a language foreign to them in teaching and research. But as far as the use of a foreign language is concerned, mobile and non-mobile academics do not differ substantially according to their status and age group.

Table 10.7 Percent and index scores of international biography and international activities of academics in universities by age, 2007–2008

	Up to 40											
	Over 56						41–55					
	Advanced	Emerging	All	Non-Mobile	Mobile	All	Advanced	Emerging	All	Non-Mobile	Mobile	All
Teaching												
International content/perspectives infused teaching	73	61	72	68	73	65	73	62	69	66	71	64
Currently, most of your graduate students are international	19	12	3	6	11	9	17	11	8	7	13	9
Teaching abroad	22	17	15	7	19	12	17	14	15	7	16	11
Research												
International scope of research ¹	71	65	55	46	63	56	68	62	59	54	64	58
Do you collaborate with international colleagues? ²	65	54	59	30	62	42	68	62	51	28	60	45
International research funding ³	26	19	21	10	24	15	24	24	20	12	22	18
Coauthored with colleagues located in other (foreign) countries ²	41	39	38	18	40	29	52	44	35	15	44	30
Published in a foreign country ²	68	58	59	46	64	52	74	63	64	40	69	52
Internationalization index												
Int teaching index	1.2	0.9	1	0.9	1.1	0.9	1.1	0.9	1.1	0.9	1.1	0.9
Int research index	2.7	2.3	2.4	1.5	2.6	1.9	2.9	2.6	2.4	1.5	2.7	2.1
Int activity index	3.8	3.2	3.2	2.3	3.5	2.8	3.9	3.4	3.3	2.3	3.6	2.9

Source: CAP data, September 2011

Note: Mobile = Migrant + Mobile academics; Non-mobile = Non-mobile academics

¹Responses 1 and 2 on a scale from 1 = Strongly agree to 5 = Not at all agree

²Affirmative responses

³Means of adjusted percentages of all research external funds

Table 10.8 Percent of academics using another language than that of the respondents' university in teaching and publications by international biography and status, 2007–2008

	Seniors				Juniors							
	Advanced		Emerging		All		Advanced		Emerging		All	
	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile
Teaching and research	23	25	14	6	19	16	17	17	10	6	14	12
Teaching only	3	3	4	4	4	4	4	3	8	6	6	5
Research only	26	37	44	43	35	40	35	45	29	32	32	39
Neither	48	35	38	48	43	42	44	34	52	55	48	45

Source: CAP data, September 2011

Note: Mobile = Migrant + Mobile academics; Non-mobile = Non-mobile academics

Question C4: During the current (or previous) academic year, are you teaching any courses in a language different from the language of instruction at your current institution? Question D5: Have you ever published your research in a different language from your current institution in last 3 years?

Table 10.9 Percent of academics using another language than that of the respondents' university in teaching and publications by international biography and age group, 2007–2008

	Over 56						41–55						Up to 40					
	Advanced		Emerging		All		Advanced		Emerging		All		Advanced		Emerging		All	
	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile
Teaching and Publication	21	22	10	4	16	13	22	22	14	6	18	14	19	20	11	6	15	13
Teaching only	4	4	2	3	3	4	3	3	7	3	5	3	4	3	6	8	5	6
Publications only	27	36	40	39	34	38	29	39	41	40	35	40	36	48	35	37	36	43
Neither	49	39	49	54	49	47	46	37	38	52	42	45	42	28	49	50	46	39

Source: CAP data, September 2011

Note: Mobile = Migrant + Mobile academics; Non-mobile = Non-mobile academics

Question C4: During the current (or previous) academic year, are you teaching any courses in a language different from the language of instruction at your current institution? Question D5: Have you ever published your research in a different language from your current institution in last 3 years?

Table 10.10 Percent of academics using a foreign language (different from mother tongue) in teaching and research by international biography and status, 2007–2008

	Seniors						Juniors					
	Advanced		Emerging		All		Advanced		Emerging		All	
	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile
Teaching	35	9	37	6	36	8	38	10	55	16	47	13
Research	52	44	62	20	57	32	57	48	67	29	62	39

Source: CAP data, September 2011

Note: Mobile = Migrant + Mobile academics; Non-mobile = Non-mobile academics
 Question F11/12: Which languages do you primarily employ in teaching/research? (% reporting “other than native language”)

Table 10.11 Percent of academics using a foreign language (different from mother tongue) in teaching and research by international biography and age, 2007–2008

	Over 56			41–55			Up to 40										
	Emerging		All	Advanced		All	Emerging		All								
	Non-mobile	Mobile		Non-mobile	Mobile		Non-mobile	Mobile									
Teaching	8	33	8	30	8	36	8	41	8	39	8	43	13	58	14	51	14
Research	41	50	27	46	34	54	42	62	23	58	33	63	55	73	25	68	40

Source: CAP data, September 2011

Note: Mobile = Migrant + Mobile academics; Non-mobile = Non-mobile academics

Question F11/12: Which languages do you primarily employ in teaching/research? (% reporting “other than native language”)

10.7 Do International Biographies and International Activities Matter Similarly Across Generations?

As a final step in the analysis, we aim to establish whether international mobility and migration as well as international academics' activities – including the use of foreign languages – have a different impact on the general views and activities of the academic profession according to the academics' status and age. For this purpose, we selected a few important aspects of the general views and activities addressed in the survey on the changing academic profession. The findings are reported in Tables 10.12 and 10.13.

First, mobile academics state more often than non-mobile academics that they have a preference for research rather than for teaching. This gap, however, is smaller among junior academic staff and younger academic staff than among older and senior cohorts.

Second, a similar difference is not confirmed in the actual allocation of working time. On average, mobile and non-mobile academics hardly differed in the percentage of time allocated to research and to teaching respectively. There is an exception, however. Older and more senior academics that are mobile from emerging countries spend a somewhat smaller proportion of their time on teaching.

Third, we note that mobile academics state more frequently pronounced attitudes than non-mobile academics. Notably, they not only underscore more strongly the international aspects of their teaching, but they also point out more frequently the need for vigilance in preventing student cheating and a meritocratic approach, i.e., underscoring that their grading is totally achievement oriented. In this respect, we do not note any substantial difference between university professors and junior academic staff, but wider gaps between the mobile and the non-mobile academics according to age: the gap is widest within the youngest group and smallest within the eldest group.

Fourth, mobile academics emphasize original research more strongly, while non-mobile academics advocate the social relevance of research somewhat more strongly. The gap in the emphasis on original research is wider, the younger the academics are, whereas no corresponding difference can be observed between university professors and junior academic staff.

Fifth, we compared the number of articles published by mobile and non-mobile academics in the most recent 3 years. The data suggest that mobility does not affect academic productivity. In the senior group, productivity is the same for both mobile and non-mobile academics, and in the junior group, the productivity of the non-mobile group is even higher than that of the mobile group. Senior academics publish more than junior academics, but within the career ranks, no differences can be found between mobile and non-mobile academics.

Sixth, we note that mobile academics altogether show a slightly higher commitment to their academic discipline, department, and institution, but this difference is marginal in some institutions, and the reverse is true in some instances as well. For example, mobile junior academics in advanced countries consider themselves

Table 10.12 Academics' general views and activities, mean number of publications, and mean index score by international biography and status (percentages), 2007–2008

	Seniors						Juniors					
	Advanced		Emerging		All		Advanced		Emerging		All	
	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile
Academic preference												
Primarily teaching	3	5	5	10	4	8	6	9	7	11	7	10
In both, but leaning teaching	21	23	27	39	24	31	22	22	40	43	31	33
In both, but leaning research	59	57	58	44	59	51	46	45	47	41	47	43
Primarily in research	17	16	11	7	14	12	25	24	5	6	15	15
Time allocation												
Teaching	38	40	40	47	39	44	41	40	49	51	45	46
Research	32	32	33	30	33	31	36	38	25	28	31	33
Attitudes toward teaching												
Practice-oriented approach	58	55	75	81	67	68	67	64	68	76	68	70
International approach	73	62	76	68	75	65	68	57	61	59	65	58
Value-oriented approach	59	55	68	67	64	61	56	53	68	66	62	60

Honesty approach	72	57	75	75	74	66	70	57	77	70	74	64
Meritocratic approach	83	79	76	53	80	66	74	75	79	53	77	64
Attitudes toward research												
Original research	80	76	69	55	75	66	78	69	71	57	75	63
Application	68	67	79	81	74	74	69	72	79	81	74	77
Integration	63	62	68	71	66	67	62	61	65	72	64	67
Social relevance	57	61	60	68	59	65	55	60	66	67	61	64
Academics' affiliation												
Discipline	90	87	93	88	92	88	88	86	96	88	92	87
Department	66	64	77	77	72	71	65	65	84	79	75	72
Institution	56	56	83	75	70	66	52	55	84	76	68	66
Job satisfaction	69	70	71	66	70	68	59	60	59	58	59	59
Number of publications	10	10	7	7	9	9	5	5	3	4	4	5
Infrastructural support index	4.7	4.4	3.7	3.7	4.2	4.1	4.7	4.4	3.3	3.4	4	3.9

Source: CAP data, September 2011

Note: Attitudes toward teaching and research refer to the percentage of academics who strongly agree and agree

Table 10.13 Academics' general views and activities, mean number of publications, and mean index score by international biography and age (percentages), 2007–2008

	Over 56						41–55						Up to 40						
	Advanced		Emerging		All		Advanced		Emerging		All		Advanced		Emerging		All		
	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	Non-mobile	Mobile	
Academic preference																			
Primarily teaching	9	5	15	7	12	5	8	6	10	6	9	2	4	5	10	4	7		
In both, but leaning teaching	27	31	44	29	37	23	23	32	42	28	33	15	16	35	40	25	28		
In both, but leaning research	51	54	35	53	43	53	52	54	43	54	48	52	51	52	45	52	48		
Primarily in research	13	10	6	12	9	18	17	8	6	13	12	32	30	8	6	20	18		
Time allocation																			
Teaching	40	40	47	40	44	40	41	43	47	42	44	37	36	48	52	43	44		
Research	29	31	29	32	30	31	31	29	29	30	30	42	44	27	29	35	37		
Attitudes toward teaching																			
Practice-oriented approach	59	75	85	67	71	63	61	72	81	68	71	64	59	70	76	67	68		
International approach	73	61	72	68	73	65	73	69	66	71	64	66	56	67	61	67	59		
Value-oriented approach	61	58	71	76	66	67	62	71	69	67	63	48	45	65	63	57	54		

Honesty approach	72	55	76	75	74	65	73	59	75	75	74	67	67	53	77	71	72	62
Meritocratic approach	79	78	81	73	80	76	80	79	76	57	78	68	75	75	78	46	77	61
Attitudes toward research																		
Original research	77	74	68	53	73	64	78	72	69	55	74	64	81	72	70	56	76	64
Application	69	68	73	85	71	77	69	71	80	81	75	76	66	70	79	80	73	75
Integration	66	63	64	68	65	66	63	61	69	70	66	66	61	60	65	74	63	67
Social relevance	58	64	63	68	61	66	59	62	63	66	61	64	51	57	65	68	58	63
Academics' affiliation																		
Discipline	67	86	94	93	81	90	89	87	94	89	92	88	90	88	96	86	93	87
Department	60	65	77	80	69	73	64	63	79	79	72	71	67	66	84	77	76	72
Institution	73	56	84	81	79	69	53	56	83	76	68	66	51	54	85	75	68	65
Job satisfaction	73	70	76	71	75	71	61	63	65	65	63	64	62	63	63	58	63	61
Number of publications	8	8	7	6	8	7	9	9	6	6	8	8	6	5	5	6	6	6
Infrastructural support index	4.8	4.3	4	3.6	4.4	4	4.6	4.2	3	3.4	3.8	3.8	4.8	4.6	3.5	3.6	4.2	4.1

Source: CAP data, September 2011

Note: Mobile = Migrant + Mobile academics; Non-mobile = Non-mobile academics

Note: Attitudes toward teaching and research refer to the percentage of academics who strongly agree and agree

slightly less attached to their higher education institutions than non-mobile junior academics. The picture is even more mixed as regards age. While among the academics of the youngest age group mobility is linked to stronger affiliation in all three respects, the non-mobile elder academics have a stronger affiliation to the discipline and the department than do the mobile elder academics.

Seventh, mobility hardly has any influence on the job satisfaction of academics. Correspondingly, hardly any generational impact can be found in this respect. However, mobile academics of the eldest age group are slightly more often satisfied than non-mobile academics of the eldest age group.

An effect of mobility, i.e., a more positive rating of the infrastructure by those academics who are mobile, is visible to the same extent among senior and junior academics of advanced countries. Moreover, among the eldest academics, those having been mobile are more likely to rate the infrastructure positively, while such a difference cannot be observed regarding the younger academics.

10.8 Concluding Observations

Academic migration and mobility are widely appreciated as an opportunity for individuals to broaden their experience, to increase the international dimension of teaching and research in general, and even as factors contributing to the quality of academic work in general. Analyses in previous chapters have confirmed these assumptions to some extent but have also showed that academic migration and mobility are not consistently beneficial in all those respects.

In this chapter, the question has been raised whether differences between migrant and mobile academics, on the one hand, and non-mobile academics, on the other hand, are similar across generations or show varying patterns across generations. Within this context, we could expect two contrasting generational effects. On the one hand, we could expect *biographic generational* and *status generational* effects. Elder persons have had more opportunities in their life course to be mobile and thus contribute to possibly positive effects of mobility. Moreover, academics in senior positions might have more power, network links, and experience to be mobile and contribute to the beneficial effects of mobility. On the other hand, we could expect *historical generational* effects to overshadow the biographic generational effects and possibly the status effects as well: junior staff and young academics might have been socialized to academic work at a time when being international was more popular than at the time when the currently older academics and those in senior positions have been socialized to academic work. An analysis of the available data might show whether these contrasting factors neutralize each other or whether one might outweigh the other.

In looking at migration and mobility as outcome variables, generally speaking, senior academics' careers appear to be more international than those of junior academics. However, there are substantial variations by country. In addition, these differences exist according to types of mobility. For instance, more young

academics at Malaysian, Norwegian, and Dutch universities show high international mobility experience compared to those in other countries. Also, some countries, including Korea, show high student mobility and PhD mobility despite the fact that the number of immigrants is low.

In regard to international activities, we note a strong positive effect of academic status and a more moderate link between higher age and more frequent international activities. Such a link cannot be found as regards the use of a language other than the language of the country where the university is located. However, young academics are more likely to employ a language different from their native language.

The positive influence of migration and mobility on international activities and foreign language use hardly differs between generations. We note, as most striking, the findings that the gap between mobile vs. non-mobile academics differs more widely among young and junior academics than among elder and senior academics as regards the use of language that is not their native language.

In a minority of aspects examined, migration and mobility are associated with different general views and activities among academics. Indeed, in only a minority of those cases do these differences vary by generation. The most pronounced differences, in that respect, is that mobile academics who are senior and older differ more visibly from mobile academics who are junior and younger academics in terms of a stronger preference for research and less time spent on teaching, in comparison to non-mobile academics.

Thus, overall, generational factors do have an impact on international mobility, international activities, and on the links between mobility, international activities, and general academic activities. Although we need to consider different contexts such as advanced or emerging countries, clearly there are biographic and status generational differences in internationalization.

In the wake of the widespread debate about internationalization, which, for the most part, depicts it as an enormously dynamic trend, we might draw the conclusion that this trend is less dynamic than presumed. We might also conclude that both senior and junior academics as well as both older and younger academics can handle the implications of internationalization so successfully that no substantial status and biographical gaps arise in the majority of the countries addressed in this comparative study.

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Chapter 11

Patterns of Faculty Internationalization: A Predictive Model

Martin Finkelstein and Wendiann Sethi

11.1 Introduction

As economies become increasingly integrated across national boundaries and as the locus of competition expands beyond national boundaries, nations across the globe have sought to upgrade their systems of higher education. Higher education is the seminal industry in a globalized, knowledge-based economy and the key at once to innovation in knowledge production as well as to workforce preparation. For smaller and developing countries on the periphery of global finance and innovation, internationalization promises access to new technologies, to human resources in “core” systems,¹ and to opportunities to exploit the “know-how” of core systems in the education of their indigenous workforce. For “core” systems, internationalization promises access to potential student markets and to importing foreign talent for their indigenous knowledge-based industries (see Chap. 3).

For systems on the periphery, the imperative to internationalize is strong and unambiguous. The central questions are how best to offset barriers to importing foreign talent and know-how and how to expose an increasing proportion of their citizenry to global standards of excellence. What levers at the national government and institutional levels are available? How can they be exploited optimally given resource and cultural constraints? For core systems and those closer to the core, especially

¹The distinction between “core” or “center” and “periphery” was first advanced by scholars of economic development, including Paul Krugman. In the context of higher education, the concepts were introduced by Philip Altbach in “Centers and Peripheries in the Academic Profession,” in Altbach (2003).

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large systems, the motives are weaker and more ambiguous. There is simply less at stake—with the clear exception of new student markets and access to foreign talent.

In all cases, the decision to “engage” internationally comes down to the decision of individual academic staff and their institutions; and this is especially true for the best credentialed and most productive academic staff across the globe. What then drives the decisions of academic staff to internationalize—whether that involves physical boundary crossing for study or professional work, the integration of international content and perspectives into one’s teaching and research (internationalization at home), or working with foreign students and colleagues? To what extent is the intention and ultimate behavior the result of situational and/or structural factors in the home country, e.g., its size and the opportunity structure it offers for developing indigenous research networks, its linguistic distance from English, the lingua franca of scholarship, and its commitment to regionalization? To what extent do institutional factors—purposes and policies—drive faculty internationalization behavior? Or, to what extent do individual personal or professional factors, including academic field, level of research orientation and activity, and personal background—including nativity and citizenship, gender, and age—shape faculty internationalization decisions? Moreover, do any or all of these categories of factors operate uniformly across all dimensions of international activity? Or, are some factors more important in shaping certain aspects of faculty international activity? The answers to questions such as these promise to provide readers with a framework for “thinking through” the type and level of levers that might be pressed in their own particular circumstances in efforts to encourage increased international activity of one sort or another in different national and cultural settings.

The Changing Academic Profession (CAP) 2007–2008 survey provides an unparalleled opportunity to explore answers to questions such as these. It provides individual faculty level data on a variety of personal and professional characteristics and an inventory of international activity for academic staff in 19 countries that differ substantially in economic development, language, culture, and size. In what follows we provide an overview of a model of the determinants of faculty international activity that we developed and sought to test with CAP data. This is followed by a description of the procedures we employed in analyzing the data—including a factor analysis of the dimensionality of faculty international activities, a cluster analysis of individual scores on those factors, and, ultimately, a logistic regression analysis of how each of the factors affected the odds of faculty engagement in various international activities.

11.2 A Model of Faculty Internationalization Behavior

11.2.1 Country Characteristics

Our model began with the basic premise that pursuing academic careers in vastly different national settings provided different sets of motives and opportunities for academic staff to engage internationally. Most generally, *size* was a variable: those academic staff working in very large countries with many universities and a critical mass of scholars in

most fields could likely pursue their research and scholarship without stepping beyond national boundaries; those working in small countries with few universities and lacking a critical mass of researchers in their field were more likely to compensate for those limitations by seeking internationally what they could not find at home. Beyond size, *language tradition* would also likely be a factor. Among the CAP countries, at least three distinctive types of language tradition were discernible: countries where English was the main language (the UK, the USA, Australia), countries where English was one of several “main” languages (Canada, Hong Kong SAR, South Africa, Malaysia), and countries whose main language(s) was not English. Insofar as English has become the lingua franca of research and scholarship worldwide (Borghans and Corvers 2010), we expected that native English speakers would experience less “pull” to engage in the international English-centric venues. At the same time, those scholars in non-English-speaking countries would be “pulled” to engage international, English-centric venues.

Beyond size and language tradition, we identified two other country characteristics which we thought might shape international activity. These include *level of economic development* and *cultural traditions*. We assumed that an academic staff member’s patterns of international activity would likely be affected by whether they worked in a “mature” or “emerging” economy² and whether they worked in a Western or Asian country insofar as cultural—as reinforced by linguistic traditions—traditions might insulate individuals from participation in the dominant, Western culture.

11.2.2 *Organizational Characteristics*

Within national settings, we assumed that the organizational characteristics of the employers of academic staff would further shape patterns of international activity. Most generally, we expected that *institutional type*—whether a research university or a nonuniversity postsecondary institutional work setting—would shape a faculty member’s proclivity to engage internationally. We expected that those employed in universities would more likely be integrated into international scholarly networks than their nonuniversity peers, i.e., academic staff employed at “other higher education institutions.” We further assumed that those organizational settings in which *faculty* (rather than administrators) *drove policy related to internationalization*, i.e., decentralized, faculty-centric institutions, would also shape patterns of faculty behavior.

11.2.3 *Individual Characteristics: Professional*

Beyond national and organizational characteristics, the available literature (e.g., Goodwin and Nacht 1991) suggests that a faculty member’s *academic field* fundamentally shapes their orientation to international activity.³ The natural sciences as a

²For definitions of mature vs. emerging countries, see Chap. 4.

³We recognize that academic field may be viewed as well as an organizational characteristic insofar as academic fields represent communities of inquiry, albeit more often than not invisible.

group tend to be more internationally oriented (science is science everywhere), and certain fields—even outside the sciences, e.g., polar studies, archaeology, and art history—tend by virtue of the subject matter to necessitate an international orientation. Beyond academic field, there are findings in the literature that suggest that a faculty member's *career stage* (years since first appointment and academic rank) may shape the broadness of their vision reflected in their increasing internationalization. Finally, there is evidence that a faculty member's *level of engagement with scholarship and publication* is associated with international activity. Those academic staff who self-identify as active in research and report recent publication tend to be more involved in international networking than their less research active peers (see also Chaps. 7 and 9).

11.2.4 Individual Characteristics: Personal/Demographic

In the international arena, there is some empirical support for the notion that demography is destiny (Finkelstein et al. 2009). First, there is the matter of *gender*: men are more likely to engage in physical boundary crossing than women, especially married women with children (see Chap. 9, but also contrary evidence in Chap. 5). Then, there is *nativity* and *age*: there is some support for the notion that foreign-born faculty or those who crossed national boundaries in their postsecondary studies are more likely to have international connections and engage in international networks later in their careers (see Chap. 5).

Taken together, the basic contours of the model are depicted in Fig. 11.1.

11.3 Methods

11.3.1 Variables

The CAP survey provides data on some 19 variables related to three broad aspects of internationalization: physical border crossing for study or teaching, internationalization at home (integrating international perspectives into one's research and/or teaching), and involvement in international research networks and publication. The variables are listed in Table 11.1.

Beyond these indicators of the outcome variable—internationalization—the CAP survey provides data on the organizational characteristics and individual professional and personal characteristics of faculty respondents. Data on country characteristics (size, language, level of economic development, and culture) were obtained from documentary sources such as OECD, UNESCO, and the World Bank.

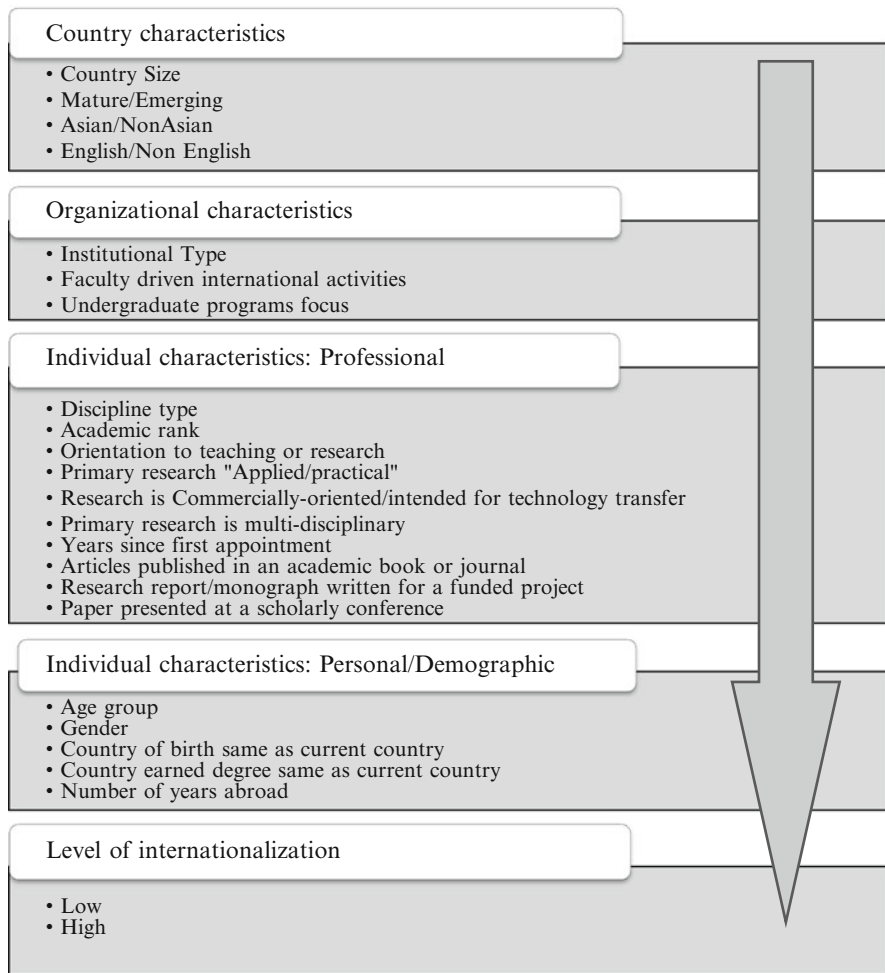


Fig. 11.1 Initial model to predict the level of faculty internationalization

11.3.2 Data Analysis

The data analysis proceeded in three phases. In the first phase data reduction, we sought to reduce the number of variables by constructing a correlation matrix for the 19 survey items related to international activity and subjecting the matrix to a principal component factor analysis with Varimax rotation.⁴ We completed the factor

⁴For categorical variables, we constructed a parallel matrix based on Spearman Rho correlation coefficients.

Table 11.1 Nineteen variables from CAP survey (grouped by three broad aspects: physical border crossing for study and teaching, internationalization at home, involvement in international research networks and publications)

Aspects of internationalization	Questions in CAP survey	
Physical border crossing for study or teaching	A1_B_1 First degree earned in country of current employment	
	A1_B_2 Second degree earned in country of current employment	
	A1_B_3 Doctoral degree earned in country of current employment	
	A1_B_4 Postdoctoral degree earned in country of current employment	
	A14_A_3 Considered seeking an academic position in another country	
	A14_B_3 Took action seeking an academic position in another country	
	C5_1 Teaching abroad	
	C5_2 Teaching in a language different from the language of instruction at your current institution	
	F13_1 Years spent in the country of your first degree	
	F13_2 Years spent in the country in which you are currently employed, if different from the country of your first degree	
	Internationalization at home	C4_5 In your courses you emphasize international perspectives or content
		C4_9 Since you started teaching, the number of international students has increased
		C4_10 Currently, most of your graduate students are international
D2_5 Courses international in scope or orientation		
Involvement in international research networks and publications	D1_4 Do you collaborate with international colleagues?	
	D5_1 Published in a language different from the language of instruction at your current institution	
	D5_3 Coauthored with colleagues located in other (foreign) countries	
	D5_4 Published in a foreign country	
	D5_5 Online or electronically published	

Source: CAP data, September 2011

analysis for all cases across the 19 CAP countries and then repeated the analysis for subgroups of countries—the mature economies only, the developing economies only, the Asian countries only and the Western countries only, the English-speaking countries only, and the non-English-speaking countries—in an effort to determine the relative stability of the factor structure across different subsamples. Once we tested the stability of the factor structure, we proceeded to a second phase—cluster analysis, in which we created a series of indices from the variables and then created clusters to help profile individuals based on these indices.

For each factor, we identified the three or four variables with the highest loadings (eigenvalues above 1.0), dichotomized the scale or ordinal variables at the median into “low” and “high,” and assigned a value of “0” to “low” and 1 of “high,” yielding an index for each factor ranging from 0 to 2 or 0 to 3, depending on the number of variables meeting the eigenvalues threshold. Scores on the indices built on the factors yielded in phase one for each respondent were added to the data file and considered to form a profile for each individual respondent. We then undertook a cluster analysis of the sample profiles (Burns and Burn 2008) using k-means cluster analysis in which Euclidean distances were calculated and, based on this distance function, a “cluster” solution was tested to maximize the distance (or distinctiveness) between clusters of points. In the third phase, the cluster memberships (distinctive patterns of international activity) identified were added to the data file and served as the outcome variable in a logistic regression analysis which included as predictor variables a number of country, institutional (organizational), and individual (professional and personal) faculty characteristics.

11.4 Results

11.4.1 Phase One: Data Reduction

A correlation matrix of the 19 international activities yielded by the sample of 20K+ academic staff in 19 countries suggests quite a range in the strength of the interrelationship among the dimensions of international activity. Some dimensions were very strongly related. These included collaboration with foreign colleagues, copublishing articles with foreign colleagues, and publishing in a foreign country. Other dimensions were much less related. These include: courses emphasize international perspectives or content with the respondent’s research being international in scope or orientation, the increase of international students since starting to teach with currently most of their graduate students are international, years being in the country of their first degree with years being in the country in with they are currently employed if different from the country of their first degree. These results suggests at a glance that certain aspects of internationalization “cohere” while others may be relatively independent.

We endeavored to test the “dimensionality” of international activity patterns by undertaking a factor analysis of the correlation matrix. The results of that factor analysis with Varimax rotation are presented in Table 11.2.

Seven factors emerged with eigenvalues above 1.0 and accounted for nearly two-thirds of the variance in international activity. The loadings of individual variables on the seven factors are displayed in Table 11.3.

The seven independent factors or dimensions of international activity emerging from the rotated matrix include:

1. Collaboration in research and co-publication (16 % of the variance)
2. Educational non-mobility (educated in country of current employment) (11 % of variance)

Table 11.2 Factor analysis solution with total variance explained

Component	Initial eigenvalues			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	3.08	16	16	1.96	10.30	10
2	2.05	11	27	1.95	10.28	21
3	1.85	10	37	1.77	9.31	30
4	1.61	8	45	1.73	9.09	39
5	1.24	7	52	1.56	8.22	47
6	1.08	6	57	1.50	7.88	55
7	1.01	5	63	1.45	7.62	63
8	0.97	5	68			
9	0.86	5	72			
10	0.78	4	76			
11	0.71	4	80			
12	0.66	3	84			
13	0.55	3	87			
14	0.53	3	89			
15	0.50	3	92			
16	0.47	2	94			
17	0.43	2	97			
18	0.37	2	99			
19	0.26	1	100			

Source: CAP data, September 2011

Extraction method: principal component analysis

3. International publication (dissemination in a foreign language or in foreign countries (10 % of variance)
4. Openness to international job mobility (8 % of variance)
5. General internationalization of teaching and research at home (7 % of the variance)
6. International teaching, including teaching abroad or in a foreign language (6 % of the variance)
7. Perceptions of growth in international students (5 % of variance)

In examining the seven factors and their relative preemptiveness (how much variance they explain in international activity), at least three observations are in order. First, there is no single predominant factor: the first factor—international collaboration in research and co-publication—accounts by itself for only one-sixth of the variance in international activity. Having said that, it should also be noted that when combined with the third factor—publication in a foreign language or country—the two factors combined that are related specifically to internationalization of research and knowledge dissemination activities account for a full quarter of the variance in international activity. Moreover, it is remarkable that research collaboration and co-publication, on the one hand, and specific activities related to dissemination in foreign countries or languages, nonetheless retain a clear independence.

Table 11.3 Seven factors with the related variables and their values from the rotated component matrix

Factor	Variable	
Collaboration in research and co-publication	D1_4 Do you collaborate with international colleagues?	0.79
	D5_3 Coauthored with colleagues located in other (foreign) countries	0.62
	A1_B_4 Postdoctoral degree earned in country of current employment	-0.57
Educational non-mobility	A1_B_3 Doctoral degree earned in country of current employment	0.77
	F13_1 Years spent in the country of your first degree	0.75
	A1_B_2 Second degree earned in country of current employment	0.67
	A1_B_1 First degree earned in country of current employment	0.47
International publication	D5_4 Published in a foreign country	0.77
	D5_1 Published in a language different from the language of instruction at your current institution	0.75
	D5_5 Online or electronically published	0.64
Openness to international job mobility	A14_B_3 Took action to seek an academic position in another country	0.82
	A14_A_3 Considered seeking an academic position in another country	0.74
	F13_2 Years spent in the country in which you are currently employed, if different from the country of your first degree	-0.38
General internationalization of teaching and research at home	C4_5 In your courses you emphasize international perspectives or content	0.85
	D2_5 Research is international in scope or orientation	0.74
International teaching, including teaching abroad or in a foreign language	C5_2 Teaching in a language different from the language of instruction at your current institution	0.76
	C5_1 Teaching abroad	0.72
Perceptions of growth in international students	C4_10 Currently, most of your graduate students are international	0.82
	C4_9 Since you started teaching, the number of international students has increased	0.67

Source: CAP data, September 2011

The second observation relates to the number of factors extracted. Typically, scholarly discussions of internationalization have focused in one of three areas: physical mobility (educational or job), research, or teaching. What this analysis suggests is that the range or scope of international activity may be a little broader and need to include teachers' perceptions of international students as well as a more

general orientation to global versus national perspectives. At the same time, it suggests that some nuance may be required in addressing the traditional triumvirate of teaching, research, and physical mobility—each of these three may include more than a single identifiable independent dimension of activity (see Chap. 5 findings on physical mobility).

A final observation relates to the relationship between internationalization in teaching and research activity. While there clearly emerged separate and distinct factors representing teaching (Factor 6) on the one hand and research and publication (Factors 1 and 3) on the other, there was at least one factor (Factor 5) that appeared to represent a “general” internationalization orientation in both teaching and research—a general orientation focused on bringing international perspectives and content into academic work at home, whether in the classroom or in the field/laboratory.

Following the initial results of the factor analysis, we sought to test the stability of the factor structure by splitting our large sample into definable subsamples, including mature versus emerging economies, English usage (yes/no), and region (Asia versus the West) and repeating the factor analysis *within* subgroups. While the detailed results are not reported here, suffice it to say that while in some cases, six rather than seven factors emerged, there was remarkable overlap in the factor structure across all subgroups. This gave us considerable confidence in the stability of our factor structure.

11.4.2 Phase Two: Cluster Analysis of Individual Factor Score Profiles

Based on the factor analysis results, we built seven indices—one for each factor—as described above. The seven index scores were added to the data file as a seven-point “profile” of international activity for each respondent. The cluster analysis of faculty profiles on the seven indices yielded both a two- and three-cluster solution. The three-cluster solution included three uneven groups: one cluster that was basically “low” on the seven indices ($N=6,615$, 43 %) and two others that distinguished between subgroups of relatively “high” international activity ($N=3,659$ (23 %) and $N=5,213$ (34 %), respectively)—the differences being primarily in the areas of educational background (whether educated in country of current employment) and foreign publication. The two cluster solution yielded two nearly equal groups including one that displayed a basically low international activity pattern ($N=8,011$, 52 %) and a second with a relatively high pattern ($N=7,476$, 48 %). Given the anticipated requirements of the third phase of the analysis, we opted for the two cluster solution, allowing the subsequent analysis to focus on what distinguished generally low from generally high patterns of international involvement.

Table 11.4 below displays the means and standard deviations of the two clusters on the seven indices. At glance at the table suggests two broad types or patterns as follows.

Table 11.4 Descriptive statistics for the two individual clusters with respect to the indices (cluster 1 = low internationalization, cluster 2 = high internationalization)

Index	Cluster	N	Mean	Std. deviation	Std. error	95 % Confidence interval for mean			Minimum	Maximum
						Lower bound	Upper bound			
Collaboration in research and co-publication index	1	8,011	0.28	0.54	0.01	0.27	0.29	0	3	
	2	7,476	1.49	0.79	0.01	1.47	1.51	0	3	
	Total	15,487	0.86	0.90	0.01	0.85	0.88	0	3	
Educational non-mobility	1	8,011	1.99	0.88	0.01	1.97	2.01	0	3	
	2	7,476	1.81	0.95	0.01	1.79	1.83	0	3	
	Total	15,487	1.9	0.92	0.01	1.89	1.92	0	3	
General internationalization of teaching and research at home	1	8,011	0.97	0.77	0.01	0.95	0.98	0	2	
	2	7,476	1.42	0.71	0.01	1.41	1.44	0	2	
	Total	15,487	1.19	0.78	0.01	1.17	1.2	0	2	
International publication	1	8,011	0.7	0.71	0.01	0.68	0.71	0	2	
	2	7,476	2.28	0.71	0.01	2.26	2.29	0	3	
	Total	15,487	1.46	1.06	0.01	1.44	1.48	0	3	
Openness to international job mobility	1	8,011	0.15	0.42	0.01	0.14	0.15	0	2	
	2	7,476	0.4	0.65	0.01	0.39	0.42	0	2	
	Total	15,487	0.27	0.56	0.00	0.26	0.28	0	2	
Perceptions of growth in international students	1	8,011	0.54	0.66	0.01	0.53	0.56	0	2	
	2	7,476	0.73	0.73	0.01	0.72	0.75	0	2	
	Total	15,487	0.63	0.70	0.01	0.62	0.65	0	2	
Teaching abroad or in a foreign language	1	8,011	0.16	0.40	0.01	0.15	0.16	0	2	
	2	7,476	0.5	0.70	0.01	0.48	0.52	0	2	
	Total	15,487	0.32	0.59	0.01	0.31	0.33	0	2	

Source: CAP data, September 2011

The 8,011 academic staff in Cluster 1 are characterized by lower means scores on international collaboration, co-publication and foreign publication, teaching abroad, and perceiving foreign student at home. Cluster 1 are more likely than those in Cluster 2 to report being educated in the country of their current employment. Those 7,476 academic staff in Cluster 2 are characterized by relatively high index scores on international collaboration, co-publication, and foreign publication and are more likely to have taught abroad and experienced a more international student presence at home. They are more likely to consider international job moves and are less likely to have been educated in the country of their current employment. In sum, Cluster 1 represents a relatively insular faculty; Cluster 2 a relatively internationalized one.

11.4.3 Phase Three: Descriptive Statistics and Logistic Regression

Based on the model described earlier (Fig. 11.1), the first set of characteristics whose effects on faculty international activity we sought to test were country characteristics: size, economic development, language tradition (English versus non-English), and cultural tradition (Asian vs. Western). Table 11.5 shows how the country characteristics were distributed between the two clusters of faculty (low and high internationalists). All of the country characteristics are significantly associated (correlated) with the individual clusters. Faculty in larger countries are more likely to be members of Cluster 1, while those in small countries are more likely to be members of Cluster 2. Faculty in the mature economies and in the Western countries are significantly more likely to belong to Cluster 2 than faculty from emerging economies and Asian countries. Finally, faculty in the non-English-speaking countries were slightly more likely to be members of Cluster 1.

The second set of variables whose effects on faculty international activity we were interested in testing included institutional and individual characteristics (professional and personal). Table 11.6 shows that—with the exception of institutional type and academic field—most of these were much less correlated to the cluster membership. Faculty at research universities were more likely to fall in Cluster 2 than those employed in nonuniversity settings, and faculty in the natural sciences were more likely to fall in Cluster 2 than those in other fields.

After establishing the two clusters of individual internationalization patterns based on the seven indices, and cross-tabulating cluster membership with potential predictor variables, we next sought to determine if there is a predictive model which would demonstrate the effects of country characteristics, institutional type, discipline type (hard/soft), and individual characteristics—professional and personal—on international activities. The nested or hierarchical model that was assumed is illustrated in Fig. 11.1. The model is based on the significant variables found in Finkelstein et al. (2009) exploring the predictors of internationalization of research content and professional networks for US professors.

Table 11.5 Individual clusters with respect to country characteristics (cluster 1=low internationalization, cluster 2=high internationalization)

Country characteristics		Individual cluster		Total
		1	2	
Country size				
Small (population <30 million)	Count	1,719	2,699	4,418
	% within cluster	22 %	36 %	29 %
Medium (population between 30 and 100 million)	Count	2,692	3,357	6,049
	% within cluster	34 %	45 %	39 %
Large (population >100 million)	Count	3,600	1,420	5,020
	% within cluster	45 %	19 %	32 %
Economic status of country of current employment				
Mature economy	Count	4,299	5,552	9,851
	% within cluster	54 %	74 %	64 %
Emerging economy	Count	3,712	1,924	5,636
	% within cluster	46 %	26 %	36 %
Language				
Non-English	Count	5,197	4,943	10,140
	% within cluster	65 %	66 %	66 %
English	Count	2,814	2,533	5,347
	% within cluster	35 %	34 %	35 %
Asian region (dummy)				
Non-Asian regional	Count	4,914	5,929	10,843
	% within cluster	61 %	79 %	70 %
Asian regional	Count	3,097	1,547	4,644
	% within cluster	39 %	21 %	30 %
Western region (dummy)				
Non-Western regional	Count	4,648	2,636	7,284
	% within cluster	58 %	35 %	47 %
Western regional	Count	3,363	4,840	8,203
	% within cluster	42 %	65 %	53 %

Source: CAP data, September 2011

A logistic regression was performed through SPSS to assess the model presented. The results confirmed that most of the variables with the exception of economic development, years since first appointment in higher education/research sector, research is commercially oriented, and the country of birth being the same as current country were significant predictors of level of internationalization, i.e., cluster membership. The strength of the logistic regression model can be evaluated by looking at the change in the classification of the individual based on no predictor variables being used (50 %) versus the significant variables being used (75 %) (Tables 11.7 and 11.8).

The model explained between 30.7 % (Cox & Snell R square) and 40.9 % (Nagelkerke R squared) of the variance in internationalization of the individual faculty and correctly classified 75.2 % of cases. On that basis, we can safely say that the model is a reasonably good predictor of the likelihood of internationalization of the individual academic staff.

Table 11.6 The mean of individual characteristics by cluster membership

Individual characteristic	Individual cluster									
	1: Low internationalist			2: High internationalist						
	N	Mean	Std. Dev.	Minimum	Maximum	N	Mean	Std. Dev.	Minimum	Maximum
A6_Y1 Years since your first full-time appointment in higher education/research sector	7,143	15.37	10.52	0	58	6,929	15.73	10.35	0	57
BIRTHG age of respondents at the time of the survey	7,755	4.65	2.05	1 up to 30 years	9 66 and older	7,228	4.64	1.98	1 up to 30 years	9 66 and older
B2_Teaching orientation primarily teaching	7,808	0.44	0.49	0 Orientation primarily research	1 Orientation primarily teaching	7,301	0.19	0.39	0 Orientation primarily research	1 Orientation primarily teaching
C1_A_1 Percent of instruction time for undergraduate programs	7,572	70.1	32.09	0	100	6,741	54.25	34.64	0	100
Country of birth is same as current country	7,270	.92	.268	0 Different	1 Same	6,734	.86	.346	0 Different	1 Same
Country of first degree is same as current country	7,207	.93	.252	0 Different	1 Same	6,653	.85	.355	0 Different	1 Same
D2_2 Research is applied/practically oriented	7,624	2.1	1.12	1 Very much	5 Not at all	7,160	2.24	1.17	1 Very much	5 Not at all
D2_3 Research is commercially oriented/intended for technology transfer	6,916	3.77	1.36	1 Very much	5 Not at all	6,677	3.82	1.29	1 Very much	5 Not at all
D2_7 Research is multi-/interdisciplinary	7,460	2.26	1.2	1 Very much	5 Not at all	7,208	2.12	1.16	1 Very much	5 Not at all

D4_3 Articles published in an academic book or journal	7,470	5.04	7.12	0	200	7,392	9.92	11.91	0	300
D4_4 Research report/monograph written for a funded project	7,470	1.13	2.45	0	50	7,392	2.11	4.44	0	150
D4_5 Paper presented at a scholarly conference	7,470	4.19	6.06	0	100	7,392	8.85	11.55	0	200
Discipline (hard sciences)	7,733	0.83	2.09	0	1	7,273	1.02	2.06	0	1
E1_11 Establishing international linkages by faculty	6,984	0.31	0.46	0	1	6,434	0.57	0.49	0	1
F13_3 Years spent in other countries (outside the country of your first degree and current employment)	7,372	0.82	2.31	0	35	7,010	1.88	3.47	0	61
ACRANK academic rank	7,936	1.42	0.49	1	2	7,397	1.41	0.49	1	2
INSTITUT institution type	7,928	1.3	0.46	1	2	7,391	1.14	0.35	1	2
				Soft sciences	Hard sciences	Faculty-driven international initiatives	Faculty-driven international initiatives	Faculty-driven international initiatives	Soft sciences	Hard sciences
				0	1	6,434	0.57	0.49	0	1
				Not faculty-driven international initiatives	Faculty-driven international initiatives	Faculty-driven international initiatives	Faculty-driven international initiatives	Faculty-driven international initiatives	Not faculty-driven international initiatives	Faculty-driven international initiatives
				0	35	7,010	1.88	3.47	0	61
				Senior position	Junior/other positions	Senior position	Junior/other positions	Senior position	Junior/other positions	Junior/other positions
				1	2	7,397	1.41	0.49	1	2
				Universities	Other institutions	Universities	Other institutions	Universities	Other institutions	Other institutions
				1	2	7,391	1.14	0.35	1	2

Source: CAP data, September 2011

Table 11.7 Classification table without any factors^{a, b}

Observed		Predicted		Percentage correct
		Individual cluster level of individual internationalization		
		0 = Low	1 = High	
Step 0	Individual cluster : level of individual internationalization	0 Low	3,755	100
		1 High	3,703	0
Overall percentage				50.3

Source: CAP data, September 2011

^aConstant is included in the model

^bThe cut value is .500

Table 11.8 Classification table for full model^a

Observed		Predicted		Percentage correct
		Individual cluster level of individual internationalization		
		0 Low	1 High	
Step 3	Individual cluster level of individual internationalization	0 Low	2,900	77
		1 High	991	73
Overall percentage				75

Source: CAP data, September 2011

^aThe cut value is .500

The results of the logistic regression are displayed in Table 11.9.⁵

An examination of the odds ratios in Table 11.9 suggests that both country characteristics and organizational characteristics exerted powerful independent effects on international activity. Among the former, country size and cultural tradition (Asian) as well as language were significant, while level of economic development was not. Faculty in large countries, those in Asian countries and those in English-speaking countries were significantly less likely to be involved internationally. Among organizational characteristics, both institutional type and faculty-centric shaping of international activity significantly predicted international activity. Academic staff affiliated with universities were 1.5 times as likely to fall in the “high” internationalist group as were those affiliated with nonuniversity postsecondary institutions and faculty at institutions where the faculty drove internationalization initiatives were also 1.5 times as likely to be in the high internationalization cluster as those in which administrators drove internationalization initiatives.

⁵The coding of categorical variables is described in Appendix 1.

Table 11.9 Predictors for final logistic regression model

	<i>B</i>	S.E.	Exp(<i>B</i>)
Country characteristics			
Country size	-0.72***	0.05	0.49
Asian regional	-0.77***	0.08	0.46
Primarily English	-1.05***	0.07	0.35
Mature economy	0.02	0.07	1.02
Organizational characteristics			
Faculty-driven international initiatives	0.43***	0.06	1.54
University	0.43***	0.07	1.54
Professional characteristics			
Hard sciences	0.82***	0.06	2.27
Primary research: applied/practical	0.13***	0.03	1.14
Paper presented at a scholarly conference	0.05***	0.01	1.05
Articles published in an academic book or journal	0.04***	0.00	1.04
Research report/monograph written for a funded project	0.03**	0.01	1.03
Teaching undergraduate programs	-0.01***	0.00	1.00
Primary res: is multidisciplinary	-0.13***	0.03	0.88
Junior rank/other positions	-0.24**	0.07	0.79
Primarily teaching	-0.75***	0.07	0.47
Years since 2007 for first appt	0.01	0.01	1.01
Primary res: commerce or technology	0.03	0.03	1.03
Personal characteristics			
Gender: male	0.17**	0.07	1.18
Time in other countries (outside the country of your first degree and current employment)	0.14***	0.01	1.16
Age group	-0.13***	0.03	0.88
Country of first degree same as current country	-0.79***	0.14	0.45
Country birth same as current country	0.08	0.14	1.08
Constant	1.85***	0.25	6.34

Source: CAP data, September 2011

Note: *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$

Among the professional and personal characteristics, 13 out of 16 proved significant predictors—although only two yielded substantial odds ratios. Academic staff in the “hard” disciplines (life sciences, physical sciences (including mathematics and computer science), engineering, architecture, agriculture, medical and health sciences) were 2.3 times more likely than those outside these fields to be members of the high internationalization cluster. Faculty who were primarily oriented to teaching were half as likely to belong to the “high” internationalist group as those primarily oriented to research. Beyond these key professional variables, faculty who were more involved in research and publication showed a slightly (but statistically significant) higher involvement in international activity. Among personal characteristics both study time spent abroad and gender proved significant predictors. Male faculty and those who spent time

abroad were 1.2 more likely to be highly involved in international activity than their opposites. The effect of the country is also confirmed by the fact that those faculty who report the “same” country of their first degree and their current employment will be less likely to be internationally oriented by a factor of almost 0.5; therefore, they would be twice as likely to be less internationalized than someone whose degree was earned in a country different from their current employment. Faculty who were employed in the same country in which they received their first degree were also half as likely as those with international education experience to belong to the “high” internationalist cluster. Thus, mobility for study emerged as a significant predictor of membership in the “high” internationalization cluster.

The factors that were not significant in the model included research primarily commercially oriented/intended for technology transfer and the country of birth being the same as the country of current employment. Thus, being foreign born was not, in itself, a predictor of subsequent faculty pattern of international activity. Years since first academic appointment was not significant in the final model as well which would indicate that the number of years the person is in their academic position has little to do with how internationalized they are—a somewhat surprising finding insofar as in the United States, at least, the early career pressures of tenure review have been shown to be associated with depressed international activity of earlier career stage faculty (Finkelstein et al. 2009). Yet at the same time, academic rank and the age group of the person were significantly if slightly associated with level of international activity: those in junior ranks were one quarter less likely to be internationally involved, while the older the person the slightly more likely they would be internationally involved.

11.5 Discussion and Conclusions

This chapter sought at once to understand the dimensionality of internationalization as a construct (uni- vs. multidimensional) and to develop and test a model of the factors that shape the extent to which, and the pattern in which, academic staff engage in international activities—ranging from the macro level of country characteristics through organizational or institutional characteristics to individual characteristics, both professional and personal. To that end, we performed a factor analysis of 19 international activity variables for which data was available in the 2007–2008 Changing Academic Profession survey followed by a cluster analysis of individual faculty profiles. We concluded with a logistic regression analysis that sought to determine how the various predictors affected the odds of faculty engaging in international activity.

A few major findings emerged from the analyses. First, we identified a stable factor structure of international activity including seven independent dimensions. That factor structure suggested most generally that international activity

was, strictly speaking, a multidimensional construct. Indeed, that structure suggested that even the basic intuitive dimensions along which previous studies had framed their analyses of international activity—physical mobility, teaching, and research—were each multidimensional in their own right. Physical mobility included independent dimensions for study and job mobility, internationalization in teaching including independent dimensions for teaching abroad and for working with international students at home, and internationalization in research included independent dimensions for collaborating with foreign colleagues and for publishing in a foreign countries or a foreign language. At the same time, there appears to be a more general “internationalization at home” factor—one that reflects a general proclivity to integrate international content and perspectives into one’s core teaching and research activities. And indeed, this more *general* factor is reflected in the cluster analysis we performed in which both a two- and three-cluster solution emerged as viable—in both cases including a generally low internationalization group and another differing primarily in whether one or two groups of more internationalized faculty emerged.

The presence of a general factor allowed us to focus in our regression analysis on those macro and micro predictors that affected the odds of respondents falling into one of two membership groups defined as high or low in internationalization. Perhaps the most telling finding from that analysis is at once the power of institutional type and academic field to shape the internationalization of academic work and careers, on the one hand, (a confirmation yet again of the basic principle that Burton Clark (1987) identified 30 years ago as the structural arbiters of academic life) and the near equal power of national context to shape faculty internationalization activity. Disciplinary membership shapes the orientation of faculty to international activity: faculty in the natural sciences and in certain fields where the substantive content of the field requires the crossing of borders (whether physically or mentally). At the same time, nationality—whether a faculty member works in a large or small country, whether one in which English dominates or not, and whether in a Western or Asian culture, all to a considerable degree—contributes to the motivation and opportunity to engage in international activity. Indeed, it is within these national and disciplinary parameters that institutional type (in terms primarily of research oriented mission) further channels faculty toward or away from international activity. Beyond these factors, personal characteristics, including gender, time spent abroad for study, academic rank, and an individual faculty member’s focus between research and teaching, have less pronounced, although statistically significant, effects.

Taken together, these findings have implications for both research and policy on faculty internationalization. From the research perspective, they suggest the need to at once introduce some nuance into our study of internationalization and to no longer assume that the traditional triumvirate of physical border crossing, teaching, and research encompass the waterfront of faculty activity. They suggest while a general internationalization at home factor may exist in the individual, its expression is going to be shaped by both national context and academic field affiliation. From a

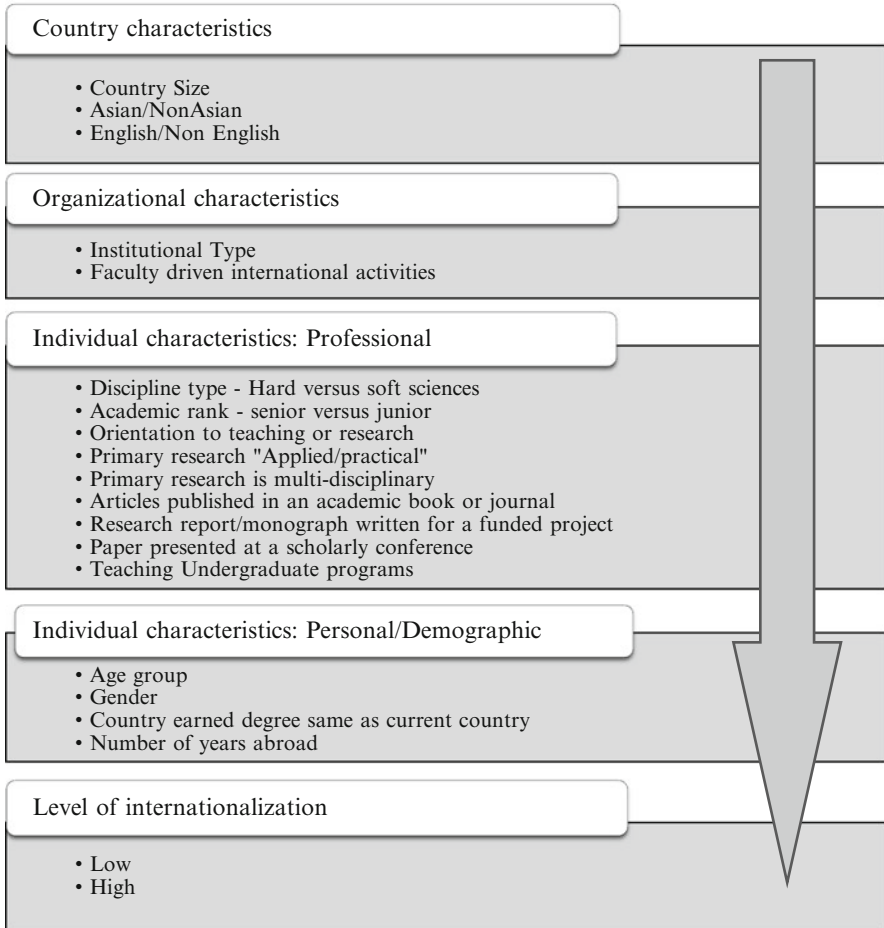


Fig. 11.2 Final model to predict the level of faculty internationalization

policy perspective, these findings provide a context within which government and institutional policymakers must operate. The notion of “general” internationalization policy that ignores significant differences in the motivations and opportunity structures associated with different academic fields and institutional settings is not likely to be successful. Similarly, the magnitude of the challenges posed to internationalizing the faculty in large countries—whether English-speaking, like the USA, or non-English-speaking, like China—can be properly assessed. In those cases, public or institutional policy is clearly pushing against the current and will likely require much more sustained and long-term efforts to counter inertial forces in the other direction (Fig. 11.2).

Appendix 1: Dichotomous Variables Coding for Logistic Regression

		Frequency	Parameter coding (1)
Asian region	0 Non-Asian regional	5,274	0
	1 Asian regional	2,184	1
Emerging or mature economy	0 Emerging economy	2,753	0
	1 Mature economy	4,705	1
Language (English used)	0 Non-English	5,188	0
	1 English	2,270	1
Current institution	1 Universities	5,500	1
	2 Other institutions	1,958	0
Academic rank	1 Senior position	4,571	0
	2 Junior/other positions	2,887	1
Discipline (hard sciences)	0 Soft sciences	3,100	0
	1 Hard sciences	4,358	1
Orientation primarily teaching	0 Orientation primarily research	5,152	0
	1 Orientation primarily teaching	2,306	1
Gender (male)	0 Female	2,244	0
	1 Male	5,214	1
Country of first degree is same as current country	0 Different	707	0
	1 Same	6,751	1
Country of birth is same as current country	0 Different	735	0
	1 Same	6,723	1

Source: CAP data, September 2011

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Chapter 12

The Internationalization of the Academy: Findings, Open Questions, and Implications

Michele Rostan, Futao Huang, and Martin Finkelstein

12.1 Introduction

This volume has sought to highlight the contribution that large-scale international surveys such as the Changing Academic Profession make to a better understanding of the international dimension of the academic profession. In this final chapter, we seek to distill what we have learned about the nature, determinants, and consequences of internationalization from our analyses. We seek next to identify those questions that remain unanswered – whether because our data or analyses were insufficient. Finally, we examine the implications of the findings as they are for research, policy, and practice.

12.2 What Have We Learned About the Nature of Internationalization?

Most generally, the analyses addressed four specific research questions as follows:

1. What is “internationalization”? To what behaviors or events are we referring? And what is its current status globally in the academic world?

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2. How is that changing as reflected in (a) current faculty perceptions, (b) comparisons with earlier data, and (c) differences by generation or career cohort?
3. What factors shape faculty internationalization behavior? How does internationalization manifest itself differently in different national contexts? How do discipline, type of institution, career stage, and gender facilitate or impede international engagement?
4. What are the outcomes, or the consequences, of internationalization? Does it make academics more productive researchers or better teachers?

12.2.1 What Is Internationalization?

What is internationalization? The CAP survey provides information on about 20 different aspects of the internationalization of the academy. Analyzing the interrelationships among these activities, we identified seven dimensions of the internationalization of the academic profession (see Chap. 11). Each dimension brings together some internationally focused activities that “cohere” with each other while being relatively independent of the remaining dimensions. Each dimension explains a significant amount of the variability in the available data, and all together the seven dimensions account for nearly two-thirds of the variability in international academic activity. The seven dimensions of the internationalization of the academy include:

1. Research collaboration with foreign colleagues
2. Physical mobility for study
3. Publication and dissemination outside one’s native country or in another language
4. Openness to job mobility outside national borders
5. General orientation to internationalizing both teaching and research
6. Teaching abroad and/or in another language
7. Exposure to international student mobility

The first dimension – research collaboration – refers to international research collaboration, international coauthorship, and postdoctoral studies, that is, to crossing borders into another country where academics earned their postdoctoral degrees. The second dimension – physical mobility for study – refers to both undergraduate and postgraduate studies, again taking into consideration the countries where academics earned various degrees that were either the same as, or different from, their country of current employment. The third dimension – publication and dissemination – refers to the proclivity to publish work in a foreign country, in a “foreign” language, and electronically. The fourth dimension – propensity toward job mobility – focuses on the willingness and the concrete actions undertaken to move to an academic position in another country. The fifth dimension – internationalization of teaching and research – refers to a general orientation aimed at bringing international perspectives and content either into teaching and/or research albeit while remaining on one’s own “home turf”.

The sixth dimension – teaching – refers to teaching abroad and/or to teaching in a “foreign” language. The seventh dimension – students – refers to the perception that academics have of international student mobility in terms of teaching international students at their home institution.¹

There are several findings related to these dimensions of internationalization that are worth highlighting. The first concerns the *structure* of academic internationalization. According to the CAP data, the multidimensional structure of academic internationalization is remarkably stable across different economic and cultural contexts. The relationships between the various aspects of the internationalization of the academy have been studied not only in the aggregate across all the 19 countries, including Hong Kong, which participated in the CAP survey, but also within six different contexts, namely, those including academics working in (a) mature economies, (b) emerging economies, (c) countries where the English language is the main or the official language or one of the official languages, (d) countries where English is not the official language, (e) Asian countries, and (f) non-Asian countries. In these six different contexts, a similar structure based on either six or seven common factors or dimensions emerged. Thus, the internationalization of the academic profession is not only a multidimensional phenomenon, but its multidimensional structure also appears to be relatively independent of economic and cultural conditions. The six or seven independent dimensions organizing academic internationalization are the same across different economic and cultural settings worldwide. For instance, the multidimensional structure of academic internationalization is similar in both Asian and non-Asian countries. As a consequence, it is possible to conceive the internationalization of the academy as a multidimensional construct consisting of a common set of components or dimensions and to study it either at the global level or in more limited national or regional contexts.

A second set of findings concerns the substantive dimensions of the internationalization of the academy. First of all, there is no single predominant dimension accounting for academic internationalization. Research collaboration and copublication are essential (about a quarter of the variance), but further dimensions are required to render a complete picture. Data analysis confirms that the scope of internationalization is not limited to the three areas on which the discourse on internationalization usually focuses, namely, physical mobility, research, and teaching. A more nuanced discourse is required. Physical mobility includes two independent dimensions, one for study mobility of future academics, and one for their subsequent job mobility. Research includes two independent dimensions as well: collaboration and coauthorship on the one hand and publishing or dissemination on the other. Teaching also includes two dimensions, one referring to teaching courses abroad, and one to working with international students at home institutions. Interesting enough another independent dimension of internationalization cuts across the teaching vs. research divide as it refers to a general orientation toward

¹More precisely, academics’ perceptions concern the increase of the number of international students since the time they’ve started teaching, and the extent to which most of their graduate students were international at the time when the survey was carried out.

Table 12.1 Percent distribution of respondents by type of mobility experience

Type of mobility experience	Percent (<i>N</i> =21,130)
Non mobile: no experience abroad throughout entire life course	58
Circulating for study: short-term	16
Circulating for work: short-term	10
Circulating for work: long-term	6
Migration for study: long-term	5
Migration for work: long-term	6

Source: CAP data, 2011

Note: Due to rounded values the sum of the items exceeds 100 %

internationalization in both of the two core academic activities. Finally, the results of data analysis support the idea that internationalization in higher education includes both “border-crossing activities” and “internationalization at home.” Five independent dimensions of the internationalization of the academy refer to “border-crossing activities” (namely, research collaboration, physical mobility for study, dissemination, propensity for job mobility, and teaching abroad), while two independent dimensions (namely, working at home with international students at home institutions and integrating or infusing international perspectives or contents in ordinary teaching and research activities) refer to “internationalization at home.”

The need for a more nuanced and multidimensional approach to the internationalization of the academic profession is also supported by findings on individual aspects of it. International academic mobility is one case in point. The richness of the CAP data set allows one to build several typologies of international academic mobility. One of them is based on the notion of experience abroad along academics’ entire life course (see Table 12.1). That typology distinguishes between nonmobile and mobile academics and identifies several types of mobile academics on the basis of two aspects of the temporal dimension of mobility, namely, the phase of the life course when the experience abroad started and its length. In this typology, academics who were born abroad, and crossed the borders of the country where they are currently employed at different stages of their life and for different purposes, are considered as *migrants*. Academics who work where they were born but have experienced border crossing either for study or professional purposes are considered as *circulating*.

This empirically based typology allowed us to estimate with some precision the extent to which international mobility is part of the academic profession and shows that international academic mobility is not a homogeneous phenomenon but a multifaceted one.

In sum, the CAP survey first of all shows that the internationalization of the academic profession is a multidimensional phenomenon. Further, the CAP survey helps to identify those independent dimensions, to demonstrate the stability of that multidimensional structure of the internationalization of the academic profession across different economic and cultural contexts, and to show that the three basic dimensions on which the analysis of academic internationalization has been traditionally framed – that is, physical mobility, teaching, and research – are each multi-dimensional in their own right.

12.2.2 How Is Academic International Activity Changing?

In our analyses, we have sought to examine change in the internationalization of the academic profession over time. We did so in at least three ways:

1. Comparing data from the 1992 Carnegie International study to the 2007 CAP survey
2. Through perceptions of change reported by respondents to the CAP questionnaire
3. Comparing responses of faculty in different academic generations or cohorts who participated in the CAP survey

What did we learn?

12.2.2.1 Comparing Carnegie and CAP

Based on a comparison of CAP to the 1992 Carnegie study, William Cummings and the other authors of Chap. 4 concluded that over the past 15 years, we have seen more stability or continuity in the internationalization of the academy than change. Yet, that chapter calls to our attention the difference between the proportions of academics engaged in international activities and their actual number. During the considered period, the academic profession has expanded considerably, even exponentially in some countries. As a consequence, despite little change in the proportions of internationally active academics, their actual number has increased substantially. At what point such a change in pure numbers reaches a sufficiently critical mass or threshold to constitute an aggregate increase in academic international activity remains an open question and probably differs by region or country.

It is worth noting that the comparison between the Carnegie and the CAP data can be carried out on only a few dimensions of the internationalization of the academic profession. So it might be that international research collaboration has not changed much, but other aspects of the internationalization of the academy – such as integrating international perspectives and contents in ordinary academic activities – have changed, even substantially. Further, only 10 out of 19 countries participated in both studies. It might be that countries which are not included in the Carnegie study where academics were only marginally participating in international activities – such as China – have moved some considerable distance toward academic internationalization, steps which are not captured by the comparison between Carnegie and CAP data.

12.2.2.2 Perceptions of Change

Another vantage point for assessing changes in the internationalization of the academy is academics' perceptions. Data on perceived changes in internationalization are available only for the CAP survey and only for one aspect of

Table 12.2 Percentage of academics' reporting that number of international students has increased

Country	Percent (<i>N</i> =20,139)
Australia	70
Finland	66
Portugal	60
United Kingdom	60
Norway	54
Netherlands	53
China	52
Hong Kong	52
Canada	51
Germany	49
United States	48
South Africa	41
Italy	41
Mexico	30
Malaysia	28
Korea, Republic of	24
Argentina	22
Brazil	18
Japan	12

Source: CAP data, 2011

Note: Countries participating in both the Carnegie and the CAP survey in bold

internationalization, namely, international student mobility. Table 12.2 reports the percentages of respondents who agree or strongly agree with the view that since they started teaching the number of international students has increased. Although these data would deserve a deeper analysis, it is nevertheless possible to come to some preliminary conclusions. According to their academics, countries more able than average to attract an increasing number of international students – that is, reporting changes on one dimension of the internationalization of the academy – include both Asian and non-Asian countries, countries with different language traditions, small and large countries, and countries participating in both the Carnegie and the CAP surveys.

12.2.2.3 Differences Across Generations

Finally, changes in the internationalization of the academic profession can be assessed by looking at possible differences in attitudes and behaviors across academic generations. Here, we focus on the most frequent type of international academic mobility detected according to CAP data, namely, circulation for study occurring early in academics' life course (see Chaps. 5 and 10).

As we suggested earlier, academics living in economically mature countries, in countries where English is not the official language or an official language among

others, who have a father with tertiary education, and who are males, are more likely than others to have studied abroad while returning home afterward. The proportions of academics who have circulated for purposes of study early in their lives vary across countries. The proportion is high, that is, over one standard deviation above average,² in three Asian countries, Malaysia, South Korea, and Hong Kong, and is medium, that is, between average and one standard deviation above average, in six countries, Norway, Canada, Mexico, Argentina, Portugal, and Brazil, while it is low, that is, below average, in the other participating countries.³ Thus, early circulation for study does not involve only European and Anglo-Saxon countries but also Asian and Latin American countries, a finding that *per se* suggests that changes in the internationalization of the academy are ongoing.

Defining generations in terms of age groups or cohorts, it is possible to divide respondents to the CAP survey into four age cohorts: (a) those who were born up to 1950, (b) those who were born between 1951 and 1960, (c) those who were born between 1961 and 1970, and (d) those who were born in the year 1971 and after. Other things being equal,⁴ the data analysis shows that belonging to the three older generations increases the probability of circulating for study early in the life course. Compared to the youngest generation, the older generations are twice (or almost twice) as likely to have circulated for study (see Chap. 5). Although following a different approach, other data analyses come to similar conclusions (see Chap. 10).

These findings, together with similar ones concerning early migration for study, suggest that academics who were in their formative years at the beginning of the 1990s were less internationally mobile than their older colleagues. It might be that changes in higher education – notably the widespread development of graduate programs – have lowered the need to study abroad in order to earn advanced graduate degrees, and that economic change in emerging and less developed countries might have reduced the need or the willingness of young people to migrate for purposes of study. Nevertheless, the correspondence between changes in the attitude toward international mobility of the youngest academic generation and historical breakthroughs such as the end of the “Cold War” is somehow striking. It may be that, at least in the countries participating in the CAP study, growing up and studying in a period of tremendous change and increasing uncertainty following the end of the “old” world order have lowered international study mobility compared to the previous period.

All in all, we can say that CAP data contribute to a better understanding of the internationalization of the academy by offering some insights on changing trends.

²As mentioned the average value for this type of International academic mobility is 16 %.

³Germany, the UK, Italy, South Africa, Australia, Finland, Japan, the Netherlands, China, and the USA.

⁴That is controlling for country’s economic status, the status of the English language in the country, gender, father’s level of educational attainment, and academic discipline.

12.2.3 What Factors Shape Internationalization?

The internationalization of the academic profession is shaped both by differences and disparities. On the one hand, the internationalization of the academy is shaped by disparities deriving from the uneven distribution of economic, political, and cultural resources across regions, countries, higher education systems, higher education institutions, families, and individuals. On the other hand, differences in academic internationalization may not depend on the unequal distribution of opportunities and resources but on other factors such as the nature of academic disciplines, the kind of research academics carry out, the degree of their embeddedness in national or local settings, and the different missions or organizational structure of the institution at which they work. Further, academics who have studied abroad may be more international just because their experience abroad has provided them with international networks, better foreign language proficiency, better intercultural competencies, and better knowledge of foreign countries.

In order to highlight the factors shaping academic internationalization, we consider again some findings in five areas: (1) the overall level of individual engagement in international activities, (2) physical mobility, (3) teaching abroad, (4) international research collaboration, and (5) international dissemination and publication. Next, we organize factors shaping internationalization into three broad categories providing some examples of individual factors which have more frequently recurred throughout the analyses reported in this volume.

12.2.3.1 Engagement in International Activities

Conceiving the internationalization of the academic profession in the broadest sense, we can divide the academy worldwide into two groups: the “internationalists” and the “insulars” (see Chap. 11). Internationalist academics are those who score “high” in most of the seven dimensions described in the first paragraph, that is, they are people highly engaged in international activities, while the opposite is true for insular academics.

Other things being equal – that is, controlling for age, the level of engagement with scholarship and publication, and some characteristics of teaching – data analysis shows that:

- Academics in the hard sciences are more likely to be highly involved in international activities than those in the soft sciences.
- Academics working at universities are more likely to be highly involved in international activities than those working at other higher education institutions.
- Academics at institutions where individual faculty drive internationalization initiatives are more likely to be “internationalist” than academics at institutions where international linkages are primarily established by administrators.
- Academics focusing on research are more likely to be internationally active than those focusing on teaching.

- Academics who have earned a higher education degree “abroad” (i.e., in a country different from country of current employment) are more likely to be internationally active than those who did not. However, this is not the case for academics who were simply born abroad.
- Academics working in small countries, in countries where English is not the main, or one of the official languages, and in Western countries, are more likely to be highly involved in international activities than those working in large countries, in English-speaking countries, and in Asian countries. Interesting enough, the level of economic development does not have a significant, independent effect on being classified as an internationalist academic.

These are the most powerful factors predicting high levels of individual engagement in international activities. Another less powerful – but still significant – factor is gender. Other things being equal, males are more likely to be internationally active than women. Similarly, career stage and time spent in other countries play some role. Those in junior ranks were one quarter less likely to be internationally involved, while people who spent sometimes abroad were more likely to be internationally engaged.

12.2.3.2 Physical Mobility or Border Crossing

Physical mobility across national borders is a multifaceted phenomenon, shaped by a complex set of factors which divide the academic profession into mobile and non-mobile academics but also into different types of mobile academics (see Chap. 5).

The most frequent type of international academic mobility – educational circulation – depends on four factors: (a) the economic status of the country where academics were born and work, (b) the status of English in that country, (c) gender, and (d) father’s level of educational attainment, used as an indicator of academics’ family social, cultural, and economic capital. Other things being equal – that is, controlling for age cohort and academic discipline – data analysis shows that being born and working in an economically mature country, being in a country where English is not the official language or is one official language among others, being male, and being children of fathers with tertiary education increase the likelihood of studying abroad and coming back home to find a job.

Short-term circulation for professional purposes – that is, spending one or more periods abroad of a total length of 2 years or less – is the second most frequent type of international academic mobility. Four factors have a net impact on this type of mobility: (a) the economic status of the country of employment, (b) the status of the English language in the country of employment, (c) father’s level of educational attainment, and (d) academic rank. Other things being equal – that is, controlling for age, whether academics have earned a study degree abroad, type of institution, academic discipline, academics’ preferences toward teaching and research, type of research, as well as gender – it is possible to conclude that working in mature economies, working in countries where English is not the official language or is one official language among others, having a father

with tertiary education, and holding a senior position increase the probability of being professionally mobile for short periods. While circulation for study is less open to academic women, this is not the case with short-term professional circulation. Other things being equal, being a woman rather than a man does not make a difference in spending short periods abroad.

The two types of academic migration which have been distinguished – early and late migration – have different motives and start at different stages of academics' life course. They depend on both common and different factors. Differences notwithstanding, it is possible to identify the impact of some common factors. The results of data analysis show that structural factors explaining early migration for study, namely, the economic status of both country of birth (i.e., country of origin) and country of current employment (i.e., country of destination) and the status of the English language in both countries, explain late job migration as well. Drivers and direction of migration fluxes are similar: people move from emerging and less developed to mature economies and from non-English-speaking countries to English-speaking countries. Further, the educational attainment of academics' fathers has the same positive impact on late and early migration. In both cases, a higher endowment of family resources support international migration. On the contrary, the impact of gender on the two types of migration is different: while early migration for study is not affected by gender, late job migration is less open to women than to men.

12.2.3.3 Teaching Abroad

Teaching abroad is an international activity involving a small proportion of academics – about one in ten (see Chap. 6). Other things being equal – that is, controlling for country of current employment, type of institution, years spent working in higher education, employment situation (full-time vs. part-time), and academic discipline – data analysis shows that teaching abroad is strongly associated with physical mobility along academics' life course and career, especially with professional migration and circulation late in academics' lives but also with early circulation for study purposes (see Chap. 5). Moreover, holding a senior position, instead of a junior one, and being male instead of female increase the probability of teaching abroad.

12.2.3.4 Research Collaboration

International research collaboration involves many more academics than teaching abroad. Four academics out of ten (41 %) collaborate with international colleagues in their research. Both differences and disparities among academics shape this international activity (see Chap. 7).

On the one hand, academics active in the fields of science and medicine are more likely to collaborate with international colleagues than those from education and the

humanities, social sciences, business, and law. Compared to those primarily engaged in applied or practically oriented research, both academics engaged in basic or theoretical research and those who combine basic and applied orientations in their research are more likely to collaborate internationally. Age differences play a role as well: academics from the oldest age group – those born before 1951 – are less likely to be engaged in international research collaboration. Finally, academics working at universities are more likely to collaborate than those working at other higher education institutions, and the same holds true for those who had the opportunity to study abroad.

On the other hand, the results of data analysis suggest that inequalities also are shaping this academic activity. Other things being equal, international research collaboration is more open to men, to academics coming from more educated families, to academics who have earned an advanced degree, to academics holding higher ranks, to academics working in mature economies, and to academics working in countries outside Asia. The fact that those who work in small countries, and those who are from non-English-speaking countries are more likely to be involved in international collaboration, also points at existing inequalities – in resources and critical mass in national scholarly networks – within international research collaboration.

12.2.3.5 Publishing Abroad

While international research collaboration is quite widespread within the academy, international dissemination of study and research results in the form of publications is even more pronounced. More than half of the CAP survey respondents have published abroad: one-third (34 %) had disseminated at least half of their publications during the preceding 3 years in a foreign country, one fifth (19 %) had published less than half of their works abroad, while nearly half (47 %) had not published in a foreign country at all.

Controlling for country of employment, type of institution, years spent working in higher education, employment situation, either full-time or part-time, and academic discipline, the data analysis shows that publishing abroad is strictly associated with physical mobility or border crossing along academics' life course and that holding a senior position, and being male, have a positive impact (see Chap. 5).

Other things being equal, academics working in all the countries participating in the CAP survey are more likely to publish abroad than their colleagues working in the USA; American faculties do not actually need to publish abroad as they belong to a vast domestic scientific community, and they can rely on the dominant position that their country has in the international publishing industry, while academics working in other countries – albeit for different reasons – need or want to publish abroad. There may be some correlation between academics' publishing behavior and institutional policies, such as emphasizing internationalization or research outcomes, etc.; no doubt, academics from the hard sciences and working in research universities tend to publish abroad more.

12.2.3.6 Factors Shaping Academic Internationalization

Factors shaping academic internationalization can be grouped into three categories. First, there are individual characteristics, both ascribed and acquired, personal and professional, such as age, gender, family background, educational achievements, preferences, and assignments. Second, there are institutional factors, such as academic discipline, and the type of institution at which academics work. Third, there are the national and regional contexts within which academics operate, such as country's size, language, cultural tradition, and economic and political situation. Throughout the chapters of the book, some individual factors have emerged more frequently as significant in various authors' analyses. Three examples are worth mentioning.

The gendered nature of academic internationalization has been addressed at length in one chapter of the book (see Chap. 9), but gender has also been considered a factor shaping physical mobility (see Chaps. 5 and 9), teaching abroad (see Chaps. 5 and 9), international research collaboration (see Chaps. 5, 7, and 9), publishing abroad (see Chaps. 5 and 9), and the engagement in international activities at large (see Chap. 11). The results of data analyses carried out in different chapters point in the same direction. Women academics are less likely to have studied abroad than men, especially in some countries or regions (e.g., Latin America) and at the doctoral level. Women are less involved than men in teaching abroad. International research collaboration is less open to academic women than to men. Data analysis suggests that males have a 30 % higher probability of collaborating with international colleagues than females. Women are less likely to report having published in another country, and/or with international coauthors, than men. Thus, academic internationalization must be considered as less open to women than to men suggesting that the opportunities to be involved in international activities may discriminate against academic women, although gender differences appear to be stronger in some countries or regions than others (see Chap. 9). Nevertheless, there are activities – such as short-term professional circulation – to which academic women and men participate on equal terms.

An institutional factor often recurring in authors' analyses is academic discipline. Discipline has proved to be one of the most powerful factors in shaping internationalization. Academics in the “hard” disciplines appear to be twice as likely to be highly engaged in international activities as those outside these fields (see Chap. 11). Further, when international research collaboration and publishing abroad are considered, a clear divide separates the natural and medical sciences, on the one hand, and the social sciences, business, law, and humanities, on the other (see Chaps. 5 and 7). Yet, this is not the whole story. Natural scientists, for instance, are less likely to teach abroad than academics working in other fields. Academics from the medical sciences are less likely to have studied abroad than their colleagues from all other disciplines; but disciplines don't have any impact on other types of international mobility, namely, early and late migration and short-term professional circulation.

Among context factors, it is worth noting the role played by countries' economic status, approximated by their level of income. Comparing the results illustrated above, an interesting difference emerges. On the one hand, country's economic

status doesn't have an impact on the divide between academics who are highly engaged in international activities at large and those who are not (see Chap. 11). On the other hand, academics working in mature economies are more likely to collaborate with international colleagues in research than those working in emerging economies (see Chap. 7). Data analyses show that in both cases, the other three considered context factors, namely, country size, country language, and macro region, have a significant net effect on the two dependent variables. Controlling for these three factors, country's economic status doesn't have an impact in one case, while it has in the other case. Why? A possible explanation is that when considering academic internationalization as a whole, that is including all its dimensions, there is no difference between mature and emerging countries. The internationalization of the academic profession appears to be indeed a global phenomenon. On the contrary, when considering only international research collaboration, the divide between mature and emerging economies asserts itself. Research appears to be an arena where differences in countries' economic status still play a role.

The economic status of a country affects physical mobility or border crossing as well, especially international migration. In most of the analyses illustrated throughout the volume, authors have referred to the country of academics' current employment, that is, the country where the CAP survey was carried out. These countries have been classified into only two categories according to income: mature and emerging. This was not the case when international migration was considered. By definition, international migration implies a movement from the country of origin to the country of destination. While the countries of destination coincide with the countries participating in the CAP survey, the countries of origin also include countries having an income which is lower than that of emerging countries and have been considered as "less developed." Thus, in the case of academic international migration, the impact of countries economic status is much stronger and more visible.

To sum up, a third contribution that the CAP survey offers is a better understanding of what drives and deters academics from international activity. A number of environmental, organizational, professional, and personal factors shaping academic internationalization – grouped in three broad categories – have been identified. The analyses provided throughout have shown that not all have an impact on internationalization at large or on individual aspects of it, that the strength of their association with internationalization and its multiple dimensions isn't always the same, and that the most powerful factors shaping internationalization and international activities may vary according to the particular dimension in question.

12.2.4 The Consequences or Outcomes of International Activity: Why It Is Important?

Collected works in this book have focused mainly on the consequences for the academic profession of two international activities, namely, physical mobility or

border crossing (see Chaps. 5 and 10) and international research collaboration (see Chap. 7). Further insights on the importance of international activities can be drawn also from other chapters (e.g., Chap. 11).

In order to analyze physical mobility and its outcomes, two typologies have been established: one in Chap. 5 and another in Chaps. 8 and 10. The two typologies share the assumption that international mobility is better understood when the entire life course of academics is taken into consideration. Thus, mobility is considered in its biographical dimension including several phases or stages of academics' lives such as education and career. Both typologies classify academics responding to the CAP questionnaire according to the distinction between migrant and mobile academics, the stage of life when they moved to another country, and the purposes for crossing borders. Yet, while the second typology also considers academics' citizenship, the first does not. Comparing the categories of the two typologies, some other differences emerge. Nonmobile academics are defined differently. The second typology defines nonmobile academics as people who are neither migrants nor were mobile during their lives for study purposes. Although acknowledging the possibility that some of them have worked for a while in another country, nevertheless it considers this subgroup of temporary border crossers as nonmobile academics. On the contrary, the first typology defines nonmobile academics as people who never experienced international mobility throughout their life, distinguishing this group from academics who, while working at the time when the survey was carried out where they were born, and where they earned their study degrees, have experienced either short-term or long-term mobility in their career. Although the other categories of the two typologies are quite similar, some other differences must be pointed out. While in the first typology people who have been mobile for study purposes and earned a graduate and/or postgraduate degree abroad are merged together within a single category (i.e., circulating for study), the second typology distinguishes people who had been mobile exclusively during the course of their doctoral work (i.e., PhD mobile academics) from people who had been mobile during the course of study including those who had been mobile both in the course of study and during doctoral work (i.e., study mobile academics). Similarly, the second typology distinguishes between early migrants and PhD migrants, while the first one considers only one group of early migrants for study regardless of the degree. Finally, the most similar categories of the two typologies refer to migrants for work or professional migrants.

In studying the relationship between international mobility and international activities, Chaps. 5 and 10 take two different approaches. Chapter 5 focuses on a limited number of activities, namely, teaching abroad, international research collaboration, and publication abroad, while Chap. 10 considers a wider range of international activities taking into consideration as well the links between international mobility and other aspects of the academic profession. While Chap. 5 adopts a multivariate approach, Chap. 10 builds on a set of cross tabulations referring only to academics working at universities and controlling separately, firstly, for academic rank and country's economic status and, secondly, for age cohorts and country's economic status. Finally, while in Chap. 5 the impact of five types of mobility on international activities is

considered, in Chap. 10 only the difference between mobile and nonmobile academics is addressed. These differences notwithstanding – among which the different definitions of nonmobile academics are especially relevant – the two streams of analysis lead to similar conclusions. In three international activities for which a comparison is possible, physical mobility does make a difference. Mobile academics are more likely to teach abroad, to collaborate with international colleagues in research efforts, and to publish abroad than nonmobile academics, or – in other words – there are relatively more mobile than nonmobile academics involved in these activities. Thus, physical mobility throughout academics' entire life course is important because it is strictly connected to – and sometimes favors – international activities.

Internationalization is important also because it is associated with one crucial aspect of the academic profession, that is, academic productivity. Our findings suggest a clear correlation between the individual engagement in international activities at large and the number of articles published in an academic book or journal, research reports written for a funded project, and papers presented at a scholarly conference (see Chap. 11). More specifically, the relationship between international research collaboration and research performance in the form of scholarly articles and conference papers has been studied (see Chap. 7). The results show that, across all fields, academics collaborating with international colleagues had published or presented almost twice as many articles or papers as their colleagues in the same field who did not collaborate internationally.

In sum, a fourth contribution that the CAP survey provides is that it documents at least some of the consequences that internationalization has on academic work and productivity.

12.3 Questions and Issues Raised by the Analyses

While a number of conclusions seem justified by our findings, the analyses that we have reported in the preceding chapters raise a host of new questions and issues – some conceptual or substantial, others methodological.

Some of the questions remain owing to the limitations imposed by the CAP dataset, as we simply don't have the data to answer them. The CAP survey collected information on the country where respondents obtained their degrees, the country of citizenship and of residence at various stages of their life course, and – of course – the country of employment at the time of the survey. Unfortunately, however, no information was collected on the foreign country where respondents possibly taught, the countries where respondents' foreign collaborators or coauthors were located, the foreign country of publication, and the country or countries where respondents spent some periods abroad or intended to move. Further, although the geographical coverage of the CAP data is quite extensive, it is insufficient to study academic internationalization in meaningful clusters of countries such as the European Union, sub-Saharan Africa, or less developed countries. As a consequence, authors' ability to address the internationalization of teaching and research

(see Chaps. 6 and 7), regionalization (see Chap. 8), gender disparities (see Chap. 9), and generational differences (see Chap. 10) has been limited. Many questions on individual networks of research collaboration and coauthorship, international research cooperation, patterns of international knowledge dissemination, transnational education, and the like remain unanswered. For instance, among our findings has been the identification of differences in internationalization among nations, among regions, and among subgroups within nations and regions. To what extent has the dynamics of international knowledge production and dissemination been affected by these variables? Has globalization or regionalization essentially altered the “center/core-periphery” dynamic which has historically characterized international patterns of innovation and knowledge transfer? Have knowledge production functions become more dispersed and greater equity has been achieved in the access to the means of production?

The CAP survey has also provided information on respondents’ first language or mother tongue, on whether they were primarily employing their mother tongue in teaching and research, and – if this was not the case – in which other language they were performing these two activities. Moreover, the questionnaire asked whether they were teaching and/or publishing in a language different from the language of instruction at their employing institution. Yet, the survey failed to collect information on the language primarily employed at respondents’ current institution making it more difficult or even impossible to capture all the complexities and nuances of the role of languages in the internationalization of the academy. As it has been noted, a Portuguese scholar permanently working at a German university and employing German in his or her teaching and research activities would be considered, or not, as a “foreign” academic depending on the language used as a term of reference, either his or her native language or the language of his or her institution. Similarly, the lack of information on the main language used at a particular institution hinders the clear understanding of the role played by individual faculty in the internationalization of both the academy and higher education in the context of multilingual countries such as Canada, Finland, Hong Kong, Malaysia, or South Africa. Finally, some other information needed to fully assess the use of foreign languages by academics is also missing. In fact, we don’t know how frequently respondents use a “foreign” language in their teaching and publications, whether they use it in all their courses and publications or just in few of them, and whether they use only one or more “foreign” languages.

Another – albeit clearly more minor – example of a dearth of relevant data concerns our finding of the effect of time abroad on subsequent international activity; this has raised as many questions as it has answered. To the extent that our data do not distinguish number of episodes from total length of time spent abroad, we are in no position to specify whether it is the number of distinctive exposures or the length of individual exposures that seems to be associated with the effects on international academic activity.

Some of the most frequent international academic activities such as integrating or infusing an international dimension in both teaching and research, publishing abroad, and collaborating with international colleagues in research depend on the possibility

of gathering information quickly, communicating easily, and sharing views and standards within extended communities. One of the mechanisms for the spread of these common structures and standards has, of course, been the information and communication technology revolution. The rise of the personal computer – that is, of ubiquitous computing – and of the Internet has enabled the near instantaneous sharing of information across national boundaries. In many respects, the digital revolution has been at the heart of the internationalization of the academy; and yet, it has been largely absent from these chapters. Although CAP data show a clear connection between publishing in a foreign country, publishing in a language different from the language of instruction at respondents' current institution, and online or electronic publishing (see Chap. 11), the CAP questionnaire dedicated little attention to the impact of the digital revolution on the academic profession.⁵ As a consequence, many questions remain open. How, for example, has collaboration between scholars changed in terms of process (beyond pure production numbers)? Is the nature of the collaboration more intensive, more frequent than in the past? Has ICT provided more opportunities for international collaboration on equal terms? How many academics are involved in computer-assisted international distance teaching and learning? Moreover, the lack of information on the spread of information and communication technologies across the academic profession complicates the interpretation of some of the findings of our analyses. For instance, is there a link between the increasing use of these technologies and the fact that younger academics were less internationally mobile for purposes of study than their older colleagues?

Some other questions remain because we did not undertake analyses of data that were available or we didn't fully exploit available data. Three examples are worth mentioning in this regard.

First of all, there is one variable that has not been taken into consideration in the reported analyses, namely, that concerning international funding. We asked respondents which percentage of the external funding for their research – that is, funding coming from outside their institution – came in a reference period from national organizations or entities and which percentage came from international organizations or entities. As the amount of “no answers” for this variable was the highest recorded (see Chap. 2), we considered it as less reliable and did not build upon it. In this way, though, we gave up addressing relevant issues such as the relationship between international funding, international research collaboration, and international publishing, or the relationship between national and international funding of academic research.

Secondly, throughout the book, several chapters have looked at the role of language in the internationalization of the academy and higher education. Most

⁵Only three questions addressed directly the issue of the use of ICT in the academic work. Question B3 asked for the evaluation of computer facilities and telecommunications (Internet, networks, and telephones) at respondents' institution; question C2 asked whether respondents were involved in ICT-based learning/computer-assisted learning and electronic communications (e-mail) with students, and question D5 asked which percentage of respondents' publications were online or electronically published.

chapters have focused on the role played by the English language. Relying on available data, information has been provided on how many academics use English, in which activities, and whether English is employed as respondents' first language (or mother tongue) or as a second language. Depending on its status in the participating countries, the role of the English language has also been discussed (see Chap. 3). The status of the English language in respondents' countries of birth and employment and respondents' English proficiency have been considered as factors influencing international academic and student mobility (see Chaps. 5 and 6), international research collaboration (see Chap. 7), and individual engagement in international activities (see Chap. 11). Other chapters have focused on the use of foreign languages across countries and macro regions (see Chap. 8), and generations (see Chap. 10), adopting three different definitions of "foreign" language based on available information. Nevertheless, the host of data collected by the CAP survey on languages has not been fully exploited, and we haven't been able to gather the significant, albeit scattered, findings on the role of English and of "foreign" languages other than English in one common frame. Some questions deserve further attention. For instance, does employing English in teaching as second language perform the same function across different countries and institutional settings? Is academics' publishing behavior associated with the structure of the international publishing industry? Are there other international language communities within the academy beyond the global one based on English as "lingua franca"?

Thirdly, data analysis has shown that gender disparities vary across countries or groups of countries and that gender differences are smaller among junior academics. It has also been shown that academic women collaborate to a lesser extent with international colleagues in research both in the soft and in the hard disciplines (see Chap. 9). However, a full explanation of gender differences over the whole range of international academic activities remains to be offered. For instance, it has been shown that family-related variables, such as familial status and child care, hinder women's participation in international research collaboration. Yet, their influence on other aspects of gender differences in terms of internationalization still needs to be explored. Similarly, also other institutional and organizational factors might influence gender differences in academic internationalization. As a consequence, several questions remain open for further analyses: Why have female academics been less internationally mobile than men in obtaining their PhD? Why is there a significantly lower share of women who report having published in another country and/or with international coauthors? Why are women and men equally emphasizing international contents and perspectives in their teaching, while women are less likely to have taught abroad? Do institutional characteristics and organizational settings depress female academics participation in international activities?

Finally, there are questions that remain because our findings conflict. Conflicting findings raise both empirical, conceptual, and methodological questions and issues. For instance, findings from Chaps. 5 and 9 suggest contrasting roles of family variables in limiting women's participation in international activities. According to the latter, women academics with full-time employed partners and children are less likely to take part in international research collaboration than male academics in

similar circumstances, while according to the former familial status, partners' characteristics, number of children living in the household don't have an impact on academic international mobility. Does the contrast depend on the two different aspects of internationalization being considered? Is it just a matter of choosing different methods of data analysis?

One of the most fundamental among the conceptual issues is the notion that internationalization is both a "general" factor as well as a set of multiple "specific" factors. As explicitly advanced in Chap. 11, internationalization is a multidimensional construct, including six dimensions that span teaching, research, and physical border crossing. At the same time, we identified a more general factor, the orientation to internationalization in both teaching and research in academics' everyday activity. How do we reconcile at once the notion that internationalization is both a general factor as well as a set of multiple, independent factors? Moreover, we have argued that five independent dimensions of the internationalization of the academy refer to "border-crossing activities," while two refer to "internationalization at home." Is this conceptualization convincing and heuristic?

Related to these conceptual issues is the matter of the nature of change and stability in the concept. On the one hand, these chapters argue that in the face of enormous economic and political changes, the advent of a truly "global" economy, the extent of internationalization of the academic profession has barely changed since the 1992 Carnegie survey. At the same time, the data suggest that while border crossing may not have increased, activities emblematic of "internationalization at home," including the integration of an international focus and international content in one's teaching, may have increased remarkably. In the same vein, results of the CAP demonstrate a certain "globalization" or increasing commonality in the structures that define the academic profession across countries. Thus, the increasing penetration of common standards for assessing research and defining academic quality are increasingly evident – in itself a kind of internationalization of "rules" and "standards" of what it means to do quality academic work.

Finally, our analyses have raised a variety of methodological issues. Most generally, our efforts at model building in, for example, Chaps. 5, 7, and 11 provide related, albeit distinctive, models for explaining or predicting internationalization. Comparing these chapters, some questions call for further analyses. To what extent do different aspects of internationalization require – or justify – distinctive model-building efforts? To what extent can we, or should we, begin to identify and direct our attention to the development of an "*uber*" model encompassing a common set of explicative factors?

12.4 Implications for Research and Policy

Though there exist numerous issues, the analysis and discussion of the internationalization of the academy in this volume have at least suggested several implications at the research and policy levels. This section focuses only on the most general of these.

With respect to the research implications, the first and most general implication has to do with the meaning of academic internationalization. The studies reported in our volume suggest that internationalization of the academy is a multidimensional construct and changing over time and its analysis and study require considerable nuance. To illustrate, as indicated in the introduction and in Chaps. 4 and 8 as well, though there is indeed continuity in the internationalization of the academy, major forms, activities, and dimensions of the internationalization of the academy not only change in different historical phases but also vary considerably by region and country. Furthermore, the volume concentrates on the analysis of six separate dimensions of the internationalization of the academy. These specific dimensions consist of core or key aspects of the internationalization of the academy in each chapter; however, we do not provide an in-depth discussion about whether these various dimensions have any connections nor has much discussion been undertaken about whether or how they intersect with each other. From a research perspective, we need to be clear about at least two issues. Namely, in what sense the notion of the internationalization of the academy is defined in historical perspective, and more importantly, on which particular dimensions or in what specific aspects of the internationalization of the academy are we studying? Second, according to findings in some chapters, the economic status and size of the national higher education system appear to have had a direct impact on the characteristics and also the level of the internationalization in a majority of countries; however, additional efforts need to be undertaken in order to identify whether there are any specific factors which had affected the internationalization of the academy in a particular country or system. Finally, with increasingly diversifying dimensions of the internationalization of the academy in recent years, it has become more difficult to measure the level of the internationalization of the academy with a single indicator. Though it is also relevant to the formulation and implementation of strategies on internationalization of the academy at both policy and institutional levels, undoubtedly, it may be necessary for researchers to create appropriate indicators which can be adopted to evaluate specific dimensions or each individual activity of the internationalization of the academy.

From a policy perspective, since we have identified that internationalization consists of multidimensional activities and these activities are influenced not only by drivers at national and individual levels but also by factors at institutional level, therefore, when an institution, a system, or a nation seeks to “internationalize,” there is an imperative to be very clear about exactly what ends are being sought: stimulating border crossing for advanced study? Stimulating research and publication in international (i.e., English) venues? Preparing native students as international citizens? And exactly what levers are useful to leverage to which of these ends? Then there is also the matter of regions and regionalization. We learned that similar policies of higher education, transparent and comparable structure of degree programs, and academic unit systems at a regional level have led in some instances to remarkable results, most prominently the growth and popularity of temporary “horizontal” student and academic mobility and collaborative research between European countries. Should national systems of higher education pursue more

similar policies, especially the structure of academic degree programs, at a regional level if more effective and efficient teaching, learning, and research collaboration is the goal? Moreover, there are the findings about gender and career stage/generation. As the academic profession *feminizes* across the globe, and as gender is associated with decreased international activity (especially border crossing), what are the implications for pursuing internationalization strategies? Should we stress the importance of supranational, national, and institutional policies widening women access to the profession and to academic international activities?

12.5 A Final Word

This volume has provided an estimate of the extent to which the academic profession is internationalized at the beginning of the twenty-first century, also indicating which are the most internationalized academic activities. It has drawn a map of the differences in the internationalization of the academy across countries and regions. Its chapters have argued that the CAP survey contributes to a better understanding of the internationalization of the academic profession in at least four respects. Data analysis has shown the multidimensional nature of the internationalization of the academy, which factors shape it, and identified some of the consequences it has on the academic work. Contrasting views on changing trends have been offered as well. Most chapters have focused on a specific topic: change, physical mobility, teaching, research, regions, gender, and generations. Others have contributed to place our main theme in the wider context of the internationalization of higher education and in an historical perspective, and to provide a model to explain academics' engagement in international activities at large. Limits and implications of authors' work have been pointed out, as well as some of the questions raised by their findings which remain to be answered.

Our final word looks at three future developments already in process. First, the CAP survey has been followed by two subsequent studies on the academic profession in Europe and Asia. In both cases new surveys have been carried out involving countries beyond those participating in the CAP study. The new surveys have investigated several aspects of the academic profession, including its internationalization, adopting questionnaires which were in large part identical to the CAP one. In Europe, six countries – Austria, Croatia, Ireland, Poland, Romania, and Switzerland – participated in “The Academic Profession in Europe: Responses to Societal Challenges” (EUROAC) Project funded by the European Science Foundation and national agencies (2009–2012). Assuming that no dramatic changes occurred between 2007 and 2011, data from the CAP and the EUROAC surveys have been merged providing the opportunity to compare 13 European countries and addressing some of the limitations in studying the internationalization of the academic profession in Europe we have encountered in this book. In Asia, several countries initiated a new project which deals with changing academic profession in Asia (APA) in 2010. The project is in part a follow-up to the CAP research, but with

a sharpened focus on selected Asian countries and societies. Currently, seven participating countries and systems have completed their first-stage national surveys with a common questionnaire. These participating teams include Cambodia, China, Indonesia, Japan, Malaysia, Taiwan, and Vietnam. Similar to the CAP project, the common aim of the APA project is to complete an “effective” sample of 800 academics in degree-granting institutions in individual countries and systems. Mail surveys were used in all the seven countries. Except for Cambodia in which the national survey was conducted in both English and the local language, national surveys were carried out in national languages. Each team added new questions or items to the master questionnaire according to its context and needs while national surveys were implemented. Participating country teams obtained research grants through various channels. For example, some country teams obtained their funding from national governments, while the Chinese team is mainly supported by the Ford Foundation. For the last 3 years, three international conferences have been organized in Hiroshima, Japan. Preliminary findings about characteristics of the academics in selected Asian countries and systems, their teaching and research activities, major patterns of governance and management in each participating country and system, as well as their involvement with international activities have been examined. Second, the availability of large data sets from both the CAP and related studies and other sources – examples in the USA would include the National Science Foundation’s Survey of Doctoral Recipients (SDR), the triennial Faculty Survey by UCLA’s Higher Education Research Institute, and Harvard University’s Collaborative for the Study of Academic Careers in Higher Education (COACHE) survey – allows us to continue moving along the lines that some of the chapters have suggested. As it has been shown, the internationalization of the academic profession in its various dimensions may have an impact on several aspects of the academic work in terms of preferences, time allocation, attitudes toward teaching and research, productivity, and personal satisfaction. Moreover, the internationalization of the academy may intertwine with other broad processes such as the fragmentation of the profession, academics’ contribution to knowledge production and dissemination, the establishment of a global labor market for highly skilled or qualified workers, or higher education’s influence on social change. Briefly put, both the results of this book and the availability of new comparative data on the academic profession invites us to focus on the links between internationalization and other aspects of the academic profession.

Finally, as mentioned at the beginning of the chapter, this book highlights the contribution that large-scale surveys such as the CAP make to a better understanding of the internationalization of the academy. As further data of the same kind accumulate, it becomes more and more desirable to compare data from the CAP family studies, or findings from their analysis, to other survey data and to administrative data and to findings from their analyses. Although these comparisons deserve special care and caution, they might be able to shed further light on the internationalization of the academic profession.

Appendix: The Changing Academic Profession: Questionnaire

Final Version 21 November 2006

A. Career and Professional Situation

A1 For each of your degrees, please indicate the year of completion and the country in which you obtained it.

Degree	Year	Earned in country of current employment	If no, please specify country
First degree [NATCAT]	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Second degree (if applicable) [NATCAT]	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Doctoral degree (if applicable) [NATCAT]	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Post-doctoral degree (if applicable) [NATCAT]	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

A2 Please identify the academic discipline or field of your

Check one in each column

Highest degree	Current acad. unit or unit	Current teaching area	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Teacher training and education science
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Humanities and arts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Social and behavioral sciences
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Business and administration, economics
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Law
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Life sciences

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Physical sciences, mathematics, computer sciences
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Engineering, manufacturing and construction, architecture
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Agriculture
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medical sciences, health related sciences, social services
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal services, transport services, security services
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: (please specify)..... (please specify)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not applicable

A3 How would you characterize the training you received in your doctoral degree? (If you do not hold a doctoral degree, please go to question A4.)

Check all that apply

- You were required to take a prescribed set of courses
- You were required to write a thesis or dissertation
- You received intensive faculty guidance for your research
- You chose your own research topic
- You received a scholarship or fellowship
- You received an employment contract during your studies (for teaching or research)
- You received training in instructional skills or learned about teaching methods
- You were involved in research projects with faculty or senior researchers
- You served on an institutional or departmental (unit) committee

A4 Since your first degree, how long have you been employed in the following? (If "0," so indicate.)

Full-time	Part-time	
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Higher education institutions
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Research institutes
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	(Other) Government or public sector institutions
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	(Other) Industry or private sector institutions
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Self-employed
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	If you reported some non-academic employment, since how many years do you work in academe without interim phases of employment in other occupational areas?

A5 By how many institutions have you been employed since your

First degree	Highest degree	
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Higher education institutions or research institutes
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Other institutions (including self-employment)

A6 Please indicate the following:

- Year of your first full-time appointment (beyond research and teaching assistant) in the higher education/research sector
- Year of your first appointment to your current institution (beyond research and teaching assistant)
- Year of your appointment/promotion to your current rank at your current institution
- For how many years have you interrupted your service at your current institution for family reasons, personal leave, or full-time study? (If "0," so indicate.)

A7 How is your employment situation in the current academic year at your higher education institution/research institute? (Check only one.)

- 1 Full-time employed
- 2 Part-time employed, % of full-time
- 3 Part-time with payment according to work tasks
- 4 Other (please specify)

A8 Do you work for an additional employer or do additional remunerated work in the current academic year?

- 1 No
- 2 In addition to your current employer, you also work at another research institute or higher education institution
- 3 In addition to your current employer, you also work at a business organization outside of academe
- 4 In addition to your current employer, you also work at a non-profit organization or government entity outside of academe
- 5 In addition to your current employer, you are also self-employed.
- 6 Other:.....
(please specify)

A9 How would you describe your current institution?

- Check one only
NATCATs to identify a) Higher education institution or research institute and b) type of higher education institution and c) type of research institution

A10 What is your academic rank? (If you work in a research institution with ranks differing from those at higher education institutions, please choose the rank most closely corresponding to yours.)

- 1 NATCAT
- 2 NATCAT
- 3 NATCAT

- 4 NATCAT
- 5 NATCAT
- 6 NATCAT
- 7 NATCAT
- 8 Other:
(please specify)

A11 What is the duration of your current employment contract at your higher education institution or research institute? (Check only one.)

Check only one

- 1 Permanently employed (tenured)
- 2 Continuously employed (no preset term, but no guarantee of permanence)
- 3 Fixed-term employment *with* permanent/continuous employment prospects (tenure-track)
- 4 Fixed-term employment *without* permanent/continuous employment prospects
- 5 Other:
(please specify)

A12 What is your overall annual gross income (including supplements) from the following sources?

- Your current higher education institution/research institute [NATCAT: Currency and number of boxes]
- All other concurrent employers [NATCAT: Currency and number of boxes]
- Other income (e.g. self-employment) [NATCAT: Currency and number of boxes]

A13 During the current academic year, have you done any of the following?

Check all that apply

- 1 Served as a member of national/international scientific committees/boards/bodies
- 2 Served a peer reviewer (e.g. for journals, research sponsors, institutional evaluations)
- 3 Served as an editor of journals/book series
- 4 Served as an elected officer or leader in professional/academic associations/organizations
- 5 Served as an elected officer or leader of unions
- 6 Been substantially involved in local, national or international politics
- 7 Been a member of a community organizations or participated in community-based projects
- 8 Worked with local, national or international social service agencies
- 9 Other:
(please specify)

A14 Within the last five years, have you considered a major change in your job? And did you take concrete actions to make such a change? (If yes, check all that apply in both columns A and B. If no, so indicate in column A and skip to B1.)

Considered	Concrete action taken	
1 <input type="checkbox"/>	1 <input type="checkbox"/>	To a management position in your higher education/research institution
2 <input type="checkbox"/>	2 <input type="checkbox"/>	To an academic position in another higher education/research institute within the country
3 <input type="checkbox"/>	3 <input type="checkbox"/>	To an academic position in another country
4 <input type="checkbox"/>	4 <input type="checkbox"/>	To work outside higher education/research institutes
5 <input type="checkbox"/>		No, I have not considered making any major changes in my job

B. General Work Situation and Activities

B1 Considering all your professional work, how many hours do you spend in a typical week on each of the following activities? (If you are not teaching during the current academic year, please reply to the second column only.)

Hours per week when classes are in session	Hours per week when classes are <u>not</u> in session	
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Teaching (preparation of instructional materials and lesson plans, classroom instruction, advising students, reading and evaluating student work)
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Research (reading literature, writing, conducting experiments, fieldwork)
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Service (services to clients and/or patients, unpaid consulting, public or voluntary services)
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Administration (committees, department meetings, paperwork)
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Other academic activities (professional activities not clearly attributable to any of the categories above)

B2 Regarding your own preferences, do your interests lie *primarily* in teaching or in research?

- Check only one
- 1 Primarily in teaching
 - 2 In both, but leaning towards teaching
 - 3 In both, but leaning towards research
 - 4 Primarily in research

B3 At this institution, how would you evaluate each of the following facilities, resources, or personnel you need to support your work?

Excellent					Poor	
1	2	3	4	5		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Classrooms
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Technology for teaching
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Laboratories
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Research equipment and instruments
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Computer facilities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Library facilities and services
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Your office space
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Secretarial support
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Telecommunications (Internet, networks, and telephones)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Teaching support staff
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Research support staff
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Research funding

B4 Please indicate the degree to which each of the following affiliations is important to you.

Very important					Not at all important	
1	2	3	4	5		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		My academic discipline/field
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		My department (at this institution)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		My institution

B5 Please indicate your views on the following:

Strongly Agree					Strongly Disagree	
1	2	3	4	5		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Scholarship is best defined as the preparation and presentation of findings on original research
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Scholarship includes the application of academic knowledge in real-life settings
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Scholarship includes the preparation of reports that synthesize the major trends and findings of my field
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		This is a poor time for any young person to begin an academic career in my field
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		If I had it to do over again, I would not become an academic
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		My job is a source of considerable personal strain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Teaching and research are hardly compatible with each other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Faculty in my discipline have a professional obligation to apply their knowledge to problems in society

B6 How would you rate your overall satisfaction with your current job?

Very high Very low

1 2 3 4 5

B7 Since you started your career, have the overall working conditions in higher education and research institutes improved or declined?

Very much improved Very much deteriorated

1 2 3 4 5

Working conditions in higher education

Working conditions in research institutes

C. Teaching (Refer to the current academic year or the previous academic year [if you do not teach in this academic year]. If you do not/did not teach in this or the previous academic year go to section D.)

C1 Please indicate the proportion of your teaching responsibilities during the current academic year that are devoted to instruction at each level below and the approximate number of students you instruct at each of these levels.

Percent of instruction time	Approximate average number of students per course	
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(NATCAT) Undergraduate programs
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(NATCAT) Master programs
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(NATCAT) Doctoral programs
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(NATCAT) Continuing professional education programs
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Others

C2 During the current (or previous) academic year, have you been involved in any of the following teaching activities?

Check all that apply

1 Classroom instruction/lecturing

2 Individualized instruction

3 Learning in projects/project groups

4 Practice instruction/laboratory work

- 5 ICT-based learning/computer-assisted learning
- 6 Distance education
- 7 Development of course material
- 8 Curriculum/program development
- 9 Face-to-face interaction with students outside of class
- 10 Electronic communications (e-mail) with students

C3 Does your institution set quantitative load targets or regulatory expectations for individual faculty for the following?

Check all that apply

- 1 Number of hours in the classroom
- 2 Number of students in your classes
- 3 Number of graduate students for supervision
- 4 Percentage of students passing exams
- 5 Time for student consultation

C4 Please indicate your views on the following:

Strongly agree				Strongly disagree	
1	2	3	4	5	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	You spend more time than you would like teaching basic skills due to student deficiencies
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	You are encouraged to improve your instructional skills in response to teaching evaluations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At your institution there are adequate training courses for enhancing teaching quality
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Practically oriented knowledge and skills are emphasized in your teaching
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	In your courses you emphasize international perspectives or content
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	You incorporate discussions of values and ethics into your course content
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	You inform students of the implications of cheating or plagiarism in your courses
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grades in your courses strictly reflect levels of student achievement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Since you started teaching, the number of international students has increased
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Currently, most of your graduate students are international
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Your research activities reinforce your teaching
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Your service activities reinforce your teaching

C5 During the current (or previous) academic year, are you teaching any courses

Check all that apply

- 1 Abroad
- 2 In a language different from the language of instruction at your current institution

D. Research (Refer to the current academic year or the previous academic year [if you are not active in research in this academic year]. If you are not/were not active in research in this or the previous academic year, go to section E.)

D1 How would you characterize your research efforts undertaken during this (or the previous) academic year?

- | Yes | No | |
|----------------------------|----------------------------|--|
| 1 <input type="checkbox"/> | 1 <input type="checkbox"/> | Are you working individually/without collaboration on any of your research projects? |
| 2 <input type="checkbox"/> | 2 <input type="checkbox"/> | Do you have collaborators in any of your research projects? |
| 3 <input type="checkbox"/> | 3 <input type="checkbox"/> | Do you collaborate with persons at other institutions in your country? |
| 4 <input type="checkbox"/> | 4 <input type="checkbox"/> | Do you collaborate with international colleagues? |

D2 How would you characterize the emphasis of your primary research this (or the previous) academic year?

- | Very much | | | | | | Not at all |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|------------|
| 1 | 2 | 3 | 4 | 5 | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Basic/theoretical | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Applied/practically oriented | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Commercially oriented/intended for technology transfer | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Socially-oriented/intended for the betterment of society | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | International in scope or orientation | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Based in one discipline | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Multi-/interdisciplinary | |

D3 Have you been involved in any of the following research activities during this (or the previous) academic year?

Check all that apply

- 1 Preparing experiments, inquiries, etc.
- 2 Conducting experiments, inquiries, etc.
- 3 Supervising a research team or graduate research assistants
- 4 Writing academic papers that contain research results or findings
- 5 Involved in the process of technology transfer
- 6 Answering calls for proposals or writing research grants
- 7 Managing research contracts and budgets
- 8 Purchasing or selecting equipment and research supplies

D4 How many of the following scholarly contributions have you completed in the past *three* years?

(Number completed in the past three years)

- Scholarly books you authored or co-authored
- Scholarly books you edited or co-edited
- Articles published in an academic book or journal
- Research report/monograph written for a funded project
- Paper presented at a scholarly conference
- Professional article written for a newspaper or magazine
- Patent secured on a process or invention
- Computer program written for public use
- Artistic work performed or exhibited
- Video or film produced
- Others (please specify):

(please specify)

D5 Which percentage of your publications in the last *three* years were

- Published in a language different from the language of instruction at your current institution
- Co-authored with colleagues located in the country of your current employment
- Co-authored with colleagues located in other (foreign) countries
- Published in a foreign country
- Online or electronically published
- Peer-reviewed

D6 Please indicate your views on the following:

Strongly agree				Strongly disagree	
1	2	3	4	5	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Restrictions on the publication of results from my publicly-funded research have increased since my first appointment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Restrictions on the publication of results from my privately-funded research have increased since my first appointment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	External sponsors or clients have no influence over my research activities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The pressure to raise external research funds has increased since my first appointment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Interdisciplinary research is emphasized at my institution
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Your institution emphasizes commercially-oriented or applied research
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Your research is conducted in full-compliance with ethical guidelines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Research funding should be concentrated(targeted) on the most productive researchers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High expectations to increase research productivity are a threat to the quality of research
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High expectations of useful results and application are a threat to the quality of research

D7 In the current (or previous) academic year, which percentage of the funding for your research came from

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Your own institution
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Public research funding agencies
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Government entities
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Business firms or industry
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Private not-for-profit foundations/agencies
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Others:

(please specify)

D8 In the current (or previous) academic year, which percentage of the *external* funding for your research came from

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	National organizations/entities
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	International organizations/entities

(please specify)

E. Management

E1 At your institution, which actor has the primary influence on each of the following decisions (please check only one column on each decision)?

Government or external stakeholders	Institutional managers	Academic Unit managers	Faculty committees/ boards	Individual faculty	Students	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Selecting key administrators
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Choosing new faculty
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Making faculty promotion and tenure decisions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Determining budget priorities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Determining the overall teaching load of faculty
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Setting admission standards for undergraduate students
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Approving new academic programs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Evaluating teaching
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Setting internal research priorities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Evaluating research
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Establishing international linkages

E2 How influential are *you*, personally, in helping to shape key academic policies?

Very influential	Somewhat influential	A little influential	Not at all influential	Not applicable	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At the level of the department or similar unit
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At the level of the faculty, school or similar unit
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At the institutional level

E3 By whom is your teaching, research, and service regularly evaluated?

Check all that apply

Your teaching	Your research	Your service	
1 <input type="checkbox"/>	1 <input type="checkbox"/>	1 <input type="checkbox"/>	Your peers in your department or unit
2 <input type="checkbox"/>	2 <input type="checkbox"/>	2 <input type="checkbox"/>	The head of your department or unit
3 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	Members of other departments or units at this institution
4 <input type="checkbox"/>	4 <input type="checkbox"/>	4 <input type="checkbox"/>	Senior administrative staff at this institution
5 <input type="checkbox"/>	5 <input type="checkbox"/>	5 <input type="checkbox"/>	Your students
6 <input type="checkbox"/>	6 <input type="checkbox"/>	6 <input type="checkbox"/>	External reviewers
7 <input type="checkbox"/>	7 <input type="checkbox"/>	7 <input type="checkbox"/>	Yourself (formal self-assessment)
8 <input type="checkbox"/>	8 <input type="checkbox"/>	8 <input type="checkbox"/>	No one at or outside my institution

E4 At my institution there is

Strongly agree					Strongly disagree	
1	2	3	4	5		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A strong emphasis on the institution's mission
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Good communication between management and academics
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A top-down management style
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Collegiality in decision-making processes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A strong performance orientation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A cumbersome administrative process
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A supportive attitude of administrative staff towards teaching activities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A supportive attitude of administrative staff towards research activities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Professional development for administrative/management duties for individual faculty

E5 Please indicate your views on the following issues:

Strongly agree					Strongly disagree	
1	2	3	4	5		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Top-level administrators are providing competent leadership
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		I am kept informed about what is going on at this institution
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Lack of faculty involvement is a real problem
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Students should have a stronger voice in determining policy that affects them
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The administration supports academic freedom

E6 To what extent does your institution emphasize the following practices?

Very much					Not at all	
1	2	3	4	5		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Performance-based allocation of resources to academic units
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Evaluation-based allocation of resources to academic units
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Funding of departments substantially based on numbers of students
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Funding of departments substantially based on numbers of graduates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Considering the research quality when making personnel decisions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Considering the teaching quality when making personnel decisions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Considering the practical relevance/applicability of the work of colleagues when making personnel decisions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Recruiting faculty who have work experience outside of academia
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Encouraging academics to adopt service activities/entrepreneurial activities outside the institution
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Encouraging individuals, businesses, foundations, etc., to contribute more to higher education

F. Personal Background and Professional Preparation

F1 What is your gender?

1 Male
 2 Female

F2 Year of birth

Year

F3 What is your familial status?

1 Married/partner
 2 Single
 3 Other:
 (please specify)

F4 If married/partner, is she/he employed?

- 1 Yes, full-time
- 2 Yes, part-time
- 3 No

F5 Is your spouse/partner also an academic?

- 1 Yes
- 2 No

F6 Do you have children living with you?

- 1 Yes, 1 child
- 2 Yes, 2 children
- 3 Yes, 3 or more children
- 4 No

F7 Did you ever interrupt your employment in order to provide child or elder care in the home?

- 1 Yes
- 2 No
- If yes, for how many years?

F8 What is your parents' highest, and if applicable, partner's highest education level?

Father	Mother	Partner	
1 <input type="checkbox"/>	1 <input type="checkbox"/>	1 <input type="checkbox"/>	Entered and/or completed tertiary education
2 <input type="checkbox"/>	2 <input type="checkbox"/>	2 <input type="checkbox"/>	Entered and/or completed secondary education
3 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	Entered and/or completed primary education
4 <input type="checkbox"/>	4 <input type="checkbox"/>	4 <input type="checkbox"/>	No formal education
5 <input type="checkbox"/>	5 <input type="checkbox"/>	5 <input type="checkbox"/>	Not applicable

F9 What was/is your nationality/citizenship and your country of residence?

	Citizenship	Country of residence
At birth	.....	.....
At the time of your first degree	.....	.....
Currently	.....	.....
	(please specify)	(please specify)

F10 What is your first language/mother tongue?

.....
(please specify)

F11 Which language do you primarily employ in teaching?

- 1 First language/mother tongue
- 2 Other:.....
(please specify)

F12 Which language do you primarily employ in research?

- 1 First language/mother tongue
- 2 Other:.....
(please specify)

F13 Since the award of your first degree, how many years have you spent

- In the country of your first degree
- In the country in which you are currently employed, if different from the country of your first degree
- In other countries (outside the country of your first degree and current employment)

Notes on Editors

Futao Huang is professor at the Research Institute for Higher Education, Hiroshima University, Japan. Before he came to Japan in 1999, he had taught at several Chinese universities. His major research fields are concerned with university curricular development; internationalization of higher education, including the internationalization of the academy; and a comparative study of higher education in East Asia with a focus on China and Japan. He has published widely in Chinese, English, and Japanese languages in many international peer-reviewed journals and domestic journals in both China and Japan. He is member of the Editorial Advisory Boards of *Higher Education* and *A Journal of Studies in International Education*.

Martin Finkelstein is professor of education at Seton Hall University, South Orange, NJ, USA. He has served as a visiting scholar at the Claremont Graduate University; at the Research Institute for Higher Education, Hiroshima University, Japan; and at the Faculty of Education, the University of Hong Kong. Most recently, he is coauthor of *The American Faculty: The Restructuring of Academic Work and Careers* (with Jack Schuster, Johns Hopkins University Press, 2006) and of *Scholars in the Changing American Academy* (with William Cummings, Springer, 2011).

Michele Rostan is director of the Centre for Study and Research on Higher Education Systems at the University of Pavia, Pavia, Lombardy, Italy. He is associated professor of economic sociology at the Department of Social and Political Sciences. He is member of the Consortium of Higher Education Researchers and the Editorial Advisory Boards of the journals *Higher Education* and *Studies in Higher Education*. He was responsible for the Changing Academic Profession survey in Italy and edited the Italian CAP Report (*La professione accademica in Italia. Aspetti, problemi e confronti nel contesto europeo*, 2011). He recently coedited *Questioning Excellence in Higher Education Policies, Experiences and Challenges in National and Comparative Perspective* (2011, with M. Vaira).

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Hamish Coates conducts research and development in the field of higher education. Dr Coates is the founding director of Higher Education Research at the Australian Council for Educational Research and a program director at the LH Martin Institute, based at the University of Melbourne. He has worked in over 35 countries, directed 50 major projects, and published over 200 papers and reports. His work focuses on designing and developing new forms of evidence-based quality assurance for higher education. He teaches across all levels, works with executive teams, manages research programs, supervises graduate students, contributes to numerous advisory groups, serves on several editorial and academic committees, and has held several visiting fellowships.

William K. Cummings is professor of international education at the George Washington University, USA. He received his PhD in sociology from Harvard University in 1972. Since then, he has taught at the University of Chicago, the National University of Singapore, Harvard University, and the State University of New York at Buffalo. He is the author of *Education and Equality in Japan* (Princeton University Press, 1980), *Profiting from Education* (Institute of International Education, 1990) (with Gail Chambers), *The Japanese Academic Marketplace and University Reform* (Garland Publishing Inc., 1990), and *The Institutions of Education* (Symposium Books, 2003). He coedited *Scholars in the Changing American Academy* (with M. Finkelstein, 2012, Springer) and *Crossing Borders in East Asian Higher Education* (with G. Postiglione and D. Chapman).

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V. Lynn Meek was foundation director and now professorial fellow at the LH Martin Institute of Tertiary Education Leadership and Management at the University of Melbourne. Having completed a PhD in the sociology of higher education at the University of Cambridge, he has nearly three decades’ experience researching higher education policy issues. Professor Meek has published over 30 books and monographs and numerous book chapters and scholarly articles. He is on the editorial board of several international journals and book series and has worked with such international agencies as UNESCO and OECD. In 2012, Professor Meek was appointed editor of the journal *Studies in Higher Education* and chaired the Irish Universities Quality Board’s audit of Trinity College Dublin.

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Agnete Vabø is deputy head of research at Nordic Institute for Studies in Innovation, Research and Education (NIFU). She holds a dr.polit degree from the University of Bergen. In the past two decades, she has published numerous reports and articles on change in higher education with particular focus on the academic profession.

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