

Changing European Academics

A COMPARATIVE STUDY OF SOCIAL
STRATIFICATION, WORK PATTERNS AND
RESEARCH PRODUCTIVITY

Marek Kwiek



RESEARCH INTO HIGHER EDUCATION

Changing European Academics

European academics have been at the centre of ongoing higher education reforms, as changes in university governance and funding have led to changes in academic work and life. Discussing the academic profession and, most importantly, its increasing stratification across Europe, *Changing European Academics* explores the drivers of these changes as well as their current and expected results.

This comparative study of social stratification, work patterns and research productivity:

- Examines 11 national, higher education systems across Europe (Austria, Finland, Germany, Ireland, Italy, The Netherlands, Norway, Poland, Portugal, Switzerland and the United Kingdom)
- Provides a panoramic view of the European academic profession
- Confronts misconceptions of academic work and life with compelling results and detailed analyses
- Discusses new dilemmas inherent to the changing social and economic environments of higher education.

A thoughtful and comprehensive study of the changing academic profession in Europe, this book will be of interest to higher education practitioners, managers and policy makers, both in Europe and globally. *Changing European Academics* will benefit anyone whose work relates to changing academic institutions and changing academic careers.

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Marek Kwiek

First published 2019
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data
A catalogue record has been requested for this book

ISBN: 978-0-8153-9647-5 (hbk)
ISBN: 978-0-8153-9648-2 (pbk)
ISBN: 978-1-351-18204-1 (ebk)

Typeset in Galliard
by codeMantra

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Series editors' introduction

This series, co-published by the Society for Research into Higher Education and Routledge Books, aims to provide, in an accessible manner, cutting-edge scholarly thinking and inquiry that reflects the rapidly changing world of higher education, examined in a global context.

Encompassing topics of wide international relevance, the series includes every aspect of the international higher education research agenda, from strategic policy formulation and impact to pragmatic advice on best practice in the field. Each book in the series aims to meet at least one of the principal aims of the Society: to advance knowledge; to enhance practice; to inform policy.

Marek Kwiek's book focuses on the academic profession in 11 European higher education systems and deals with different forms of stratification in academic careers. Informed by theoretical insights from the sociology of science, data from the Changing Academic Profession survey are analysed to elucidate the contemporary nature of work in academia. Against the background of asserting that the profession in the Europe is highly stratified, the analyses show important differences between the higher education systems. The book offers significant food for thought for those embarking on an academic career, and also for institutional managers and national policy makers.

Jennifer M. Case
Jeroen Huisman

Introduction

Changing career structures,
award and recognition systems,
and work patterns

Toward a comprehensive cross-national comparative view of European academics

European academics have been at the very center of ongoing higher education reforms across the continent. Changes in university governance and funding, as widely reported (Musselin and Teixeira, 2014; Jongbloed and Lepori 2015; de Boer et al. 2017; Bleiklie, Enders, and Lepori 2017), have inevitably led to changes in academic work and life. Traditional theories of social stratification in science, penetrating as they are, appear to be only partially useful in analyzing the directions of ongoing changes as viewed from a cross-European empirical perspective. New academic realities seem to require a closer look at the micro-level data and, by extension, traditional theories. Today, academics are in the eye of the storm, and this book examines the drivers of the aforementioned changes and their current and expected results.

Only in the last decade has it become possible to study the academic profession—that is, academics’ attitudes, behaviors, and perceptions, with the individual academic as a unit of analysis—from a quantitative comparative European perspective. A decade ago, it was difficult, if not impossible, to undertake a comprehensive cross-national examination of ongoing transformations. Most studies were single-nation, and most published research was country-specific, with individual chapters devoted to academics in the context of various aspects of changing university governance and funding.

This book provides a panoramic view of the academic profession—specifically, from the university sector—across Europe in 11 national systems (Austria, Finland, Germany, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Switzerland, and the United Kingdom). Until recently, gaining such a perspective was possible at only a very general level, and it was based predominantly on aggregated national higher education statistics. In contrast, this book adopts a quantitative approach based on 17,211 returned questionnaires that were distributed across Europe (and the accompanying qualitative background, which is based on 480 semi-structured in-depth interviews).

This book confronts misconceptions about academic work and life and provides compelling results of detailed analyses performed on large-scale primary

empirical material. It asks traditional research questions that are rooted in new comparative empirical contexts, as well as entirely new questions that are pertinent to the changing conditions of academic work. It also confronts academics across Europe who are facing new dilemmas that are inherent in the changing social and economic environments of higher education. Academics from major European systems and beyond can view their own academic trajectories within the context of a larger, cross-national story.

Reputation-and-resource model of scientific careers

Research interest in social stratification in academic science was accelerated with Robert K. Merton's claim that science has an ethos and is organized by the four norms of universalism, communism (or communalism), disinterestedness, and organized skepticism. The four norms govern academic behaviors and form a theory of the normative structure of science (Merton 1973; Hermanowicz 2012). Academics follow the norms because 'like other institutions, the institution of science has developed an elaborate system for allocating rewards to those who variously live up to its norms' (Merton 1973: 297). Universalism is contrasted with particularism, which refers to factors such as age, race, gender, religion, and political or sexual orientation, which are said to be functionally irrelevant to institutional operation but are used in the evaluation of people and their work. Discussion of the extent to which science is governed by universalism, as well as by particularism, has been ongoing ever since Merton formulated this basic contrast. The norm of communism holds that knowledge must be shared, not kept secret, and this is where academic knowledge has often been contrasted with industry knowledge (especially before commercialization came to academe, modifying academic behaviors). The norm of disinterestedness holds that the motives and conduct of science should not be influenced by personal bias; neither personal gains nor issues related to prestige or money should be relevant. Finally, the norm of organized skepticism holds that scientific judgments are to be held until all necessary evidence is on hand to make evaluations of scholarship (Hermanowicz 2012: 211).

Merton developed a reputation-and-resource model of scientific careers starting with three premises: Resources in the scientific world are limited, scientific talent is difficult to observe directly, and the allocation of resources in science is governed by the norms of universalism and communism (DiPrete and Eirich 2006). In the process of accumulative advantage, exceptional research performance early in a young scientist's career attracts new resources, as well as rewards that facilitate continued high performance. Scientific resources are not simply rewards for past productivity; they are allocated to stimulate future productivity:

With limited ability to evaluate the great mass of ongoing scientific work, and with limited ability to measure future productivity beforehand, the

scientific community favours those who have been most successful in the past, given their additional resources and attention.

(DiPrete and Eirich 2006: 281–282)

Three consequences of this mechanism are reported at the individual level: The gap in the rewards between a more able and less able scientist may grow over time; chance events may produce a relative advantage for scientists of identical talent, and this relative advantage may increase over time; and the so-called ‘Matthew effect’, according to which scientists with greater reputations may gain greater rewards from work of the same quantity and quality than scientists with lesser reputations, may result (DiPrete and Eirich 2006: 281–282).

In his theory of the normative structure of science, Merton pointed out that the institution of science has developed a reward system that is designed to give recognition and esteem to those scientists who have best fulfilled their roles:

On every side the scientist is reminded that it is his role to advance knowledge and his happiest fulfilment of that role, to advance knowledge greatly When the institution of science works efficiently ... recognition and esteem accrue to those who have best fulfilled their roles, to those who have made genuinely original contributions to the common stock of knowledge.

(Merton 1973: 293)

‘Recognition for originality’ in science is a ‘socially validated testimony’ to successfully fulfilling the requirements of the role of scientist (Merton 1973: 293). Academic rewards constitute academic recognition, which is centrally situated in the occupation of science and the lives and minds of scientists (Hermanowicz 2009: 12). Consequently, what is believed to motivate most scientists is ‘the desire for peer recognition’ (Cole and Cole 1973: 10).

Prestige, success, status, and recognition in academic science

In the last half century, Merton’s institutional norms of science as a major mechanism governing higher education and academic research have been tested from various angles; however, they seem to have become systematically threatened within the last two decades or so.

The major attack on the traditional academic rules of conduct governed by the above overarching academic norms does not seem to be coming directly from outside the university sector: It seems to be coming from the inside, and only indirectly from the outside, powered by what has been termed ‘academic capitalism’ (Slaughter and Leslie 1997; Slaughter and Rhoades 2004), and specifically from the ever more widespread ideology of commercialism. While the impact of academic capitalism is much more powerful in American higher education, the implications of the growing policy emphasis on universities’ ‘third mission’

across Europe should not be underestimated. In an American context, David R. Johnson (2017) explores qualitatively the ‘conflict in academic science’ between traditionalists and commercialists, and what emerges from this is a fractured profession that operates according to two contrasting academic ideologies: the traditional academic ideology, which reflects the Mertonian institutional norms of science, and the new ideology of commercialism. The focus of this book, which is driven by European data and their interpretation within the European context, will be on the former.

Knowledge produced in universities is increasingly converted into products or services that can be sold; this dramatically changes the nature of work in academic science and the social organization of higher education wherever the process is discernible. In the American case, this is at the elite research universities. As Johnson explains, American academic scientists are now exposed to two main reward systems, which are characterized by two different conceptions of the academic role and its corresponding occupational norms:

Scholars once conceived of the scientific reward system as singular, referring to the *traditionalist*, or priority-recognition reward system, which mandates that scientists advance knowledge by sharing their discoveries with their scientific community through peer evaluation in exchange for recognition of priority in discovery. This honorary system of rewards now exists alongside a new *commercialist* reward system, which gives scientists a mandate to contribute to economic development through the dissemination of their discoveries in the market in exchange for profits. These are not simply different approaches to scientific work. They are career paths tied to competing visions of the role of the university in society that raise questions with broad implications.

(Johnson 2017: 2, emphasis in the original)

Consequently, in the American elite university sector, the traditional role of universities exists alongside a new institutional role of science that emphasizes the creation of technologies that can be sold. Commercialism, which is defined by Johnson (2017) as a professional ideology that asserts that scientists should create technologies that control societal uncertainties, functions as a second competing reward system, and in academe, such systems ‘engender intraprofessional conflict’ (Johnson 2017: 3). What academics are supposed to do becomes increasingly unclear, especially as unequal rewards, as well as unequal conditions of work that are accompanied by the devaluing of commitment to traditional goals of science and higher education in the form of basic research, emerge in the system. In the specific American context, a new tension appears in the academic profession, which, in turn, becomes fractured.

However, in the specific European context that is studied in this book, the phenomenon of academic research commercialization is not equally widespread, although its importance as one of the items on the European Union’s major

policy agenda has been increasing systematically. Parallel processes affecting reward systems in European science can be explored in the context of the emergence of ‘third stream’ or ‘third mission’ activities. The commercialist–traditionalist divide explored in the case of the United States does not yet emerge as critically important to European universities. Although ‘academic capitalism’ has been studied in reference to a number of European systems, following the pioneering work of Sheila Slaughter, Larry L. Leslie, and Gary Rhoades, neither financial implications for individuals and institutions nor for the dominant academic norms (specifically, Merton’s ‘normative structure of science’) seem to be as powerful in European as in North American universities (Cantwell 2016; Cantwell and Kauppinen 2014).

Academic norms are of critical importance because they provide stability to the functioning of the academic profession. Academic norms demonstrate how academics should behave; they reflect common beliefs about how higher education systems and academic science systems should operate. However, in vertically stratified systems, they seem to be far more applicable to the upper and elite research-focused segments of national higher education systems than to the lower teaching-focused segments. While system segmentation grows, the appeal of the normative structure of science diminishes to the system as a whole. One of the consequences of this systemic segmentation and normative differentiation in this book is that we are focused entirely on the European *university* sector in terms of both theoretical underpinning and empirical data. Traditionally, common academic beliefs converge with common public beliefs to enable the institution of science to benefit from the power of public support, including the power of public subsidization. Finally, professional academic ideologies are formed by academic norms and are promoted in society, providing widely shared visions of how research universities should function. Moreover, professional academic ideologies define which academic roles are most highly valued and which are less valued or not valued at all, and they define success and professional status in science at the levels of individuals, institutions, and national systems.

Based on a traditional account of academic careers, research achievements mattered most, with all other achievements (in teaching, service, or administration) lagging far behind. The academic men and women are represented by their publications, as the traditional story goes:

In a community of scholars, scholarly performance is the only legitimate claim to recognition ... the academic marketplace as a system rests on the assumption that the worth of the academic man can be measured by the quality of his published work.

(Caplow and McGee 1958: 225)

In the specific European context explored in this book, publications are still key regardless of how much the so-called ‘third mission activities’ are being promoted internally and externally by the academic community and policy

makers alike. Assessment of the research output of individual academics and their departments and institutions—compared with the research output of other individual academics in the same specialty, as well as their departments and institutions—is at the core of individual academic recognition and international university rankings (research-based being more informative and less subjective than reputation-based). As emphasized in the sociology of science, ‘The working of a reward system in science testifies that the research role is the most highly valued. The heroes of science are acclaimed in their capacity as scientific investigators, seldom as teachers, administrators or referees and editors’ (Merton 1973: 520). In other words, ‘Contribution to scientific knowledge is the underpinning of the stratification system’ (Cole and Cole 1973: 45). The various types of stratification discussed in this book will refer predominantly to research: the inequality in its production (Chapter 1), its links to high academic incomes (Chapter 2), its links to academic roles played within institutions (Chapter 3), its relationships with international collaboration (Chapter 4), the role of patterns of time investments in it and the role of patterns of orientation to it across academic generations (Chapter 5), and its role in enabling academics to climb up the academic ladder (Chapter 6). Research is the core issue in academic careers from the perspective of social stratification in academic science, and it is, therefore, the core of this book. For this particular reason, teaching and students are discussed only marginally.

In academic science, in a specific form of publications, prestige, success, status, and recognition are inseparable from research. Non-publishers or silent scientists do not traditionally belong to the academic community, even though they do work across European universities (see Chapter 5). No publications basically means no research, which, in turn, means no academic success and no academic recognition. Moreover, in the specific context of the increasing role of competitive research funding in most European systems, it also means no research funding. The existence of lower-ranked and, therefore, only indirectly competing reward systems in teaching, service, and administration may be explained as an institutional mechanism that allows higher education organizations to accommodate failures in the core mission of research. Recognition in research was traditionally found to maintain ‘high motivation to advance knowledge, and high motivation resulted in the scientist’s devoting more of his own time to research; this, in turn, resulted in the high-quality scientific performance, as judged by the researcher’s closest professional colleagues’ (Glaser 1964: 1012).

There are certainly ‘comparative failures in science’ (Glaser 1964) and, certainly, some scientists realize early in their careers that they will not be successful in achieving national or international recognition: They are prone to adopt their local colleagues as reference groups and to drop the national or international scientific elite as meaningful reference groups, spending their time teaching and doing administrative work instead. Put bluntly, ‘Local prestige probably goes a long way to make up for failure to achieve national recognition’ (Cole and Cole 1973: 260–261). In the context of this book, ‘internationalists’ in research differ

sharply from ‘locals’ in research both in terms of reference groups for their research and their collaborators in research, with far-reaching consequences for access to prestige, status, and resources for further research, as shown in Chapter 4.

Thus, in the tradition of the sociology of science, recognition comes from scientific output rather than anything else inside or outside the science system (Cole and Cole 1967; Hermanowicz 2012; Johnson 2017). The reward system is designed to give recognition and esteem to the scientists who have best fulfilled their research roles with the use of an elaborate system for allocating rewards. Consequently, the reward system reinforces research activities, rather than any other academic activities, and few scientists are believed to continue to engage in research if they are not rewarded for it (Cole and Cole 1967). Consequently, in this traditional account, academics publish their work in exchange for scientific recognition. As Warren O. Hagstrom (1965: 168) stated in his theory of social control in science, and before the massive advent of lower-ranking journals, ‘Recognition is given for information, and the scientist who contributes much information to his colleagues is rewarded by them with high prestige.’ In this sense, only high-performance research leads to recognition in science, and reward systems function to identify research excellence:

A substantial part of the efficient operation of science depends upon the way in which it allocates positions to individuals, divides up the rewards and prizes it offers for outstanding performance, and structures opportunities for those who hold the extraordinary talent In science, as in most other institutions, prestigious position, honorific awards, and peer recognition, as well as monetary rewards, combine to form an integrated reward structure. The pattern of stratification in science is determined in large measure by the way rewards are distributed among scientists and by the social mechanisms through which the reward system of science operates to identify excellence.
(Cole and Cole 1973: 15)

The accumulative advantage hypothesis generalizes the ‘Matthew effect’ to include productivity and recognition: The process consists of two feedback loops in which recognition and resources are intervening variables (Allison and Stewart 1974). However, there is also the darker side of the accumulation of rewards: It is ‘the accumulation of failures—the process of “accumulative disadvantage”’ (Cole and Cole 1973: 146), leading to the stratification in science between the ‘haves’ and ‘have-nots.’ As scientific productivity is heavily influenced by the recognition of early work, the skewed distribution of productivity and the skewed distribution of subsequent rewards result not only in the rich getting richer but also in the poor getting (comparatively) poorer. The ‘relative Matthew effect’ occurs when both the rich and the poor get richer, ‘but the rich get richer by a larger margin, creating a widening gap between themselves and the poor’ (Rigney 2010: 8). In summary, the scientific community ‘favors those who have been most successful in the past’ (DiPrete and Eirich 2006: 282). Prestige in

science is, in a way, a system of social control that celebrates ‘heroes.’ As William J. Goode argues in wider social rather than strictly academic contexts,

To perform and be ranked at the highest levels ... demands both talent and dedication which only a few can muster. Such ‘heroes’ are given more prestige or admiration because both the level and type of performance are rare and evaluated highly within the relevant group. Most admirers recognize that such performances are possible for only a few people. The supply is and remains low.

(Goode 1978: 67)

Science is highly stratified, the academic profession is highly stratified, and, like other professions, the latter is heavily status-based. While the intense research-related stratification of the academic profession—the major theme of this book—is not easily seen from the outside, it is enormously powerful inside. Science is dominated by ‘a small, talented elite [and] [a]ll major forms of recognition—awards, prestigious appointments, and visibility—are monopolised by a small proportion of scientists’ (Cole and Cole 1973: 254). The majority of scientists contribute little to scientific advancement, are low or very moderate publishers, and are still necessary to keep national higher education and science systems going, as we shall discuss in detail in Chapter 1. Prestige allocation in science makes some academics work much harder and some only moderately harder, while, on some, it exerts no pressure at all: The pressure or control through prestige allocation is ‘fundamental in understanding why some people will try harder or not’ (Goode 1978: 81). Certainly, this traditional elitist, exclusive, and hierarchical function of research in universities—differentiating and rank-ordering the academic profession (Marginson 2014)—has been strengthened in the era of new public management, as Marginson suggests, and it is merely one of six social functions of research, among which the balances and relations are constantly changing. However, as he argues, it has deep roots in academic cultures in elite research universities:

The one unambiguous driver of career advancement in research universities is success at the highest level of research. ‘Highest’ means both the most prestigious and the most competitive level of performance, as in research grants, and academic publishing status is assigned on the basis of ranked performance A persistent pattern in intellectual fields is that a small number of people made a high proportion of the recognized major contributions.

(Marginson 2014: 107)

In a sense, this book is about who gets what, why, and how in science—it is about its inherent inequality. Social stratification in science is not viewed as ‘the patterning of inequality and its enduring consequences on the lives of those who

experience it' (as is social stratification in general in sociological studies) and this book is not about 'how inequalities persist and endure—over lifetimes and between generations' (Bottero 2005). Stratification processes studied here are confined to the social institution of science; science being 'a communal social enterprise' (Cole and Cole 1973: 14).

Intraprofessional and extraprofessional status

Individual status within the academic community has traditionally been defined by original contributions to fundamental research. In the theory of professions (Abbott 1981; Abbott 1988; Carvalho 2017), which is useful for conceptualizing the organization and stratification of the academic profession, the most highly valued pursuits are 'professionally pure' pursuits—that is, those without nonprofessional considerations. Abbott (1981) draws a very useful distinction between the intraprofessional and extraprofessional status of professions, which explains the internal functioning of status conferment in European universities to outsiders. Intraprofessional status is a function of 'professional purity,' which is 'the ability to exclude nonprofessional issues or irrelevant professional issues from practice. Within a given profession, the highest status professionals are those who deal with issues predigested and predefined by a number of colleagues' (Abbott 1981: 823).

Over time, the academic profession, like all other professions, has developed an internal system of relative judgments of the purity or impurity of academic activities, with the resultant status hierarchy governing academic science. According to this hierarchy, purer considerations in science are more highly valued than less pure considerations; extraprofessional status (gained through nonprofessional channels of knowledge distribution) is less important in the academic world than intraprofessional status, which is traditionally gained through the visibility of research publications in the area of fundamental research. In the same vein, curiosity-driven research is more highly valued than application-driven research because, in the theoretical context of professional purity and impurity, leading to intraprofessional stratification in science, it is more professionally pure. Based on this account, visible science is transmitted through highly valued professional channels, such as top academic journals; much less visible science is transmitted through other channels (such as nonacademic journals, television, and social media). Most importantly, with the exception of humanities, parts of social science, and professional disciplines, scientific research is published primarily in English. As Marginson (2016c: 19) points out in his study of global stratification in higher education, 'Academic publications form a single world library. English-language science is the single global conversation: the claims of French, German and Russian have faded.'

In Merton's account of science and scientists and Abbott's account of professions and professionals, academic recognition comes exclusively from a single set of intraprofessional activities—that is, research activities converted into publications (as well as from their impact on the scientific community or from citations). All

academic generations are being socialized to this widely accepted set of academic norms, and any deviance from this is being punished by the academic community.

Academic scientists need clear professional identities: They need to know how they should function to be among the top layers of the academic enterprise, should they choose to want this. In terms of their own academic careers, they need to know what is important, what is not important, and especially why this is the case. They also need to have clear images of a successful scientist and successful science, both in general terms and within their specific national contexts. The career stages of successful scientists need to be clearly defined in advance in terms of research achievements if the academic science enterprise is to continue successfully (see ‘the Anna Karenina Principle’ which links success to journal space, funds, reception and recognition in Bornmann and Marx 2012). Regarding promotion in the university sector, and especially within its upper layers, what matters and what does not matter need to be clearly stated, and this is exactly where ideologies of academic work and academic careers become useful. Stable professions tend to have clear definitions of high and low status and clear images of success and failure; therefore, they are not troubled by unnecessary tensions, feelings of undeserved inequality, or undue deprivation of access to opportunities, rewards, and resources. Status hierarchies in stable professions need to change slowly over time, if at all, especially as, in some of them, including the academic profession, careers are long term and clear guidance on how to function is needed throughout their lives. Intraprofessional conflicts about well-defined status and success do not serve the long-term goals of science. As Abbott stated, there is tension between what the public expects from professions and what professions expect from themselves:

Intraprofessional status rests on the exclusion of nonprofessional issues or of professional issues irrelevant in a particular case In the pursuit of intraprofessional status, professions and professionals tend to withdraw from precisely those problems for which the public gives them status.

(Abbott 1981: 819)

The changing stratification in science in the current massified higher education systems is related to the diversified external public and internal institutional expectations from the diversified academic profession. While (Abbott’s) intraprofessional status rests on prestigious research results, prestigious research is increasingly publicly funded and is increasingly expected to be performed (by the public and by the university administration) only in the upper, elite layers of national systems. Consequently, the traditional rules of individual and institutional competition, academic recognition, and professional status seem to be ever more applicable to the upper university subsectors of national systems only. As evidenced by the European trend of strengthening national research councils as major bodies allocating research funding (with the European Research Council as a transnational manifestation of this trend)—with regard to academics and institutions, the minority garner the majority of competitive research funding.

The pertinence of academic profession studies

The academic profession across Europe is being exposed to similar external pressures despite national variations. The major global forces responsible for the actual changes in academic work and life, as well as those that prevail in international discourses, especially policy discourses on academic work and life, are as follows: economic globalization and its European responses (Europeanization), changing social and economic priorities in emergent generationally divided societies, intergenerational conflicts over the use of scarce public resources, changes in public services along the lines suggested in new public management, the increasing economic relevance of two major products of higher education systems: graduates and academic knowledge, and the transnationalization and internationalization of higher education policies combined with global policy convergence, especially through policies promoted by supranational institutions and organizations.

Simultaneously, the massification of higher education also means the massification of the academic profession, resulting in ongoing global struggles on the part of academics to maintain their traditionally stable (upper) middle-class social and economic status. Globally, huge numbers of students in national systems are accompanied by huge numbers of academics. As massification progresses, stratification follows. At the same time, as massification progresses, higher education research becomes a more attractive field that is gaining increasing scholarly and policy attention and mobilizing research funds (see Jung, Horta, and Yonezawa 2018; Kwiek 2013b). Massified and increasingly stratified higher education systems lead to a massified and increasingly stratified academic profession along dimensions such as institutional location within the system, access to human and material resources, productivity, and connections to global science networks. As Jürgen Enders noted,

Privileges that were characteristic for members of the academic profession in an elite higher education system came increasingly under pressure in a massified and more diversifying system ... ‘the gold standards’ that were once characteristic for the few are not to be taken for granted for the many. (Enders 2006: 7)

Thus, the zero-sum logic of positional competition among universities derived from the high-participation system theory, which argues that there is little room at the top (Marginson 2016c), can be extended to include the level of individual scientists. Stratification guarantees competition and an endless struggle to move up the academic hierarchy at both the institutional and individual levels.

From a global perspective, higher education ‘is no longer an elite enterprise, and this new reality has had dramatic implications for the academic profession’ (Altbach et al. 2012: 4). However, new large-scale developments in university governance and funding lead to new challenges and require traditional stratification

theories to be revisited. Tensions emerge between the traditional theories governing the social and academic imaginations and the reality on the ground, especially if examined through cross-national, large-scale empirical material.

To some extent, there is an element of ‘business as usual’ in the academic game; however, in many ways, European academics are facing harsh new realities that are not consistently understood across European systems. In some of these systems, changes are believed to be related to globalization; in others, to financial austerity or new public management; and, finally, in others, to the massification of higher education (Enders, de Boer, and Leišytė 2009; Enders and de Weert 2009a; Carvalho and Santiago 2015; Antonowicz 2016; Nixon 2017; Kwiek 2017c). New academic behaviors (how academics actually work) and new academic attitudes (what academics actually think about their work), combined with emergent teaching/research patterns across academic cohorts and emergent productivity patterns across genders and academic disciplines both intra-nationally and cross-nationally, call into question the traditional theories produced in (Martin Trow’s) ‘elite’ systems. The academic profession is working in emergent ‘high-participation systems’ (Marginson 2016b; Cantwell, Marginson, and Smolentseva 2018; Cantwell, Pinheiro, and Kwiek 2018) across all European countries, including the 11 studied here.

This book attempts to show which elements of the theoretical tradition of higher education research may hold and which may need to be conceptually revisited. For instance, the book’s findings clearly indicate that the performance stratification of the academic profession not only continues but also seems to intensify. Originally, the idea was formulated with reference to individual academics as follows:

The scientific community is not the company of equals. It is sharply stratified; a small number of scientists contribute disproportionately to the advancement of science and receive a disproportionately large share of rewards and the resources needed for research.

(Zuckerman 1988: 526)

For academics, the recognition of their work by the collectivity of competent peers is ‘the only unambiguous demonstration that what they have done matters to science’ (Zuckerman 1988: 526). In addition, as previously noted, recognition in science is converted into resources for further research. Highly recognized scientists (and their research institutions) are clearly more successful than less recognized scientists (and their less recognized research institutions) in obtaining resources for further research. The distribution of academic rewards, including research funding, is sharply graded. There is enormous inequality in research performance, accompanied by enormous inequality in recognition and rewards in science, and both are highly stratified. Both academics and institutions are also stratified, and the processes of stratification seem to have intensified rather than weakened in the last two decades.

Prime significance is given to symbolic recognition by colleagues rather than by any outside individual or collective body. Members of the scientific community are considered the only competent judges of the merits and significance of one's research. This is part of the socialization of young scientists into the academic profession: 'Differentials in recognition are not only fundamental to differential ranking in science but also provide the base from which scientists may acquire new facilities either in the form of resources for research or in increased influence' (Zuckerman 1970: 236). The viability of modern science depends on the existence of a substantial consensus on the quality of scientific work and the occupational status of academics, who are its producers; therefore, evaluations are constantly made. The current evaluations of academics that are conducted within their institutions and by funding bodies, as well as the evaluations of institutions in rankings (including their international rankings), are merely more sophisticated and data-driven, with growing importance given to bibliometrics and research assessment exercises in various forms for resource allocation (see Kulczycki, Korzeń, and Korytkowski 2017 on Poland). However, these are not new institutionally nor individually. The picture that is half a century old does not seem to differ much from the one presented in Chapter 1 on the inequality in academic knowledge production and the role of top research performers:

Stratification and ranking are not, however, limited to individual investigators. Disciplines, publication in particular journals, types of research, organisations, and rewards are also ranked. Individual scientists can be located in each of these dimensions and their final rank is the sum or product of these evaluations of their research.

(Zuckerman 1970: 237)

However, research—and even more so, publicly funded research—cannot be conducted across whole national systems, in all of their segments, and with equal intensity. Vertical differentiation, which expects different contributions to knowledge from academics representing diverse segments of the system, with upward mobility guaranteed, may be the only way to protect the academic profession from widespread dissatisfaction if not despair:

Increased emphases on research will likely be accompanied by increased probabilities of dissatisfaction throughout the system of higher education. As research is more greatly stressed, by institutions as well as by individuals, career expectations rise, in accord with attempting to satisfy external reference groups that are consistent with fulfilling the institutional goals of academe. As expectations rise, the likelihood of satisfying them decreases.

(Hermanowicz 2012: 238)

The attractiveness of academic careers is questioned for a number of interrelated reasons, and the stakes involved in the ongoing changes, including the overall

functioning of the academic profession, are high. As discussed in the American context, which is applicable to the European one,

On many objective criteria, chances of success in academia across many fields are low and, where won, are hard-fought: obtaining regular employment, obtaining tenure, obtaining promotion through standard ranks, publication, citation of work, competitive salary, and competitive salary growth. These basic rewards are also arguably more difficult to obtain across institutional types than in any other historical time in the profession.

(Hermanowicz 2012: 238)

Inequality in academic knowledge production is combined with inequality in academic remuneration. New teaching-only or teaching-mostly segments of the academic profession emerge (in our sample, this is especially the case in the United Kingdom) with new tasks and new responsibilities, thereby contributing to the disintegration of traditional (research-focused) academic norms. There are new ‘haves’ and ‘have-nots’ in academia due to the growing role of competitive, project-based research funding distributed by new national research councils and other bodies with a similar function. Institutional governance structures change, and there is a growing cross-generational gap between younger and older academic cohorts: Increasingly, academic job portfolios differ cross-generationally, contributing to the redefinition of what academics do based on their age groups (see Chapter 5). The internationalization of research and international academic mobility change the traditional national prestige structures and exert a powerful influence on national research funding distribution.

A data-rich research context

Despite continuity at the level of ideas governing higher education research—the social stratification in science being a prime example—there has been a rupture in a single dimension: that of the available data, including self-produced primary data collected through international surveys. International comparative higher education has entered a ‘data-rich’ research context. Four decades ago, Paul L. Dressel and Lewis B. Mayhew analyzed the emergence of the academic profession and of higher education as a specific ‘field of study,’ and they complained that, with a few exceptions, ‘The literature is virtually silent about how faculty members enter the profession, what kinds of people they are, how they proceed in their careers and how they succeed in their professional tasks’ (Dressel and Mayhew 1974: 89). Similarly, three decades ago, Burton R. Clark opened his exploration of ‘The Academic Life’ by stressing that

relatively little is known about what goes on in the profession’s many quarters. What is the quality of the workaday life for its varied members? How do they conceive of themselves and their lives? What, if anything, holds them together?

(Clark 1987a: xxi)

Since the 1990s, both from single-nation perspectives (especially regarding the American one, see quantitatively informed studies by Blackburn and Lawrence 1995; Finkelstein, Seal, and Schuster 1998; and Schuster and Finkelstein 2008) and from a global perspective (Boyer, Altbach, and Whitelaw 1994; Altbach and Lewis 1996; Forest 2002), numerous studies have been published. In contrast, it is only in the last few years that European comparative academic profession studies have, for the first time, become truly ‘data-rich,’ following collaborative research efforts in the global ‘Changing Academic Profession’ (CAP) and the European ‘Academic Profession in Europe: Responses to Societal Challenges’ (EUROAC) research projects. In the last few years, both projects have given rise to a long list of studies.¹ Both also used the same survey questionnaire, based on the 1991–1993 Carnegie Foundation global survey of the academic profession, which provided a benchmark for comparative studies (Altbach and Lewis 1996: xxii). Consequently, in this book, we follow the ‘gold standard’ in social sciences (and in higher education studies): The research presented here is based on primary data. In the 2000s, there were at least three global and European (see Altbach 2000; Altbach 2003; Enders 2000; Enders and de Weert 2004) large-scale comparative projects on the changing academic profession and changing academic workplace that were relevant to this book. However, none of the three projects was driven by systematically collected primary quantitative data; therefore, they should be categorized as exploratory studies with some inconsistent or problematic data sources.

Academics’ work situations change substantially, and this change is central to the academic profession as a whole, as prior analyses underscore. Enders and de Weert (2009b: 252–253) identified five ‘drivers’ that were central to changing the nature of the academic profession: the massification of higher education, expansion of research, growing emphasis on the societal relevance of higher education and research, processes of globalization and internationalization, and policies and practices geared toward marketization and managerialism. Similarly, Kogan and Teichler (2007: 10–11) identified three recent trends that were pervasive in higher education: relevance, internationalization, and management. Some other analyses refer specifically to financial constraints, the differentiation of higher education systems, competitive forces, and, moreover, the growing uncertainty of the academic profession: ‘We live in times of uncertainty about the future development of higher education and its place in society and it is therefore not surprising to note that the future of the academic profession seems uncertain, too’ (Enders and Musselin 2008: 145).

This book discusses a long list of uncertainties related to academic work and life, comparing academics’ attitudes, behaviors, and productivity across countries, clusters of academic disciplines, age cohorts, and genders. It is structured around the notion of social stratification in science. It explores various manifestations of stratification in the academic profession across Europe and seeks to understand the extent to which ongoing governance and funding changes are consequential with respect to the work and life of academics.

Several approaches to social stratification in science are used, depending on the context, with research as the core university-sector activity figuring prominently in all of them: The idea of *academic performance stratification* is used in Chapter 1 (discussing research performance differentials across Europe, with specifically defined top research performers contrasted with their lower-performing colleagues); the idea of *academic salary stratification* is used in Chapter 2 (discussing links between income differentials and research performance differentials across Europe, with specifically defined academic top earners contrasted with their lower-earning colleagues); the idea of *academic power stratification* is used in Chapter 3 (analyzing the extent to which European systems are still collegial and the role of academic power distribution across layers of academic positions in European systems); the idea of *international research stratification* is used in Chapter 4 (exploring the links between research productivity differentials and international collaboration differentials, with clearly defined ‘internationalists’ in research contrasted with ‘locals’ in research, as well as the role of research internationalization in national award systems and resources distribution in science across Europe); the idea of *academic role stratification* is used in Chapter 5 (exploring intergenerational patterns of academic behaviors, attitudes, and productivity, with ‘academics under 40’ or ‘young academics’ contrasted with their older colleagues and with ‘academic generations’ in academic knowledge production at the forefront); and, finally, the idea of *academic cohort (or age) stratification* is used in Chapter 6 (analyzing changing academic careers with the use of qualitative rather than quantitative material, unique in this book, with a special emphasis on young cohorts of academics seeking stability in academic employment in volatile institutional environments).

The notion of social stratification in science allows for a better understanding of the changing academic profession than a number of competing notions used in the research literature, such as globalization, managerialism, financial austerity, or commodification. This is because the notion of social stratification refers directly to academics and their work and lives. In contrast to the four notions outlined above, our guiding notion in this book is internal rather than external to the academic profession. The issues of persistent inequality in research achievements and in academic knowledge production, the systematic inequality in academic incomes and their (disappearing) link to research productivity, the decreasing role of collegiality in university governance for all, not only the lower layers of academics but, the increasing correlation between internationalization in research and productivity (together with the increasing role of international publications in national reward systems, including access to competitive research funding), and the unexplored role of academic generations—and especially of different types of young academics employed in different countries—go to the very heart of the academic profession. And the above dimensions can be rigorously measured and compared cross-nationally with a unique data set.

Some themes in this book have previously been mentioned in higher education research (in a combination of theoretical and empirical contexts). ‘Top research

performers,’ ‘internationalists,’ and ‘academics under 40’ have been studied under different rubrics; however, ‘academic top earners’ has not been present in the research literature, and none of these prototypical figures in higher education have been studied from a comparative quantitative European perspective using large-scale empirical material. The four faculty categories investigated above, as well as predictors of membership of these categories, have not been studied in cross-national comparative detail thus far. This book links new themes to existing themes and to the extant research literature.

Rare scholarly themes are examined in this book using rare prototypical figures, and our intention is to embed them in a larger scholarly conversation about higher education research (including traditional accounts of the academic profession over the last half century) between the previous generations of scholars. The themes studied indicate new differentiations of the academic profession (with a strong dividing line between the ‘haves’ and ‘have-nots’ in terms of publication-derived prestige and research-related resources) along under-researched dimensions from a European cross-national comparative perspective: internationalization in research, academic cohorts, academic incomes, and/or academic teaching/research role orientations. The book’s findings have implications for theories of academic productivity, theories of university organization, traditional models of university governance, the economics of science, and policy reform theories.

Higher education research tends to view European academics (and European universities more generally) through the theoretical lenses provided by Anglo-Saxon, predominantly American, ideas about what universities are for and what academics should do; these ideas have been developed over the last half century, including by Logan Wilson, Paul Goodman, John D. Millett, Harold Perkin, Paul Lazarsfeld, Wagner Thielens, Clark Kerr, Martin Trow, Burton R. Clark, and Philip G. Altbach. The type of social imagination and academic imagination applied to universities as institutions and the academic profession as a ‘key profession’ (Perkin 1969) seems not to have changed much. However, in the meantime, academic realities in Europe have been changing. Consequently, there have been interesting tensions between some traditional ideas in higher education research and some academic realities emerging from the data (as Chapter 2 on high academic incomes indicates).

Transformations of European higher education systems in the last two decades have been substantial and have had a significant impact on the academic profession. The growing complexity of the academic enterprise has led to growing uncertainty about its future. Higher education as a whole has already changed substantially in most European economies, but it is expected to change even more (de Boer et al. 2017; Hüther and Krücken 2018). Perhaps the least susceptible to fundamental changes in the next decade will be the traditional research university, with its taste for research, as it is viewed as crucial for the economic prosperity of regions and nations. All other subsectors of national systems are more susceptible to further changes, heavily affecting the academic profession.

As a recent study of 11 reform processes across Europe emphasizes,

in higher education, we live in an age of reform. All over Europe, state authorities frequently adapt their policies and introduce new ones to encourage public higher education institutions to deliver high-quality services in an effective and efficient way. They take forceful initiatives and introduce reforms to change the higher education landscape.

(de Boer et al. 2017: 1)

However, governance and funding reforms in Europe have had different timing, implementation results, and intensities in different systems (Paradeise et al. 2009; Maassen and Olsen 2007), as shown in empirical details through the governance equalizer model, which captured and graphically presented changes in governance in England, the Netherlands, Austria, and Germany between 1980 and 2006 (de Boer, Enders, and Schimank 2007) and in the 16 Germany states in the 2000s (Hüther and Krücken 2018: 119–122). Even though national processes of reform implementation shared rationales and tools—with the New Public Management (NPM) ideas in the forefront (Musselin and Teixeira 2014; Bleiklie et al. 2017)—reforms remain ‘path dependent and most often incremental’ and European higher education systems are reported to ‘remain far from converging toward a unified pattern that would progressively erase borders’ (Paradeise, Reale, and Goastellec 2009: 197, 198). Domestic institutional contexts matter and historical institutions have a ‘filtering effect’ on international reform pressures (Dobbins and Knill 2014: 188–189).

Reforms of funding systems were inspired by the NPM doctrine and driven by the assumption that introducing competition and performance-based funding would increase the performance of systems and institutions; however, every country uses in practice a combination of different funding options ‘having its own mix, reflecting historical and political developments’ (Jongbloed and Lepori 2015: 443). Funding arrangements are reported to be undergoing ‘dramatic changes’ (Gläser and Velarde 2018: 1), with the increasing role of project-based research funding and performance-based funding (Gläser and Laudel 2016). Across Europe, a convergence toward a funding mode is reported: ‘about three quarters of the budget is provided by the state as core funds, which is complemented by third-party funds and student fees’ (Jongbloed and Lepori 2015: 449). While the intended scope of governance and funding reforms differs across Europe, as do real effects of implemented reforms, academics are exposed to permanent reform attempts. The reforms increasingly compel them to function in the state of permanent adaptation to changing realities (Krücken, Kosmützky, and Torka 2007). Academics are exposed to both actual reform implementation and reform debates with their peers and with policymakers, being reminded by organization studies that reforming universities leads to further waves of reforms as ‘reforms generate reforms’ (Brunsson and Olsen 1998: 42–44).

The academic profession has already been fractured into many different academic professions (in the plural), and it is expected to be even more diversified, especially in more vertically stratified systems, with clearly defined top and bottom system layers (see Kwiek 2018a). The increasingly heterogeneous nature of the profession results from

transformations in employment and working conditions; in their engagement with different activities; in the increased diversification of academic roles; in their different involvement in internationalization processes; and in their participation in decision-making.

(Carvalho 2017: 72–73)

Different directions of academic restructuring in different countries and within particular national systems add to the complexity of the picture, which certainly leads to an overall more stressful working environment. Academics, the core of the academic enterprise, are working in turbulent times. In the last two decades, universities and other higher education institutions, as well as their social and economic environments, have been changing faster than ever before. Today, the academic profession is in the eye of the storm globally, and this book goes beyond change processes in any single European country. It discusses the academic profession and its increasing stratification across Europe, assuming that a theoretically coherent and empirically driven overview of ongoing changes is needed for academics and the general public alike. Examining the national variations of ongoing change through a study of empirical material at the micro level of the individual academic (rather than at institutional or national levels, with their corresponding aggregated data) leads to a better understanding of current realities. Moreover, understanding change is of primal importance to the future shape of the academic profession. Change cannot be effectively opposed nor promoted without such a clear understanding of its drivers and their results.

Not only higher education in Europe (with gross enrollment rates often exceeding 50 percent) but also the academic profession itself are becoming massified, with unclear consequences for individual academics. The end result of this double-massification process is its ever more detailed public scrutiny and ever more sophisticated policy interest. Higher education in general and, by extension, the academic profession are in the public spotlight. Academics are at the core of a multibillion-euro enterprise, but they are also the single most important cost in almost all academic institutions. Therefore, changing realities in which academics function need to be analyzed and understood to enable academics to see more clearly the somehow unexpected context of the large-scale, long-term systemic transformations to which they have been exposed. The general assumption of this book is that the changes directly affecting the life and work of academics will intensify, thereby undermining most principles of traditional academic visions and ideologies or undermining them in most segments of national systems. The drivers of change in higher education across Europe are

structurally similar. Before we (the academic profession) decide where we would collectively prefer to be, it would be useful to examine where we are and to see whether and how this goal can be achieved.

Finally, the changes in academic work today are intensive, but, for the first time, they can be assessed in much more detail through large-scale European quantitative research, which adds a refined empirical dimension to the growing research literature on the academic profession. There are ongoing changes in academic work, as well as attempts to measure them and draw valid conclusions from the available empirical material. However, it is also possible that the sheer scale and speed of the changes make it difficult for the community of higher education researchers to interpret them. The inevitable time gaps between data collection and analysis, interpretation, and publication may be more crippling in times of change, as today, than in times of relative stability. It is also possible that we in academic profession studies are actually measuring only the changes of which we are aware; consequently, we may not be measuring the changes of which we are *not* aware and those that are beyond our current analytical frameworks. There may be many reasons why this occurs, the most obvious being the conceptual invisibility of some aspects of change and the resultant lack of proper indicators of change. Consequently, we know much less than we would like to, and we could know, about the changing academic profession in Europe. In academic profession studies, as in any other social research, there are some known knowns and some known unknowns; however, there are also some unknown unknowns of which we are conceptually unaware. This makes social research, including international comparative academic profession studies, extremely exciting and exceedingly rewarding.

Acknowledgements

This book is a product of a journey in my professional life that started in 2009 when Ulrich Teichler of the University of Kassel kindly agreed to Poland's entry to an extant European Science Foundation (ESF) project. For me, it was a highly consequential event in scholarly terms. In the early 2000s, I had been studying the academic profession in two international collaborative research projects coordinated by Philip G. Altbach of Boston College and Jürgen Enders—then of the Center for Higher Education Policy Studies (CHEPS), University of Twente—but there were no follow-up projects. Ulrich Teichler's decision to incorporate me in the ESF project refocused my research interests on international comparative academic profession studies.

I gratefully acknowledge all the friends and colleagues who have made this book possible. First of all, thanks to my colleagues from the EUROAC and CAP projects ('Changing Academic Profession' and 'Academic Profession in Europe: Responses to Societal Challenges') who were responsible for data collection across Europe; without their work, this book would never have been written. My colleagues on the EUROAC national teams included Dominik Antonowicz,

Marie Clarke, Abbey Hyde, Jonathan Drennan, Yurgos Politis, Ester Eva Höhle, Christian Schneiderberg, Nadine Merkator, Gaële Goastellec, Elke Parke, Gülay Ates, Kevin Toffel, Carole Probst, Luminita Moraru, Marko Turk, Bojana Čulum, Nena Rončević, Jasminka Ledić, Tatiana Fumasoli, Nicolas Pekari, Angelika Brechelmacher, David F. J. Campbell, Timo Aarrevaara, Ian R. Dobson, and Janne Wikström. The EUROAC project was co-funded by the European Science Foundation (ESF) and coordinated by Barbara M. Kehm and Ulrich Teichler.

I gratefully acknowledge all the opportunities to discuss the various chapters of the book as they first versions emerged. Apart from numerous EUROAC seminars across Europe (Kassel, Lausanne, Dublin, Berlin, Vienna, Helsinki, and Poznan), I want to acknowledge the opportunity to prepare (if not always to deliver) keynote speeches and regular conference presentations across Europe and beyond. I am grateful for all the constructive input I received from all of those audiences, both nationally and internationally.

I want to warmly thank my Routledge publishing team, who have been very supportive since this project's inception. My deep gratitude to Jeroen Huisman and Jennifer M. Case, the series editors, who have been waiting for the final manuscript for much longer than originally promised. My special thanks to Helen Perkins, director of SRHE, for her ongoing encouragement and support; and my sincere appreciation to the editors at Routledge, Lucy Stewart and then Sarah Tuckwell, Lisa Font and Natalie Larkin.

I am grateful for all support I have received in the last few years for the Center for Public Policy Studies from all levels of my home university—from rectors and vice-rectors for research, former and current (Bronisław Marciniak, Andrzej Lesicki, Jacek Witkoś, and Ryszard Naskręcki), from former and current deans (Zbigniew Drozdowicz and Jacek Sójka), and from the director of the Institute of Philosophy, Roman Kubicki. Without their unstinting support, writing this book while fulfilling other research commitments would not have been possible.

I want to express my special gratitude to my junior colleagues from the Center for Public Policy Studies: Dr. Wojciech Roszka from the Poznan University of Economics, whose assistance in statistical analysis was absolutely crucial for the success of this research undertaking; Professor Dominik Antonowicz, who was part of the original EUROAC team and conducted 60 semi-structured interviews with Polish academics, as well as participating in all of the EUROAC international seminars; Dr. Krystian Szadkowski, whose day-to-day assistance with ongoing projects was crucial to the completion of this book, and whose Polish translations of several chapters helped me to improve the theoretical frameworks; and the three newcomers to the Center: Professor Emanuel Kulczycki, Dr. Krzysztof Czarnecki, and Jakub Krzeski, who introduced new perspectives from scientometrics, welfare state studies, and political philosophy, respectively, to our seminars. Finally, I gratefully acknowledge the assistance of Marek Holowiecki in the Center's financial operations and in solving numerous technical problems.

I also wish to acknowledge the academics—more than 17,000 of them—from 11 European countries who gave up time from their own research or with

friends and families to complete a dull academic profession questionnaire in the belief that their individual contributions to this research would be meaningful.

Finally, I want to dedicate this book to Natalia and Krystyna—my beloved daughter and wife. I wish Natalia limitless opportunities to develop her talents, to achieve her goals, to live the way she wants. Krystyna and I met 30 years ago, and it was the most important day of my life; living together was never easy, and became even more difficult each time I was finishing a book project. It was no different this time—please accept my apologies for this. Thank you for your unreserved love and powerful support day by day, and year by year!²

Notes

- 1 A list of international comparative books includes Locke, Cummings, and Fischer (2011) on governance and management; Teichler and Höhle (2013) on working conditions; Bentley, Coates, Dobson, Goedegebuure, and Meek (2013) on job satisfaction; Kehm and Teichler (2013) on new tasks and new challenges; Teichler, Arimoto, and Cummings (2013) on major findings from the CAP survey; Huang, Finkelstein, and Rostan (2014) on internationalization; Shin et al. (2014b) on teaching and research; Cummings and Teichler (2015) on the relevance of academic work; Galaz-Fontes, Arimoto, Teichler, and Brennan (2016) on biographies and careers; Teichler and Cummings (2015) on recruitment and management; and Fumasoli, Goastellec, and Kehm (2015) on academic work and careers. A list of country-focused books includes Cummings and Finkelstein (2012) on the United States; Arimoto, Cummings, Huang, and Shin (2015) on Japan; and Postiglione and Jung (2017) on Hong Kong. For an overview of papers published in international journals, see Carvalho (2017).
- 2 The work on this book would not be possible without the support received from the Ministry of Science and Higher Education through its Dialogue grant 0021/DLG/2016/10 (EXCELLENCE).

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