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WORLD BANK SUPPORT TO HIGHER EDUCATION IN LATVIA

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Academic Careers

Nina Arnhold
Elias Pekkola
Vitus Püttmann
Andrée Sursock

WORLD BANK GROUP

Ministry of
Education and Science
Republic of Latvia

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1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

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ACADEMIC CAREERS: LEARNING FROM GOOD INTERNATIONAL PRACTICE

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Abbreviations

A3ES	Agency for Assessment and Accreditation of Higher Education (Portugal)
ANRT	Association nationale recherche technologie
BFUG	Bologna Follow-Up Group
BSRS	Bergen Summer Research School on Global Development Challenges
CHE	Centre for Higher Education
CHEPS	Center for Higher Education Policy
CIFRE	Industrial Agreement for Training Through Research (France)
COMUE	Communauté d'universités et d'établissements
CRAC	Careers Research and Advisory Centre (UK)
DIT	Dublin Institute of Technology
EC	European Commission
ECTS	European Credit Transfer and Accumulation System
EID	European Industrial Doctorate
EJRA	Employer Justified Retirement Age
EQF	European Qualifications Framework for Lifelong Learning
ERA	European Research Area
ESF	European Science Foundation
EU	European Union
EUA	European University Association
EUA-CDE	European University Association — Council for Doctoral Education
HEI	higher education institution
HR	human resources
HRM	human resource management
IoT	Institute of Technology (Ireland)
JOIMAN	Joint Degree Management and Administration Network
KIvI	Royal Netherlands Society of Engineers
LERU	League of European Research Universities
MoES	Ministry of Education and Science (Latvia)
NAIRTL	National Academy for Integration of Research, Teaching and Learning
OECD	Organisation for Economic Development
PBS	performance-based salary
PD	Professional doctorates
PDEng	Professional Doctorate in Engineering (the Netherlands)

QAA	The Quality Assurance Agency (United Kingdom)
QQI	Quality and Qualifications Ireland
SME	small and medium-sized enterprise
TUT	Tallinn University of Technology, Estonia
UAS	University of Applied Sciences
UPE	Université Paris-Est
uniko	Österreichische Universitätenkoferenz (University Austria)
UT	University of Twente, the Netherlands

Executive Summary

Academic careers are an important aspect of higher education policies and practice, and thus impact countries' competitiveness beyond the narrow field of human resources (HR) management in higher education. High-quality academic work conducted by well-selected, supported, and incentivized academics is a major output of higher education. Therefore, countries compete in designing efficient HR policies that support national and institutional higher education strategies and their implementation, and help attract into the academic profession the best and the brightest from within and beyond national borders.

This report investigates how selected governments and higher education institutions (HEIs) in Europe and beyond shape key aspects of the career trajectories and employment conditions of academics, and derives normative criteria for good system- and institution-level HR policies from this analysis. Based on the relevant research literature, the examination of selected cases of good practice, and the authors' experience in the field, the report covers (1) doctoral training and the postdoc (2) the selection and promotion of academics, and (3) the remuneration of academics. The three corresponding chapters address system-level regulations and policies, and the policies and practices within HEIs.

Doctoral training and, optionally, the subsequent postdoc lay the groundwork for an academic career. Countries and institutions all over the world thus design policies and practical approaches to ensure that doctoral training is research based and clearly structured, and that it takes place in a conducive environment. That applies to institutional arrangements in terms of admission and supervision, doctoral programs and schools, financing for institutions and individuals, and clear and suitable arrangements for the conferral of the doctoral degree.

National frameworks conducive to academic careers promote a clearly structured approach to, and transparency of, academic careers. National regulations also play an important role in ensuring international recognition and comparability of academic careers and positions. Such policies enable the recruitment of (international) talent, and the integration of academics and their work in an international environment. These policies support the mobility between higher education and other sectors of society. Institutional policies need to support the transparency, fairness, and predictability of academic careers.

Well-designed institutional career policies align approaches to recruitment, promotion, and remuneration with the institutional mission and strategy. Recruitment is one of the most important tools for the profiling of HEIs and for implementing their vision. By aligning promotion patterns with the institutional mission, institutions can motivate their employees to contribute to the achievement of institutional goals, and develop a balanced approach toward, and

an appreciation of, the different core tasks of HEIs — namely, research, teaching, and service — and of administrative duties.

The design of remuneration models is another instrument that allows HEIs to create incentives that support performance in line with institutional missions. Such models need to be designed in a transparent manner; they need to be perceived as clear and support the motivation of staff, instead of crowding it out. Well-designed performance-based salary models balance stability with performance orientation, and appreciate the diversity of tasks and roles that support institutional missions.

The various aspects of academic careers can be combined by institutions in a framework for strategic HR management that aligns different HR tools with system- and institution-level strategies and policies.

1 Introduction

1.1 Purpose and Structure of the Report

This report investigates how selected governments and higher education institutions (HEIs) in Europe and beyond shape key aspects of the career trajectories and employment conditions of academics, and derives normative criteria for good system- and institution-level human resources (HR) policies from this analysis. Based on the relevant research literature (including scholarly articles, policy reports, and consultative papers), the examination of selected cases of good practice, and the authors'[1] expertise and experience in the field and their perspective on successful examples, the report covers (1) doctoral training and the postdoc, (2) the selection and promotion of academics, and (3) the remuneration of academics. The three corresponding chapters address system-level regulations and policies, and the policies and practices within HEIs. The report identifies normative requirements that good system- and institution-level HR policies must fulfill, and uses selected case examples to highlight some key points of the analysis and practices that are considered promising by the authors. A concluding chapter provides an outlook on strategic HR management and summarizes the criteria for good system- and institution-level HR policies. Those criteria are developed to serve as the normative basis for an analysis of the status quo in Latvia, of which results will be published in a second report. Building on the criteria and the status quo analysis, a third report — to be published in spring 2018 — will provide recommendations on how to improve system- and institution-level HR policies in Latvia.

All three reports are part of a series of World Bank advisory services on higher education in Latvia. The first World Bank higher education advisory service was carried out in 2013/14, and addressed the Latvian higher education funding model on the system level. It led to the introduction of a new, three-pillar funding model including a performance-based funding pillar. The second higher education project with World Bank support[2] started in 2016. In the first of its two phases, it turned to the internal funding models and governance arrangements of Latvian HEIs. It focused on the effects of the system-level reforms, particularly on the HEIs' responses to the introduction of the performance-based funding pillar.

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[1] Members of the World Bank team that authored this report are Dr. Nina Arnhold, Senior Education Specialist and Task Team Leader, World Bank; Dr. Elias Pekkola, University of Tampere, Finland; Vitus Puttmann, Consultant, World Bank; and Dr. Andrée Sursock, Senior Adviser at the European University Association (EUA). Adjunct Professor Jussi Kivistö, University of Tampere, Finland; Professor Hans Vossensteyn, Director of the Center for Higher Education Policy (CHEPS), the Netherlands; and Professor Frank Ziegele, Director of the Centre for Higher Education (CHE), Germany, provided substantial input and comments.

[2] This report uses the term "project" for this World Bank higher education advisory service.

The project's second phase — which comprises the three reports mentioned — covers doctoral training and the postdoc, the selection and promotion of academics, and their remuneration.

1.2 Introduction to the Topic

People are the most valuable resource for higher education systems and institutions. For all their activities (from teaching, to research, to valorization[3]), HEIs depend on the quality of their (academic) staff body to a greater extent than most other organizations. The related mechanisms for preparing and selecting individuals to academic positions comprise four basic phases: an initial phase of socialization via doctoral training; the entry into academia via selection processes; career advancement regulated by promotion processes; and a phase of leaving the higher education sector surrounding retirement. All those phases are framed by specific arrangements of working conditions of academics, including their remuneration.

A basic objective for governments and HEIs therefore is to ensure that the right candidates with the highest potential reach and are maintained in the best positions. That requires that all the phases mentioned are designed in an appropriate way: doctoral training must prepare candidates well; selection processes must ensure that the right person is chosen; and promotion processes and remuneration need to reward the performance of academics. Moreover, the design of career systems as a whole needs to make academic careers an attractive option. Traditionally, there has been only one career track in academia, leading to the professorship. The selection processes for that track have always involved a struggle between an academic community of scholars making selection decisions, and influence from the state. However, that model has started to change as the result of new important influences.

Several developments within and outside of the higher education sector have provoked a gradual yet sustained change of the employment conditions and career trajectories of academics.[4] Three drivers of change stand out in that respect: a transformation of the academic profession leading to a greater diversity of academics' activities and career trajectories, a new approach to academic careers and staff development by HEIs, and a growing interest of governments in their country's pool of higher education academic staff. Even though national traditions and regulatory frameworks are still decisive factors, there are several broad development trends common to many higher education systems.

The number and variety of tasks that academics engage in have increased, resulting in a differentiation of activity profiles and career trajectories. The traditional notion of an academic as someone who engages exclusively and

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[3] Examples for activities falling under this category are research cooperation and study programs designed together with the business sector, continuing professional development in a lifelong learning context, widening participation of nontraditional students, contribution to developing or partner countries, spin-off companies, and different forms of direct interaction with society.

[4] In this report, the terms "academic" and "academic staff" refer to HEIs' staff members whose main responsibility is teaching and/or research (see also Eurydice 2017, 14). That definition excludes staff members with primarily administrative responsibilities, technical staff, and secretarial/support staff (for a detailed discussion of staff categories see Chapter 3.3 Academic Staff Categories).

simultaneously in (basic) research and teaching is no longer appropriate (Kogan and Teichler 2007). One important reason for that is the diversification of demands directed at HEIs. That has its source in the increasingly heterogeneous student body, in societies' interest in an efficient and effective use of public funding channeled to higher education, and in the business sector's growing realization of the value of higher education outputs (such as from applied research). HEIs react to those demands by adapting their activities, and (at least in some cases) by developing institutional profiles that focus on certain types of activity. Those reactions also affect academics, who experience a similar need to engage in new activities and profile development (Eurydice 2017). In addition, closer relationships between the higher education sector and its environment expanded some career avenues for academics, for example, with regard to the transition to the private sector. Those combined developments result in a new diversity in the work of academics and their potential career paths.

A growing necessity and expanding possibilities for HEIs to strategically develop their academic staff contribute to the change in academic employment conditions and careers. Responding to a diverse set of external demands and establishing an institutional profile by giving priority to some of them have become important tasks for HEIs. The same holds true for the strategic steering of HEIs toward institutional objectives by an HEI's management. Those tasks require developing a staff body that fits the institutional profile, and ensuring a steering of academics' activities toward institutional objectives. At the same time, attracting and retaining good academic staff members is increasingly challenging, and the international competition of HEIs for high-performing academics has intensified. Moreover, attractive employment opportunities in the private sector make it particularly difficult to fill academic positions and retain promising candidates in some fields. To cope with those challenges, HEIs have started to revise their HR policies and to approach matters of academic staffing strategically — from doctoral training and selection and promotion processes, to remuneration, proactive staff development, and matters of retirement. The evolving strategic approach to HR management is facilitated by the growing autonomy of HEIs. A decline in direct government influence on HEIs grants them greater freedom in the areas of staffing and funding. That enables HEIs to design key processes covering their academic staff body, and furthermore shifts the main responsibility for staff development to the HEI's leadership.

Policy initiatives resulting from a greater attentiveness of governments to their country's pool of academics are another major influence. HEIs bear the main responsibility for the development and management of academics and their careers, but governments set important framework conditions and policies. The interest of governments — as well as of supranational actors such as the European Union (EU) — in adapting those framework conditions and devising new policies and programs intensified for different reasons. The mere growth of academic staff numbers in recent decades increased their importance as an object of policy interventions. The relevance of academics as a driving force for innovation and economic development amplifies that trend. A first set of regulations and policies pertaining to academics cover issues of general interest that also apply to other parts of the labor force. That includes regulations on wages, conditions of employment (for example, the duration of employment contracts), and fair recruitment and promotion processes (for example, with respect to equal opportunities). There are, however, also regulations and policies specific to the higher education sector. Those address, for example, the attractiveness of careers

in academia and science, the internationalization and mobility of the academic staff body, and the possibilities for strategic staff management by HEIs.

The changes in the field of academic employment and careers raise one crucial question: How can an overall system of well-adjusted system- and institution-level HR policies be established? The various developments and the activities of HEIs and governments mentioned interact in their influence on employment conditions and career trajectories in academia. They might reinforce or thwart each other. Especially in the face of the challenges that make a new approach to human resources in the higher education sector necessary on the side of HEIs and governments, it is crucial to develop a sound overall approach in this field. Any specific approach is of course dependent on the traditions and framework conditions within a country, and on the histories and profiles of HEIs. Nevertheless, by focusing on shared challenges and objectives, it becomes possible to identify the following three aspects: crucial elements of the employment conditions and career trajectories of academics, choices that must be made when designing them, and the implications of these choices. That in turn allows for identifying basic requirements for good system- and institution-level HR policies — as this report seeks to do with a focus on the areas of doctoral training and the postdoc, the selection and promotion of academics, and their remuneration.

2 Early-Stage Researchers: Doctoral Candidates and Postdoctoral Fellows

Doctoral education and training[5] represents the first step in an academic's career, which lays the foundations for successful and meaningful employment within and outside academia later on. The character of that step changed drastically in the past decade, especially in Europe. The main reason for this change is that doctoral training is believed to provide the best qualifications for the creation, implementation, and diffusion of knowledge and innovation, and therefore is viewed as one of the crucial links between the European Research Area (ERA) and the European Higher Education Area (EHEA) (see, for example, Kehm 2007 and Auriol 2010).

There are three main implications resulting from that development. First, expectations about doctorate holders have changed radically. They are expected to be both specialists in their subject matter and academic discipline and to be equipped with a range of professional skills allowing them to be well-rounded researchers and professionals who can occupy both academic and nonacademic positions. Second, there is increased pressure on doctoral-granting institutions to ensure that their students complete their studies on schedule, which means that doctoral candidates face increasing pressure to establish a record of significant academic accomplishments within a limited time period. Third, the inclusion of the doctorate as the third cycle into the Bologna Process and related European Union (EU) policy developments (for an overview see Box 1) marked a turning point and triggered a change process that was rapid and broad in its scope in Europe.

[5] This chapter refers to doctoral education and doctoral training interchangeably because the third cycle is in fact about both: it generally includes taught elements (hence, it is about education), but it also provides training to become a researcher.

Box 1 European Union policy developments in the field of doctoral training

Doctoral training became an important topic of EU-level policies in the fields of higher education and science. The Bologna Process was initially focused on the first two cycles. Upon the request of the Bologna Follow-Up Group (BFUG) in 2003, the European University Association (EUA) developed the "Salzburg Principles,"[a] which provided a framework for doctoral training in Europe. These principles were adopted by the Ministers of the Bologna signatories in the 2005 Bergen Communiqué. The EUA was asked to continue its work on the topic by, among others, preparing a report on doctoral training that includes an analysis of the organization and funding of doctoral education at the national level. In 2010, the EUA revisited the Salzburg I recommendations and issued the Salzburg II recommendations, which was based on the experience gathered since Salzburg I (see Box 4).

In parallel, the European Commission published the European Charter and Code for Researchers.[b] This document sets out a range of important criteria for recruiting and managing researchers, which also pertain to doctoral education. The code covers "General principles and requirements applicable to researchers," "General principles and requirements applicable to employers and funders," and a "Code of Conduct for the recruitment of researchers." The principles and requirements include:

- The responsibility of senior researchers to support younger researchers in their development, and related responsibilities of employers and funders;
- A perspective of employers and funders on researchers as professionals with a career path that starts at the postgraduate level;
- Fair, equitable, and attractive remuneration (also) for early-stage researchers;
- The support of researchers' career development by employers and funders;
- The support of researchers' mobility by employers and funders;
- Preserving early-stage researchers from too-heavy teaching workloads;
- Suitable training for teaching and coaching activities as part of the professional development of researchers;
- The provision of career development opportunities in the case of recruitments for postdoctoral appointments.

The European Commission (EC) developed the "HR Excellence in Research Award"[c] to support implementation of the code. The award is given to institutions that have implemented the code, which helps them to publicize the quality of their human resources procedures and obtain European research funding.

Source: Authors based on the European Charter and Code for Researchers (https://euraxess.ec.europa.eu/sites/default/files/am509774cee_en_e4.pdf); EC 2005.

Note:
a. http://www.eua.be/Libraries/newsletter/Salzburg_Conclusions.pdf?sfvrsn=0.
b. https://euraxess.ec.europa.eu/sites/default/files/am509774cee_en_e4.pdf.
c. https://euraxess.ec.europa.eu/jobs/hrs4r.

Doctoral-granting institutions started to address the competing needs related to the training of early-stage researchers, while at the same time governments and other higher education stakeholders supported implementation of the framework conditions outlined above. The efforts of both HEIs and system-level stakeholders revolved around the quality of doctoral education and training. At the system level, new regulations, guidelines, and criteria were introduced for that purpose. HEIs adapted their structures and policies on the doctorate, especially with respect to the research environment they provide, the management of doctoral education, supervision arrangements, and quality assurance processes.

2.1 Doctoral Candidates and Programs

The doctorate level is considered as the early stage of an academic career, but also as the final step in education and training. Although the bulk of doctorate holders work outside academia, because research training is central to the third cycle, the doctorate is seen traditionally as the first milestone in an academic career. For instance, the European Commission refers to doctoral candidates as

first-stage researchers and defines them as individuals doing research under supervision in industry, research institutes, or universities (EC 2011, 7).

Nevertheless, a recent Eurydice study shows that the majority of national systems in Europe consider doctoral candidates primarily as students. This relates to doctoral candidates receiving a student card and having access to a variety of student services and benefits, including student accommodations and medical insurance. However, there are European countries (Norway, Switzerland) where an employee status for doctoral candidates is more common (see Figure 1) (Eurydice 2017, 30). In the Netherlands, next to many doctoral candidates with a university employee status, there are also many doctoral candidates paid by grants, scholarships, their employers, companies, and so forth, who have no employee status. They often do a PhD part-time. In some countries, doctoral candidates can have both student and employee status, (for example, in Denmark, Finland, France, Germany, and Sweden) (Eurydice 2017, 30). In other countries (Hungary, Latvia, Lithuania, and Poland), it is possible to earn a doctoral degree without formal student status or participation in a doctoral program.

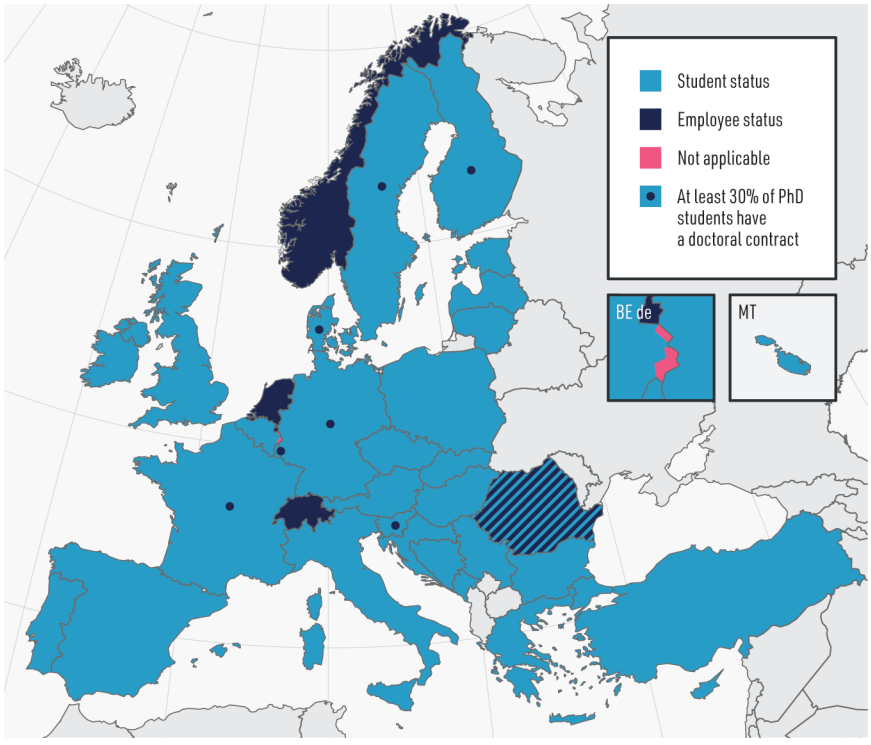

Figure 1 Primary legal status of doctoral candidates in Europe

Source: Authors adapted from Eurydice 2017, 30.

Note: BE de = Belgium – German-speaking Community; MT = Malta.

In a given country, one doctoral candidate can have multiple statuses. Statuses such as student, employee of a university or a private company, or self-employed can exist side by side and are most probably related to funding sources (Jørgensen 2014). According to Jørgensen, the diversity and parallelism of statuses can compromise a clear definition of rights and responsibilities on the side of individuals and HEIs, with a possible negative impact on the training of doctoral candidates.

Little is known about the funding support for doctoral students across Europe. Eurydice has done most work on national support systems for undergraduates, leaving out the third cycle (for example, Eurydice 2015). In Eurydice's

latest report on academic staff, it is possible to infer limited information on doctoral student support when looking at their status. In Switzerland and Norway, most doctoral candidates have an employment contract related to their PhD; in the Netherlands, it is the case for around half of all doctoral candidates; in other countries, at least 30 percent of all doctoral students have an employment contract related to their PhD. This is the case in Denmark (90 to 95 percent have a contract), Luxembourg (80 percent), Germany (64 percent), Sweden (62 percent), Finland (50 percent), Slovenia (37 percent), and France (32 percent) (Eurydice 2017, 30).[6]

Original research remains the core component of doctoral training, but new forms of doctorates challenge the classical definition of the doctorate. Traditionally, the doctorate has been defined as an intensive training through independent research under supervision and aimed at creating new knowledge. More recently, new forms of doctorates have required a refinement of this definition. For example, the UK evaluation agency states that doctoral candidates "must demonstrate an original contribution to knowledge in their subject, *field or profession,* through original research *or the original application of existing knowledge or understanding*" (QAA 2015, 3; italics added). This statement points to the emergence of new forms of doctorates such as professional and practice-based doctorates, which have increased in numbers in the UK (CRAC 2016, iv). They allow individuals working in the professions to pursue doctorates in their professional fields.

This development is partly related to efforts in art-based disciplines to be allowed to train and award doctorates that would be fully recognized in meeting the standards of the traditional academic doctorates. These efforts led, for example, to arts-based doctorates in Austria (see Box 2).

A National Qualifications Framework, aligned with the Framework for Qualifications of the European Higher Education Area, is an essential foundation for the establishment of different types of doctorates; it ensures their transparency as well as their articulation with other degrees.

Box 2 The arts-based doctorate in Austria

An amendment of higher education legislation in Austria enabled the development of arts-based doctoral programs. The legal reform established a framework for obtaining a doctoral degree based on artistic work. As stated by Universities Austria (uniko), the national association of universities: "Doctoral studies may be operated as scientific research, artistic-scientific research ('arts based research') or artistic studies. It should also be possible to run doctoral studies as interdisciplinary studies without assignment to any scientific discipline." The changes in Austria were explicitly related to similar developments in doctoral training in other countries. The legislative change is perceived to allow Austrian art universities to develop further their distinct profiles via offering doctoral programs that go beyond research-based doctoral studies.

Source: Authors based on Braidt 2016.

Note: The authors gratefully acknowledge permission received from the EUA-CDE to extensively quote its work in this report.

[6] Additional, yet by now slightly dated data on modes of doctoral student funding were generated via a survey among Bologna Follow-Up Group (BFUG) member countries in 2006 (EUA 2007). The survey revealed that scholarships/fellowships/grants were the most important form of financial support for doctoral students, while in many countries, salaries or teaching assistantships were also offered to doctoral students. In general, most countries exhibited a mix of funding modes.

2.2 System-Level Framework Conditions

Growing attention paid to the different aspects of the third cycle by policy makers and other higher education stakeholders led to a new perspective on the doctorate. European policy developments resulted in a shift in perspective on the doctorate with far-reaching implications for governments and doctoral-granting institutions. The traditional notion of the doctorate in Europe consisted of a doctoral candidate being admitted to a program by one professor under whom she or he produced original research. European policy developments (see Box 1) challenged these notions and placed greater emphasis on the link of doctoral programs to the Master's degree, taught courses as part of doctoral training, and better supervision. The European Qualifications Framework for Lifelong Learning (EQF) amplified this trend by specifying standards in the form of learning outcomes (descriptors) for the doctorate.

The responsibilities of HEIs in the field of doctoral training was strengthened. The provisions of the European policy framework on doctoral training, especially in the Salzburg II Recommendations, provides a comprehensive overview of important institutional conditions and requirements vis-à-vis doctoral training. It is clear from the overview presented in Box 4 that many of the principles embedded in the Salzburg II recommendations highlight the responsibilities of the doctoral-granting institutions for the quality of their doctoral programs.

In parallel, doctoral education became the target of national policy interventions in the form of national-level frameworks, guidelines, and regulations. This included developing national frameworks for doctoral education (for example, in Ireland and the United Kingdom), including consideration of the third cycle in quality assurance frameworks, and regulating doctoral education in greater detail in the national legislation — such as in the proposed draft law for Poland (see Box 3).

Box 3 Doctoral Education in the proposed Polish Law on Higher Education and Science

The new draft Law on Higher Education and Science in Poland comprises several provisions on doctoral education in line with European trends and conducive to promoting its quality.[a] The new draft law stipulates that doctoral education must take place in doctoral schools (even though there is also a possibility to acquire a doctorate as an external candidate), which can be established in cooperation of doctoral-granting institutions. Key provisions on the doctoral schools include:

- That access takes place via competition;
- That doctoral education is based on a curriculum and an individual research plan, whose implementation is evaluated;
- That doctoral candidates can engage in teaching in the form of an apprenticeship, with a defined maximum number of teaching hours per year;
- That doctoral schools are subject to evaluations that cover, among others, the quality of recruitment processes and of the support that doctoral candidates receive for conducting research;
- That in the case of closure of a doctoral school, doctoral candidates must have the possibility to continue their education at another doctoral school.

In addition, all doctoral candidates are supposed to receive a scholarship. The scholarship's amount should be at least 110 percent of the minimum wage in Poland until the mid-term evaluation of the individual research plan, and at least 170 percent afterward.

Source: Authors based on the draft Polish Law on Higher Education and Science (from September 16, 2017).

Note:
a. Since the law is currently in the drafting stage, there might be changes to the provisions presented here.

Designing national-level frameworks requires looking for the appropriate balance between institutional autonomy and accountability and between regulation and creativity. A precondition for such a balance is a national consensus among relevant stakeholders on the definition of the core characteristics and standards of the doctorate. Generally, relevant stakeholders include the ministry of education, the ministry of finance, quality assurance agencies, HEIs, funding agencies, early-stage research associations, and employers.

Box 4 Key provisions of the Salzburg II Recommendations

Critical mass and critical diversity: Institutions must develop a critical mass and diversity of research to offer high-quality doctoral education (through more focused research strategies and engagement in larger research networks, collaborations, or regional clusters).

Recruitment, admission, and status: Programs should develop recruitment strategies that correspond to their particular mission and profile. Admissions policies must be transparent and accountable (a single, identifiable place to apply, admissions based on a well-defined public set of criteria). Doctoral candidates should be recognized as early-stage researchers with commensurate rights and duties.

Supervision must be a collective effort with clearly defined and written responsibilities for the main supervisor, supervisory team, doctoral candidate, doctoral school, research group, and institution. Providing professional development to supervisors is an institutional responsibility. Supervisors must be active researchers.

Outcomes of doctoral research must testify to the originality of the research and be suitable for dissemination.

Career development for doctoral candidates must take into account individual goals and motivations and acknowledge the wide range of careers. Offering training in transferable skills should be a priority. Building ties to the other sectors contributes to bridging the communication gap with potential employers and recruiters.

Credits: Applying the credit system is not a necessary precondition for establishing successful doctoral programs (especially when credits are used to measure the research component or its associated dissemination outputs).

Quality and accountability: It is necessary to develop specific systems for quality assurance in doctoral education. Assessment of the academic quality of doctoral education should be based on peer review and be sensitive to disciplinary differences. Institutions should develop indicators based on institutional priorities such as individual progression, net research time, completion rate, transferable skills, career tracking, and dissemination of research results for early-stage researchers.

Internationalization strategies should be a tool in increasing the quality of doctoral education and developing institutional research capacity (internationalization at home, collaborative doctoral programs, international joint doctoral programs, mobility).

Funding: High-quality doctoral education requires adequate, sustainable, and doctorate-specific funding opportunities. Funding schemes that aim to increase the number of doctoral candidates should take into account the quality and capacity of the programs.

Autonomy: Institutions need autonomy to be able to establish, and be accountable for, diverse structures with different research strategies and strengths.

Legal framework: The national and European legal frameworks must give institutions the opportunity to engage in innovative doctoral programs and to develop their quality assurance systems independently within their national frameworks.

Sources: Authors based on EUA 2010 and Kivistö, Pekkola, and Siekkinen 2017.

Quality assurance is an important consideration when designing a system-level framework, and clarity should be sought about the respective responsibilities of the doctoral-granting institutions and any quality assurance agency. Good examples of how to assure quality are found in Ireland and the United Kingdom, where the doctoral-granting institutions must demonstrate that they assure the quality of all aspects of doctoral education and training (for example, QQI 2017; QAA 2015, 2015b). In many countries, explicit quality criteria related to the dissertation (for example, in terms of academic rigor, originality, research methods, analysis, and interpretation) are assessed by a committee of (international) peers, either before or during the defense.

Legislation regulates which HEIs have the right to confer the doctorate. This right is usually given to universities, sometimes also to other types of HEIs. In the case of binary systems with two distinct types of HEIs, there is a need to regu-

late if and when non-university institutions can confer the doctorate. In the UK, for example, such an institution can be linked formally to a university to train the doctoral candidates. In these cases, the degree is conferred by the university, which is responsible for the standards and quality of the degree. In other systems, such as in Ireland (see Box 6), non-university institutions have the right to confer the doctorate, provided certain conditions are met.

Legal frameworks and external quality assurance play an important role in supporting the quality of doctoral training, and its development and expansion to different types of institutions. A key issue in that respect are the qualifications of academic staff members involved in doctoral training. That can be regulated in different ways. Portugal, for instance, has different requirements for academic staff in universities and polytechnics (see Box 5). In other countries, the same legal framework applies to all types of HEIs. For instance, the framework in Ireland (see Box 6) started out by regulating tightly its relatively new non-university sector (1999–2012) with respect to conferring the doctorate. However, the legal framework is evolving as the non-university sector has matured and has demonstrated its capacity to train to the doctoral level. Currently, a new "National Doctoral Framework" provides a single national set of principles and high-level expectations on the standards and quality for research degrees. It has been adopted by all higher education institutions, government agencies and departments, policy bodies, and research funding bodies.[7]

Box 5 Portugal: Accreditation criteria for staff

The qualifications of academic staff are an important consideration in an accreditation process. This is framed by several legal texts. The set of requirements for staff include quantitative and qualitative elements.

Universities

- The institution must have its own teaching staff (this refers to the full-time academic staff) qualified in the area of the program to be accredited and adequate in number (see section 1, below), of which at least half must hold a PhD degree.
- More than half of the teaching staff (FTE) in Master's or Doctoral programs should hold a PhD degree in a scientific area relevant to the program.
- In third-cycle programs, all teaching staff assigned to the program should hold a PhD degree.
- The Coordinator of the program should be a full-time PhD holder specialized in the area of the program.
- The institution's own teaching staff (full-time teachers) must represent at least 75 percent of the total number of FTEs.

1. Universities must have, among all the teachers and researchers who work in any capacity at the institution, at least one PhD holder for every 30 students, and at least half of those must be full-time.

Polytechnics

- The institution must have their own teaching staff (full-time teachers) qualified in the area of the program to be accredited and adequate in number (see section 2, below), of which at least half must hold either a PhD degree or the title of specialist.
- More than half of the teaching staff (FTE) in Master's programs should hold either a PhD degree or the title of specialist in a scientific area relevant to the program.
- The Coordinator of a second-cycle program should be a full-time PhD holder, specialized in the area of the program.
- The Coordinator of a first-cycle program should be a PhD holder or a specialist in full-time regime, specialized in the area concerned.
- The institution must have its own teaching staff (full-time teachers) of at least 70 percent of the total number of FTEs.

[7] Another difference between the cases of Portugal and Ireland is that the Portuguese law applies to both public and private institutions of both sectors, while in Ireland the law distinguishes between the public and the private Institutes of Technology (IoTs). None of the private IoTs in Ireland have delegated authority to confer the doctorate. This was not permitted under the 1999 Act, but there are provisions for delegated authority to be given to private institutions under the 2012 Act. The conditions for this are determined by secondary legislation (known as Statutory Instruments or Ministerial Regulations), which have not been written yet.

2. Polytechnics must have, among all the teachers and researchers who work in any capacity at the institution, at least one PhD holder or a specialist for every 30 students; and among those engaged in teaching or research, 15 percent should be PhD holders in full-time posts, and at least 35 percent must hold the title specialist, who may also be holders of a PhD degree.

Verification of the quantitative information

Compliance with these requirements is done by the accreditation agency on a five-year cycle, as part of rebuilding the institutional database of the Agency for Assessment and Accreditation of Higher Education (A3ES). The database is consulted when issuing an accreditation decision.

Link with the staff's research activities

As part of the program accreditation, the expert panels look at the research activity of staff.

- For first-cycle study programs, no specific requirements associated with research and experimental development are explicitly set by law, but the general principles linked to the nature of higher education are applicable, particularly with respect to the articulation of study and teaching with research (or targeted research) and experimental development, which are demonstrated by the effective integration of a significant part of the academic staff in research, targeted research, or experimental development activities.
- A program leading to a Master's degree requires that "the institution develops a recognized activity of education and research or of high-level development of a professional nature, in the scientific areas integrating that area of expertise."
- A program leading to a doctoral degree in a particular field of knowledge or area of expertise requires "the existence of own human and organizational resources needed to carry out research in the scientific areas integrating that field of knowledge or specialty" and that "the university owns, by itself or through its participation or collaboration, or of its teachers or researchers, in certain scientific institutions, an accumulated research experience subject to review and materialized in scientific and scholarly material in the scientific areas integrating that field of knowledge or area of expertise."

Source: Authors adapted from A3ES 2012.

Box 6 The role of quality assurance in determining which institutions can deliver the doctorate:

The case of the Institutes of Technology in Ireland

The Irish framework started out by tightly regulating its relatively new non-university sector (1999–2012) with respect to conferring the doctorate, but the legal framework is evolving as the non-university sector has matured and has demonstrated its capacity to train to the doctoral level.

Ireland has a diverse system of public higher education, comprising seven universities and 14 Institutes of Technology (IoTs). Under the Qualifications and Quality Assurance (Education and Training) Act 2012, the seven universities and the Dublin Institute of Technology (DIT) are defined as "designated awarding bodies"; that is, they have their own statutory authority to make higher education awards up to the doctorate level (Level 10 in the Irish National Framework of Qualifications).[a]

The remaining 13 IoTs are also classified as awarding bodies, and can confer awards up to the doctorate level under powers delegated to them by Quality and Qualifications Ireland (QQI), the independent state agency responsible for promoting quality and accountability in education and training services. Granted initially under the Qualifications (Education and Training) Act, 1999, whose provisions were preserved under the 2012 Act, the delegated authority process is currently being extended under new policies and criteria published by QQI.[b]

Delegated authority to make research degrees (Levels 9 and 10), 1999–2012

Originally, the research degree delegated authority process was administered by the quality assurance agency for the IoT sector, the Higher Education and Training Awards Council (HETAC), one of the antecedent agencies of QQI. It included the following steps:

- Approval of the right to hold a "research register": This was a registration process that included evaluation of the institution's capacity to assess a research degree and provide appropriate supervisory arrangements. This registration process applied to both the research Master's degree (level 9) and the doctorate (level 10); each level would undergo a specific assessment process that involved a peer evaluation visit.
- Once an institution had the right to hold a research register, it could then apply for delegated authority to award the relevant degree. This also included a peer evaluation process but was broader and came close to a traditional institutional evaluation process.
- Delegation of authority to make research awards at level 9 or 10 was not institution-wide at the time, but specific to a discipline (for example, business studies, mechanical engineering, environmental science).

Delegated authority to make research degrees (Levels 9 and 10): Developments post-2012

Since the establishment of QQI in 2012, the process for delegating authority to IoTs to make research degrees has undergone further refinement. The two key developments are:

- QQI published a policy (QP.04) in May 2014, entitled *Policy and Criteria for the Delegation of Authority to the Institutes of Technology to make Higher Education and Training Awards (including Joint Awards)*, which, among other things, was designed to enable IoTs to validate their own research degree programs in any discipline area at NFQ Level 9, and to make Master's awards in respect of the same validated research degree programs under delegated authority from QQI. The 13 IoTs agreed a sectoral protocol with QQI, setting out the necessary requirements pertaining to a quality research infrastructure, to which all of them have subscribed. All 13 IoTs can now self-validate research Master's degrees in any disciplinary area.[c]
- In 2017, QQI published new *Procedures and Criteria Related to Delegation of Authority*. These include a provision that will enable IoTs with a track record of operating delegated authority at the doctoral level in a specified number of disciplinary fields, and of graduating a specified number of doctoral graduates in a five-year period, to apply for delegated authority at the doctoral level across all disciplinary fields. It is anticipated that implementation of this policy will begin in Autumn 2017.[d]

New Legislation for self-awarding in the IoTs

In tandem with the extension of delegated authority to IoTs to make awards, which is being proceeded under the 2012 Act, new legislation is currently being drafted that will establish the IoTs' awarding authority on the same footing as that of the universities and DIT. The Qualifications and Quality Assurance Amendment Bill, 2017, includes provisions that give the IoTs full statutory awarding authority up to Level 9 of the National Framework of Qualifications, including for research Master's degrees.

The Irish government is also well advanced in the process of legislating for the establishment of Technological Universities, an upgraded status for some IoTs. Under the legislation, it is envisaged that Technological Universities will be formed from several consortia of the existing IoTs, that will amalgamate as part of the process of Technological University designation. Once established, the new Technological Universities will have full awarding powers up to the doctorate level. It is expected that the majority of the 14 IoTs will proceed toward the Technological University, as part of at least four consortia, and subject to the consortia meeting certain statutorily established criteria.

The increasing convergence of the IoTs and universities in the area of awarding of research degrees is reflected in the establishment of the National Framework for Doctoral Education, which was developed jointly by the public higher education institutions and the key state agencies.[e]

Source: Authors based on contributions provided by Karena Maguire, Head of System Quality Project; Jim Murray, Director of Academic Affairs, Institutes of Technology Ireland; Richard Thorne, former IT Sligo president; and Padraig Walsh, Chief Executive, QQI.

Note:
a. The seven universities' statutory awarding authority is established under the Universities Act 1997 (on the Functions of a University, section 13); DIT's awarding authority is established under the Dublin Institute of Technology Act, 1992 (on the Functions of the Institute, section 5(2) (a)); and the related Ministerial Order, S.I. No. 224/1997, Dublin Institute of Technology Act, 1992 (Assignment of Function) Order, 1997.
b. http://www.qqi.ie/Downloads/IoT%20Sectoral%20Protocol%20on%20Validation%20of%20Research%20Programmes%20at%20Level%209.pdf#search=QP%2E04%2A; http://www.qqi.ie/Publications/Publications/Procedures%20and%20criteria%20relating%20to%20delegation%20of%20authority.pdf.
c. http://www.qqi.ie/Downloads/IoT%20Sectoral%20Protocol%20on%20Validation%20of%20Research%20Programmes%20at%20Level%209.pdf#search=QP%2E04%2A.
d. http://www.qqi.ie/Publications/Publications/Procedures%20and%20criteria%20relating%20to%20delegation%20of%20authority.pdf, pp. 38–9.
e. http://www.research.ie/aboutus/national-framework-doctoral-education.

Another important facet of the system-level framework is if doctoral training is incentivized financially. In some countries, doctoral training and degrees are covered by system-level financial incentives. Doctoral training and the research conducted by doctoral candidates form a large part of the productivity of universities; therefore, incentives to promote a well-functioning doctoral training part is regarded as very important for the academic development in a higher education system. Doctoral candidates are not only ambitious individuals with creative new ideas, they are also eager to learn and at the same time contribute to academic activities. As such, they are important contributors to the production of, among others, academic articles and books — including their dissertations. They also often contribute to teaching. As a result, they can be a very productive part of the academic community. Realizing this, some governments incentivize universities to attract doctoral candidates and support them in successfully completing their dissertation. One example can be found in the Netherlands, where the number of successfully defended degrees is an important factor behind the funding allocations for research to universities, as described in Box 7.

Box 7 Use of state funding for doctoral studies in the Netherlands

In the Netherlands, the public funding for research universities consist for about 40 percent of funds for teaching and for about 60 percent of funds for research. The research part (EUR 1,731 million) consists of four components:

1. Relative number of Bachelor's and Master's degrees conferred (15 percent)
2. Relative number of doctoral degrees conferred (20 percent)
3. Specific budget allocations for strategic research programs (7 percent)
4. Fixed amounts allocated to universities according to historical distributions (50 to 70 percent of research funding per university).

The number of doctoral degrees conferred has increased steadily since the related component was integrated in the research funding for universities in 1993. Currently, at the national and institutional level, the relative importance of doctoral degrees within the funding model is contested. It is felt that that element has become too dominant because the premium per successfully defended dissertation was fixed (EUR 93,000). The increasing number of degrees awarded pushed up the relative share of that funding from 13 percent to over 20 percent. Consequently, either the bonus per doctorate will be reduced or the total amount available for the component will be frozen.

Source: Authors based on Vossensteyn, de Boer, and Jongbloed 2017.

2.3 Anchoring the Doctorate in the Institution

Doctoral-awarding institutions bear the main responsibility for the quality of doctoral programs and for the design of those components that will ensure it. Many of these elements gained in importance as a result of the European policy developments discussed above, and were taken up by HEIs. They include a stimulating research environment; an improved management of doctoral training; enhanced support and quality supervision for doctoral candidates; adapted policies and procedures on admission, progression, and assessment; skills development opportunities; and internal quality processes.

To signal the institutional responsibility for the quality of doctoral programs, an overarching policy on the governance of doctoral training, is important. Such policies (a) provide an overview on the doctoral degree, including details on how responsibilities for the doctorate are shared at the central university level, the faculty, and the department, and the respective rights and responsibilities of supervisors and doctoral candidates; (b) refer to the set of institutional documents that explain the regulations and processes for all stages of doctoral training; and (c) include a consideration of ethics and research integrity, open research and data management, and how the institution addresses issues related to commercialization and intellectual property rights. When scholarship funding is available, the institution provides information about the length of financial support, whether part-time candidates are supported, and the policies and procedures for the allocation of scholarships. Policies and procedures for allocating teaching assistantships are accessible, and criteria for selecting teaching assistants are fair, transparent, and consistently applied. Furthermore, it is important that such policies are easily accessible to all institutional members.

Creating a Stimulating Research Environment

A stimulating research environment is critical to ensuring the quality of doctoral training. Many key publications on the doctorate stress that point. As Bryne, Jørgensen, and Loukkola (2013, 43) put it, this research environment should have

sufficient high quality and critical mass to produce original knowledge and to enable to doctoral candidate to become an independent and productive researcher. In some countries, critical mass is achieved through interinstitutional cooperation. QAA Scotland has a very useful self-checking tool (QAA Scotland 2017a) and two accompanying reports that would help institutions to assess this important aspect of doctoral training (QAA Scotland 2017b; 2017c).

Different characteristics make up a good research environment, which is also an essential criterion in deciding which institutions should be allowed to confer the doctorate. The code of the Quality Assurance Agency for Higher Education (QAA) in the UK provides a comprehensive picture of what constitutes a good research environment (for a comprehensive overview of such characteristics, see Box 8). Key characteristics include demonstrable research achievements, a sufficient number of research-active staff, adequate learning and research tools, good physical resources, and an overall environment supportive of research achievement.

The characteristics of what constitutes a good research environment deserve a national discussion, particularly because this should be a core criterion for decisions on which institutions should be allowed to confer the doctorate.

Box 8 Quality Assurance Agency for Higher Education's – characteristics of a stimulating research environment

- Demonstrable research achievement as recognized either through peer assessment as internationally excellent or above; or consistently recognized by the award of grants in open competition with, in both cases, outputs such as journal publications, books, and work produced in other media, including engineering, performing arts, sculpture, fine art and design, and other professional practice-based and clinical contexts.
- Sufficient numbers of research-active staff, including postdoctoral researchers and research students (either located at the provider or included in collaborative or networked arrangements).
- Knowledge exchange and impacts (including knowledge transfer partnerships), with an emphasis on the practical impact of research outcomes and demonstrable ability to attract external funding.
- Exposure to researchers working at the highest level in the student's chosen field and in cognate and related disciplines.
- Opportunities and encouragement to work and exchange ideas with people and organizations using research outcomes for their own purposes and with colleagues in the wider research environment.
- Access to academic and other colleagues able to give advice and support.
- Adequate learning and research tools including access to IT equipment, library, and electronic publications.
- Opportunities for research students to develop peer support networks where issues or problems can be discussed informally (this could include access to social space provided for the purpose).
- Supervision that encourages the development and successful pursuit of a program of research.
- Guidance on the ethical pursuit of research and the avoidance of research misconduct, including plagiarism and breaches of intellectual property rights.
- Support in developing research-related skills and access to a range of development opportunities that contribute to the student's ability to complete the program successfully (including, where appropriate, understanding issues of funding and its commercial exploitation).
- Access to and support for a range of development opportunities that contribute to the research student's ability to develop personal and, where pertinent, employment-related, skills.
- Availability of relevant advice on career development.
- An environment supportive of research achievement may include:
  - A collegial community of academic staff and postgraduates conducting excellent research in cognate areas.
  - Supervisors with the necessary skills and knowledge to support research students in working toward the successful completion of their research degrees.
  - Access to the facilities and equipment necessary to enable research students, in all modes of study, to complete their research degrees successfully.
  - Access to welfare and support facilities that recognize the distinctive nature of research degree study.
  - The opportunity for research students to raise complaints or appeals.

- Mechanisms for addressing research students' feedback both as individuals and collectively.
- Sufficient implementation and monitoring mechanisms to ensure that where a project is undertaken in collaboration with another organization, the standards of both organizations are maintained.

Source: Authors adapted from QAA 2015b.

Doctoral Schools

Doctoral schools have been established by most European universities to institutionalize the responsibility for quality doctoral education and training and signal the shift away from the individual responsibility of supervisors. These schools can improve the management and organization of doctoral training, provide the required stimulating research environment, and ensure the consistent application of common guidelines and standards for various aspects of doctoral education such as admission, supervision, assessment, and complaints and appeals procedures (see also below).

It is impossible to provide a single definition of doctoral schools because there is a great deal of variation in their function, composition, and positioning. First, these schools vary in the functions they assume (Fuller 2016):

- Purely administrative (doctoral office, research degrees office)
- Administrative (registration, progress, QA) + student training
- Administrative + student training + supervisor training
- Administrative + student and supervisor training + policy making
- Administrative + student and supervisor training + policy + research culture (accommodation, workshop/conference facilities)

Second, they differ in whether they cover master's student or exclusively doctoral students, and whether they have additional objectives such as establishing an elite group of young researchers.

Third, they differ in their positioning within an HEI. Some are located at the program level, others at the faculty level, and still others at the institutional level (see Figure 2). In some cases, a doctoral school coordinates the doctoral programs of several universities. The positioning of the doctoral schools has a direct impact on its functioning, for example, by fostering interdisciplinarity and enabling the mobilization of a critical mass of researchers.

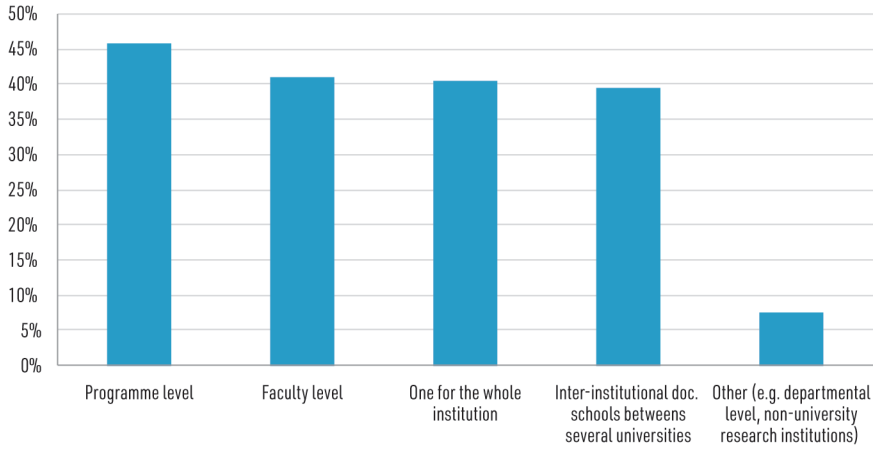

Figure 2 **The positioning of doctoral schools within European higher education institutions, 2013 (*in percent*)**

Source: Oliva Uribe 2017.

Note: Based on EUA European Research Area Survey 2013.

The number of doctoral schools has rapidly and steadily increased in Europe in recent years (see Figure 3).

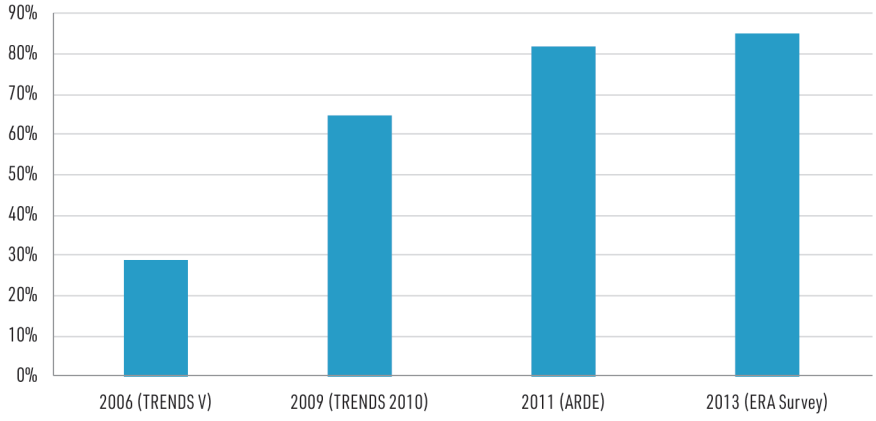

Figure 3 **Share of European higher education institutions with doctoral schools, 2006–13 (*in percent*)**

Source: Oliva Uribe 2017.

Note: Data sources specified in parentheses. All data collected on the basis of surveys. The Trends questionnaires were sent to the EUA membership and other higher education institutions, the Accountable Research Environments and Doctoral Education (ARDE) and European Research Area survey questionnaires went to the EUA membership only. The largest set of responses was 821 for the Trends 2010 questionnaire.

Universities wishing to create doctoral schools must consider a range of questions, starting with: How many doctoral schools to set up? Where to locate them on an organizational chart?

A first consideration is how to achieve critical mass given the size of the HEI and the number of doctoral candidates in each broad disciplinary field. The issue of critical mass — which was an important challenge for doctoral education at the University of Andorra, Andorra, as a small institution (see Box 9) — should be manageable and allows for close interactions. In other words, doctoral schools should be neither too small nor too large. The Salzburg Principles address that trade-off by pointing out that there are different ways of achieving that goal, including by participating in international, national, and regional networks (EUA 2005).

Box 9 The doctoral school at the University of Andorra

Because of its size, the University of Andorra has a number of issues that are quite different from those of a larger institution when it comes to designing a doctoral program. This small institution with only about 1,000 students and 22 full-time academic staff needs some special provisions in order to offer a sustainable doctoral program.

Multidisciplinary-focused program

Doctoral research is multidisciplinary and relates to the economic and social development of Andorra as well as those aimed at improving the standards of quality of life. The University of Andorra has taken a multidisciplinary approach in order to achieve the following three goals:

1. To meet the demands of doctoral students for a doctoral program.
2. To promote multidisciplinary and interdisciplinary research at the University and at national research groups.
3. To obtain a critical mass and offer a sustainable doctoral program.

Goal 1: The first goal is a responsibility of the University of Andorra as the only public university in the country. The definition of a doctoral program in only one discipline would have been a major constraint, as a national university, if it wanted to train future researchers in strategic areas that can promote the social and economic development of the country.

At first, the doctoral program was considered solely as an interdisciplinary program in a strategic field for the social and economic development of Andorra as a micro-state. This vision certainly allowed for an enriching interdisciplinary work, seen from various perspectives, in a particular strategic area, but it limited the recruitment of doctoral candidates whose research intentions were outside this field. This meant excluding doctoral candidates in areas that are also important for the country but outside the defined research field, thus reducing the potential critical mass of doctoral students (Goal 3).

Goal 2: The Quality Council of the University of Andorra has defined four generic transversal competencies that regular students should acquire before the completion of their studies. One of these competencies is the ability to work and lead multidisciplinary and interdisciplinary groups. Research groups at the University of Andorra are a good example of this double multidisciplinary and interdisciplinary approach. Some of these groups are concerned with or related to several disciplines in a mutual and cumulative approach (multidisciplinarity), and this cooperation often involves merging the practices and assumptions of each discipline to accomplish the research goals (interdisciplinarity).

Goal 3: The Principality of Andorra has a population of about 80,000 inhabitants, making it difficult to find enough critical mass for doctoral studies. Recruiting foreign students is not an easy undertaking, either. In the Catalan-speaking countries or regions (Andorra, Catalonia, Balearic Islands, and Valence) there are around 11 million inhabitants and more than 20 universities, some of which are large and prestigious institutions. In addition, importing non-Catalan-speaking students is not easy for a program in a language with a relatively small number of speakers. These factors reinforce the idea of bringing together the majority of doctoral candidates from Andorra in a multidisciplinary approach.

Source: Authors adapted from Nicolau i Vila 2010.

A second consideration in deciding the number of doctoral schools and their position in the HEI relates to interdisciplinary opportunities. In this context, important research questions cross disciplinary boundaries. The EU Horizon 2020 Program, for example, is structured around seven challenges facing Europe: health; food, water, forestry and bioeconomy; energy; transport; climate action, environment, resource efficiency, and raw materials; European society; and security. Addressing these challenges requires working as part of interdisciplinary teams. Doctoral candidates need to be given the opportunity to explore other disciplines that are pertinent to their research focus. Doctoral schools can provide these opportunities if they bring together several departments and even several faculties. Here too, balance is key, and the doctoral schools should seek to achieve a certain level of interdisciplinarity while avoiding the risk of spreading themselves too thin across too many disciplines.

Moreover, interdisciplinary doctoral schools require that the responsibility for supervision and the conferral of the doctorate is shared across departments and faculties through the doctoral school. Box 10 shows how such shared governance is assured at the University of California (UC), Berkeley, in the United States, for one option, which allows doctoral candidates to design their own interdisciplinary program.

Box 10 **Interdisciplinary graduate program at the University of California, Berkeley**

Guidelines for Faculty Supporting Interdisciplinary PhD Proposals

Five faculty members must agree to serve as a sponsoring committee. Each must write a letter of support containing a detailed analysis of the proposed program. Faculty members are reminded that they should not write letters of support unless they are totally convinced that the applicant is an outstanding student with a proposal of exceptional merit and uniqueness.

The sponsoring faculty committee must be drawn exclusively from UC Berkeley Academic Senate members (as defined in the Guide to Graduate Policy). One member of the committee must agree to act as major professor, usually serving as doctoral committee chair, and a second must agree to chair the Qualifying Examination. The major professor's department graduate staff will be expected to serve the interdisciplinary PhD student by submitting required administrative paperwork, if the proposal is accepted, and agreement by the department Chair should be indicated.

The letter from the proposed major professor should contain:

1. Evidence of consultation with other sponsors in which the role of each sponsor as a member of the supervising, qualifying, and dissertation committee is made clear
2. The proposed foreign language and manner of completing the foreign language requirement
3. A proposed normative time for completion of degree requirements
4. A statement of eligibility for or access to study space, laboratory facilities, or other forms of support within the department, group, or school.

Assurance by a sponsoring faculty member that the student will be eligible for a GSI (Graduate Student Instructor) appointment or other form of support, while not mandatory, greatly strengthens the proposal.

It is also helpful for the subcommittee to receive additional letters of recommendation from faculty members who have worked with the student but who will not be associated with the interdisciplinary program.

Proposal Review and Next Steps

A faculty subcommittee of the Graduate Council reads the proposal and makes a recommendation to the Dean of the Graduate Division, who makes the final decision whether to approve the proposal.

If approved, the student's major will be changed to Interdisciplinary Studies. One of the five sponsoring faculty (usually the major professor) will be designated as Graduate Adviser for signatures on study lists, petitions, and other forms requiring the signature of a Head Graduate Adviser.

Qualifying Examinations will be carried out in accordance with the usual procedures. Foreign language requirements will conform to Graduate Council policy. After successful completion of the Qualifying Examination, the student will be advanced to candidacy under Plan A with five members (three signing the dissertation title page and all five participating in a final defense of the subject of the dissertation).

Source: Authors adapted from http://grad.berkeley.edu/programs/interdisciplinary/.

Supervision of Doctoral Candidates

Good supervision is fundamental to the success of doctoral candidates. Many publications and studies stress that fact (for example, Bryne, Jørgensen, and Loukkola 2013), including the European Charter for Researchers (cf. §14). The Charter stresses the responsibilities of senior researchers to fulfill their supervisory and supporting role.

Supervision, however, is not the responsibility of supervisors alone. The conclusion to the 2015 EUA's Council for Doctoral Education (CDE) workshop stressed that HEIs share the responsibility for supervision with individual supervisors, and that it should provide the right institutional framework conditions and leadership support for supervisors (for all conclusions, see Box 11).

Box 11 Doctoral Supervision – Practices and Responsibilities

1. Supervision must be considered as a responsibility that the individual professor shares with the institution. At a personal level, the ability to provide good supervision should be seen as a professional skill, separate from the academic/scientific expertise of the professor. In other words, extensive publications and a long-standing academic teaching experience do not necessarily make a good supervisor. Nonetheless, supervisory skills can be developed, for instance, through systematic training. Moreover, training that brings together supervisors from different disciplinary fields is generally perceived as extremely beneficial to participants because multidisciplinarity facilitates real exchange of practices and views, and helps against the feeling of isolation that accompanies the role of supervisor. In an attempt to raise awareness on the importance of quality and performance in doctoral supervision, some institutions decided to assess and recognize excellence in supervision through specific awards and incentives.
2. Leadership support and the appropriateness of the institutional framework are essential for the development of satisfactory supervision practices. During the workshop, participants from the University of Lausanne explained how they managed to turn their "Code of Practice for the doctorate" into a reference document for the whole university. The key strategic actions were the involvement of academic bodies, doctoral students, and professors from all faculties in the content development and subsequently the approval of the document by the deans and the university rectorate.
3. Institutions are looking for effective methods to measure and evaluate the impact of supervisor training and to determine whether the content of the supervisor development program is fit for purpose. So far, there have not been many examples of effective assessment methods. Some institutions have started to collect data on this issue and suggest that the design of staff development programs should be research-based.
4. The assessment of the progression of PhD candidates is a highly debated issue. The question of how to deal with the PhD project of a student who proves unable to progress exists in every institution but is approached differently according to the different cultural contexts and national legal frameworks.
5. The traditional supervisor-supervisee collaboration seems to have been replaced by a team model in the majority of institutions. In this new model, each doctoral student is assigned to a main supervisor and to a third person, who can be either a co-supervisor or a mentor. The role of the mentor is to act as a mediator in case of conflict between the PhD candidate and the supervisor. Very often, to avoid conflict and define the rights and the duties of the parties, institutions have introduced a PhD agreement to be signed at the beginning of the PhD project.
6. Career options for doctorate holders have changed: academia offers fewer opportunities than it used to, and many PhD candidates will have to leave academia after they have obtained their PhD. This shift should be reflected by a corresponding change in the academic culture. Doctoral programs must prepare PhD candidates for possible careers within or outside academia, and supervisors must be aware of this when performing their tasks. Institutions should help PhD candidates become the drivers of their own professional development.
7. Decision making concerning doctoral education should be driven by solid evidence. Data should be collected on the status quo and on the progress of doctorates in order to monitor supervisory relationships, and this knowledge should be used to inform decision making.

Source: Maltauro 2016.

Note: In boxes and annexes that consist of quotes, spelling was changed from British to American English.

Today, there is recognition that co-supervision is important; therefore, team supervision is on the rise. The shift from the apprentice model to team supervision can be attributed to the significant expansion of higher education, which resulted in greater diversity of students, structures, and purposes of programs, as well as a variety of supervision styles and configurations. Denicolo (2017) stresses the need for team supervision by arguing that doctoral candidates would benefit from a range of views on their research topics and take advantage of their relationship with multiple supervisors to enlarge their professional networks. In addition, having more than one supervisor reduces risks related to the increasing mobility of supervisors, who might leave their doctoral candidates behind.

However, because confusion and tensions can increase with multiple supervision, it is important to think about ways to minimize these issues. Denicolo (2017) notes that joint supervision requires, at the very least, a harmonized approach to advising and guiding doctoral students so that they develop as independent researchers. Important guidelines to solve challenges of co-supervision include that supervisors are trained for co-supervision, and that they develop shared objectives and ensure open communication.

The training of supervisors is crucial for good supervision. The importance of supervisors' training reflects the shift from the apprentice-master model to a more structured relationship (cf. Maltauro 2016). Training is particularly important for academics who have no prior supervision experience. Supervisors' training became an accepted part of HEI activities and a signal to doctoral candidates that the respective institution takes their training as researchers seriously.

The UK is the first country in Europe to have developed supervisor training. Other countries that achieved significant progress with supervisors' training include Australia, Denmark, and Sweden (Brentel 2017). Denmark and Sweden are interesting examples of countries that developed supervisor training activities via national networks. Box 12 describes how Ireland managed such a shared process and highlights the aspects that should be taken into account when developing supervisor training.

Box 12 Developing a national approach to the training of academic supervisors in Ireland

This box shows how Ireland approached the development of a national framework for training and supporting academic supervisors. The Irish project involved five universities and two Institutes of Technology that represented a significant proportion of the total PhD student population in Ireland. The overall interinstitutional project was managed by a working group. The program was developed in such a way so as to facilitate a unified approach while respecting institutional differences.

In the initial stages of developing the Irish framework, several key themes to be addressed in the training of and support for supervisors were identified:

- Working within institutional administrative systems relating to postgraduate education (for example, registration, examination);
- Mentoring and support of individual students, and guiding the development of students as independent researchers (for example, advising on training strategies, helping students with Personal Development Plans/Training Needs Analysis or other developmental tools, providing feedback, drawing on existing support services for students in difficulty);
- Understanding key stages of progress for students and projects, and appropriate principles of project management;
- Managing academic aspects of supervision (for example, preparing students for evaluations, examinations, and theses).

In addition, it was recognized that there are several categories of supervisory staff, whose training needs may be substantively different, for example:

- Early-stage researchers working with students, usually as co-supervisors (for example, postdocs);
- Newly appointed academic staff without experience of supervision (including probationary staff);
- Newly appointed academic staff without experience of supervision in an Irish HEI;
- Academic staff with experience of supervision, either within or new to an Irish HEI;
- Research staff who do not hold academic positions, but who are in day-day contact with students, for example, in research centers;
- Heads of Department/School/Institutes and Department Managers who need to be aware of regulations and best practice for research students in their Department;
- Administrative staff in Departments or central of offices who deal directly with postgraduate students.

In any institution, it is likely that the training needs of these diverse categories may require different sessions or courses, or parts thereof. For experienced staff, for example, particularly those with research leadership responsibilities, keeping up to date with policies and practices, and developing their capability to support and manage diverse research staff roles within a team or center, is a critical development step, and the participation of such staff in training sessions for less experienced staff will unquestionably yield valuable benefits. Also, administrative and academic staff could benefit from combined initiatives that build bridges and understanding among these key sources of support for students.

Thus, the Working Group proposed to develop a multistrand strategy for support of staff involved in research student supervision and support, involving induction sessions for new staff; workshops for experienced staff; and support through development of training materials, guidelines, and handbooks, and an online forum for discussion of issues.

When courses were being designed, the guiding principle was as follows:

- Minimum lecturing content, maximum use of discussion, case studies, reflection, exercises, and so forth, based on a survey of international best practice;
- Blending academic disciplines for generic areas where possible, perhaps with follow-up individual sessions for particular disciplines, and subsequent support through, for example, online resources;
- Drawing on a mix of international experts and experienced supervisors for course development and delivery.

The issue of formal accreditation of training for staff was carefully considered and left for each institution to decide. In general, it was intended that the training and skills development could be taken as stand-alone activities, or be awarded credit in formal qualifications taken in parallel or at a later date. Whatever model of supervisor support is adopted, to ensure high rates of participation by academic staff, clear benefits must be demonstrable, or elements must be formally associated with ongoing training and induction programs.

Source: Authors adapted from NAIRTL 2012.

There are different ways of approaching the supervision of doctoral candidates, but this is a fast-changing area in Europe. The variety of academic cultures is reflected in how supervisors are chosen, trained, and monitored (Bryne, Jørgensen, and Loukkola 2013, 30). On one end of the spectrum, Sweden requires supervisors to take an examination before they are appointed to show that they have the skills required, while in the UK, supervisors are trained and can be removed from their role if there are repeated problems among their supervisees. At the other end of the spectrum, in many parts of Southern and Eastern Europe, professors must have merely the right formal qualifications or a certain number of years of research experience to become supervisors, and show that they are research-active. They receive no training and their performance is not monitored. Changes to these practices and introducing supervisor training and monitoring require involving academics in discussions to show how supervision can be improved through these new practices (see also Box 12). In addition, the training of supervisors should be based on a profound understanding of all aspects of doctoral supervision and the willingness of participants to reflect openly about their experience (Brentel 2017, 5).

Furthermore, it is essential to provide ongoing support after the initial training so that supervisors do not revert to a position where they are isolated and cannot discuss their responsibilities (Brentel 2017, 5).

HEIs can take up all those different facets of the supervision of doctoral candidates in institutional policies, which need to cover at a minimum the qualifications of academic staff who are allowed to supervise (for example, being an active researcher in the relevant field); how supervision is considered as part of the teaching workload; the number of doctoral candidates per supervisor; and the supervisors' responsibilities (for example, expectations regarding regular interactions with the doctoral candidates, requirements about monitoring their progress, the support given to develop the candidates' research and soft skills, and their subject-based and interdisciplinary knowledge).

In addition, regulations could include information about supervisors working as part of a team, any mandatory or optional supervisor training, the formal performance appraisal of supervisors, and the complaints and appeals procedures available to supervisors. Such regulations need to be accessible to all institutional members and consistently applied. Furthermore, it is important that HEIs address the continuity of supervision (for example, if the initial supervisor leaves or is removed or if a student requests a change of supervisor).

Finally, the performance of supervisors can be made part of the internal quality assurance processes. Quality assurance of supervision usually comprises yearly meetings between supervisors and unit heads to discuss students' progression and any challenging issues, such as an unusual number of students who are not progressing normally, an unusual number of student complaints

(which, if grave enough, even in smaller numbers should trigger broader discussions), and other relevant factors. If necessary, the unit head can require a supervisor to seek training or remove a supervisor from his or her role. Advisors with whom doctoral candidates discuss their supervision in a safe environment can also be part of the quality assurance arrangements.

Admissions

The path of students from their recruitment to the conferral of the doctorate needs to be carefully monitored and supported. The key milestones in the process of doctoral training are admission, progression, and assessment.

The traditional practice of a student approaching a potential supervisor to inquire about being admitted to a doctoral program is disappearing and being replaced with an institutional process. While many HEIs in Europe are still recruiting internally, the institutions have published criteria and developed transparent admission processes. The overall objective of a sound admission system is that the doctoral candidate, the research environment at the HEI, the resources available, and the supervision capacities match (ECU 2013, 38).

In the UK, the QAA requires HEIs to define in advance and communicate clearly the rights and responsibilities of doctoral candidates, and to provide candidates with all relevant information (QAA 2015b). With respect to admission procedures, it requires that they are clear, consistently applied, and demonstrate equality of opportunity (QAA 2015b, 13). Additional important criteria are that only appropriate candidates are recruited; that at least two staff members trained for that purpose are involved in admission decisions; and that the HEI can ensure that the admission process fulfilled its admission policy, notably with respect to non-discrimination (QAA 2015b, 14).

At U.S. universities, it is common to ask for a dissertation proposal. For example, applicants to the interdisciplinary programs at UC Berkeley must submit a preliminary dissertation prospectus that describes the research questions or hypotheses and the research methodology in the context of a discussion of the current state of knowledge on the subject.[8]

The global competition for talents means that the top research universities are seeking to recruit worldwide and use their brands to attract candidates. At the Technical University of Denmark, for instance, all vacant positions (except for industrial PhDs) are advertised nationally and internationally (Barfoed 2013); international applicants are interviewed by Skype and the successful ones invited for an on-site interview.

Following admission, doctoral candidates should be supported by an orientation and the provision of relevant information. An orientation creates a sense of community among doctoral candidates. At Edith Cowan University in Australia, for instance, the orientation includes information about the expectations and responsibilities of supervisors and candidates, degree requirements, progress

[8] http://grad.berkeley.edu/programs/interdisciplinary/.

procedures, research integrity and ethics,[9] grievance procedures, health and safety procedures and the availability of support services (ECU 2013, 39).

Candidates should be provided with an overview of all relevant regulations and processes, including characteristics of the program (for example, academic requirements, rules and regulations, the availability of funding and teaching assistantships, the criteria and length of financial support, and so forth); the time commitment and supervision arrangements; academic and nonacademic course requirements and mobility opportunities; and the rights and responsibilities of doctoral candidates (for example, costs, intellectual property rights, and appeals and complaints procedures). The related documents need to be updated regularly and easily accessible.

Progression and Assessment

To ensure appropriate progression, many universities require their doctoral candidates to sign a contractual agreement with their supervisor that includes clear milestones. As an example (for another example, see Annex 1),[10] the University of Lund uses an individual study plan for planning and monitoring the progression of the doctoral candidates. It contains 12 check-off points outlining how the individual timetable for the doctoral degree should be structured, and the plan is revised at least once a year (LERU 2016). Another example comes from the University of Leiden, which requires that all candidates have a training and supervision plan within three months of the start of their PhD; that they have identified a second or co-supervisor in addition to the first supervisor, and that each co-supervisor has clear responsibilities; that each candidate has an annual meeting to review progress with one or two independent members of staff; and that a decision is taken at the end of the first year as to whether the candidate is allowed to continue.[11] At the University of Twente, a qualifying exam, nine months after admission, requires candidates to demonstrate sufficient progress and potential that would convince a research group and a few external professors that the candidate will be able to complete the doctorate.

Of note in the Leiden example is the annual meeting with independent staff members (that is, not the supervisors) to discuss how supervision is working out. That is a good way of addressing supervision problems. Similarly, at Aalto University in Finland, doctoral students have an assigned advisor (in addition to their supervisors) for that purpose.

HEIs are monitoring progression and completion. Such monitoring is especially important when scholarship funding is tied to on-time completion. Monitoring of progression helps address weak supervision and improve completion (see the example of the University of Adelaide, Australia, in Box 13).

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[9] Includes videos and a variety of activities such as interviews, quizzes, and a discussion forum. This course was developed with contributions from the doctoral candidates and requires about 12 hours of homework. It is available in open access on Moodle (http://www.cpu.fr/actualite/integrite-scientifique-a-luniversite-de-bordeaux-sensibiliser-et-responsabiliser-tous-les-doctorantes/).

[10] See also, for another example, the University of Tampere's agreement form: http://www.uta.fi/english/doctoralschool/regulation/index/doctoral_studyandsupervisoryplan_eng_V1.0.docx

[11] PhD Guidelines; http://www.phd.leiden.edu/current/policies-procedures/phd-guidelines.html.

Efforts to improve completion rates can also result from external pressures. In the case of the social sciences in the UK, for instance, the Economic and Social Research Council (ESRC) that funded students played a significant role in that respect in the early 1990s. Humphrey (2010) notes that the ESRC published detailed research training guidelines, covering core research and subject-specific training, with which social science disciplines had to comply in order to receive support for their students. ESRC also required institutions to report on completion rates. Those that fell below a 60 percent average were subject to the sanction of two years' exclusion from the prestigious ESRC studentships.

Box 13 Improving PhD Completion Rates: University of Adelaide, Australia

All supervisors are assessed on the number of students they have supervised over a number of years and their current load. The university was keen to reward supervisors for "timely" completions, other completions, and "student rescues," when someone about to abandon a thesis was persuaded to stay on. It wanted to penalize noncompletions and withdrawals due to dissatisfaction with supervisors, but to remain neutral about early withdrawals, student-initiated withdrawals for nonacademic reasons, and failed rescue attempts.

The result was a much more effective system for classifying and tracking the performance of supervisors. This has led to problems being addressed earlier, the removal of "totally unsatisfactory supervisors," and an 8 percent increase in timely completions.

Faculty members have been bought into it because they can use the results to support applications for promotion, and the university can demonstrate "the efforts made to reduce unnecessary wastage" when "arguing for additional scholarship support," according to Russell, who said that behavior such as "dragging failing students out" until their scholarships run out is no longer seen as appropriate.

Source: Authors adapted from Reisz 2017.

HEIs can also account for special circumstances impacting the duration of doctoral studies. Those include changing personal circumstances such as pregnancy leave, parental leave, or changing status from part-time to full-time or vice versa. Institutions devise appropriate procedures to deal with such changes, for example, revising the doctoral agreements accordingly.

Aside from regularly monitoring the progression of doctoral candidates, the thesis is the primary basis for their assessment. There is strong consensus that the doctoral thesis should be based on original research of publishable quality. What concrete form this takes can vary substantially, including in a single institution. The two most frequent formats are a monograph or a series of papers (published or not). Studio-based research in areas such as audiovisual, arts, and IT is also an acceptable format in some cases. The specific requirements vis-à-vis the thesis vary with its type. In the UK, for instance, a thesis in the form of a series of papers needs to be an integrated whole and present a coherent argument rather than a random assortment of papers (Davidova 2010). Other requirements devised by some HEIs are that the doctoral candidate has published several peer-reviewed papers in internationally recognized journals, and that she or he is the first author of at least one paper (Olschewski 2010).

Irrespective of the format and related requirements, it is important that doctoral candidates are informed on all aspects and requirements related to their thesis. The relevant information comprises the way in which the thesis is assessed. These criteria need to be clear, fair, and publicly available, and communicated actively to doctoral candidates and supervisors. The procedures should be applied rigorously and consistently. That can be done through standard information packages, introduction meetings, and clear instructions for supervisors and promotors.

The process surrounding the final thesis of a doctoral candidate usually includes an oral defense. The most common procedure for the defense is a formal and public procedure, but private procedures are common in some countries (Davidova 2010).

Whatever the format, it is important to ensure that all phases of the examination process are regulated. For instance, it is good practice to appoint external examiners (preferably some international), who have no conflict of interests, and have been approved by the university. The doctoral candidate can have a right to veto examiners before they are appointed and have access to complaints and appeals procedures. The examination that takes place during the oral defense can lead to failing the procedure, or requests by the examiners for improvements of the thesis. Those improvements can be directed at increasing the success of the thesis' publication in journals.

Increasingly, theses (and the associated data) are available in open repositories. Generally, most theses are available online except if there are reasons leading to an embargo for a designated period of time (for example, copyright issues, and ethical sensitivities such as protection of human subjects). Nevertheless, online publication could be an obstacle to career development by preventing more prestigious forms of publications.

The quality of the theses should be monitored regularly. A good quality assurance practice is for the HEIs to periodically review the theses that have been accepted to ensure that they are of consistent quality across the disciplines. These could be done by an interfaculty or international committee that would read a sample of theses across disciplinary fields to evaluate whether they meet the same quality standards.

Components of Doctoral Training

Increasingly, HEIs are providing postgraduate students with academic, subject-based courses and soft skills development to prepare them for both their academic and nonacademic careers. It estimated that around 50 percent of current doctorate holders are employed outside academia, in business, government, the service sector, and other education sectors, holding both research and non-research positions, and it is unlikely that the figure will decrease (Borrell-Damian 2009, 103). If the nonacademic labor market becomes the destination of an increasing number of doctoral holders, their generic skills must be sufficient to meet employer expectations. The related need to provide doctoral candidates with a wider set of skills is increasingly accepted by HEIs (LERU 2014). Other elements of doctoral training such as fieldwork and experimental laboratory work depend on the field.

A good starting point for developing a course menu is to identify the characteristics that doctoral graduates should develop. These characteristics can include a range of competencies in handling knowledge, critical thinking, project management, professional standards and ethics, interpersonal skills, and the dissemination of research results (see also Box 14). Defining such characteristics can lead to a learning-outcome approach to doctoral programs. Box 15 describes how this is implemented at UC Berkeley. In this case, the university-level set (broad) learning outcomes, while leaving each discipline the task of

defining them further and applying this approach to its particular programs. The box also shows how internal accountability mechanisms ensure the quality of these processes.

Box 14 QAA's Characteristics of doctoral graduates

All doctoral graduates should be able to:

- Search for, discover, access, retrieve, sift, interpret, analyze, evaluate, manage, conserve, and communicate an ever-increasing volume of knowledge from a range of sources
- Think critically about problems to produce innovative solutions and create new knowledge
- Plan, manage, and deliver projects, selecting and justifying appropriate methodological processes while recognizing, evaluating, and minimizing the risks involved and impact on the environment
- Exercise professional standards in research and research integrity, and engage in professional practice, including ethical, legal, and health and safety aspects, bringing enthusiasm, perseverance, and integrity to bear on their work activities
- Support, collaborate with, and lead colleagues, using a range of teaching, communication, and networking skills to influence practice and policy in diverse environments
- Appreciate the need to engage in research with impact and to be able to communicate it to diverse audiences, including the public
- Build relationships with peers, senior colleagues, students, and stakeholders with sensitivity to equality, diversity, and cultural issues.

Furthermore, doctoral researchers are increasingly being encouraged to develop their foreign language and enterprise skills, and to cultivate business acumen.

All doctoral graduates will have developed during the course of their research additional specialist knowledge within their discipline, while those who have studied a professional doctorate are likely to have been required to have particular professional experience that informs the topic of their research studies. They may well also have been required to engage in further study related to that professional field as part of their doctorate.

Finally, doctoral graduates are able to prepare, plan, and manage their own career development while knowing when and where to draw on support.

Source: QAA 2015a.

Box 15 UC Berkeley: Graduate Programs Assessments and Outcomes

In May 2013, the Graduate Council approved guidelines for establishing graduate program outcomes (GPOs) for all graduate degree programs. It identified six areas of mastery that are common to graduate programs that reflect Berkeley Academic Senate requirements and statements on graduate education.

Through curriculum and assessment mechanisms defined by each degree program, graduate students will be able to demonstrate mastery relative to:

- Advanced knowledge
- Methods
- Research
- Pedagogy
- Communication
- Professionalism.

For more information, please see the Graduate Council Statement (PDF).[a]

Curricular Maps

To implement the Graduate Council's statement, curricular maps of each graduate degree program at Berkeley were constructed, incorporating published program requirements and information from departments obtained through a survey.

In September 2013, program faculty reviewed their degree maps to ensure accurate representation of graduate program outcomes, revised them as needed, and forwarded them to the Graduate Division.

The Graduate Division reported to the Graduate Council the results of the GPO mapping process in October 2013.

Links to key documents:

- Graduate Program Outcomes (PDF)[b]
- Graduate Council Statement (PDF)[c]
- GPO Mapping – Explanation of Symbols & Rationale for their Use (PDF).[d]

Source: Authors based on http://grad.berkeley.edu/programs/graduate-program-outcomes/.

Note:
a. http://graddashboard.berkeley.edu/wp-content/uploads/guidelines.pdf.
b. http://graddashboard.berkeley.edu/wp-content/uploads/gpos-final.pdf.
c. http://graddashboard.berkeley.edu/wp-content/uploads/guidelines.pdf.
d. http://graddashboard.berkeley.edu/wp-content/uploads/rationale.pdf.

An increasing number of doctoral-granting institutions offer taught courses to doctoral students. At the University of Twente, for instance, the educational structure is set out in official regulations.[12] The essential requirement is that a doctoral candidate and his or her supervisor must agree within the first three months on a training and supervision plan that specifies the frequency of their meetings and how the candidate will complete 30 European Credit Transfer and Accumulation System (ECTS) credit points of coursework. These are divided into two equal halves: 15 on academic courses and 15 on skills development. (See the "Doctoral Education Guidelines" for further details on the course requirements.)

Often, the requirements and the balance between taught courses and work on the doctoral thesis will vary within one institution. As an example, doctoral programs at the University of Tampere[13] are equivalent to 240 ECTS credit points. The University of Tampere Doctoral School[14] was established recently and the details of the curriculums for doctoral programs are decided by the faculties. However, the standard structure is as follows: 180–200 ECTS for the dissertation; and 40–60 ECTS for courses including orientation, methodology, doctoral seminars, and so forth. How the 40–60 ECTS are divided and what they cover varies across the faculties.[15]

HEIs also offer professional development courses as well as career support. The menu of courses taken by each doctoral candidate will vary depending on his or her prior experience and future projects. Box 16 provides an example of such activities at Imperial College, London, UK.[16]

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12 https://www.utwente.nl/en/education/post-graduate/tgs/rules-regulations/doctoral-education/ and https://www.utwente.nl/en/education/post-graduate/tgs/.

13 cf. The aims, organizing, and good practices of doctoral training at the University of Tampere: http://www.uta.fi/english/doctoralschool/regulation/index/Guideline%20on%20the%20goals,%20organising%20and%20good%20practices%20of%20doctoral%20training%20EN_v2.pdf.

14 http://www.uta.fi/english/doctoralschool/introduction/index.html.

15 As examples, cf.: Doctoral program in Education and Society:
http://www.uta.fi/edu/en/doctoralstudies/index/EDU_regulations.pdf
https://www10.uta.fi/opas/tutkintoOhjelma.htm?rid=14511&uiLang=en&lang=en&lvv=2017.
Doctoral programs in the Faculty of Medicine:
http://www.uta.fi/med/en/doctoralstudies/regulations/MED%20jatko-opas%202015%20EN,%20nettiversio.pdf
https://www10.uta.fi/opas/tutkintoOhjelma.htm?rid=11934&uiLang=en&lang=en&lvv=2015.
Doctoral programs in the Faculty of Natural Sciences and Communication Sciences:
http://www.uta.fi/sis/en/doctoral_studies/curriculumguide2015-2018.html.

16 For instance, cf. University of Twente: https://www.utwente.nl/en/hr/career-professional-development/.

Box 16 Professional skills training at Imperial College, London, UK

The Graduate School at Imperial College provides a Professional Development Program for Postgraduate Research and Postgraduate Taught Students.

Why does Imperial offer professional skills training?

Funders of doctoral programs, including governments, industry, and research councils, expect that students would have spent time on their professional development, and consider that developing generic research, personal, and professional skills is an important part of postgraduate training.

Imperial's Professional Development Program offers student support in their study and research, as well as the opportunity to develop skills relevant to their Master's or Doctorate and their future career, whether inside or outside academia. These skills are meant to improve the ability to undertake focused and successful research, present one's work to a variety of audiences, and enhance the students' overall experience at College. Postgraduate alumni, academics, and employers have noted the value of the program.

The Graduate School works across Imperial College with academic and support departments, alumni, students, and externals to enable and enhance joined-up opportunities. This has a social benefit, fostering networking and collaboration, as the courses, events, and activities provide forums for students to interact with others from different departments and divisions.

The Postgraduate Development Unit (PDU) ensures that the program is educationally relevant, developing new initiatives, and safeguarding quality and relevance. The program is underpinned by educational research focused on the postgraduate student experience.

The Graduate School Professional Skills Development Program

The Graduate School Professional Skills Development Program is one of staged learning to ensure that students acquire basic research skills at the start of their doctoral studies and continue to develop as a well-rounded researcher, gaining the skills and experience to successfully complete a research degree and move on. The program is an integral part of the research degree and students should use it to support their personal development. The courses vary in length and format, from one-hour lectures, webinars, and online courses, to three-day interactive residential workshops.

The short program is divided into "innovation" areas as follows:

- Writing for success
- Perfecting presentations
- Ensuring integrity
- Information landscape
- Maximizing management skills
- Understanding yourself and others
- Successful interactions
- Entrepreneurship
- Teaching.

The program is regularly reviewed and updated and new courses added throughout the year.

Requirements

All doctoral students are expected to complete several professional skills courses as part of their doctoral degree registration. Imperial College requires all doctoral students to complete their minimum attendance requirement using one of the following options.

Option One:

- A minimum of two professional skills workshops plus the online plagiarism awareness course by the Early Stage Assessment.
- A further two Graduate School workshops or a Global Postgraduate Retreat or Global Fellows International Program by the Late Stage Review.

Option Two:

- A Graduate School Global Postgraduate Retreat plus the online plagiarism awareness course by the Early Stage Assessment.
- One further Graduate School workshop or an additional Global Postgraduate Retreat or a Global Fellows International Program by the Late Stage Review.

Option Three:

A Global Fellows International Program plus the online plagiarism awareness course by the Early Stage Assessment.

Source: Authors adapted from
https://www.imperial.ac.uk/study/pg/graduate-school/professional-skills/why-do-we-offer-professional-skills-training/;
https://www.imperial.ac.uk/study/pg/graduate-school/professional-skills/doctoral/professional-skills-attendance-requirement/.

Sometimes doctoral programs include teaching assignments. According to Eurydice (2017), it is difficult to know the extent of this practice in Europe, because most countries do not stipulate this aspect in their legal framework and leave it up to the internal regulations of the higher education institutions. There are, however, a few exceptions. In Bulgaria, Denmark, Estonia, Poland, and Slovakia, legal frameworks are phrased in a way that establishes teaching assignments as a standard part of all or most PhD curriculums (Eurydice 2017, 35). These regulations vary in how specific they are about the number of teaching hours and whether this applies to all doctoral candidates or only those who have a contract. For instance, the legal framework in Estonia indicates that teaching and supervising are among the competencies expected from PhD holders but without quantifying the extent of expected teaching or supervising practice (Eurydice 2017, 35).

Quality Assurance

Accountability and systematic quality enhancement of doctoral education have been rising in importance on the agenda of HEIs, but external quality assurance of doctoral education is not frequent because most quality assurance agencies in Europe do not have responsibilities for assuring the quality of the third cycle.[17] Sometimes, external quality assurance is part of the evaluation of research. In the Netherlands, for instance, the research evaluation exercise looks at the extent to which doctoral students are fully engaged in their research units. The research review committees interview the doctoral candidates as a matter of course.

Accountability requirements are often focused on the need for each institution to assure its quality through internal quality processes. The need for internal quality assurance processes and basic requirements are covered in the Salzburg II recommendations, which stress the need to adapt these processes to the institutional profile and the specific disciplines. Furthermore, the recommendations include peer review and the use of indicators based on institutional priorities. These indicators generally measure individual progression, net research time, completion rate, transferable skills, career tracking, and dissemination of research results for early-stage researchers, taking into consideration the professional development of the researcher as well as the progress of the research project (EUA 2010, §2.7).

As those requirements reveal, the quality assurance mechanisms required for the doctoral level are somewhat different from the ones required for the first two cycles (Bryne, Jørgensen, and Loukkola 2013). That pertains to, for example, the importance of an adequate research environment, the importance of supervision, and the specific character of a doctoral thesis. Overall,

[17] At present, few national quality assurance agencies in Europe address doctoral education as part of their core activities. These include, in particular, the French national evaluation agency, the High Council for Evaluation of Research and Higher Education (HCERES), which has responsibility for the evaluation of research more generally, and specifically includes a strand focused on the evaluation of doctoral schools in its activities; the Central Evaluation and Accreditation Agency (ZeVa) in Hanover; the Polish Accreditation Committee (PKA); the Quality Assurance Netherlands Universities (QANU) in the Netherlands, which evaluates doctoral programs as part of the evaluation of research units; and the Hungarian accreditation agency. The Romanian Agency for Quality Assurance in Higher Education (ARACIS) is launching the evaluation of doctoral programs.

doctoral schools were identified as a promoting factor of internal quality assurance and improvement (Bryne, Jørgensen, and Loukkola 2013, 42).

Importantly, the quality of all aspects of the doctorate should be continuously monitored and assured. Internal quality assurance mechanisms include institution-wide data collection and a targeted analysis of the data. They involve feedback from doctoral students and supervisors as well as internally initiated evaluations of academic and professional courses and research activities (research institutes, research groups, and so forth). The outcomes of the data analysis are provided to the relevant internal stakeholders to allow them to monitor and improve quality in a continuous manner. Results of external quality assurance processes are used for the same purposes. The senior institutional leadership monitors the quality improvement processes.

Internal quality assurance processes are part of a wider framework of external quality assurance processes, which should be coordinated. Stakeholders involved in the monitoring of the quality of doctoral education are quality assurance agencies, research assessment exercises, and funding organizations. There is a risk that external evaluations become too burdensome and uncoordinated so that internal quality processes have no room to grow. This challenge can be mitigated by increasing the coherence of assessments and evaluations in the field (Bryne, Jørgensen, and Loukkola 2013).

2.4 Managing the Doctorate with Partners

Partnerships with others are likely to enhance the quality and diversity of doctoral provision — whether with other domestic HEIs, or with international or industrial partners. This is particularly true for countries with a relatively small higher education system, but it is also true that institutions in very large countries establish partnerships as key to the quality of their research activity. Cooperation enriches doctoral training and promotes, among many benefits, interdisciplinarity, quality (by creating critical mass), and a more efficient use of resources.

Partnerships, however, carry risks that need to be managed. The QAA Quality Code sets out basic expectations regarding the management of partnerships, and expects that the doctoral-awarding institutions will take full responsibility for the quality and standards of their doctoral awards, including when partnerships are involved (QAA 2015b, 37).

A sound practice to manage partnerships needs to cover, among other aspects, a strategic approach, appropriate governance arrangements, and adequate policies and procedures (QAA 2015b; for a comprehensive overview see Box 17[18]).

[18] The 19 indicators listed in the box assume that HEIs are fully autonomous and responsible for the quality and standards of their awards and, as such, are fully in charge of all the steps of doctoral training, from the point of entry through the conferral of the doctorate.

Box 17 Managing the doctorate with partners: 19 indicators of sound practice

Indicator 1: A strategic approach to delivering learning opportunities with others is adopted. Appropriate levels of resources (including staff) are committed to the activities to ensure that the necessary oversight is sustained.

Indicator 2: Governance arrangements at appropriate levels are in place for all learning opportunities which are not directly provided by the degree-awarding body. Arrangements for learning to be delivered, or support to be provided, are developed, agreed, and managed in accordance with the formally stated policies and procedures of the degree-awarding body.

Indicator 3: Policies and procedures ensure that there are adequate safeguards against financial impropriety or conflicts of interest that might compromise academic standards or the quality of learning opportunities. Consideration of the business case is conducted separately from approval of the academic proposal.

Indicator 4: Degree-awarding bodies that engage with other authorized awarding bodies to provide a program of study leading to a joint academic award satisfy themselves that they have the legal capacity to do so.

Indicator 5: The risks of each arrangement to deliver learning opportunities with others are assessed at the outset and reviewed subsequently on a periodic basis. Appropriate and proportionate safeguards to manage the risks of the various arrangements are determined and put in place.

Indicator 6: Appropriate and proportionate due diligence procedures are determined for each proposed arrangement for delivering learning opportunities with an organization other than the degree-awarding body. They are conducted periodically to check the capacity of the other organization to continue to fulfil its designated role in the arrangement.

Indicator 7: There is a written and legally binding agreement, or other document, setting out the rights and obligations of the parties, which is regularly monitored and reviewed. It is signed by the authorized representatives of the degree-awarding body (or higher education provider without degree-awarding powers arranging provision by a third party) and by the delivery organization, support provider, or partner(s) before the relevant activity commences.

Indicator 8: Degree-awarding bodies take responsibility for ensuring that they retain proper control of the academic standards of awards where learning opportunities are delivered with others. No serial arrangements are undertaken without the express written permission of the degree-awarding body, which retains oversight of what is being done in its name.

Indicator 9: Degree-awarding bodies retain responsibility for ensuring that students admitted to a program who wish to complete it under their awarding authority can do so in the event that a delivery organization or support provider or partner withdraws from an arrangement or that the degree-awarding body decides to terminate an arrangement.

Indicator 10: All higher education providers maintain records (by type and category) of all arrangements for delivering learning opportunities with others that are subject to a formal agreement.

Indicator 11: Degree-awarding bodies are responsible for the academic standards of all credit and qualifications granted in their name. This responsibility is never delegated. Therefore, degree-awarding bodies ensure that the standards of any of their awards involving learning opportunities delivered by others are equivalent to the standards set for other awards that they confer at the same level. They are also consistent with UK national requirements.

Indicator 12: When making arrangements to deliver a program with others, degree-awarding bodies fulfil the requirements of any professional, statutory, and regulatory body (PSRB) that has approved or recognized the program or qualification, in relation to aspects of its delivery and any associated formal agreements. The status of the program or qualification in respect of PSRB recognition is made clear to prospective students.

Indicator 13: Degree-awarding bodies approve module(s) and programs delivered through an arrangement with another delivery organization, support provider, or partner through processes that are at least as rigorous, secure, and open to scrutiny as those for assuring quality and academic standards for programs directly provided by the degree-awarding body.

Indicator 14: Degree-awarding bodies clarify which organization is responsible for admitting and registering a student to modules or programs delivered with others, and ensure that admissions are consistent with their own admissions policies.

Indicator 15: Degree-awarding bodies ensure that delivery organizations involved in the assessment of students understand and follow the assessment requirements approved by the degree-awarding body for the components or programs being assessed in order to maintain its academic standards. In the case of joint, dual/double and multiple awards or for study abroad and student exchanges, degree-awarding bodies agree with their partners on the division of assessment responsibilities and the assessment regulations and requirements which apply.

Indicator 16: Degree-awarding bodies retain ultimate responsibility for the appointment, briefing, and functions of external examiners. The external examining procedures for qualifications where learning opportunities are delivered with others are consistent with the degree-awarding body's approved practices.

Indicator 17: Degree-awarding bodies ensure that modules and programs offered through other delivery organizations, support providers, or partners are monitored and reviewed through procedures that are consistent with, or comparable to, those used for modules or programs provided directly by them.

Indicator 18: Degree-awarding bodies ensure that they have effective control over the accuracy of all public information, publicity, and promotional activity relating to learning opportunities delivered with others which lead to their awards. Information is produced for prospective and

current students which is fit for purpose, accessible, and trustworthy. Delivery organizations or support providers are provided with all information necessary for the effective delivery of the learning or support.

Indicator 19: When degree-awarding bodies make arrangements for the delivery of learning opportunities with others, they ensure that they retain authority for awarding certificates and issuing detailed records of study in relation to student achievement. The certificate and/or record of academic achievement states the principal language of instruction and/or assessment where this is not English. Subject to any overriding statutory or other legal provision in any relevant jurisdiction, the certificate and/or the record of achievement records the name and location of any other higher education provider involved in the delivery of the program of study. Where information relating to the language of study or to the name and location of the delivery organization or partner is recorded on the record of achievement only, the certificate refers to the existence of this formal record.

Source: QAA 2015b.

Interinstitutional Cooperation

Forming alliances and interinstitutional agreements for doctoral education and training is a clear trend in many European countries. This is particularly important when funding initiatives concentrate research capacity and investment in a few institutions. Because such concentration can lead to regional disparities, some countries have tried to find other ways to ensure that all regions benefit from higher-education-driven research. In Sweden, for instance, all doctoral-level courses are open to all doctoral candidates regardless of their institutional affiliation. Many universities in Scotland share a common doctoral school. In France, all universities across the country are required to form an alliance with their immediate neighbors (universities and other types of HEIs). Box 18 presents the case of Université Paris-Est in France.

Box 18 The interinstitutional doctoral school at Université Paris-Est, France

In France, three types of alliances are defined by the 2013 law. This example shows the most highly developed form of alliance: a Comue (Communauté d'universités et d'établissements) that has, itself, the status of a university.

Created in 2007, Université Paris-Est (UPE) is an association of 22 teaching and research institutions located outside Paris (for example, universities, a veterinary school, hospital centers, engineering and architecture schools, research institutes, and other types research and development agencies and technical centers).

UPE, on behalf of its members, awards the doctoral degree as well as the *Habilitation à diriger des recherches*, a national postdoctoral qualification that allows academic staff to serve as doctoral supervisors and as principal investigators.

UPE coordinates doctoral training, from the admission stage to the delivery of the doctorate. To do so, UPE has created six multidisciplinary doctoral schools that combine the expertise of its members in various thematic configurations.

The UPE Department of Doctoral Studies helps the doctoral schools as follows:

- To formalize their method of operation, each doctoral school is composed of a board, a director, and a clearly identified administrative manager who is responsible for its scientific policy, its budget, and its budget allocations;
- To harmonize the recruitment (international calls, funds allocated to doctoral students) and monitoring (duration of the thesis and professional insertion) of doctoral candidates and doctoral holders;
- To ensure the integration of doctoral students, by organizing "welcome days" as well as thematic courses and dedicated scientific days.

The Department of Doctoral Studies coordinates doctoral training and ensures that all doctoral students have the required professional skills by:

- Offering interdisciplinary courses within the doctoral schools and promoting the professional preparation of doctoral students through language courses, library and computer training, project management and business-related training, and so forth;
- Providing opportunities for doctoral students to work as consultants in a business, administration, or institution while preparing their thesis;
- Administering admission to the doctorate degree through the recognition of prior learning;
- Tracking their careers up to 36 months after graduation.

Université Paris-Est has several activities to support the internationalization of research, including:

- Hosting academic guests who have been selected to come to UPE for short periods based on responses to calls for proposals;
- Offering funding for co-tutelle theses, which promote early-stage researcher mobility by allowing a doctoral candidate to be supervised by two supervisors located in two countries, and the international mobility of doctoral candidates and postdocs;
- Assisting international doctoral students, postdocs, and academic guests in their search for housing and in the administrative French residency procedures.

Some of the **shared institutional services**, developed and coordinated by UPE, include:

- An electronic platform, based on a shared information system;
- A library portal;
- Shared subscriptions to online academic resources;
- An international residence for international guests.

Source: Authors adapted from the website of the Université Paris-Est; http://www.univ-paris-est.fr/en/actions-and-missions/document-2478.html.

International Partnerships

Partnerships can also be established at the international level as part of an internationalization strategy that includes the third cycle. Compared to other regions of the world, European universities are more likely to develop internationalization strategies (IAU 2014), including for the third cycle. It is customary to distinguish between two aspects in an internationalization strategy: cross-border internationalization via mobility of individuals, and internationalization "at home" that concerns the design of provision — both types form a part of the strategy of the University of Bergen, Norway (see Box 19).

Box 19 Internationalization strategy at the University of Bergen

Internationalization abroad

The University of Bergen (UiB) surveyed its PhD candidates to learn their needs in relation to internationalization. The survey revealed that going abroad was considered to be very valuable from an academic point of view. It meets the following needs: (a) compensation (learn new methods, new technology, and work in laboratories not available at home), (b) disciplinary variation (experience greater variation), (c) detachment (recreate oneself in a new environment), and d) networking (create future contacts).

These findings served as guidelines for improving UiB's internationalization policy. The 2009 general action plan for doctoral education at UiB requires that departments, research groups, and schools ensure that PhDs are introduced to and properly integrated into existing international networks. The PhDs should be involved in institutions that have been strategically selected as UiB's main international collaborators. Supervisors are now given the responsibility to recommend an academically based choice for the PhD's stay abroad.

Internationalization at home

Internationalization is not only a question of going abroad. For a university with clear ambitions of being visible and attractive in the international arena, it is also necessary to cultivate internationalization at home. PhD candidates want an international environment at home to meet and collaborate with fellow PhD candidates and with (senior) researchers and teachers who come from interesting and high-quality environments that are different from theirs. To improve this dimension, UiB, with a number of local partners, decided to develop a new and unique initiative: the Bergen Summer Research School on Global Development Challenges (BSRS).

Mission of BSRS

The mission of the BSRS is to strengthen the internationalization of PhD education in the Bergen milieu and to foster globally committed young researchers and future leaders. It offers high-quality disciplinary as well as interdisciplinary and problem-oriented, research-based education to a worldwide audience of doctoral candidates and junior researchers. It seeks to form an international platform for discussion and dissemination of new perspectives on key global challenges, where it is crucial to bring together young researchers from the global North and the global South. The topics correspond to fields that are already strong in Bergen; the aim is to strengthen international teams, and thus generate new research projects. The whole concept of BSRS is strategically related to the two major research areas of UiB, that is, global development research and marine research.

BSRS outreach to nonacademic organizations and the public

The BSRS mission is also to reach out to the nonacademic sectors of society. This has two aims: to ensure that the Bergeners take ownership of this initiative, and to provide an opportunity to the PhD candidates to interact with nonacademics on the global challenges they study. This was accomplished by organizing open debate meetings in collaboration with nonacademic organizations.

Source: Authors adapted from Fløttum 2009.

International cooperation in the field of doctoral training benefits from being based on certain principles such as providing access to a good research environment, with appropriate supervisors and resources; that universities involve supervisors and doctoral candidates in their international activities, including facilitating periods of mobility; and that universities must have the necessary institutional structures to support international activities (EUA 2015).

Institutions will provide funding to promote international mobility, for instance, to attend international conferences or a period of research mobility in another institution. Periods of mobility are framed by formal agreements that specify the rights and obligations of the two institutions and those of the doctoral candidate.

International cooperation in doctoral programs can assume different forms. The Joint Degree Management and Administration Network (JOIMAN) project identified the following stages of cooperation (while the list is not supposed to imply that one stage is better than another):[19]

- International collaboration: this type of cooperation is not very structured and typically includes research cooperation and student exchange;
- Individual collaborative doctoral program: such as co-tutelle, which includes a formal agreement with one candidate (see also Box 20);
- Joint doctoral program: A doctoral program developed and/or provided by two or more HEIs, leading to the award of a double or multiple degree;
- Joint doctoral degree: A program developed and/or provided by two or more HEIs, leading to the award of a joint degree issued jointly by two or more institutions on the basis of a joint doctoral program.

The JOIMAN project identified the following success factors of these forms of cooperation: the quality of research cooperation among partners, anchoring cooperation in an internationalization strategy and, most importantly, the application of an individual co-tutelle agreement (see Box 20 for details on the French national framework and Annex 2 for an example of a co-tutelle agreement). It is generally expected that a memorandum of understanding would frame such an agreement.

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[19] *JOIMAN — Joint Degree Management and Administration Network: Tackling current issues and facing future challenges* (http://eacea.ec.europa.eu/erasmus_mundus/results_compendia/selected_projects_action_1_joint_doctorates_en.php). Since their first report, the Erasmus Mundus Joint Doctorates have been launched and further guidelines from JOIMAN are available at www.joiman.eu.

Box 20 International co-tutelles – The French national framework

International co-tutelles in France, which promote early-stage researcher mobility by allowing a doctoral candidate to be supervised by two supervisors located in two countries, are regulated by a national framework. The following provides a snapshot of how these are organized.

Registration

- The student approaches the two potential supervisors and appies to both institutions.
- The two supervisors sign a memorandum of understanding or base their agreement on a preexisting, bilateral institutional agreement.
- The student registers in both institutions but pays registration fees in one institution.
- The co-tutelle agreement specifies how the cost of housing and medical insurance will be covered.
- The doctoral candidate alternates for a one-year period in each institution.

Conferring the doctorate

There are two options for conferring the doctorate:

- As a single award jointly conferred by the two institutions; the award certificate indicates the title in the national language of the two institutions (for example, Doctorat en littérature française; PhD in French Literature).
- As two doctoral awards delivered by each institution; each award includes a reference to the other institution.

In either case, the thesis is defended jointly in one of the two institutions. The examining committee includes representatives from both institutions (funding is available to cover travel and subsistence costs). The language for the oral defense and for the thesis must be acceptable to both institutions. An abstract in French is required.

Source: Campus France n.d.

Collaborative Doctorates with Industry

Collaboration between HEIs and industry can result in doctoral theses carried out in partnership among an HEI, a company, and a doctoral candidate. Among other benefits, such arrangements can have important effects on regional development. This has been recognized by some regions across Europe, which have established policies to support research collaborations between universities and enterprises. The fundament of such an arrangement is the integration of an industrial supervisor in a supervision team, while the academic supervisor retains the lead and the responsibility for successful completion and quality of the thesis (Borrell-Damian, Morais, and Smith 2015, 8).

The European Commission encourages doctorates outside academia by funding European Industrial Doctorates (EIDs) with partners from at least two different EU or associated countries.[20]

A variety of collaborative models with industry are possible, but all must meet certain conditions. The precise model — such as the Professional Doctorate in Engineering (PDEng) offered by three Dutch technical universities (see Box 21) — depends on the specific research project, the respective profiles of the HEI and the company, and the regional context (Borrell-Damian, Morais, and Smith 2015). In any case, some conditions must be met to ensure that collaborative doctorates meet the same exacting academic standards as more traditional doctorates, and allow for a successful collaboration. This includes building and maintaining a trustful relationship among all stakeholders, and careful planning

[20] https://www.euresearch.ch/fileadmin/redacteur/Career_Funding/EID_Infosheet_20170328.pdf and https://www.euresearch.ch/fileadmin/redacteur/Career_Funding/EID_Infosheet_20170328.pdf.

and integrating industry partners in the lifecycle of a doctorate. Additional factors include establishing a formal agreement among the partners that addresses such issues as intellectual property rights and the formal requirements for admission (Borrell-Damian, Morais, and Smith 2015, 25).

Box 21 The Professional Doctorate in Engineering (PDEng) at Dutch technical universities

PDEng programs are two-year, full-time designer programs for end-on candidates in Civil Engineering, Energy & Process Technology, Healthcare Logistics, Maintenance, and Robotics. The PDEng degree (not a PhD) is accredited[a] by the Royal Netherlands Society of Engineers (KIvI). Most candidates are employees of companies who are stimulated and funded by their employers to conduct intensive research on a particular (practical) problem that is related to the company's business.

The programs focus on solving real-life engineering design issues suggested by clients, who may be governments, consultants, contractors (from small and medium-sized enterprises [SMEs] to large multinationals) or large research institutes. Often, trainees find jobs at client companies after obtaining their PDEng there. The programs are full-time for two years (120 ECTS), with 51–60 ECTS (= up to 1 year) worth of education, while the design project makes up the remaining ECTS. Education and the design project are scheduled in parallel across the two years.

Sources: CHEPS 2017, Differentiated Doctorates.

Notes:
a. As in the Dutch higher education law accreditation is only defined for Bachelor's and Master's degree programs, the voluntary "accreditation" of doctorates has no official status, though it may be good for marketing purposes.

In short, collaborative doctorates are generally the result of a previous, long-term research collaboration between the HEI and a company. For the relative importance of different activities in fostering a good relationship between universities and companies from the perspective of companies, see Figure 4.

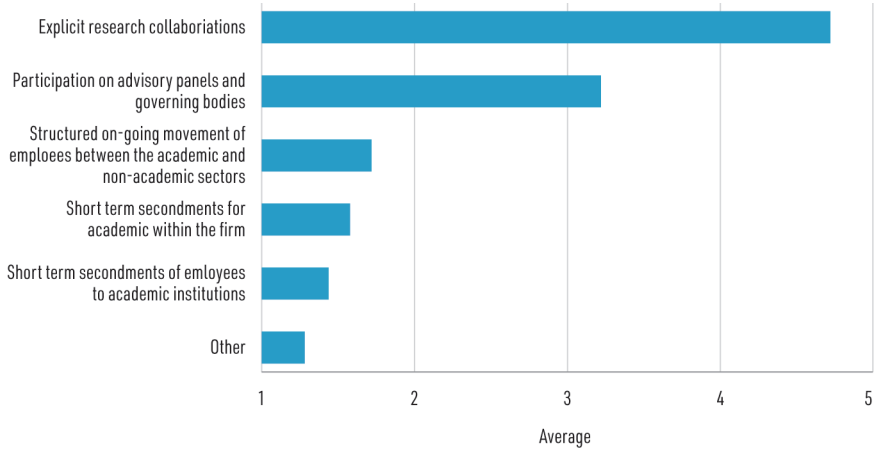

Figure 4 Average importance of different activities in fostering ongoing professional relations between companies and universities, different years (2010–12)

Source: Authors adapted from Borrell-Damian, Morais, and Smith 2015, 26.

Note: The scale ranges from 1 (low importance) to 5 (high importance). Data from the DOC-CAREERS II project; number of responses: 11/14.

Collaborative doctorates are possible in cooperation with different types of organizations, and in different forms. This includes industrial laboratories and other types of organizations as described in Box 22 for France, where an association coordinates these types of doctorates on behalf of the Ministry of Higher Education and Research. Another approach can be found in Denmark. The Technical University of Denmark promotes Industrial PhDs[21] through a number of activities, such as developing Masters projects into PhD projects, organizing research forums and networks aimed at small and medium-size enterprises, marketing the industrial PhD program internally to departments, and maintaining contacts with alumni. In addition, the Career Centre holds annual briefings on the Industrial PhD program for Master of Science (MSc) students and companies.

Partners such as chambers of commerce or foundations can be involved in collaborative doctorates, as shown by the "Dual PhD" offered by the University of Leiden, Netherlands (Box 23).

Box 22 The Industrial Agreement for Training Through Research (CIFRE) fellowship in France

France has been offering the opportunity for "CIFRE doctorates" for the last 30 years. CIFRE fellows conduct their doctorate in a variety of settings, including industrial laboratories or other types of organizations. They sign a three-year, full-time work contract with a French company and receive a good salary. The work undertaken in the partner organization is their thesis.

Fellows enroll in a doctoral course and attend all relevant courses. They are assigned an academic supervisor and an advisor from the company who monitors their work.

The French Ministry of Higher Education and Research funds this specific doctoral program. The CIFRE Program is administered on behalf of the ministry by a French association (Association nationale recherche technologie, ANRT). ANRT assesses the doctoral research projects and the involvement of the companies, and grants EUR 14,000 per year to the company. Fellows are required to submit an annual progress report signed by both the academic and nonacademic supervisors and sent to ANRT.

More than 20,000 PhD students have already benefited from the CIFRE fellowships to complete their doctoral studies. The success rate of the fellowship is very high – 90 percent CIFRE fellows have completed their PhDs and are academic researchers or industrial managers in various academic fields and business sectors.

Source: Authors adapted from http://www.anrt.asso.fr/fr/espace_cifre/pdf/plaquette_cifre_en.pdf.

Box 23 University of Leiden's "Dual PhD"

Dual PhD program

The Dual PhD program is characterized by intensive supervision; tailored tracks; and a small-scale, individual research environment. The dual character of the program is set up in various ways and tailored to the needs of the student. With full-time PhD students, all activities serve the PhD trajectory.

The approach

The Dual PhD Centre connects the strengths of professional practice with the strengths of scholarship through research. The system of the Dual PhD Centre, combining professional experience and PhD research, allows for new cross-fertilization between professional practice and science. Matters and questions arising out of a professional business environment will be studied from an academic perspective.

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[21] "The three-year Industrial PhD programme is focused on enhancing development and innovation in Danish industry. The individual project is carried out in cooperation with a company and a department at DTU; the partners could be either public sector or private companies. The partner receives a subsidy for payment of salary and the university receives a tuition fee from the Ministry of Science, Technology and Innovation. The company and the candidate and/or the main supervisor usually know each other before a company initiates an industrial PhD project; hence, in order to recruit industrial PhDs DTU tries to create structures to facilitate contact between the university, the candidate and the company." (Barfoed 2013, 5)

The approach of the Dual PhD Centre is characterized by individually tailored programs, individual supervision, intensive coaching, and academic profundity through access to the Leiden University's extensive academic facilities and expertise. As a result, new forms of interaction will be made possible between practice and theory.

The goal of PhD research at the Dual PhD Centre is to provide a regional impulse to corporate and public innovation.

PhD contract and PhD financing

The candidate, the employer, and the Centre all work together to best suit individual wishes and circumstances. These working conditions are formally described in a tailored contract. The contract focuses on the special circumstances of the dual PhD candidate and fills the general requirements of the Leiden University Doctoral Regulations.[a]

This contract also describes how the program will be financed. The costs of the program depend on the competencies and knowledge of the candidate as well as the nature and duration of the PhD research. For several professional sectors, education and research funds and grants are available. There are also other subsidy opportunities that can cover some or all of these costs. The Centre can help with advice on financing.

More information about the Dual PhD Centre can be found in the following documents:

- Bridging Theory and Practice: The Dual PhD[b] (English brochure)
- Prospectus pre-PhD program[c] (an overview of the pre-PhD program of Leiden University Dual PhD Centre)
- Model for a dual PhD proposal[d] (a model to develop a dual dissertation proposal).

Source: Authors adapted from https://www.universiteitleiden.nl/en/governance-and-global-affairs/dual-phd-centre/about; https://www.universiteitleiden.nl/en/governance-and-global-affairs/dual-phd-centre/documentation.

Note:
a. http://www.regulations.leiden.edu/research/phd-regulations.html.
b. https://www.universiteitleiden.nl/binaries/content/assets/governance-and-global-affairs/dual-phd-centre/20170117-dual-phd-brochure-english.pdf.
c. https://www.universiteitleiden.nl/binaries/content/assets/governance-and-global-affairs/dual-phd-centre/2017-prospectus-dual-phd-programme.pdf.
d. https://www.universiteitleiden.nl/binaries/content/assets/governance-and-global-affairs/dual-phd-centre/2017-model-dual-phd-research-proposal.pdf.

2.5 Outlook on the Postdoctorate

What is a Postdoctorate?

The postdoc is usually a fixed-term position between the doctorate and a permanent academic position. That implies that much of the discussion on academic personnel in general (see Chapter 3) also applies to postdocs, but it should be noted that the postdoc is not an obligatory step to advance in an academic career.

It is difficult to generalize about the postdoc's responsibilities, but they are usually expected to carry on their research during which they might serve as the junior supervisor of doctoral students. They may have some teaching duties, as well.

The European Charter and Code for Researchers recommends clear rules and explicit guidelines for the recruitment and appointment of postdoctoral researchers, including the maximum duration and the objectives of such appointments (EC 2005, 27).

Career Prospects

The postdoc allows a researcher to become independent, while still developing his or her scientific competencies and professional skills (Science Europe 2016, 6). As a result, the number of postdocs has been rising and exten-

ding to most fields, thus prolonging the precarious career beginning of many academics (cf. also Chapter 3).

A pilot study by the European Science Foundation (ESF) revealed the beneficial aspects of a permanent contract for both science and society. The study tracked the postdoctoral careers of 880 doctorate holders, of whom 57 percent responded.[22] Some of the main findings related to the type of contracts and emphasized the positive impact of long-term compared to short-term contracts in producing more patents and more impactful research (on policy and practice). Long-term researchers were also found to be more likely to receive awards and prizes and to be more satisfied with their workplace (ESF 2015, 9–10).

Currently, however, an alarming number of postdocs have become "permadocs" (Powell 2015), that is, they go from one postdoc to another endlessly with the hope that a permanent academic job will open up. As a response, some research-intensive universities in the United States have decided to limit to five years the postdoc period and, in a sense, force some postdocs out of the academic pipeline. In several European countries (for example, France, Germany), labor law limits the number of times a short-term contract can be renewed. There are, however, ways of getting around the law by going from one institution to the next. Therefore, as Powell (2015) points out, it is unclear if such laws are useful. The European Charter and Code addresses this fact by recommending that institutions take into account prior postdoctoral appointments at other institutions. The Code emphasizes that the postdoctoral status is transitional, and should be considered as one step in a long-term career (EC 2005, 27).

Ultimately, the fate of postdocs is linked to the way that research is funded and laboratories populated. The current model is to rely on cheap and numerous labor (the docs and postdocs). An alternative model, discussed by Powell, is to have fewer but better paid staff and to turn the postdoc into a "superdoc," that is, a well-paid senior scientist (see also Chapter 3).

The postdoc can be supported at the same level as doctoral candidates. A good practice example is provided by Imperial College, which has a center dedicated to postdocs.[23]

2.6 Reform Process toward New Models and Procedures

All facets of doctoral training form part of an overarching system and should be treated as such when approaching reforms in the field. Even though reforms of doctoral training can put a focus on some of the areas discussed, these areas cannot be considered in isolation. Therefore, it is important to account for the repercussions of any partial reform efforts. To ensure that reforms

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[22] Of those, one-third were in postdoctoral posts, one-third completed their postdoc in the last two years, and the one-third completed the postdoc prior to 2011. A follow-up study was launched in March 2017, the results of which should be available shortly.

[23] Postdoc Development Centre; http://www.imperial.ac.uk/postdoc-development-centre/.

are coherent and directed at an overarching, valid objective, a national consensus is needed on what the doctorate should be and how it should be created.

Exchange among higher education stakeholders is a precondition for sound reforms more generally. There are different bodies and actors with an interest in doctoral education in every country. They include governments (for example, the ministry responsible for higher education and the ministry of finance), higher education governing bodies on the national level including quality assurance agencies, HEIs, organizations representing academic staff members, and the private sector. To account for the various interests and demands of those stakeholders, involving them early in a reform process is key.

Given the importance of quality assurance arrangements, all reform efforts need to ensure that new models and procedures are also taken up by quality assurance processes. External and internal quality assurance emerged as the fundament of doctoral training in many European countries. These processes need to be able to cover the specific system of doctoral training in a country. This necessitates complementing any reform efforts by related adaptations of quality assurance arrangements. In this way, it becomes possible also to monitor unintended effects of reforms, and to take mitigating measures when necessary.

2.7 Key Learnings and Good Practice Criteria

Key Developments in the Field of Doctoral Training

- Doctoral education and training is a very diverse arena as demonstrated by the emergence of new types of doctorates and the differentiation in the statuses of doctoral candidates.

- Doctoral education and training has been dynamic as a result of the attention paid to the third cycle by European-level policies and initiatives. European policies and initiatives have identified a range of principles and good practices for the doctoral level. Compared to the first two cycles, doctoral education is significantly less regulated in many countries, because of its tight connections to research.

- At the national level, regulations evolved in line with European developments by providing new national frameworks for the doctorate, and in the form of guidelines and criteria for external and internal quality assurance.

- At the institutional level, internal structures and regulations are changing to adapt to new standards of doctoral education.

- The quality of doctoral training and the way in which it can be promoted lie at the heart of developments related to the doctorate. The most important factors of quality include a stimulating research environment, a diversity of partnerships (national and international with academic and nonacademic partners), quality supervision, and internal quality assurance mechanisms. These must be supported by an appropriate system-level framework that allows diversity of provision and both institutional responsibility and accountability.

Good Practice Criteria

System-level framework

- **A.1** – *System level* – The system-level framework for doctoral training finds an appropriate balance between regulation and flexibility. While regulations and quality criteria need to be applied rigorously and consistently, doctoral training also requires room to accommodate personalized paths, and room for a reasonable level of institutional and disciplinary differences. This necessitates a national consensus on the essence and standards of the doctorate developed jointly by all relevant stakeholders of the higher education system.

- **A.2** – *System level* – The autonomy of HEIs in the field of doctoral training is complemented by mandatory internal accountability mechanisms and appropriate external quality assurance processes of research and doctoral education. This includes regulations on which HEIs have the right to confer the doctorate and the related requirements. The regulations need to reflect that original research is the core component of the doctorate and, therefore, stipulate that institutions provide a suitable research environment.

- **A.3** – *System level* – Doctoral training needs to be incentivized financially to promote efficiency and quality.[24]

- **A.4** – *System level* – Public funding for doctoral training is allocated in accordance with national needs and competencies required, while ensuring a diversity of doctorates.

- **A.5** – *System level* – Research support programs designed and funded at the system level ensure that doctoral candidates are appropriately involved in research projects wherever possible and that suitable co-supervision agreements are in place.

Anchoring the doctorate in the institution

- **A.6** – *Institutional level* – Admission, progression, and assessment of doctoral candidates are monitored and supported. This includes published criteria and transparent processes for admission, an orientation and the provision of relevant information for newly recruited candidates, contractual agreements between doctoral candidates and supervisors with clear milestones (including for any requirements for publications), sound assessment procedures based on clear and transparent criteria and processes, and the monitoring of students' progression and completion.

- **A.7** – *Institutional level* – The supervision of doctoral candidates is framed by appropriate institutional policies and guidelines (among others, outlining the respective responsibilities and rights of supervisors and doctoral candi-

[24] Questions of how to provide financial incentives to HEIs, also vis-à-vis an increase in effectiveness and efficiency, have been the subject of earlier World Bank advisory work in Latvia.

dates), training and ongoing support for supervisors, and monitoring of their performance. Co-supervision is encouraged and continuity of supervision is assured.

- **A.8** – *Institutional level* – HEIs provide a stimulating research environment for doctorates with a critical mass of research-active staff, adequate learning and research tools, sufficient physical and financial resources, support for, among others, mobility and conference participation, and an overall environment supportive of research achievements.

- **A.9** – *Institutional level* – There is a policy outlining the balance between course work and research (thesis). Such a policy reflects the competencies that a doctoral candidate is supposed to acquire. Courses include research methodology and scientific integrity, and professional competencies such as grant writing, and written and oral communication.

- **A.10** – *Institutional level* – An institution-wide policy and related procedures for establishing an examination committee ensure objectivity and fairness.

- **A.11** – *Institutional level* – Institutions provide doctoral candidates with a range of academic courses (for example, subject-based courses, and courses on research methodology, teaching competencies, and scientific integrity) and soft-skills courses to prepare them for both their academic and nonacademic careers. Furthermore, HEIs provide career support and, where possible, teaching and research assistantships. Career support includes helping students, when appropriate, to find nonacademic jobs (including in the private sector).

- **A.12** – *Institutional level* – Open access to doctoral theses is promoted. Normally, all doctoral theses are available in open access, except if there are reasons requiring an embargo for a designated period of time (for example, copyright issues, and ethical sensitivities, such as those related to the protection of human subjects).

- **A.13** – *Institutional level* – Formal appeals and complaint mechanisms are available to all doctoral candidates. The procedures are clear, fair, safe, comprehensive, and up-to-date, and are described in an easily accessible document. While respecting confidentiality and anonymity, the complaints and appeals that have been lodged are periodically analyzed to ensure that clusters of problems are addressed.

- **A.14** – *Institutional level* – The quality of all aspects of the doctorate is continuously monitored and assured. Internal quality assurance mechanisms are adapted to the specificity of doctoral training and include feedback from doctoral candidates and their supervisors.

- **A.15** – *Institutional level* – Doctoral schools are a particularly effective way of institutionalizing doctoral training and promoting its quality. HEIs that establish doctoral schools consider their number and location within the institution to maximize benefits with respect to critical mass and interdisciplinarity.

- **A.16** – *Institutional level* – Doctoral-granting institutions have a clear mission for their doctoral schools (with appropriate attention to disciplinary differences), and a comprehensive and explicit policy on the governance and organization of doctoral training that is published and easily accessible.

Managing the doctorate with partners

- **A.17** – *Institutional level* – Partnerships with national and international HEIs, research bodies, and the private sector (including industry) can improve the quality of doctoral training. To manage related risks, partnerships are framed by a strategic approach, appropriate governance arrangements, adequate policies and procedures, and a co-tutelle agreement.

- **A.18** – *Institutional level* – Stakeholder involvement in framing and evaluating the doctorate is important, among others, because the majority of doctoral holders occupy positions outside academia.

The postdoctoral position

- **A.19** – *Institutional level* – The postdoctoral position is framed by appropriate policies and guidelines covering, among others, recruitment procedures and the objectives of appointments. The postdoc is considered part of the academic career ladder, and the institution takes responsibility for related HR issues.

- **A.20** – *Institutional level* – Postdocs have access to career support to help them develop career objectives, within or outside academia.

3 Academic Selection and Promotion

3.1 Introduction: The Status and Role of Academics

The importance of framing the entire lifespan of academic careers with systematic HR policies and measures has increased in current higher education policies. There are several reasons for that development. First, following a period of strong growth, in many western countries, quantitative expansion is no more the foremost driving force behind developments in the higher education sector. That has shifted the policies to emphasize quality and efficiency instead of quantitative increase. Second, the labor market in higher education has matured throughout European countries. That means primarily that, on the one hand, there is a surplus of qualified applicants for the available academic positions and, on the other hand, that more and more countries try to establish so-called "world-class universities" that are engaged in an international competition for talent (Salmi 2009). In addition, the role of higher education for societies has changed during the last three decades, impacting the HR policies in HEIs:

> *"The mandate for higher education has broadened and changed greatly over the last few years as a result of expansion, economic duress, and the presentations of new demands by new types of clients, and changes in the map of knowledge. As the map moves more deliberately away from the pursuit of traditional academic goals, the formation and credentials of staff come into focus as a key issue. As the mandate changes, so do the institutional forms and structures of higher education, and it is within these that faculty will find new opportunities and restrictions."* (Kogan, Moses, and El-Khawas 1994, 9)

Regardless of the major changes in the operational environment of higher education, many characteristics of the status and roles of the academic profession have remained unchanged. That is typical for professional work. Professional work is usually changing only gradually even in a turbulent societal environment (Brante 2010; Evetts 2009; Abbot 1988). Thus, the changes of academic work and careers must be related to the continuums of status and role of academics in their respective societies. Based on an international literature review of academic work and profession, Pekkola (2009) listed the main characteristics of the continuums and changes in role and status of academics (see Table 1). For the development of a coherent and effective career system, the status of the academic profession in markets, society (power, exclusion), and labor markets (unionization, employment, self-sufficiency), and the actual work (mission, job description, and merits) must be taken into account.

The overall changes related to academic careers and academic work can be described in the framework of development of higher education from the traditional academic paradigm of scientific discovery and disciplinary logic (Mode 1) to a new socially distributed, transdisciplinary, and application-oriented paradigm of knowledge production (Mode 2) that is accountable to a multitude of stakeholders (Gibbons and others 1994). In that context, both the changes toward Mode 2 and the continuities of Mode 1 can be observed in practices of organizing academic work and careers. In many cases, the academics are operating outside of competitive markets of knowledge production. However, they are increasingly subjected to (quasi)market competition (see, for example, Teichler 2007; Enders 2006; Slaughter and Leslie 1997, 1999). While higher education systems have moved from an emphasis on the expansion of access to a renewed emphasis on quality, the academic knowledge has been partly demystified and other players have emerged in the competition on knowledge production. The Mertonian norms of science (communism, universalism, disinterestedness, and organized skepticism [CUDOS])[25] have been challenged by industrial norms of science (proprietary, local, authorial, commissioned, and expert [PLACE]) (Ziman 1996). Still, in many countries, academic careers have remained quite closed and the quality assurance of academic work in the hands of the academic profession, and the academic labor markets controlled by professorial unions. The career structure (vacancies) also has remained traditional, and the emphasis on research merits. In Table 1, the continuums and changes are described in greater detail.

Table 1 Continuums and changes in the status and role of academics

Note: Authors based on Pekkola 2009.

Status and Role	Continuum (tradition)	Trend (change driver)	Questions for national policy makers
Role in markets	Academics work outside of competitive markets, not-for-profit orientation	Academics work in competitive markets (competing with other professionals such as consultants); also for-profit orientation	Whom academic tasks are open to?
Societal power	Academics have a monopoly on production of scientific knowledge	Academics are one group among others producing knowledge	How to balance the ideals of the "ivory towers" and the "supermarket"?
	Asymmetry of knowledge	Demystification of knowledge	
	Institutional autonomy	Market regulation and allocation based on marginal revenue	
	Academic freedom		
Inclusion / exclusion	Scientific knowledge, education, and work evaluated only by academics	Research and education are evaluated through relevance, applications, and market value by external agents	How to evaluate academic work and outcomes?
	PhD holders have privileged positions Equity of senior academics (collegiality)	Inflation of academic degrees, other qualifications, several strata of academics	Who should evaluate and manage academic work and outcomes?

[25] Named after the sociologist Robert K. Merton.

Status and Role	Continuum (tradition)	Trend (change driver)	Questions for national policy makers
Unionization	Strong professional union of professors	Several unions, collaboration among unions	How to take into account the bargaining power of unions?
Self-sufficiency	The national academic profession is educating its successors and managing its quality	There are several gateways to academia, and its quality has many indicators	How and by whom academic careers can be entered? Who can develop the criteria for entry ("gatekeepers")?
Employment	Academics work in secure, privileged, and permanent positions and have continuous income	Academics work in fixed positions have project-based income	How to ensure working conditions for a vital, critical, diverse, and efficient academic profession?
Mission of academic work	(Liberal) academic education Knowledge (truth) as an end in itself	Production of (professional and generic) competencies Relevance and applicability of knowledge	What is the aim of an academic career system?
Job description	Generic including research, teaching, administration and management, and social engagement	Specialized: research, teaching, administration and management, social engagement	One career path/model or many?
Merits	Research merits	Merits in research, competitive funding competitions, teaching, media attention, and so forth	How to align the aim of academic careers, job descriptions, and merits?

Those gradually changing characteristics have a global dimension and are rooted in the professional and disciplinary nature of academic work. Although higher education policy is part of national policies and higher education institutions are instruments of national policies (Pekkola and Kivistö 2016), those global tendencies provide good starting points for national policy makers to question the fundaments of the development of good academic careers within their policy environment. As Kogan, Moses, and El-Khawas (1994) have put it:

> *"In the statuses accorded, in numbers of staff and in proportions of senior to junior staff, systems differ greatly, and there are also wide differences within national systems. These facts make it all surprising that academics from different countries find so much in common with each other when working on the academic content of their research and scholarship. The international dimension of knowledge and scholarship override the differences in material provision and legal and social statuses."* (Kogan, Moses, and El-Khawas 1994, 31)

Since scientific knowledge production and disciplines do not recognize national borders, the international development of the academic profession must be taken into account in the development of a national career system.

The questions concerning the development of national career systems deriving from the trends in the change of the academic profession should be taken into account while developing national career models.

3.2 System-Level Regulation of Academic Careers

High autonomy of HEIs with respect to managing their staff is a growing European trend and a basic framework condition of the system-level regulation of academic careers. Still, in many countries, at least part of the faculty members are civil servants (Eurydice 2017). Civil servant status does not necessarily mean that HEIs would not have staffing autonomy. The EUA (2017) has developed a set of indicators to measure staffing autonomy regardless of the public or private status of employees. The measured dimensions of autonomy are:

- Capacity to decide on recruitment procedures (senior academic/senior administrative staff)
- Capacity to decide on salaries (senior academic/senior administrative staff)
- Capacity to decide on dismissals (senior academic/senior administrative staff)
- Capacity to decide on promotions (senior academic/senior administrative staff.

In terms of higher education staff autonomy, Latvia belongs to the top cluster with Estonia, Denmark, Finland, Lithuania, Luxembourg, Poland, Sweden, Switzerland, and the United Kingdom. Latvia also scores high on financial autonomy, while having low points in organizational and academic autonomy.

Regardless of the autonomy trend, the tasks of academics are still nationally regulated in some European countries. These countries include major continental players like France, Germany, and Italy. Typically, national regulations specify the minimum hours expected to be allocated for teaching/research activities by academics, depending on their position on the career ladder (Eurydice 2017).

Qualifications are regulated at some level in most European countries. Holding a doctoral degree is a legal requirement for at least permanent senior academic positions in most European higher education systems. Also, in systems in which a PhD is not a legal requirement for academics, it is usually regulated in other ways. In some higher education systems, higher qualifications (habilitation, and so forth) are also still regulated, and in other systems, a national individual accreditation (of academics) is needed for certain positions. Germany, where the habilitation has been a prominent feature for many decades, is no longer among those countries (Eurydice 2017). However, in practice, the habilitation still plays a role. In other countries, like Finland, the title of "docent"[26] is an important prerequisite for career development.

[26] The title of docent ("dosentti") is an academic title (or rank) awarded by universities for doctorates with a high level of academic merit. Obtaining the title is preceded by a comprehensive academic review procedure almost similar with the recruitment procedure of full professors. The title of docent does not per se constitute an employment relationship with universities, but it officially entitles holders to teach in courses at the advanced level, act as principal investigators, lead their own research groups, and act as the supervisor of doctoral students.

A doctorate is required for the intermediate and senior academic positions, and sometimes at the junior level, as well. When juniors are recruited without a doctorate, various ways are found to ensure that their PhD is completed. Those practices emphasize the role of the doctorate as a major career step and formal indicator of career development. The following are the examples of regulations on graduation provided in the 2017 Eurydice report:

- Poland and Hungary require a set period to finish — respectively, within 8 and 10 years;
- Other countries will sign a fixed-term contract, with or without the possibility of renewal (for a fixed number of terms);
- In France, a doctoral candidate can sign a fixed-term teaching contract but will be required to finish the doctorate within one year;
- In Romania, completing a PhD is incentivized in that it provides employment stability: "assistant lecturers without a PhD are only eligible for fixed-term contracts, whereas assistant lecturers with a PhD can be offered an indefinite contract." (Eurydice 2017, 32)

In Ireland, several Institutes of Technology (IoTs) have integrated into their institutional strategy the need to increase the number of staff with PhDs. Often, the quantitative target is part of their contractual arrangement with the Higher Education Authority and has been reviewed annually. Those IoTs provide incentives (for example, reduced teaching workloads), and support to ensure that the staff complete their thesis on time.

While most countries indicate that a doctorate plays an important role in an academic career, this is controlled through the internal regulations of HEIs rather than the national legal framework. About a quarter of European countries do not have national regulations on staff qualifications (the German-speaking Community of Belgium, the Czech Republic, Ireland, Malta, the Netherlands, Finland, the United Kingdom, and Iceland). Where they exist, system-level regulations about staff qualifications vary in how specific they are (Eurydice 2017, 33).

Where a binary system exists, the doctorate is more commonly required of academic staff at universities than at other types of higher education institutions (see the Portuguese example in Box 5). However, non-university HEIs can have their own, unique criteria for academics such as a certain amount of work experience outside academia.

In addition to regulations on individual positions, the level of institutional qualifications can be regulated. In some countries, quality assurance mechanisms address the competencies and qualifications of staff as well as promotion and recruitment issues (Eurydice 2017). In others, there might be quantitative targets for different qualifications within academic staff, like quotas of PhD holders in teaching staff. In Kosovo, for example, one of the requirements to open new study programs is to have at least three relevant PhD holders among the teaching staff.

The recent Eurydice (2017) study has mapped the formalization of HR management in Europe. Currently, only 10 higher education systems in Europe have a top-level (national) strategy for higher education HR midterm and long-term planning. That can be interpreted in two ways. On the one hand, it might be a signal that HR planning is a new, emerging topic that only the forerunner higher

education systems have implemented. On the other hand, it can indicate that staff autonomy has been taken seriously and governments do not consider themselves legitimate actors in HR planning within the higher education system. Probably, both interpretations are partly true. According to the Eurydice (2017) study, common topics addressed in these strategies are gender issues, fixed-term employment, staff mobility, and staff development; that is, all topics that are usually also addressed in other documents such as internationalization strategy, or regulated under other policy sectors (such as labor contracts or gender issues).

The most typical career-related regulation concerns vacancies. In most of the European higher education systems, all or some positions (typically senior positions) are required to be announced through public calls. In many countries, the recruitment process (composition of selection committee, accessibility of selection and evaluation documents, appeal procedures, and conflict of interest) are also regulated by the central authority. However, the variations are wide in procedural regulation: 19 countries have no regulations on the recruitment process; in 6 of those countries, all elements are regulated, and in 13 countries, some elements are regulated (Eurydice 2017).

The study also reveals in which European higher education systems employment conditions are monitored by top-level authorities. In most of the countries, regardless of staff autonomy, the government closely follows the development of salaries of academic staff. They also monitor the contractual conditions of the academics. There are wide variations regarding the monitoring of the externally funded positions, work time, and distribution of working time of academics (Eurydice 2017).

In Europe, half of the higher education systems have legislation and policies preventing discrimination based on sex, age, nationality, ethnic origin, and so forth. The other half has no legislation. The most frequently stressed dimension of equality is gender. In 18 higher education systems, there are special policies in place aimed at supporting gender equality. In 15 European higher education systems, legislation is complemented with concrete measures to increase gender equity, such as quotas in the selection committees and boards, mandatory equality plans, units and committees, and minimum shares of recruited males and females (Eurydice 2017).

3.3 General Career Patterns

Academic Staff Categories

HEI staff is typically distinguished between academic and administrative staff. Figure 5 describes different tasks and personnel groups of universities in two dimensions: the level of skills needed to perform tasks, and type of tasks. The university staff categories are:

1) *Professional administrators:* administrators working in professional positions requiring a high level of professional expertise, but without a strong link with academic tasks or the work of academics. Controllers, marketing and communications specialists, and legal experts belong to this group.

2) *"Third space" professionals:* administrators with academic skills and qualifications who work on tasks that are closely related to academic activities, such as development of research infrastructure, writing research applications, and developing pedagogy or curriculums.
3) *Higher education professionals:* HR specialists, study affair specialists, and others working on tasks for which some professional qualifications and substantial knowledge of higher education and higher education policy is needed.
4) *Academic staff:* research and teaching personnel; the analysis in this chapter primarily focuses on this group
5) *Support staff:* working in sectorial and supportive tasks.

Although this report focuses on academic staff, the category of third space professionals is growing internationally, and their work is often closely related to academic work and careers.

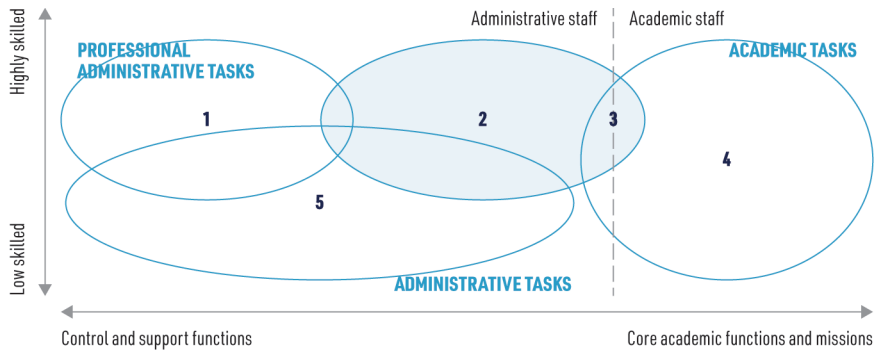


Figure 5 Professional and nonprofessional tasks in higher education

Source: Authors adapted from Kivistö and Pekkola 2017, 10.

The category of academic staff covers a heterogeneous group of research and teaching positions. A main conclusion of the recent study of European academic staff (Eurydice 2017) is that the academic workforce is on the national level not necessarily categorized in accordance with internationally comparable categories. Because of the significant variation in national taxonomies of titles, Eurydice researchers have developed a comparative model of analyzing academic positions based on the following indicators:

1) Level of seniority: junior, intermediate, and senior (and others)
2) Main duties: teaching, research
3) Qualifications: PhD, postdoc
4) Type of contract: temporary, permanent (continuous).

This list provides a good starting point to analyze different faculty groups within academic staff. In addition to these four independent variables, major significant variables for dividing academics into organizational subgroups are funding source (external or budget), full-time/part-time status, and discipline and national origins of staff.

The Eurydice report lists all European commonly used academic titles according to the above-mentioned criteria. In addition, the report lists typical career paths for each European higher education system. As an example, the Latvian career path can be compared with careers in Finland, Germany, and the Netherlands (see Table 2). Thus, the Eurydice report provides an excellent starting point for a discussion on national differences in academic careers, positions, and titles,

and it is recommended to be used as a point of reference when developing and analyzing national systems.

Table 2 Career steps by country

Source: Authors based on Eurydice 2017.

	Career step 1	Career step 2	Career step 3	Career step 4	Career step 5
Latvia	Assistant	Lecturer/ researcher	Assistant professor/ senior researcher	Associate professor	Professor
Finland	First-stage researcher (for example, doctoral candidate)	Recognized researchers (for example, postdoc researcher)	Established researcher (for example, university lecturer)	Leading researcher (for example, professor)	
Germany	Scientific and creative arts staff	Assistant lecturer	Junior professor	Professor	
The Netherlands	Teaching assistant/junior researcher	Lecturer/ researcher	Senior lecturer/ senior researcher	Professor	

Some practical conclusions can be drawn from the study of the complex and diverse career models. First, academic titles are difficult to compare across countries due to the differences in work titles, and particularly the content and qualifications attached to the working titles. In addition, there are wide differences in career paths in Europe due to historical reasons and other country-related specificities in regulating academic labor markets, and related to differences among types of HEIs (for example, universities compared to universities of applied sciences). Consequently, the respective role of teaching, service, and administrative responsibilities as part of career development should be explicitly discussed when academic careers are planned. For policy-making purposes, at least three lessons can be drawn from these findings.

First, national policy makers should provide an incentive for universities to develop their staff careers into a direction that make international (and national) comparisons possible. This would enable international comparisons and ease the mobility between institutions and higher education systems. The European four-stage framework could be one possible solution to this, also because it will be used in European funding schemes and by Euraxess[27] (see Box 24).

Second, basic promotion mechanisms can be reflected in national recommendations and the legal framework. While promotions are difficult to steer nationally, and detailed national qualification criteria have been abandoned in many countries, the national level should ensure that the new career models that are introduced or supported by a national policy (for example, tenure track, and so forth) will have normative foundations (for example, the possibility of permanent positions and probationary periods).

[27] "EURAXESS — Researchers in Motion" is a pan-European initiative that provides access to a range of information and support services to researchers who wish to pursue their research career in Europe or stay connected to European developments. It is a European Research Area (ERA) key initiative to promote research careers and facilitate the mobility of researchers across Europe.

Third, appreciation of teaching and management duties is part of strategic human resource management (HRM) and profiling of institutions and dependent on their strategy. However, institutions could be encouraged to identify and asses the teaching and administrative competencies of their staff. This can be done by providing tools to do so (for example, resources for training programs) or by including staff development as a criterion in the national quality assurance scheme.

In addition, the so-called "informal academic staff" fits poorly within the typical career descriptions and titles. In some countries, they belong to the official classification of titles (often junior, fixed term), in other systems they fall under the category of administrators or "other" faculty members. However, this group of researchers and teachers is expanding and getting more qualified (Kuoppala and Pekkola 2015). The group of peripheral faculty has many names. Depending on the higher education system, it is called contingent faculty or non-tenured faculty (Kezar 2012), project researchers, fixed-term researchers (Kuoppala and Pekkola 2015), or casual faculty (Kimper 2003).

In many higher education systems, the statistical data on informal academic staff are underdeveloped because they are not incorporated into the official HR strategies, policies, and models. Depending on the higher education system, informal academic staff faculty is mainly used as a flexible workforce to support the core workforce in teaching (hourly based contracts) or research (contracts based on short-term project funding). Their career development possibilities are limited, and their work is characterized by uncertainty and change, while senior academics' work is characterized by stability and continuity. In addition, for informal academic staff, an important factor relates to whether their contingent status is voluntary or involuntary.

In many cases, a large number of informal academic staff makes an efficient and strategic HRM difficult. Simply put, universities often do not know who the informal faculty members working for them are or what their competencies are. Nonetheless, this group of employees is often teaching and performing other main tasks of universities. Due to the mentioned lack of control, however, this creates a quality risk for universities. The recruitment of contingent faculty is done in the "shadows" (Pekkola 2014). This gives more weight to the informal organization and makes human resources more difficult to manage.

Mismanagement of human resources causes problems on the individual level. It is causing uncertainty for young researchers, who might not have the security needed to establish a family and plan for their future. In addition, it creates pressure for senior academics, who might be the only organizational contact points for young researchers. They may start feeling an amplified sense of responsibility toward the personal life of the junior academics under thfeir supervision.

To make informal academic staff more visible and their management more predictable, a national policy on statistics regarding faculty members' contracts (length and type) and funding can be recommended. Also, universities should be encouraged to provide realistic information on career possibilities for young academics and roles and clarify the responsibilities of managers and senior academics vis-à-vis junior academics.

Box 24 European four-stage career model

The European four-stage career model is an attempt by the European Science Foundation to create a joint taxonomy for European research careers. If applied, it could create a comparative framework for national higher education systems and other sectors of society having researchers and R&D careers. One of the ideas of the model is to make visible the fact that only a fraction of PhD holders is employed in universities and that the role of university differs at different stages. It also highlights that there should be mobility among sectors. The model features four stages: doctoral training, postdoc, independent researcher stage and established researchers (professors, research professors, directors, senior scientists, etc.).

The European Science Foundation also describes bottlenecks and good practices for all career stages (as updated by authors).

Table 3 Bottlenecks and good practices for different career stages

Stage	Bottleneck	Good practice
1	Unrealistic career perspectives; pensions; funding	Suitable guidelines/recommendations for doctoral education, etc. EURODOC http://eurodoc.net/policies/policy-papers/ EUA-CDE http://www.eua-cde.org/doctoral-education.html
2	Limited positions; problems in transition to other sectors; limited independence even with individual grant	In Europe, there are many postdoctoral funding schemes. Examples can be found, for example, at: Study "Postdoctoral Funding Schemes in Europe" http://www.scienceeurope.org/wp-content/uploads/2016/10/20160922-Survey-Postdocs-Final.pdf
3	Limited number of positions mainly in the public sector; lack of transparency in recruitments; gender bias	In many countries, schemes that may be used as examples have been developed. Switzerland: http://www.snf.ch/en/funding/careers/snsf-professorships/Pages/default.aspx Germany: http://www.dfg.de/en/research_funding/programmes/individual/index.html
4	Only limited positions; positions include often high administrative and teaching workload	There are several international and national funding schemes for leading professors, for example, ERC advance grant: https://erc.europa.eu/funding/advanced-grants

Source: Authors based on http://archives.esf.org/fileadmin/links/CEO/ResearchCareers_60p%20A4_13Jan.pdf.

In addition, the League of European Research Universities (LERU) has proposed a similar framework for universities in their report *Harvesting Talent: Strengthening Research Careers in Europe*:

1. Doctoral candidate
2. Postdoctoral scientist
3. University scientist
4. Professor.

Based on these frameworks, the European Commission has proposed a framework that will be used in its funding activities and in EURAXESS. The European Commission's four stages are:

R1 First-Stage Researcher (up to the point of PhD)

R2 Recognized Researcher (PhD holders or equivalent who are not yet fully independent)

R3 Established Researcher (researchers who have developed a level of independence)

R4 Leading Researcher (researchers leading their research area or field).

The aim of the framework is to help:

1. Researchers identify and apply for job offers close to their individual profile in diverse employment sectors, including academia and industry;
2. Employers identify candidates from different sectors close to the job profile on offer and develop their careers;

3. Public authorities to make international comparisons and benchmark their researcher population and have informative statistics;
4. Potential researchers to develop a better idea of a career in research.

One of the major challenges to the four-stage career model is its incompatibility with the three-stage systems (assistant, associate, and full professor) in the United States. Another challenge is the role of the postdoc which, in the view of the authors of this study, is not a mandatory step to advance an academic career.

Sources: Authors based on http://www.leru.org/files/publications/LERU_paper_Harvesting_talent.pdf; https://era.gv.at/object/document/1509; and http://archives.esf.org/fileadmin/links/CEO/ResearchCareers_60p%20A4_13Jan.pdf.

Open Vacancy Model, Career-Based System, Tenure Track, and Promotion

According to Organisation for Economic Development (OECD) definitions (OECD 2009), the public recruitment systems can be divided into two major categories: a career-based system and a position-based system. The career-based system is characterized by competitive selection early in the career. In the academic sector, "concours" (competitive examinations) are in use only in France (Eurydice 2017). However, many European career models have characteristics of the career-based system. The characteristics include preplanned career paths within an organization and constraints to entry into careers at the later stage. A position-based system is based on open positions/vacancies. Each position, when established or vacant, is open for all candidates at all stages of their career (senior or junior). In Europe, this is the predominant system in official academic careers (Eurydice 2017).

Usually, the career models in universities have characteristics of both models. Virtanen (2016) has listed the strengths and weaknesses of these two basic models. They can be adapted to higher education settings (see Table 4). In higher education, as in other sectors, the career models are usually hybrid models of the two basic variants. This means that weaknesses and strengths of both models can be found in almost every higher education system. The major challenges of career-based systems are a built-in elitism and issues related to promotion processes, whereas in position-based systems challenges related to recruitments and career development are more prevalent. The major strength in career-based systems is an emphasis on staff development and commitment, and in position-based systems a tendency toward adaptability.

When developing the career system, the balance between security and competition should be carefully considered at every career step. There are many ways of supporting the academic drive toward good-quality results. Fixed-term contracts are not always the only and best ways to secure work motivation and academic excellence, even though sometimes they might serve this purpose, as well. In many universities, however, the high retention rate is not considered as a problem, because, on the contrary, the low turnover might hinder organizational learning processes. In sum, there should be positions in which a long-term academic commitment is possible and positions that can be used as strategic instruments for renewing institutional competencies.

Table 4 Potential strengths and weaknesses of career- and position-based career models

Source: Authors.

	Potential strengths	Potential weaknesses
Career-based models	• Strong role of academic profession, collegiality • Shared values, independence, academic freedom • Long timespan, autonomy • Accumulation of knowledge • Motivation through promotion possibilities	• Elitism and stagnation • Risk of exclusion of contemporary staff from organizational decision making • Division between "core academics" and others • "Ivory tower" • High risk of heavy promotion processes to guarantee merit-based selection at all position levels
Position-based models	• Stronger role of managers and possibility for strategic recruitments • Competitiveness, diversity • Adaptability, relevance for society, possibility for multidisciplinary positions	• Unhealthy competition • Career dead-ends (no open positions) • Risk of losing a sense of shared mission and value • Risk of losing networks and knowledge, if high turnover • Risk of "supermarket logic" in academic work • High risk of heavy recruitment processes to guarantee merit-based selection at all position levels • High risks of dissatisfaction in recruitment processes

The tenure track system is a specific career trajectory in higher education combining characteristics of a career-based system and a position-based system. In a way, it is a conditional career-based system. It promises promotion and career development if conditions during the probationary period are met, as is envisaged for Poland with respect to obtaining a permanent contract (see Box 25). The concept of the tenure track system is often used with reference to the career model dominant in American universities, although there are several practices and enormous variations in institutional tenure tracks. However, the variation is even wider in tenure track models within European universities.

Box 25 Obtaining a permanent contract under the proposed Polish Law on Higher Education and Science

The new draft Law on Higher Education and Science in Poland stipulates structured ways of obtaining a permanent contract.[a] Under the new draft law, Polish HEIs can provide academics with a permanent contract or with a fixed-term contract the duration of which must not exceed four years. Hiring an academic (for a contract period longer than three months) requires an open competition – with the exception of, among others, individuals who successfully acquired an externally-funded research project. However, if an academic on a fixed-term contract is evaluated positively in a performance appraisal (which all academics must undergo at least every four years), the institution can offer him or her a permanent contract without opening up the position and carrying out the competitive procedure.

Source: Authors based on the draft of the draft Polish Law on Higher Education and Science (from September 16, 2017).

Note:
a. Since the law is currently at a drafting stage, there might be changes to the provisions presented here.

The defining document on tenure is the "Statement of Principles on Academic Freedom and Tenure" by the American Association of University Professors, published in 1940: "[A]fter the expiration of a probationary period, teachers or investigators should have permanent or continuous tenure, and their service should be terminated only for adequate cause, except in the case of retirement for

age, or under extraordinary circumstances because of financial exigencies." The statement also defines the following good practices for tenure:

1) Terms and conditions for appointment should be provided in writing;
2) The probationary period should have a maximum length and the discontinuation of the probationary period should be announced sufficiently early;
3) During the probationary period teachers have academic freedom;
4) The termination of employment (especially if tenured) should be done with precaution;
5) Termination of a continuous appointment because of financial exigency should be demonstrably "bona fide."

For instance, the recent system-wide introduction of tenure track models in Finnish universities provides a good example for assessing the preconditions, benefits, and risks associated with tenure track systems (see Välimaa and others 2016).

The preconditions of successful implementation of tenure track system are, among others:

- A regulatory basis for the probationary period;
- A regulatory basis for tenure (permanent positions);
- A regulatory basis for providing tenure after the probationary period without an open call;
- A regulatory basis for ending the employment after the probationary period;
- Sufficient HR and management capacity to implement tenure recruitment and evaluations;
- Sufficient size of unit for using tenure;
- A sufficient pool of candidates.

The benefits of tenure track systems include:

- Management of risk associated with permanent positions through probationary periods;
- Systemization of practices;
- Introducing a strong and predictable motivational structure for tenure track faculty to reach the targeted goals;
- Introducing and strengthening new strategic fields of research;
- Selecting the candidate with the best potential, not the most meritorious candidate;
- Solves a problem of dead-ends in purely position-based career models;
- International comparability and attractive and predictable options for international candidates.

The risks associated with the tenure track system include:

- If implemented only as an additional element of a career model, it creates (strengthens the division into) two ranks of academics;
- May highlight the research merits and other internationally comparable merits and neglect teaching and organizational merits;
- Creates highly individual motivational structures that may have negative impacts for collaboration especially in teaching and organizational matters;
- Increases insecurity of young committed researchers;

- Requires strong HR competencies and resources in developing the criteria for promotions and organizing the assessments;
- Requires more financial long-term planning (when introduced, might lower the salary expenses of senior academic staff but will increase them in the longer term);
- Might have a tendency to postpone promotions and increase the threshold for professorships.

Ensuring appropriate preconditions and balancing the benefits and risks is imperative for clearly structured, transparent, and successful tenure track models. If implementation of tenure track models is not done with great caution, one can expect several severe legal and practical HR problems that are evident even in the United States, where the system is well established. Based on a recent U.S. survey of tenure track practices, Trowler (2012, list modified by authors) has listed several policy and practice implications in organizing clear and successful tenure tracks:

1. Tenure track faculty (before and after recruitment) should be well informed on the expectations and priority of outcomes.
   - This should be supported by mentors, faculty orientation, written guides, and sample dossiers.
2. All outcomes need to be well defined (such as outreach to the community).
3. Tenure track faculty members need (annual) feedback.
   - Managers need skills to provide feedback.
   - Managers and senior staff need to be available for junior staff.
4. Only faculty with full potential to reach tenure should be employed after the probationary period.

Retirement

Matters of retirement are an integral part of the career patterns of academics. The ways in which the retirement of academics is handled differ among countries (see Box 26). One commonly discussed theme is whether there should be a possibility to force academics to retire at a certain age. Advocates of that possibility point out that not forcing academics to retire restricts the career opportunities of young researchers and hinders the positive turnover of academic staff. Critics of enforced retirement point out its discriminatory character and the contributions that older academics make to higher education. In the end, the design of retirement in academia requires a nationwide discussion. Nevertheless, four basic approaches can be identified:

- Ruling out forced retirement altogether;
- A nationwide retirement age (higher education specific or general);
- Allowing HEIs to design their own retirement policies (within a certain framework), which could lead to, among others, an institutional mandatory retirement age, or approaches that frame (early) retirement with an incentive system (as they are practiced by, for example, American and Australian HEIs);
- The development of special positions for “emeritus” professors (see Box 27).

Box 26 Retirement in academia

The regulation of the retirement of academics is determined by national legislation on mandatory retirement, which varies among countries.[a] Some countries have a mandatory retirement age and/or allow employers to enforce retirement, even though under different restrictions and procedures. That includes France, Germany, and the United Kingdom. In Germany, for example, academics who are civil servants must retire when they reach the mandatory retirement age of (in most cases) 67, if they do not receive a temporary extension. Other countries rule out compulsory retirement in almost all cases. That includes Australia, Poland, Spain, and the United States.

Whether to enforce retirement can be a controversial debate in higher education systems where this is possible – as in the United Kingdom. The United Kingdom abolished mandatory retirement at the age of 65 in 2011. However, employers can introduce a retirement age for their organization if they can justify it, called an "Employer Justified Retirement Age (EJRA)." The University of Oxford in the United Kingdom introduced an EJRA of 67 years in 2011.[b] During a review of the policy five years after its introduction, the university's academics fiercely debated its abolishment. The debate contained many of the arguments that proponents and critics of forced retirement in academia cite.[c] Proponents tend to point out the negative consequences for young academics that result from their older colleagues holding posts and acquiring resources into old age. They also highlight the wider impact on the refreshment of the academic staff body by a lack of career progression opportunities for young academics. Critics of enforced retirement tend to emphasize the age discrimination underlying mandatory retirement, and criticize what they perceive as an implicit assumption of a relation between age and productivity.

Source: Authors.

Note:
a. http://www.ox.ac.uk/sites/files/oxford/Report of the EJRA Review Group - annexes.pdf.
b. http://www.ox.ac.uk/staff/consultations/ejra-review.
c. http://www.telegraph.co.uk/news/2017/06/01/oxford-dons-challenge-retirement-age-rule/; https://www.nature.com/news/the-retirement-debate-stay-at-the-bench-or-make-way-for-the-next-generation-1.17487.

Box 27 The "Professor Emeritus" Status at Vilnius University, Lithuania

At Vilnius University, Lithuania, professors can remain involved in the institution's activities via a "Professor Emeritus " status. In general, permanent employment contracts of academics at the university end with the academic year during which an academic turns 65 years of age. A first possibility to continue working at the university are fixed-term contracts of a duration of less than three years, which require approval by the senate and can be renewed only once. Professors also have the option to obtain the status of "Professor Emeritus." That title is awarded by the senate for exceptional achievements in science, art, or teaching. A Professor Emeritus receives a monthly payment and can participate in the university's activities. A similar option exists for other staff categories in the form of the "Affiliated Lecturer" and "Affiliated Researcher" status.

Source: Authors based on the Statute of Vilnius University; https://www.vu.lt/site_files/Adm/statutas/VU_Statute.pdf.

Different Career Paths

There is a great variety in national definitions of academic career paths. The variation is even wider in actual career trajectories. This section looks at the overall trajectory of academic careers. Pekkola (2014) has developed a typology of academic career types that consists of seven types of concrete careers. These career types are not official career models but actual career trajectories. The career types are:

1) Assistant's career
2) Teacher's career
3) Researcher's career, depending on funding sources:
   3a) employment
   3b) scholarship
   3c) project

4) Professional career
5) Atypical career.

Academic career can be divided into organizational and nonorganizational career types. The first three of these — assistant's, teacher's and employed researcher's careers — are called organizational careers. They are based on organizational (or national) practices and on a status of employee or civil servant.

Assistant's career is the most traditional academic career type. It is related to a chair model in which a professor selects his or her successor. The beginning of a career consists of auxiliary duties in research and teaching as well as plenty of administrative duties. It is a traditional generalist's path based on a master-novice relation in which the novice grows to be a professor trough several steps.

Teacher's career is a newcomer in many higher education systems. It is a separate career model for university teachers who can be qualified toward professorship while being full-time teachers.

A researcher's career is a norm in many countries. A typical example of researcher's career is the European four-stage career model. A talented Master's degree holder is employed by a doctoral school as a junior researcher. After his or her defense, she or he continues through a postdoc position to independent researcher or teacher and finally to established researcher, like a professor.

The academic careers are often based on other than organizational positions. The researcher career can follow a similar pattern as the path described above. However, it can be based on funding sources other than the university's own budget.

A typical variant of researcher's career is a career that starts with scholarships or grants. In this case, the only formal ties to a higher education institution are the doctoral supervision and a study right (and in some cases a tuition fee).

Another variant of a researcher's career is a project researcher's career. The project researcher's path follows the researcher's path, but his or her main duties are not directed toward his or her own academic career but to implementation of a project (that may or may not be related to his or her dissertation or postdoctoral studies). The project researcher is often employed by a university but accountable to a third party.

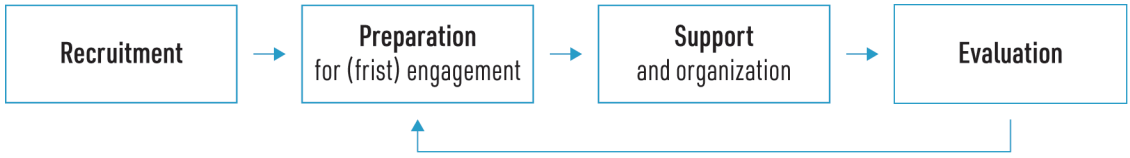
An academic career can also be professional. This means that a PhD candidate or postdoctoral researcher is employed by another organizations as she or he is pursuing, as part of her or his tasks (in research institutes, R&D departments, hospitals, and so forth), a professional doctoral program. A more detailed reflection on professional careers is provided in Box 28.

Box 28 The engagement of professionals as part-time lecturers

Professionals from the private sector can be a valuable resource for HEIs, but need to be prepared for their engagement. Their specific sets of knowledge and experience, which allow them to establish a connection between theory and practice, make professionals an interesting option for HEIs when implementing their programs. The professionals themselves can benefit from working with HEIs in the form of insights into current academic debates and an extension of their professional network – and might be passionate about sharing their knowledge and experiences with the younger generation. When hiring professionals as part-time lecturers, formal qualifications are not of primary importance to HEIs. What is important, however, is how professionals are prepared for their engagement and integrated into the HEI.

HEIs have different options for increasing the success of a professionals' engagement as lecturer. Those options cover all phases of the engagement (see Figure 6), from the design of recruitment processes to an adaptation of evaluation procedures. During the recruitment phase, for example, the overarching objective for HEIs is to ensure that the profile of the course and the competencies of the professional match. A first step to achieve this is to determine which courses professionals can implement reasonably, and to precisely define the profile and requirements for each engagement. Different options exist for subsequently identifying suitable candidates. In addition to the public advertisement of positions, HEIs can revert to the contact networks of their academics, and search for candidates via their publications or public presentations.

Figure 6 Phases of the engagement of part-time lecturers



Source: Authors adapted from Gröckel, Schönberg, and Walther 2015, 8.

The THM University of Applied Sciences (UAS), Germany, developed a system for hiring professionals as part-time lecturers and integrating them into the institution for their work-integrated higher education programs. The system focuses its recruitment efforts on professionals who are alumni of the UAS. Those are considered to be particularly suitable candidates, because they are acquainted with the respective programs and the needs of the students. After the recruitment, a mentoring program centered on a "teaching tandem" prepares new lecturers for their engagement. The "teaching tandem" consists of a newly recruited professional and a professor preparing a course together, and then teaching it in parallel. The teaching phase is complemented by a continuous mentoring by the professor. That approach benefits both parties: The newly recruited professional is prepared for his or her engagement as lecturer, and the professor gains up-to-date insights into the professional practice. Furthermore, all part-time lecturers at THM UAS have access to professional development opportunities in teaching techniques and to related support services.

Source: Authors based on Meyer-Guckel and others 2015.

The last variant of academic career is the so-called atypical career. It is named after atypical employment during PhD studies and often also, while having postdoctoral status. It includes several fixed-term positions, hourly based teaching contracts, project funds, grants, unemployment periods, and employment in other sectors. The so-called "atypical contingent academic career" is in fact typical in many countries. In Table 5, the different careers are represented within an organizational and resource environmental context.

The typology of career types is useful when analyzing alignment of job descriptions, reward structures, and career progression. Often, there is only one career model and reward system but a multitude of actual careers. This is causing a lot of dissatisfaction and misunderstandings.

Table 5 Typology of career types

Source: Authors based on Pekkola 2014.

	Funding	Employer	Senior's role	Qualifies in/ merits for
Assistant	HEI	HEI	Line manager, supervisor, mentor	Organizational work, research, teaching
Teacher	HEI	HEI	Line manager, supervisor	Teaching, organizational work, research
Researcher (a)	HEI	HEI	Line manager, supervisor	Research, (teaching, organizational work)
Researcher (b)	HEI/Foundation/ National body	N/A	Supervisor	Research
Researcher (c)	Commissioning body (CB)	HEI/CB	Project manager, (supervisor)	Project work, research
Professional	Other organization (OO)	OO	Supervisor	Professional work, research
Atypical (contingent, unofficial)	Several sources	Varies	Supervisor (project manager)	N/A

The typology is based on the differences in the beginning of the career. Normally, with career progression, the variation in individual career trajectories decreases. However, the differences might be observable throughout the career. For instance, there are professorships in which the qualifications may come from the educational activities, professional life, or project work. For example, in Lithuania and the UK there are typical separate career paths for researchers and teachers (Eurydice 2017), and Aalto University in Finland has developed different level positions for experts from industry invited to work in Aalto.

The institutions should analyze the different career trajectories of their staff. This understanding should be based on systematic data gathering and analysis by institutions ("institutional research") not on the personal experiences and anecdotal evidence presented by different constituencies of senior academics. The individual career trajectories should be at least to some extent comparable with organizational career structures to ensure the reciprocal commitment and motivation of staff. It should be also ensured that the managers, who are responsible for the outcomes and strategic management of their unit, have a role in recruitment and acknowledgement of nonpermanent faculty.

The career trajectories of contingent staff usually give a picture of the current resource environment. The changes in resource environment are usually best observable in the work of nonpermanent faculty. For these reasons, institutional leaders should closely follow the faculty, its working conditions, and funding arrangement.

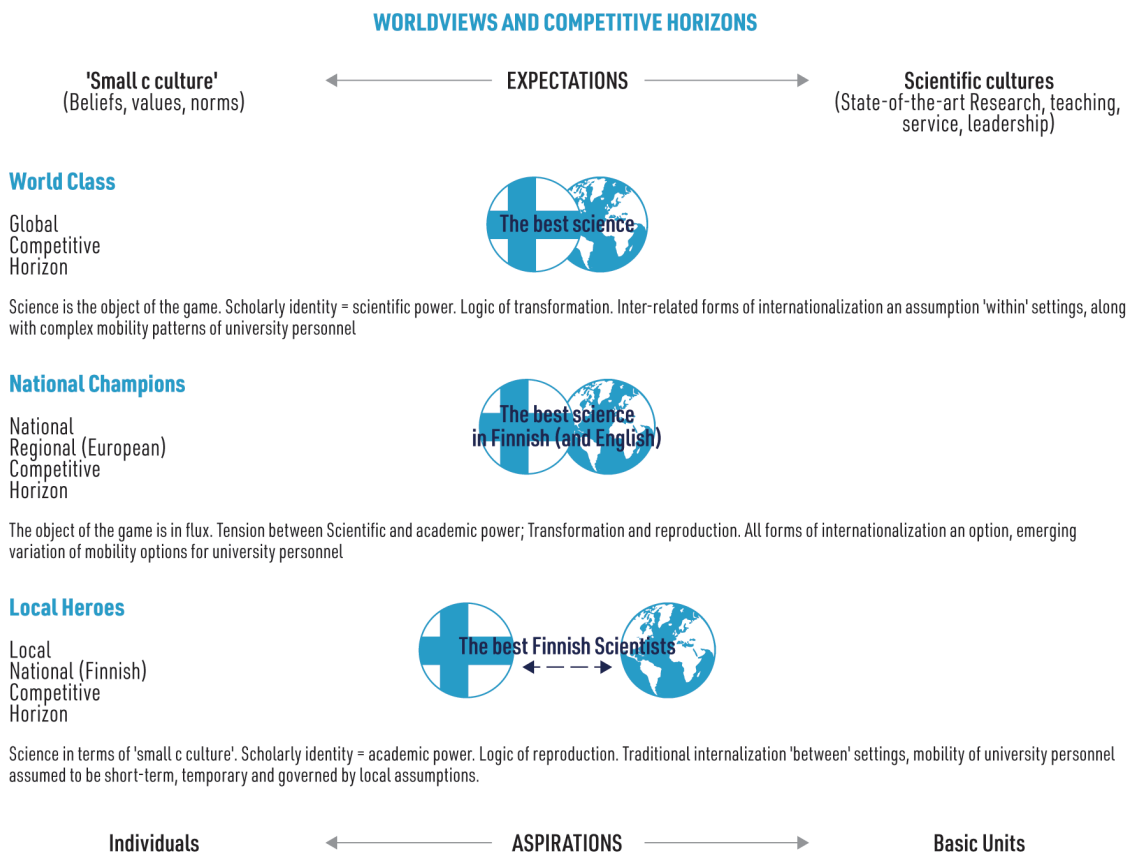
Institutions should pay attention to the impact of external funding on the academic careers. The current resource environment and autonomy trend has increased the amount of competitive funding and external funding in higher education. In many cases, the institutional HR policies and practices are not entirely adapted to this change. In this new environment, institutions are obligated to decide whether to employ a unitary career structure for all faculty members, two distinctive career structures for staff with different funding sources, or one career structure for permanent staff alongside a large group of contingent faculty.

A unitary career structure capturing different career trajectories requires professional university management. It means that management of working time and financial administration must be well functioning, because of the variety of accountability criteria (that is, for state funding vs. other funding). Conversely, the differentiation of career patterns for employees working with external funding and those paid with core budget funding might dissociate the academic work (teaching and research) and development and innovation work from each other and end up lowering the quality of both. International staff should also be taken into account when planning the career trajectories. Even though they would be employed in similar positions and they would officially have the same career trajectories, their horizons are usually different. In Box 29, career trajectories of international staff members are discussed.

Box 29 International dimension of basic units and academic careers

The career of an international researcher often depends on the nature of the academic organization. David Hoffman and his colleagues have studied the work of international staff members in Finnish universities and found three distinctive organizational profiles that have a major impact how the academic career of an individual is built (see also Figure 7). The language of the science and organization play a major role in this development. In the following, the organizational profiles are directly adapted, shortened, and, in some instances, adapted via highlighting by this report's authors from the study by Hoffman and others (2013).

Figure 7 Worldviews and competitive horizons



Source: Hoffman and others 2013.

The Best Science (World Class Basic Units)

World class basic units in Finnish universities focused on the transformation of their field of study. In these units, academic power and prestige are gained through highly ranked publications. **Human resources are recruited to these units internationally based on their academic excellence.** The most salient identity of scholars is often that of the scholar – above all else (Hoffman and others 2013).

The Best Finnish Scientists (Local Heroes)

At the other opposite are university personnel who draw on the state-of-the-art, but take no direct part in the transformation of their discipline or field of study, such as teachers in regionally orientated campuses. In these units, academic power and prestige are gained through social dynamics and local politics. **"Local Heroes" compete, but mainly among themselves or nationally with scholars from similar units. Competition centers on a limited number of vacancies and a predictable supply of students seeking well-defined knowledge to be used in local job markets** (Hoffman and others 2013).

The Best Science in Finnish – And English (National Champions)

In between best science and best Finnish scientists, "National Champions" pursue original research and teach the regular student body. While some of the academic staff spend the majority of time on instructing students, there are also significant research outcomes. **The likelihood of finding foreign academic staff in these units is higher than in units populated by Local Heroes, but not as usual in World Class units** (Hoffman and others 2013).

Source: Authors based on Hoffman and others 2013.

Regardless of approach, institutions should align their career patterns with their institutional profile and resource environment. Institutional strategy and profile as well as income logics should be identifiable from the career patterns of an institution. For instance, if a university has a societal (entrepreneurial, innovative, regional) mission, the professional and project careers should be embraced in their career model, as well as successful project management and applications. A useful heuristic device to analyze career paths is provided in the Figure 8 and is discussed in Box 30.

Box 30 **"The three careers of an academic"**

The careers of academics resemble those of other professionals, but are unique in some respects. The specificity of academic careers and their complexity is captured by a model developed by two higher education research and science studies scholars, Jochen Gläser and Grit Laudel. That model emphasizes the importance of the content of an academic's work (focusing on research) and of the scientific community for academic careers. Against that backdrop, the model distinguishes three careers of academics:

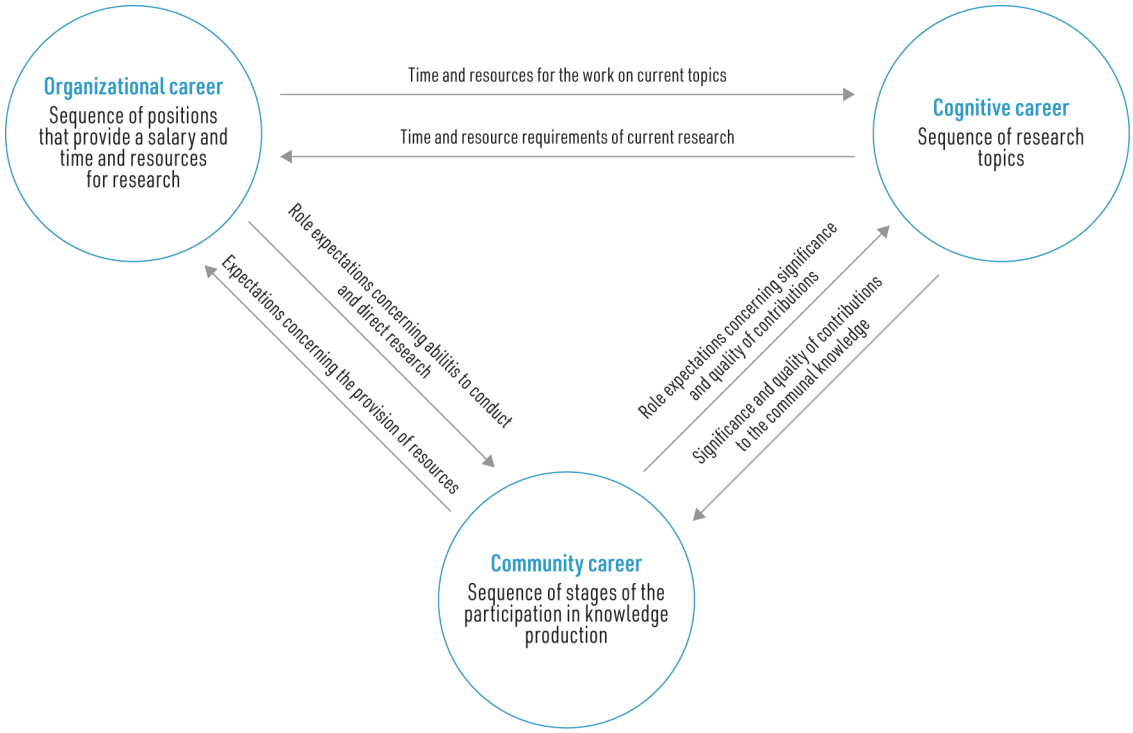
1) A "cognitive career" that refers to the research conducted;

2) A "community career" that refers to the position within the scientific community, including an academic's reputation, status, and role;

3) An "organizational career" (Gläser and Laudel 2015, 13) that refers to the organizational positions.

The model furthermore stresses that academics pursue those three careers in parallel, and that all three careers are interlinked (see Figure 8).

Figure 8 **The three careers of an academic and their connections**



Source: Gläser and Laudel 2015, 18.

Source: Authors based on Gläser and Laudel 2015.

Next to the variations in "typical academic careers," individuals can also follow more "atypical career paths." One example of that is when scientists (or even students), being an entrepreneurial academic, use an innovative idea to bring a product to the market. In cases when academics also establish their own company or commercial activities, it is important to have tailor-made solutions for the employment relationship between the entrepreneur and the university, covering issues such as time investment, intellectual property rights, and research projects. Entrepreneurial universities often have a general framework within which department leaders or deans can make tailor-made agreements with entrepreneurial academics or doctoral students (see Box 31).

Box 31 "The entrepreneurial academic" – University of Twente, the Netherlands

The University of Twente (UT), the Netherlands, encourages its academic staff members to perform ancillary activities. Ancillary activities can contribute to the professional development of staff members and strengthen the bonds between the university and society. By "ancillary activities" the UT means all paid and unpaid activities that are not part of the job performed at the UT. One can think of working with a different employer, a commissionership or being an advisor for an external organization, and activities as a (starting) entrepreneur or free professional practitioner.[a]

Staff and doctoral candidates are allowed to establish spin-off activities and companies, and are supported in doing so. They can make use of soft loans to cover start-up costs, and certain start-up activities can be considered as time they are employed by the university. In agreement with their managing director, some of the start-up activities need to be done during holidays or be compensated by taking unpaid leave. Once the company is established and becomes a real job, then, in agreement with the managing director, the staff member must reduce the number of working hours and related pay with the university, resulting in part-time employment. Running the company is then regarded as an ancillary activity for the UT and must be reported. Depending on the legal agreements with the company, for example, in relation to property rights, the spin-off company may have to pay a small proportion of turnover or profits to the university, next to the repayment of the soft loans they may have received.

If staff want to perform or continue performing ancillary activities, he or she must always request permission from the direct manager, irrespective of whether he or she works full-time or part-time. Permission is requested through the "ancillary activities" web application. Staff is usually granted permission for ancillary activities that do not adversely affect his or her job performance and that cannot harm UT interests. As universities are public organizations, transparency and integrity with regard to ancillary activities are important. As such, the UT, in concordance with the Ministry of Education, Culture and Science and the Association of Universities of the Netherlands, agreed to provide external parties with insight into ancillary activities for which permission has been granted. That concerns information on the nature of the ancillary activities and the institute for which they are performed.

Source: Authors.

Note:
a. https://www.utwente.nl/en/hr/terms-of-employment/ancillary-activities/.

3.4 Selection and Recruitment of Academic Staff

The selection of academics is a crucial HR policy field with a strong impact on academic careers. The related approaches correlate strongly with the selection of doctoral candidates and postdoctoral researchers, but here the emphasis is on the organizational practices in recruiting and selecting academics at later career stages. The recruitment to universities can follow three patterns, namely professional, organizational, and informal. The typology presented here is based on research done in the context of the Finnish higher education system (Siekkinen, Pekkola, and Kivistö 2016), but it can be applied to other settings.

Professional recruitment is a traditional way of recruiting academics. It is often applied in senior positions such as filling the professorates. Professional recruitment emphasizes the role of the disciplinary community in decision making. Candidates who apply for open positions are evaluated (and ranked) by peer review and external evaluations, typically done by other professors in the same disciplinary field. National, institutional, or professional (collective) standards typically regulate professional recruitment (Eurydice 2017). Regardless of the national regulations, professional recruitment has a global character when international experts are used.

Professional recruitment is best for searching for academic excellence. Only external professional reviewers can recognize academic excellence that the organization does not have yet. Regardless of whether the professional recruitment is based on external reviews, the strategic focus can be ensured by providing

a strategic management role in formulating the job descriptions and tasks and in participating to the selection of qualified applicants.

Organizational or managerial recruitment is a standard recruitment practice in any organization. Recruitments are done according to the organizational regulations, and decision making on selection is done according to the official decision-making procedures (by collective body or by a manager) of a university. Organizational recruitments are typically applied in filling permanent positions or established fixed-term vacancies. The variation of organizational practices is often high within national systems and even within a university among different faculties. **The tendency in organizational recruitments and selection is to move from collective decision making toward managerial decision making.**

Organizational recruitment is best for selecting persons who are likely to be committed to the organization and to generate strategic fit between person and institution. Different types of collegial and collective practices can also legitimize the selection from different approaches (gender, labor market politics, student politics, and so forth). In organizational recruitments, the strategic component can be strengthened, for instance, by supporting the managerial practices, and by providing management with a possibility to impact on selection criteria and selection procedures in departments and faculties.

Informal recruitment or ad-hoc recruitments are recruitments practically done by professors and research group leaders. Recruitments are done on an ad-hoc basis to meet the needs of ongoing, often externally funded, projects. In some cases, PhD candidates are also mainly recruited by individual senior academics. Informal recruiters are often important gatekeepers for organizational recruitments because experience of academic work (teaching/research) is often required for permanent positions.

There are several risks associated with informal recruitments, which are needed to keep departments and projects running. The strategic component in informal recruitments could be enforced by defining the role of contingent faculty and the rights and responsibilities of research group leaders, and by clarifying the role of line managers responsible for strategy implementation. In Table 6, an example of recruitment practices in Finland under the three different recruitment methods is given.

Usually the recruitments are hybrid models in which the informal, organizational, and professional processes meet. The balancing between selection based on academic excellence, strategic competencies, and organizational and collegial commitment has to be done in all recruitments. Professional recruitment usually supports academic excellence; organizational (managerial) practices support organizational aims and values; informal recruitment practices support flexibility and the needs of research groups and status of individual professors.

Table 6 Recruitment types: The example of Finnish practices, titles, and tasks

Primary source of resources	Titles and tasks		Recruitment type	Recruitment practice
Core funding	**Professor's position (career stage IV):** • Full professor positions • Tenure track positions		**"Professional recruitments"**	• Permanent contracts (fixed term for tenure track positions) • Open call for vacancies (or by "invitation") • Opened mostly as an international call • Defining the position profile and tasks: recruitment committees, deans • Use of recruitment committees and external reviewers • Recruitment decisions by rectors/deans, based on the proposal appointment committees
	Tasks for obtaining qualifications (career stages I & IV): • Doctoral candidates (with salary) • Postdoctoral researchers	**Institutional tasks (career stage III):** • University lecturers • University re-searchers	**"Organizational recruitments"**	• Permanent or long fixed-term contracts (3–5 years) • Open call for vacancies • Often opened as an international call • Defining the position profile and the tasks: department heads, professors, recruitment committees • Recruitment decisions by rectors/deans, based on the proposal of recruitment committees
Project funding	**Project-related and other short-term tasks (career stage I):** • Project researchers, research assistants, teaching assistants		**"Ad hoc recruitments"**	• Short, fixed-term, contracts • Direct recruitments often without an open call • Defining position profile and tasks: department heads, professors, principal investigators • Recruitment decisions by deans, department heads

Source: Authors adapted from Siekkinen, Pekkola, and Kivistö 2016, 28.

Connection of Personnel Policies to Institutional Profiles and Strategies

The review of the literature (see Mugabi and others 2017) suggests there is widespread agreement among higher education researchers that:

- People are the most important asset for universities and are key to long-term organizational performance;
- Managing HR is the responsibility of all managers;
- HR policies, programs, and practices should cohere and align with organizational strategy.

The alignment of HR policies, programs, and practices with organizational strategy entails more professional and strategic HR management in universities. Strategic HRM can be described as a shift of personnel administration (as a legal and administrative function) toward a function of strategic management. **Strategic HRM takes the changing environment into account by participating in strategy formulation.** Consequently, the role of HR is not only to

implement the strategy but also to actively participate in transforming the HR in changing the policy environment.

The connections of personnel policies to institutional profiles and strategies can be established through many mechanisms. One mechanism is the changing role and position of personnel managers, who recently have been introduced to the top (strategic) management and strategy formulation of universities. Another way is to manage the job descriptions and competencies of staff. However, academic work provides its own challenges to strategic human resource management and human resource development. Maintaining academic freedom (often protected by law) creates certain limitations on the management of academic work. This means that the content of academic work (and the profile of a unit as an aggregate) can be managed only in a limited way. Hence, the role of recruitments in securing academic future work performance is extremely important (Pekkola and others 2017).

The performance management system of a university is an important mechanism to steer academic work toward institutional aims. By introducing a rewards structure supporting the strategic goals of an institution or a department, academic work can be steered toward strategic goals such as internationalization or research excellence. However, research evidence shows that performance incentives might have a limited impact, especially on the research activities of senior academics (for example, Kivistö, Pekkola, and Lyytinen 2017). The remuneration and performance-based salary systems are described in more detail in Chapter 4.

In addition, promotion criteria can be considered as an instrument to implement strategic staff development. For instance, a university can emphasize teaching excellence or social engagement with respect to promotions, or require at least minimum qualifications under these categories. In addition, there are many soft ways of implementing HR strategy, such as human resource development and training.

Professionalization of Actors Involved

Traditionally, universities have been managed either as state bureaucracies or as collegial professional organizations. In both cases, the management ethos has had a far-reaching impact on the management of personnel in universities. Personnel management has been in many cases conceived as mostly support services for professional recruitment and legal and administrative services to ensure the legality of the recruitments and personnel affairs.

In many countries, the development of professional HR services is a recent phenomenon, but one that is important within the general development trend toward strategic HRM. The professionalization of HR is related to three interlinked developments in universities. First, it is a part of implementation of new steering mechanisms, namely, New Public Management and related performance measurement. Professional HR management is one of the instruments used to implement the managerial and performance-oriented practices within higher education (Siekkinen, Pekkola, and Kivistö 2016). Second, higher education administration has become professionalized in general (Kivistö and Pekkola 2017). That also relates to managerialism and new coordination methods in higher edu-

cation. Third, well-being at work, commitment, and motivation have become a new and more important focus in higher education (Siekkinen, Pekkola, and Kivistö 2016). That relates especially to the strong quantitative growth in university enrolment and the growth of non-tenure/casual/precarious/atypical employment (Kezar 2012).

There is a growing amount of research done about human resources and human resource management in higher education (Mugabi and others 2017) and the rise of new higher education professionals (Teichler 2015; McFarlane 2011; Whitchurch 2008). It is evident that an independent group of staff specialized in human resource administration and management (HR professionals) has emerged in many higher education systems with its own associations, seminars, and publications.[28] However, not much is known about the substance of the work of HR professionals and the required competencies (Evans and Chun 2012). Yet, some recommendations on developing different aspects of HR can be identified from the literature (adapted from Evans and Chun 2012):

1) *Presidents and the Board:*
   President and the board should be well aware of HR issues and provide adequate resources for them. HR leader should report directly to top management.

2) *HR Leaders:*
   The main duty is to advocate an HR dimension in strategy formulation and decision making and to develop metrics that would support decision making and the strategy process.

3) *HR Departments:*
   HR-departments are accountable for strengthening organizational capabilities, employee commitment, productivity, and morale. HR professionals need to think about their departments from "outside in" and be able to adapt with feedback. HR professionals need to develop knowledge of academic institutions, priorities, goals, and processes, as well as institutional strategy and mission.

Formalization, Transparency, and Fair Recruitment

The ethical issues, equity and equal treatment in recruitments, are highly country-specific topics. In some countries, the legislation from other sectors (such as social policy and legislation, employment policy, and legislation and legislation administrative procedures and civil service) provide a framework for recruitment as well as formalization and transparency of processes in higher education. In other countries, there are sector-specific rules and regulations concerning higher education. These issues are discussed in this report under the topic "national regulation." Box 32 illustrates policies aimed at ensuring a fair gender balance in Nordic countries.

[28] See, for example, www.uhr.ac.uk and http://www.cupahr.org.

Box 32 Women in academia

Across Europe, women are still underrepresented in academia. However, there are some countries, like Latvia, Lithuania, and Denmark, where women are in the majority. While in all academic positions the underrepresentation is moderate, in senior positions it is striking in most European countries. Serbia is the only country in which women comprise more than 40 percent of the professoriate. Even in the Nordic countries like Sweden and Norway, the share of female professors is only 25 percent. There are many explanatory factors for this.

The studies on career trajectories of women have introduced three concepts to illustrate the challenges women face during their career. The "leaking pipeline" describes how women tend to drop out at certain points during their careers, the "glass ceiling" is used to illustrate invincible structural obstacles for women to progress in their career, and the "firewall" is used to symbolize the active discrimination against women.

In higher education, two main methods of fighting against these obstacles have been the increased transparency of recruitments and promotions and affirmative action. The argument against affirmative action has been its quality as an anti-meritocratic measure. As a counter argument, it has been proposed that meritocratic traditions themselves are supporting males (Piñheiro and others 2015, 17–18).

A study done in four Nordic countries (Finland, Sweden, Norway, and Denmark) provides some insights on the reasons for gender imbalance in senior positions. It seems that the question of gender balance is not only a question of time. In all Nordic countries, the share of senior academics has not increased at the same pace as the number of women PhD holders, so it seems there some barriers for women. According to the study, the barriers are more often cultural than structural, and the structural barriers are typically related to family-work life balance and lack of mentors in early career stages, rather than to the official structures in the workplace per se. The comparative nature of the study also revealed that even in Nordic countries there are major country differences in the gender issues (Piñheiro and others 2015).

Source: Authors based on Piñheiro and others 2015.

Institutional practices are also important in ensuring formalization, transparency, and fair recruitments. The role of institutional rules and regulations is crucial for higher education systems in which a strong national culture and regulation of transparency and equity does not exist. In Box 33, an example of the University of California is provided to describe institutional solutions for fair recruitments and transparency.

Box 33 Procedural safeguards and affirmative action policies in the University of California

In the University of California, **Procedural Safeguards** are defined as follows:

Confidentiality

The membership, deliberations, recommendations, and report of ad-hoc review committees are confidential. Solicited letters of evaluation and the personal recommendation by the department chair likewise are confidential.

Access to the academic review record

A faculty member may inspect all documents in his or her personnel review record except those that are confidential. He or she is entitled, upon request, to a redacted copy of all confidential material.

Tenure

Appointments to the positions of Associate Professor and Professor are continuous in tenure until terminated by retirement, demotion, or dismissal. A tenured appointment will not be terminated except for good cause, and after the opportunity for a hearing before a properly constituted advisory committee of the Academic Senate.

Security of Employment

A track to Security of Employment similar to the Professor series exists for certain lecturer titles. An appointment with Security of Employment will not be terminated except for good cause, and after the opportunity for a hearing before a properly constituted advisory committee of the Academic Senate.

Career development

Career development opportunities are available to all ladder rank faculty members. Particular programs are available to minority and women junior faculty to assist them in advancing in their careers and to increase their representation in the tenured ranks.

In addition to overall safeguards (that are linked to the U.S. tenure tradition), the University of California has an **affirmative action policy**. According to the policy, the university is committed to:

Nondiscrimination

It is the policy of the university not to engage in discrimination or harassment against any person employed or seeking employment on the basis of race, color, national origin, religion, sex, gender expression, gender identity, pregnancy, physical or mental disability, medical condition, genetic information, ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed service.

Retaliation

University policy also prohibits retaliation against any person employed or seeking employment for bringing a complaint of discrimination or harassment pursuant to this policy.

It is a policy of the university as a federal contractor to undertake affirmative action for minorities and women, for persons with disabilities, and for veterans.

The university tracks the affirmative actions taken each year and publishes a report on these actions.

Source: Authors based on The Office of the President, UCLA; http://www.ucop.edu/academic-personnel-programs/programs-and-initiatives/faculty-resources-advancement/faculty-handbook-sections/appointment-and-advancement.html; and The 2016–2017 UCLA Academic Affirmative Action Plan; https://equity.ucla.edu/wp-content/uploads/2016/06/2016-17-UCLA-AAAP-Final-WEB-062216.pdf.

Process Design

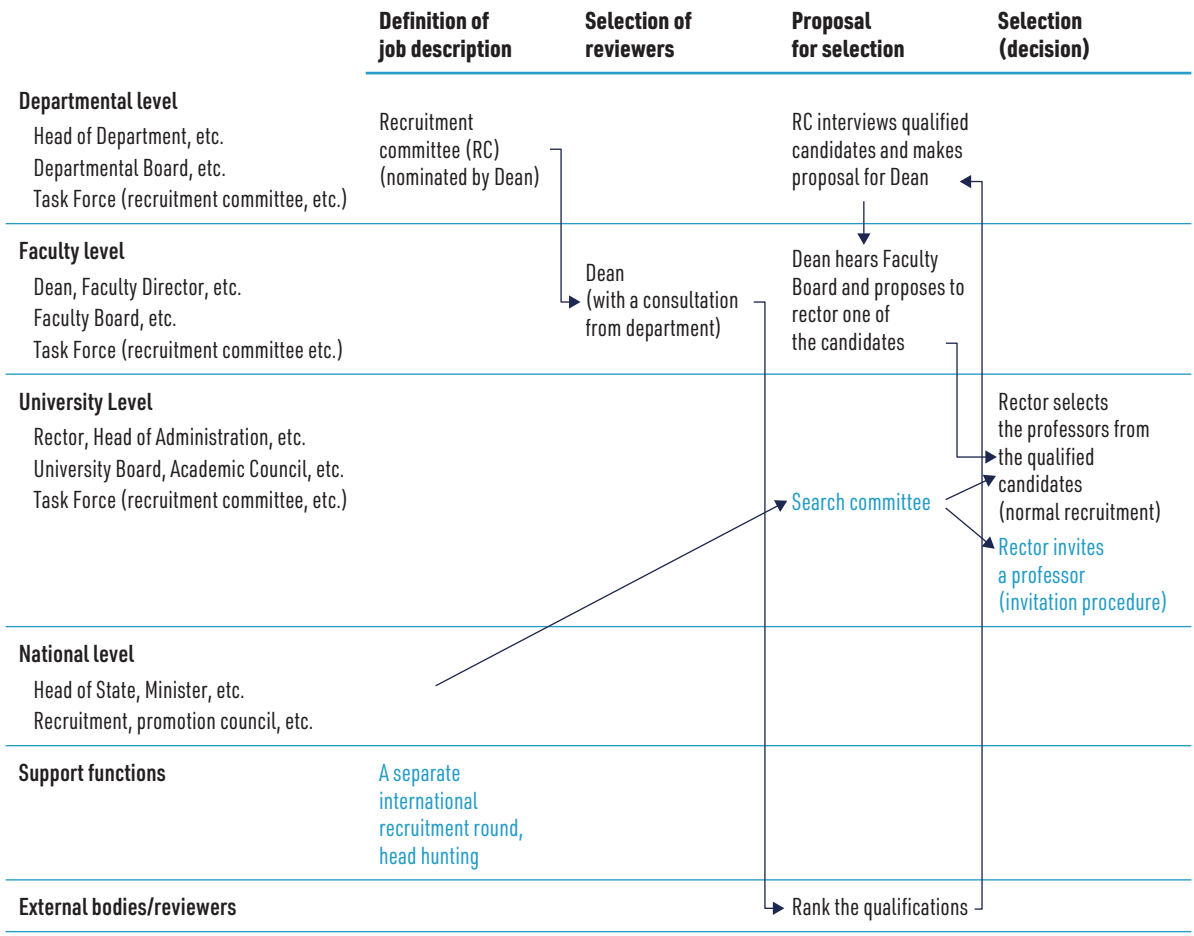
At the institutional level, the process design of recruitments in different career patterns varies significantly from case to a case. Välimaa and others (2016) have developed an instrument that can be used in mapping the practices and evaluating recruitment models (see Table 7). In addition to the decision on opening a vacancy, the recruitment process usually is comprised of several equally important stages: the definition of a job description and selection criteria, selection of reviewers (in professional recruitments), the proposal for selection, and the selection. These stages can be integrated, or they may be defined as separate processes. For instance, the job description (and the call) might be prepared by a departmental board, the reviewers can be selected by the dean, the proposal for selection (and interviews) can be done by a recruiting committee, and the decision on recruitment is made by the rector.

In every stage, there may be more than one actor (collective and/or individual) involved in the process. Typical actors in university recruitments are **managers** (academic/administrative,) **standing bodies** (collegial or representative), **ad-hoc task forces** (collegial/representative/nominated), and **external reviewers and external bodies**. Depending on the case, these actors can be national (still in several European systems, see Eurydice [2017]), university, faculty, or department-level bodies and managers. In addition, there may be a support function like HR professionals included in the process.

In short, typical recruitment processes and procedures are complicated for recruits and recruiters. Table 7 illustrates the recruitment of university professors in Finland. Because the recruitment process has many steps, and independent actors are making their own judgement without hearing each other during the process, it can be asked whether strategic recruitments are possible. For this reason, in many institutions, a separate more strategic track for recruitment, for instance, for recruiting outstanding international faculty members, has been established (example marked in blue in Table 7).

In addition to institutional complexity, the recruitment processes typically vary by type of position. Thus, mapping must be done separately for each position type (for example, professors, lecturers). In addition, the practices may vary from unit to unit, that is, it is unlikely that all faculties have similar practices, although the regulatory environment is the same.

Table 7 Instrument for analyzing complex recruitment processes in higher education – the example of the recruitment of Finnish professors



Source: Authors based on Välimaa and others 2016.

Note: Regular recruitment process in black; more strategic recruitment process in blue.

The use of different recruitment types, the involvement of different stakeholders, and the alignment of recruitment with strategic aims is a difficult task that requires compromise. In Table 8, the different types of recruitments and their strengths and weaknesses discussed above are summed up. In addition to embedding a strategic element in all recruitments, separate, exceptional, strategic recruitment models (tenure tracks, recruiting, international marketing, invitation procedures, and so forth) can be implemented.

Table 8 Different types of recruitments

Sources: Authors based on Siekkinen and others 2016; Välimaa and others 2016.

Impacts for management	Professionals	Organizational	Informal
Strengths	Supports academic excellence; more "objective"	Supports organizational goals and values; representative and affirmative practices can be applied	Flexible and fast
Weaknesses	Major power given to external stakeholders	Subject to organizational and labor market politics	Unpredictable, risk of nepotism, and misuse of power
Strategic focus in	Definition of tasks, job description; selection among qualified candidates	Defining selection criteria; definition of tasks, job description	Defining the role of research groups; defining the role of contingent faculty
Aim	Selection of most meritorious academics within an important field; legitimation of professional academic status	Selection of right person fitting to the organizational criteria; organizational legitimation	Selection of available and capable worker; practical survival; individual legitimation
Role of HR	Facilitate the review process Inform the reviewers on criteria Discuss new and emerging fields	Facilitate the recruitment process Educate the recruiters Support the development of selection criteria	Ensure legality and fairness Inform recruits on their rights and responsibilities Supports team leaders in their day-to-day management activities

Human Resource Services

HR services can be organized as centralized services, service centers, partly centralized services (matrix), and as decentralized services — with different implications for the possibilities of HEIs to engage in strategic HRM.[29] These models may also have some institutional variations or combinations, the strengths and weaknesses of which are described in Table 9.

[29] Most of the studies on HR administration and policies are case studies or studies concentrating on a specific HR function like promotion, recruitment, or remuneration. One of the few studies conducted on the topic concerns the organization of Finnish HR services (Kuoppala and Pekkola 2015).

Table 9 Organizing principles of HR services and their strengths and weaknesses

HR services	Practices	Strengths	Weaknesses
Centralized	HR personnel are part of central administration	Easy to coordinate Economy of scale Division of labor Specialization Optimization	Distance (physical and substance) from academic unit Risk of isolation Transformation costs
Service center (a service unit with own budget providing services for academic units)	HR personnel are part of service centers that are independent (budget) units	Budgeting Cost analysis Tailoring products Customer approach	HR services are easily considered as a cost Duplicating activities Transformation costs
Partly centralized (matrix)	HR personnel have placements in academic units	Proximity Coordination	Conflict of interest Management conflicts
Decentralized	HR personnel are part of the personnel of academic units; only strategic HR is located in central administration	Proximity Clear hierarchy General know-how Minor transaction costs	Difficult to coordinate Sub-optimization Lack of professional expertise

Source: Authors based on Kuoppala and Pekkola 2015.

The organization of HR services should be designed to support the strategy of an institution in the best possible way. Hence, the most important questions related to the organization of HR services are:

1) What are the most important organizational units in strategic HR (university, faculty, department)?
2) Should HR practices be coordinated among these units?
3) What is the division of labor between HR services and HR work done by line managers?

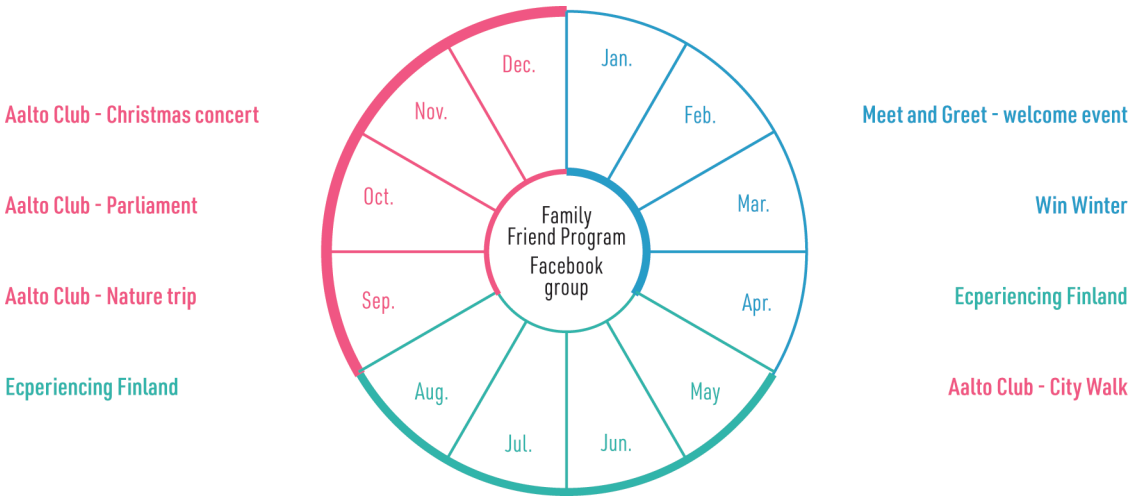
Box 34 Aalto University: Welcoming international researchers

Aalto University has profiled itself as an international research university. In all its HR policies, the internationalization plays an important role. In Finland, Aalto has probably been the most active university to develop the HR services for its international staff. One of the functions of international HR services is to provide support for the families of international staff members. For this purpose, Aalto University has developed a family program. In addition to e-mail-list, Facebook group, and other information sharing, Aalto organizes several annual events for international families. These include:

- A welcoming event
- "Winter & Eastern Fun" events
- Aalto club events, for example, City Walks, nature trips, a visit to the Parliament and to concerts
- Experience Finland events to learn about Finnish culture and traditions, as well as seasonal features (in association with the University of Helsinki).

In addition, Aalto has developed a Family Friend – Buddy Program that promotes integration of Aalto's international staff members by providing them a possibility to be acquainted with Finnish families, homes, and everyday life. In this program, families of Aalto University staff members can apply for the status of host family to be networked with a family of an international staff member.

Figure 9 Family Program at Aalto University



Source: http://www.aalto.fi/en/about/careers/international_staff/for_families/.

Source: Authors based on the website of the Aalto University; http://www.aalto.fi/en/.

3.5 Career Advancement in Academic Careers

Promotion Patterns

In many countries, advancement in one's academic career is still based on success in applying to open positions, but there are also instances of more structured approaches. In some countries, there are special promotion patterns offering possibilities for (permanent and tenure track) faculty to advance in their careers. Often advancing in one's career is still biased toward research merits. However, there is a growing interest in the role of teaching in promotions (Subbaye and Vithal 2017).

Probably the most studied and referenced higher education system in the study of promotions is the UK. In his seminal study, Parker (2008) examined the promotion systems in all UK universities. He found seven patterns of promotion criteria. They all typically consisted of assessment in research, teaching, and administration.

1) *Role profile: all-around player.* Employer lists all the duties and qualifications for each position. To be promoted, a candidate needs to fulfill all criteria at his or her own level and 75 percent of the criteria of the next level.
2) *All-rounder with a specialism.* Candidate selects one area of excellence (research, teaching, or administration) in which she or he must excel to be promoted. In other areas, she or he must meet minimum criteria.
3) *Specialist.* Candidate selects a restricted number of areas of excellence and is evaluated only in those areas.

4) *Well-rounded teachers.* Candidate provides evidence on excellence in teaching and satisfactory level in other areas.
5) *Researcher with other excellence taken into account.* The candidate can support (back up) his or her research excellence with excellence in teaching or administration.
6) *Well-rounded researcher.* Candidate is assessed in excellence in research and minimum standards in teaching and administration.
7) *Pure researcher.* Promotion is made based only on assessment of research merits.

The promotion patterns vary in different positions. The most typical pattern for senior lecturer was "all-rounder with specialisms"; for reader, "pure researcher"; and for professor, "researcher with other excellence taken into account." The promotion criteria were geared toward research merits in senior positions, especially in pre-1992 universities (that is, research universities). Institutions should select their promotions patterns to support their organizational profile and strategy.

In the framework of the European four-stage researcher's career model described earlier in this report, a list of competencies needed for different stages has been developed. These are described in Box 35.

Box 35 Competencies needed in four-step career model

Euraxess describes four broad profiles that apply to all researchers, independently of where they work in the private or public sector: in companies, nongovernmental organizations, research institutes, research universities, or universities of applied sciences. Regardless of profession, broad profiles can be outlined that describe the different characteristics researchers might possess.

First-Stage Researcher (R1) (Up to the point of PhD)

Researchers with this profile will:

Carry out research under supervision; have the ambition to develop knowledge of research methodologies and discipline; have demonstrated a good understanding of a field of study; have demonstrated the ability to produce data under supervision; be capable of critical analysis, evaluation, and synthesis of new and complex ideas; and be able to explain the outcome of research (and value thereof) to research colleagues.

Desirable competencies:

Develops integrated language,[30] communication, and environment skills, especially in an international context.

Recognized Researcher (R2) (PhD holders or equivalent who are not yet fully independent)

All competencies of "First-Stage Researcher" plus:

Has demonstrated a systematic understanding of a field of study and mastery of research associated with that field; has demonstrated the ability to conceive, design, implement, and adapt a substantial program of research with integrity; and has made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, innovation, or application. This could merit national or international refereed publication or patent; demonstrate critical analysis, evaluation, and synthesis of new and complex ideas; can communicate with their peers, that is, be able to explain the outcome of their research (and value thereof) to the research community; takes ownership for and manages own career progression, sets realistic and achievable career goals, identifies and develops ways to improve employability; and co-authors papers at workshop and conferences.

Desirable competencies:

Understands the agenda of industry and other related employment sectors; understands the value of their research work in the context of products and services from industry and other related employment sectors; can communicate with the wider community, and with society generally, about their areas of expertise; can be expected to promote, within professional contexts, technological, social, or cultural advancement in a knowledge-based society; can mentor first-stage researchers, helping them to be more effective and successful in their R&D trajectory.

[30] That is, speaking, listening, reading and writing skills.

R3 – Established Researcher (Researchers who have developed a level of independence)

All necessary and most desirable competencies of "Recognized Researcher" plus:

Has an established reputation based on research excellence in their field; makes a positive contribution to the development of knowledge, research, and development through co-operations and collaborations; identifies research problems and opportunities within their area of expertise; identifies appropriate research methodologies and approaches; conducts research independently that advances a research agenda; can take the lead in executing collaborative research projects in cooperation with colleagues and project partners; publishes papers as lead author, and organizes workshop or conference sessions.

Desirable competencies:

Establishes collaborative relationships with relevant industry research or development groups; communicates their research effectively to the research community and wider society; is innovative in their approach to research; can form research consortiums and secure research funding/budgets/resources from research councils or industry; is committed to professional development of his or her own career and acts as mentor for others.

R4 – Leading Researcher (Researchers leading their research area or field)

All necessary and most desirable competencies of "Established Researcher" plus:

Has an international reputation based on research excellence in their field; demonstrates critical judgment in the identification and execution of research activities; makes a substantial contribution (breakthroughs) to their research field or spanning multiple areas; develops a strategic vision on the future of the research field; recognizes the broader implications and applications of their research; publishes and presents influential papers and books, serves on workshop and conference organizing committees, and delivers invited talks.

Desirable competencies:

Is an expert at managing and leading research projects; is skilled at managing and developing others; has a proven record in securing significant research funding/budgets/resources; beyond team building and collaboration, focuses on long-term team planning (for example, career paths for the researchers and securing funding for the team positions); is an excellent communicator and networker within and outside the research community [creating networks]; is able to create an innovative and creative environment for research; acts as a professional development role model for others.

Source: Authors based on https://euraxess.ec.europa.eu/europe/career-development/training-researchers/research-profiles-descriptors.

Career Development

Providing academics with support for their career development has become an important part of HEIs' engagement in strategic human resource management, and should be covered in HR strategies and policies. As the activities and career trajectories have diversified, so have the needs of academics for support and training measures. As part of strategic approaches to HR management, HEIs responded to those needs by establishing support structures and offering a wide range of professional development opportunities. Those activities can form an integral part of an institution's overall approach to the career advancement and promotion of academics. In that, institutions address core competencies of academics related to teaching and research, but also competencies that relate to their institutional profiles and are of particular interest to system-level stakeholders — such as innovation skills (see Box 36) and Open Science[31] (Schwald 2017). Moreover, professional organizations provide HEIs and their academic staff members with targeted support in the field of professional development (including the self-assessment of competencies), for example, in the form of the program "Vitae" in the UK (see Box 37).

[31] Open Science can be defined via four basic goals: (1) "Public accessibility and transparency of scientific communication," (2) "Public availability and reusability of scientific data," (3) "Transparency in experimental methodology, observation and collection of data," and (4) "Use of web-based tools/infrastructure to facilitate collaboration" (Ritter 2017).

Box 36 The promotion of innovation skills at the University of Strathclyde, United Kingdom

The University of Strathclyde's focus on innovation and knowledge exchange pervades its institutional policies, including those on staff development. Impactful innovation and knowledge exchange with external partners on the regional, national, and supranational level are among the core activities of the university. The institutional strategy lists "world-leading innovation and impact" as one of its three key themes, and mentions support for staff development as a measure under the cross-cutting theme of "operational excellence" (see Figure 10). The importance attached to staff development is reinforced as one key focus of the university's human resources (HR) strategy, "Strathclyde People Strategy 2020," which complements the overall institutional strategy.

Figure 10 The strategic plan of the University of Strathclyde

Our Vision	A leading international technological university, inspired by its founding mission, that makes a positive difference to the lives of its students, to society and to the world
Our Mission	From our foundation as 'the place of useful learning', we take it as our responsibility to research, teach and be of benefit to society – to reach outside the University to make the world better educated, prosperous, healthy, fair and secure
Strategic Themes	Outstanding student experience | Internationally-leading research | World-leading innovation and impact
Cross- cutting Themes	Global engagement | Operational excellence
Our Values	People-oriented | Bold | Innovative | Collaborative | Ambitious

Source: https://www.strath.ac.uk/media/1newwebsite/documents/Strategic_Plan_2015_WEB_VERSION.pdf, p. 7.

In line with the profile and strategic objectives of the university, academics have access to a range of support services and professional development opportunities in the area of innovation and knowledge exchange. First, the Research & Knowledge Exchange Services provide academics with support related to, among others, the commercialization of intellectual property, funding applications for research and knowledge exchange activities, contract management, and the engagement with external stakeholders such as companies. Second, the university offers professional development opportunities that address knowledge and skills for innovation and knowledge exchange. That includes two comprehensive programs: the Strathclyde's Programme for Academic Practice, Researcher Development, and Knowledge Exchange, and the Strathclyde Programme in Research and Leadership. The courses offered by the university cover specific topics such as:

- The research and knowledge exchange landscape in the United Kingdom;
- Basics of knowledge exchange;
- Understanding external organizations;
- Engagement with industry;
- Building relationships with industry;
- Enterprise, commercialization, and intellectual property;
- Financial aspects of knowledge exchange;
- The public engagement of researchers.

The university also established a Technology & Innovation Centre that brings together academics and researchers from industry to work together on innovations in important areas of research such as health and energy.

Source: Authors based on the University of Strathclyde website; https://www.strath.ac.uk/.

Box 37 Professional support for researchers' career development – Vitae in the United Kingdom

Vitae, a not-for-profit program developed in the UK, provides HEIs with targeted support for their professional development activities for researchers. The activities of Vitae comprise research and innovation, training and resources, events, consultancy, and membership. The program pursues four aims:

- Influence the development and implementation of effective policy relating to researcher development
- Enhance higher education provision to train and develop researchers
- Empower researchers to make an impact in their careers
- Evidence the impact of professional and career development support for researchers.[a]

In its activities, Vitae addresses researchers within and outside of the higher education sector, and acts on a global scale.

The program adopts a holistic perspective on researchers and their development potential. That perspective is captured in the "Researcher Development Framework"[b] developed to support the professional development of researchers, which covers four key areas: knowledge and intellectual abilities; personal effectiveness; research governance and organization; and engagement, influence, and impact. Vitae is furthermore engaged in attesting HEIs' efforts in the field of career support and professional development by implementing a UK-specific procedure for the EC's "HR Excellence in Research" award (see Box 1).

Source: Authors based on the website of Vitae; https://www.vitae.ac.uk/.

Note:
a. https://www.vitae.ac.uk/about-us.
b. https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework.

Performance Evaluations

The aim of performance evaluation in the career context is usually related to career promotions, tenure track evaluations, recruitments, or remuneration. Remuneration is covered elsewhere in this report (see Chapter 4 "Remuneration"), so the emphasis here is on promotions, tenure promotions, and recruitments. As mentioned, there are as many variations of career promotions patterns as there are institutions. However, the main categories of criteria of performance evaluations are:

1) Teaching;
2) Research; acquisition and grants
3) Administration/management/organizational activities/collective duties;
4) Social engagement/outreach (often assessed together with administration as "service").

Only a few countries in Europe have an official policy to guide how to link the performance appraisal results with career development. The mechanisms linking these two factors are financial benefits, career advancement revision of work content, or extension of contract (Eurydice 2017). In countries that have a strong performance orientation (like Finland), the connection between career development and performance evaluation exists de facto, but not on paper. The connection of performance evaluation, careers, and salaries are further discussed in chapter 4.

Aspects of Process Design

The institutional process design of career progression is described with the help of the case example of Aalto University, in Box 38 (for an additional example, from

Estonia, see Box 40). An example of evaluation criteria, those of Aalto tenure track are described in Box 39. There are as many practices as there are institutions. However, in all cases at least the following checklist could be used for evaluating the process of promotions:

- What is the aim of recruitments and is it in line with who are the targeted as recruits (for example, domestic/internationals, prospective/established academics, teaching/research-oriented)?
- What are the career steps (for example, are there different career tracks for teachers, researchers, and managers, are all career tracks aiming for professorship, and so forth)?
- What are the entry points to the career (for example, are there alternative career tracks for personnel having professional experience from other sectors)?
- What are the main mechanisms for promotions (for example, are the promotions bound to positions and vacancies or can one be promoted based on qualifications)?
- What are the annual procedures for promotions (are there annual procedures for applying for promotions)?
- Is there some other time sequence in promotions (for example, tenured faculty members are evaluated every fourth year)?
- Which bodies are included to the process and decision making?
- How are the responsibilities shared?
- How is the quality ensured?

Box 38 Tenure in Aalto university

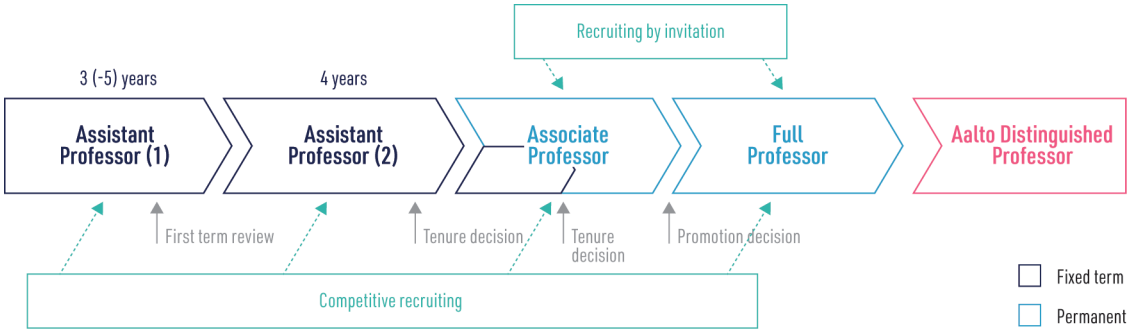
Aalto university has a three-step tenure track system. Assistant Professors (first term) are appointed for a fixed term, typically from three to five years. One year before the end of this term, the Assistant Professor is reviewed for reappointment for a second term of typically four years. Thus, the full length of the Assistant Professor term is normally seven to nine years, with extensions for parental or other types of obligatory leave. An Assistant Professor can also be appointed directly to the second term. Each Assistant Professor granted a second term will be reviewed for tenure. In the tenure review, a decision is made on whether to grant tenure, that is, a permanent position, and to promote the candidate to the Associate Professor level. The Tenure Review is conducted one year before the candidate's contract expires. The review can also be held earlier by joint agreement among the Assistant Professor, the Head of Department, and the Dean. If it is decided that an Assistant Professor has not earned reappointment or tenure/promotion, the employment ends when the existing contract expires.

Associate Professors in most cases have permanent positions that expire only with retirement or resignation (or dismissal in exceptional cases of severe misconduct). In exceptional cases, Associate Professors may have fixed-term contracts. A fixed-term Associate Professor is reviewed when the term is coming to an end. If successful, the fixed-term Associate Professor will be granted tenure as a tenured Associate Professor. Promotion to the position of Full Professor is based on merit.

Professors hold tenure until retirement or resignation (or dismissal in exceptional cases of severe misconduct).

Aalto Distinguished Professors are exceptionally qualified Full Professors who are invited by the president to the honorary position of Aalto Distinguished Professor.

Figure 11 Tenure track at Aalto University

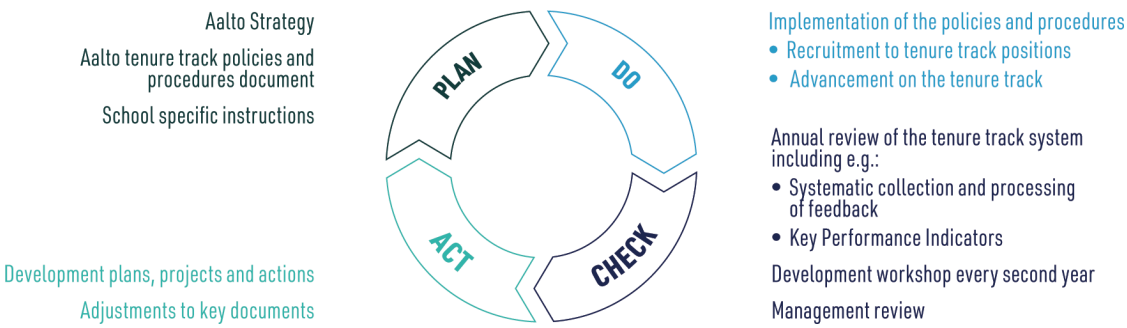


Source: http://www.aalto.fi/en/midcom-serveattachmentguid-1e6c376f9bd57d8c37611e681fe5fbb433f3d403d40/20160229_tenuretrackpoliciesandprocedures_en.pdf, p. 4.

There are several actors involved in the recruitment and promotion procedures. In their policy and procedure document, the roles and responsibilities of all actors are described in detail.

Aalto has also developed a continuous development program for its tenure track system that is based on Deming's cycle (see Figure 12).

Figure 12 The continuous development of Aalto tenure track system



Source: http://www.aalto.fi/en/midcom-serveattachmentguid-1e6c376f9bd57d8c37611e681fe5fbb433f3d403d40/20160229_tenuretrackpoliciesandprocedures_en.pdf, p. 14.

Source: Authors based on http://www.aalto.fi/en/midcom-serveattachmentguid-1e6c376f9bd57d8c37611e681fe5fbb433f3d403d40/20160229_tenuretrackpoliciesandprocedures_en.pdf.

Box 39 Evaluation for promotions in Aalto tenure track

In all positions, the performance is evaluated along three dimensions: (1) Research and/or Artistic and Professional Work, (2) Teaching, and (3) Service (activity in scientific community, academic leadership, and societal interaction). To be recruited as assistant professor, the candidate is evaluated based on a systematic evaluation of the potential (or merits if applying for a second term) for a successful career on the tenure track:

- Early exceptional research or artistic merits
- Early exceptional teaching merits
- Rate of progress in earning merits
- Comparison and benchmarking of the candidates (including bibliometric indicators)
- Independence and originality
- Networking
- Recommendation letters.

To be recruited as Associate and Full Professors, review includes at least the evaluation of the key criteria described below.

Research and/or Artistic and Professional Work

- The most important publications and their quality and impact including the quality of the publication forums from the viewpoint of the candidate's field of research; and/or the most important artistic works and their quality and impact.
- Research/artistic work in other universities and research institutes or in professionally relevant positions (including doctoral studies and the postdoc).
- The ability to build and lead a research/artistic team including possible doctoral students and postdoctoral research associates or artistic professionals supervised by the candidate.
- The capability of raising competitive research funding or corresponding competitive funding in the artistic field.
- The ability to conduct independent research/artistic work.

Teaching

- Teaching experience including supervision of doctoral, Master's-, and bachelor's-level theses.
- Development of teaching and experience in course development in the field.
- Pedagogical education and studies.
- The quality of student feedback.
- Collegial feedback (for example, head of department, director of degree program) and use of student and collegial feedback in developing teaching.
- The ability to teach.

Service

When recruiting or evaluating a candidate to the Full Professor level, the review should consider the key criteria, with increased emphasis on service (activity in the scientific community, academic leadership, and societal interaction):

- International (and national) visibility and standing of the candidate and her or his team in the field.
- Competitive funding.
- Achievements in doctoral education.
- Experience in curriculum development.

In addition, the candidate is expected to have made contributions to service including, for example:

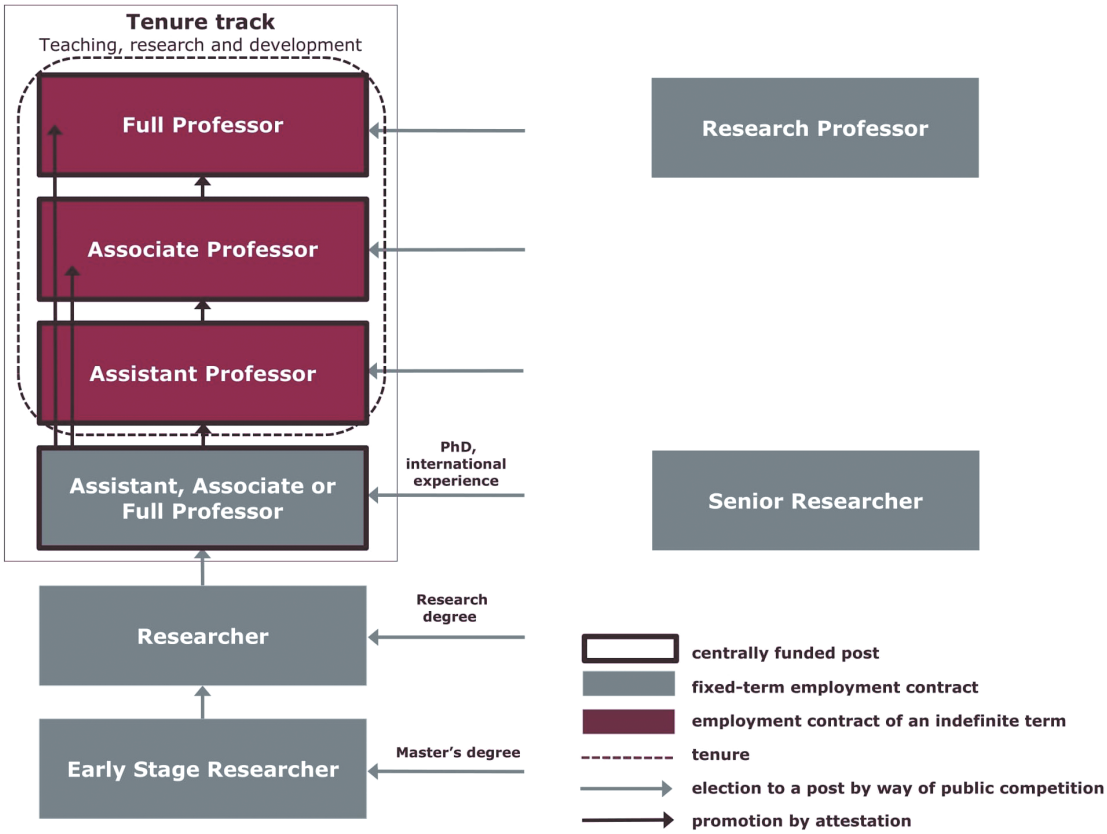
- The candidate's outreach and dissemination of her or his work.
- Collaboration within Aalto University, schools, and the departments such as committee, working group, and task force memberships.
- Mentoring and coaching more junior colleagues.
- Formal training developing academic leadership.
- Academic leadership positions including committees and educational programs.
- Service to the scientific/artistic community or society at large.

Source: Authors based on http://www.aalto.fi/en/midcom-serveattachmentguid-1e6c376f9bd57d8c37611e681fe5fbb433f3d403d40/20160229_tenuretrackpoliciesandprocedures_en.pdf.

Box 40 Tenure track at the Tallinn University of Technology, Estonia

The Tallinn University of Technology (TUT), Estonia, introduced a tenure track model to improve the attractiveness of academic careers. That model is the first of its kind in Estonia. It consists of permanent academic positions that can be reached via a structured career path (see Figure 13). The permanent positions are funded by the central institutional level, among others, to level out fluctuations in project-based funding. In contrast to posts that are not part of a tenure track, which academics enter via an open competition, advancement along the tenure track takes place via "attestation." The attestation consists of a periodic evaluation of an academic's performance and of his or her compliance with requirements for advancing to the next, higher-rank post.

Figure 13 Tenure track at Tallinn University of Technology, Estonia



Source: Website of Tallinn University of Technology; https://www.ttu.ee/public/TTU_karjaarimudel_final_eng.jpg.

Source: Authors based on Aarna 2017.

3.6 International Mobility in Academic Careers

Internationalization is one of the megatrends in higher education policy, and has far-reaching implications for academics and their careers. It is also a widely studied phenomenon in higher education. Internationalization has been approached from many perspectives including research excellence, teaching excellence, student learning and experiences, quality assurance, and governance. It has also been studied from an individual career perspective and identity formation. In addition, many indicators for internationalization have been identified (De wit 2010). However, there are comparatively few studies on international mobility as a part of national or organizational career systems. According to the Eurydice study (Eurydice 2017), most of the European higher education systems have an internationalization strategy or, like Latvia, an internationalization strategy is a part of an overall higher education policy. Only some of these policies mention concrete targets for international mobility (outgoing and incoming) — even though there is a trend in Europe toward more systematic approaches to national-level internationalization strategies, including defined targets and (performance-based) indicators (de Wit and others 2015). Latvia is among a few countries providing numerical targets, namely as aimed share for the international staff. However, most of the countries in Europe monitor incoming and outgoing mobility, indicating that it has a strategic importance.

With respect to the institutional level, the importance and impacts of mobility as part of career structures are understudied phenomena. We know from practice that in some universities international or national mobility is a requirement for recruitment or promotions. Many universities also have institutional internationalization strategies that include actions for attracting and supporting incoming mobility.

Box 41 Estonian program on attracting foreign staff

Estonia is one of a few countries that has a national international research marketing strategy with a vision stating that: By 2022 Estonia will be internationally known as a strong research country that is open to innovation.

The international marketing of research will support the internationalization of Estonian research and an increase in the competitiveness of the Estonian economy. By 2022, the international awareness of Estonian research and the attractiveness of Estonian researchers and research institutions as cooperation partners will have increased.

The vision is implemented in three development goals:

1) Estonia has a global reputation as an attractive research country that is supported by successful and constant cooperation between initiatives and organizations that aim to introduce Estonia;
2) Information on Estonian research is up to date and available for interested foreign parties;
3) The awareness has increased for international businesses that operate in the smart specialization growth areas when it comes to Estonian research, development, and innovation achievements and success stories of cooperation between enterprises and researchers.

To date, considerable attention has been paid to attracting foreign researchers and partners. The Research in Estonia website (www.researchinestonia.eu) has been developed to function as a base that has a collection of research information as well as success stories relating to Estonian research. Researchers wishing to advance their career are also able to use the website to acquire more information from other pages (EURAXESS, Work in Estonia, Study in Estonia, and so forth). The majority of those visiting the website have been directed to the site from other pages that also aim to market Estonia.

As part of the same initiative, an integrated "Guide for International Researcher's Moving to Estonia" has been developed. The guide provides a range of information from the Estonian higher education and research environment and employment in Estonia to practical issues like taxation, culture, family, and transportation. In addition to the printed guide, the Estonian Research Council is also organizing twice a year a "Research Module of the Welcoming Programme" that is designed for those who are interested in topics related to Estonian research and the higher education system. The module consists of the following topics:

- Research institutions and their functions;
- Various academic networks and organizations;
- Research funding schemes in Estonia;
- Teaching practices applied at Estonian universities, and so forth.

Source: Authors based on Estonian Research International Marketing Strategy 2016–2022; http://www.etag.ee/wp-content/uploads/2015/11/Teadusagentuur_dokument_eng.pdf.

Box 42 International dimension of academic careers

Academic careers are often analyzed as static linear paths from PhD to professorship. However, this is rarely the case. Career development can also be horizontal or flexible, with many different elements. One interesting phenomenon in academic careers is mobility, and especially international mobility. Mobility as a desirable aim for career development emphasizes the nonlinearity of career and the supportive role of an organization and national authorities in building individual careers. In some countries, mobility is a self-evident part of academic career; in the United States, for instance, it is unlikely that an academic could spend his or her entire career from undergraduate student to professor in a single university.

In smaller countries, like Finland, it commonly happens that academics spend their entire career in a single university. In many cases, in a small country, there might be only one institution providing some specialization, so even in theory, mobility might be impossible within one's home country. Incoming international mobility might also be the only way to recruit talented scholars and develop a scholarly community. The dysfunctions of national labor markets are an additional reason to encourage academics to include international mobility as part of their career.

In Finland, the ministry of education steers higher education institutions to increase inward international staff mobility. In addition to providing information, steering includes a requirement for higher education institutions to draft an internationalization strategy, and allocating 2 percent of the annual higher education budget based on the number of foreign staff members.

The Academy of Finland (an autonomous body under the auspices of Ministry) encourages individual faculty members' mobility. To be considered for postdoctoral or senior researcher's funding, an academic must apply for funding from other research environments than the one in which she or he defended her or his PhD thesis, or must verify that she or he has worked elsewhere for a period of six months. Also, an international mobility plan is a requirement for Academy project funding. In addition, the Academy has several other instruments to support internationalization. For instance, together with the Finnish Innovation agency, TEKES Finland, it funds the Distinguished Professor Program (FiDiPro) to strengthen scientific knowledge and know-how in Finland, add a more international element to the Finnish research system, and support research-driven profiling of universities and research institutes.

Many institutions have also their own policies supporting staff mobility. One of the forerunners was the University of Jyväskylä, which for several years has supported staff mobility with international research mobility grants. Mobility is also considered an asset for recruitment at all levels of academic staff. The University has also introduced a strong policy recommending that mobility is a prerequisite for permanent employment at the University of Jyväskylä.

This "forced" mobility has raised many questions. In an evaluation of the Finnish career system, several concerns were raised among the employees including a fear that it puts individuals in difficult and unequal positions depending on their family commitments, socioeconomic background, and gender.

Source: Authors based on official documents of Finnish Ministry of Education and culture, the Academy of Finland, and the University of Jyvaskyla.

3.7 Reform Process toward New Models and Procedures

The reform process toward new models and procedures of academic careers and work is an interplay among institutional autonomy, the academic profession, national higher education policy, and national and international labor markets. The best way for policy maker to approach reform is to:

1) Acknowledge the national and global the characteristics of academic work and the profession and the balance between the national and international context;
2) Identify stakeholders, resources, policies, and actors having a role in the development of academic work and careers;
3) Clarify goals of the reform and concrete measures to verify these goals.

The reform of the academic career typically requires reforms in management, internal funding and budgeting, ICT-systems, and organizational structures. It also requires a cultural change and staff commitment. Thus, reforms are complex, and they do take time.

3.8 Key Learnings and Good Practice Criteria

The status and role of academics

- **B.1** – *System level* – System-level regulations are primarily applied to secure academic freedom and academic quality, and to promote transparency, including for national and international mobility. Defining the role, status, and tasks of academics is mainly an institutional responsibility. System-level policies support healthy competition among individuals, and avoid practices that lead to the marginalization of certain staff groups.

- **B.2** – *Institutional level* – The status and role of academics are considered thoroughly in institutions and are reflected against the funding sources of academic work, the system-level policy and regulatory framework, international trends in academic work and careers, and the traditions of academic work and its values. Institutional managers are well-informed on the contractual arrangements (duration and type) and funding of their staff.

- **B.3** – *Institutional level* – Institutional policies aim for equal treatment of staff with project and budget funding, and acknowledge the equal importance of research, teaching, and administrative tasks.

General career patterns

- **B.4** – *System level* – On the national level, there is a systematic approach to career stages that allows domestic and foreign academics, ministries, and other stakeholders to compare positions among countries and institutions. This framework is flexible enough to allow institutions to engage in strategic HR manage-

ment. The system-level policy guarantees the mobility between academia and industry and among institutions, and supports attractiveness of careers. It also provides a solid legal framework for career structures such as tenure track or other systematic approaches to career development, and establishes clear entry and exit points for academic careers.

- **B.5** – *System level* – System-level policies may provide resources to HEIs for strategic career initiatives, for example, with regard to young academics.

- **B.6** – *Institutional level* – Institutional career patterns are realistic for most of the staff members. They are aligned with a systematic approach to career stages at the national level and they are internationally comparable.

- **B.7** – *Institutional level* – Institutional policies ensure transparency and clarity of career patterns and promotion criteria, and maintain an appropriate balance among research, teaching, and administrative excellence. Candidates and employees of HEIs are aware of promotion criteria and career progression possibilities. Institutions communicate clearly the qualifications needed for different positions to their employees and persons seeking recruitment.

- **B.8** – *Institutional level* – Institutional policies link key aspects of academic career patterns (recruitment, promotion, remuneration) so that these support the implementation of institutional- and unit-level strategies.

- **B.9** – *Institutional level* – Data on all staff categories (including academic staff on part-time/hourly contracts) are gathered and analyzed to enable effective human resource development and strategic human resource management.

- **B.10** – *Institutional level* – Organizational structures and HR services support the career patterns within an institution. HR policy is important for the development and implementation of strategies. In the context of academic careers, institutions:
  - Clearly define duties and responsibilities related to HR;
  - Ensure that sufficient resources are allocated for HR-related tasks;
  - Support a strategic role of the HR director;
  - Develop the competencies of HR professionals;
  - Assure the quality of HR policies and initiatives;
  - Set indicators for measuring HR success.

Selection and recruitment of academic staff

- **B.11** – *System level* – Recruitment plays a vital role in the strategic development of institutional profiles. Thus, the national framework steering the recruitment practices needs to allow for institutional development and differentiation. National policies primarily guarantee equal opportunity for, among others, different nationalities, genders, and minorities.

- **B.12** – *Institutional level* – The most important way of assuring the quality of recruitments is to ensure the transparency and clarity of processes. That encompasses the clarity and transparency of job definitions, selection processes, and criteria; the provision of clear guidelines (and training) and definitions on the role of different actors involved in the decision-making process; a clear definition of

entry points to academic careers; and a clear policy on equity issues/affirmative actions. Applicants are made aware of the practices.

- **B.13** – *Institutional level* – Institutions deliberately balance the selection criteria in the context of their mission, acknowledging academic excellence (professional evaluation of teaching and research), organizational commitment, and fit (organizational recruitment). The institutions ensure that academic units have the capacity to select their workforce in a flexible, fair, and transparent manner, to meet the requirements of external funding and to support the overall aims of HR policies.

- **B.14** – *Institutional level* – Positions are advertised sufficiently broadly (including, where suitable, on the international level). Institutions use tools facilitating the systematic search for candidates and, where appropriate, headhunting. The selection process is efficient, transparent, and not overly time-consuming. Transparency of the process also extends to the candidate, who is informed about key milestones of the process. There needs to be clarity on the tools used to evaluate the skills of candidates (for example, lectures, evaluations by students, and assessment centers).

- **B.15** – *Institutional level* – Selection processes go hand in hand with the clarity of roles (for example, of academic selection committees, including possibly stakeholders from industry, academics from other faculties, and a representative from the institutional leadership).

- **B.16** – *Institutional level* – There is a system of checks and balances that ensures, among others, the strategic fit of candidates for the position, and a balance between professional and organizational recruitment.

Career advancement and promotion patterns

- **B.17** – *Institutional level* – Promotion patterns are important instruments for steering academic work. Institutions have clear, transparent, and well-documented promotion patterns that are aligned with the institutions' mission and profile, and clearly distributed roles and responsibilities during the promotion processes.

- **B.18** – *Institutional level* – Promotion patterns take into account different aspects of academic work (research, teaching, administration, and service). The merits in different academic tasks are defined in a transparent and understandable manner. To ensure the fairness and effectiveness of promotion patterns, they are repeatedly communicated to staff members.

- **B.19** – *Institutional level* – Career development and career advancement are part of institutional planning and strategic management, and are supported by modern HR instruments (for example, target agreements and skills development tools). In this, HEIs support academics in evaluating and developing their competencies required for conducting high-quality scientific work and for succeeding in their careers within their scientific community, and within organizations in the higher education sector and beyond.

International mobility in academic careers

- **B.20** – *System level* – International mobility is crucial, particularly for small higher education systems. National policies support inward and outward mobility. Incoming mobility can be marketed and facilitated on the national level. With respect to outgoing mobility, the return of academics and related mechanisms are taken into account, in addition to the provision of grants for outward mobility. The system-level policies guarantee legal conditions conducive to the recruitment of foreign academics, and ensure the availability of information in English (or, potentially, another major European language) for international staff. Further relevant aspects include support for mobility, dual career services, English-speaking contact points in the administration, support on social security issues, and other aspects of mobility support.

- **B.21** – *Institutional level* – Internationalization is one way of improving the quality of academic work. However, that impact cannot be taken for granted. It is important that institutions have defined the aims related to internationalization; planned and organized the career patterns, tasks, and overall working environment (including family life) in a way that a foreigner without local language skills can successfully work; and have organized sufficient support structures for incoming (and outgoing) staff.

Alignment of elements of human resource policies

- **B.22** – *System and institutional level* – To promote good academic work and careers, job descriptions and tasks, performance appraisal, career progression, reward systems, and strategic objectives are aligned.

- **B.23** – *System level* – All higher education policies take into account the HR policy aspect, not least because the implementation of all policies and outcomes will be ensured by, or will have an impact on, academics.

4 Remuneration

The topic of remuneration of academic staff, and its relation to the design of academic careers and strategic human resource management, has significantly gained in importance in recent years. Different factors have contributed to this development (see also Chapter 1.2 "Introduction to the Topic"). These include the changing employment status of academics in some European countries (for example, the move from civil servant to employee), fiscal constraints in the context of the recent recession,[32] but also increased institutional autonomy and a rise in competition between public HEIs (as well as competition with the private sector) on the national and — depending on the type of institution — the international level.

Within the last three decades, and in the context of New Public Management, remuneration questions have increasingly been considered in connection with incentivising organizational units or individuals to contribute to the achievement of goals set at the unit, institutional, and national level. New Public Management embraces the principles of subsidiarity — that decisions can be taken by actors closest to the respective issue, well-defined responsibility of actors, and competition (Ziegele and Handel 2004). It replaces steering via regulations by a new managerial steering approach, which leaves more scope for individual and collective incentives as steering instruments. This can be observed in the interaction between the state and HEIs, but also increasingly in the interactions between HEIs and individuals.

One theoretical approach of remuneration is discussed by Ziegele and Handel (2004, 4), who describe it in connection with the "Principal-Agent-Theory" (Handel 2004 based on Göbel, 2002, 98). In this context, the question is considered how a "principal," that is, an actor who commissions a certain task, can ensure that the "agent" completes this task, even though the principal will not have full information on the process leading to the completion of the task. There is further an assumption of an information asymmetry ("hidden information" and "hidden action") among principal and agent and of presumed different benefits, leading to the need to steer related processes from the principal's side via incentives. These theoretical concepts provide the background of the following discussion on remuneration in higher education.[33]

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[32] Evans and Chun (2012), for example, report that at the University of Nevada at Las Vegas, 20 percent of the workforce, or 400 positions, were cut in 2011. "Clearly recessionary budget cuts have served as an exit driver in higher education, adversely affecting employees' sense of affiliation and job satisfaction" (Evans and Chun 2012, 55).

[33] However, it is important to note limitations to the "Principal-Agent-Theory," including, in an academic context, those related to intrinsic motivation and a potential "crowding out effect," as will be discussed later.

Another theoretical approach that helps understand reward systems and related questions of talent management pertains to the so-called "employee value proposition" — a model for identifying and communicating the factors that contribute to employee retention. The employee value proposition has four elements: compensation, benefits, work content affiliation, and career development" (Evans and Chun, 2012, 54).

While there are limits to the extent to which approaches to compensation and incentives developed for industry and the private sector more broadly can be applied to HEIs (Bright and Williamson 1995, 70), these approaches, nevertheless, provide a useful starting point for related considerations in the tertiary education sector. As the discussion of Bright and Williamson (1995, 70) shows, performance measurement and remuneration remains a contested area. Besides amounts and remuneration mechanisms proposed, this also relates to underlying assumptions of what motivates academic staff, as will be discussed in the next section.

However, linking remuneration models to performance will remain high on the agenda in the years to come, with competition between HEIs and countries in the "war for talent" expected to increase parallel to internationalization of higher education systems and with the need the strengthen profiles and competitiveness of HEIs measured by international rankings, by, among other things, attracting and keeping well-performing and motivated staff.

4.1 Trends in Remuneration of Academics

Remuneration in the narrow sense refers to money paid for work or services. While this is indeed an important means to compensate and incentivize academics working at HEIs, it is vital to embed any discussion on remuneration approaches in a wider framework of incentive systems. More holistic approaches toward rewards schemes have been summarized under the heading of "Total Rewards Strategies" (for example, Heneman 2007; Evans and Chung 2012), which combine monetary and nonmonetary rewards. An overview on total rewards strategies in the private sector context is displayed in Table 10.

Table 10 Total rewards strategies

Source: Heneman 2007, 3.

Total Rewards Strategy	Definition
Compensation	
Base pay	Wages and salaries
Merit pay	Base-pay increases based on employee performance
Incentives	Cash bonuses based on employee performance
Promotions	Base-pay increases based on potential to perform new job
Pay increases	Base-pay increases based on length of service with the organization
Benefits	
Health and welfare	Payment for injuries and illness both on and off the job
Paid time off	Payment for vacation time or excused days from work
Retirement	Payment for work no longer performed based on length of employment

Total Rewards Strategy	Definition
Personal Growth	
Training	Skill development through on- or off-the-job instruction
Career development	On-the-job coaching to develop skills
Performance management	Ongoing goal setting and feedback to develop skills

For now, the three broad categories — compensation, benefits, and personal growth — appear to be more important than detailed distinctions among different types of compensation. All of them provide distinct opportunities to reward staff, and while all of them have distinct advantages, they also have constraints, as will be discussed later.

Ziegele and Handel (2004, 6) have systematized different types of incentives in the higher education context (see Figure 14). Monetary incentives on one side are complemented here with nonmonetary incentives like reputation, time,[34] and transparency or information. Of particular interest is the link of the factor "freedom" to both monetary and nonmonetary incentives. Beyond academic freedom (nonmonetary), this is explained by the increased financial autonomy of institutional and individual actors, which clearly has an incentivizing function (Ziegele and Handel 2004, 8).

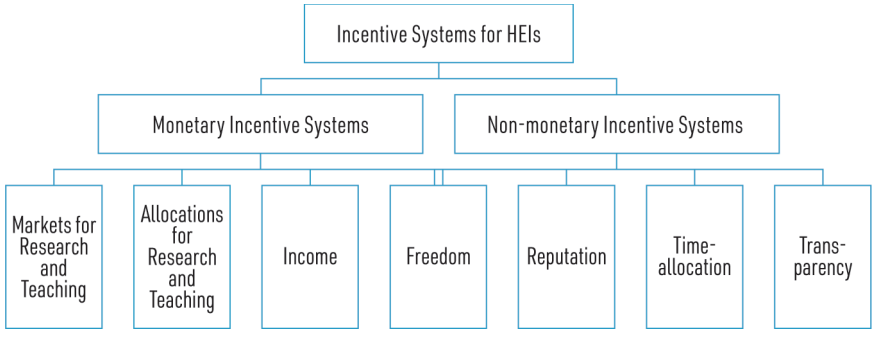

Figure 14 Overview of incentive systems

Source: Ziegele and Handel 2004, 6.

While there is an overall tendency to increasingly link remuneration to performance,[35] it can be observed that in the context of the recent recession, nonmonetary incentives have received particular attention (Evans and Chun 2012 54ff; Dowds 2010, 14). "The implementation of an annual compensation statement for both faculty and staff has become an increasingly important best practice for communicating the value of indirect financials such as leave programs, tuition reimbursement, and employer benefit contributions," note Evans and Chun (2012, 55f), listing Florida State University's launch of a university-wide total com-

[34] Practical applications include, for example, teaching-free semesters for research projects, and teaching load reduction for publication.

[35] See, for example, Dowds (2010, 14): "What we seem to observe though is a pattern of evolution towards merit based pay systems based on PM [*i.e. performance management, authors*] outcomes that will eventually be applicable to all staff…." Dowds's study (commissioned by the Higher Education Funding Council for England) of *International Experiences of Human Resource Management in Higher Education* is based on interviews with HR personnel from Australia; Canada; Germany; Hong Kong SAR, China; India; Ireland; Malaysia; New Zealand; South Africa; and the United States. For further discussion on the overall link between performance and pay, see also Heneman (2007).

pensation statement and Kent State's annual total compensation statement as noteworthy examples for the United States. However,

> *"…[f]or state employees in public research universities, the recessionary economy has given rise to unprecedented, legislative mandated changes in the terms and conditions surrounding benefits and retirement. For example, in June 2011, New Jersey lawmakers approved a broad rollback of benefits for state employees […] that sharply increased the contributions employees made to their health insurance and pension plans […]. These changes transferred billions of dollars per year in expenses to employees […]. While institutions of higher education have competed on benefits rather than base salaries compared to their private sector peers, this strategy has become increasingly unsustainable as benefits costs outpace salary increases and inflation (Advisory Board Company, 2005). A study conducted by the Education Advisory Board concludes that compared to salary compensation, benefits are both more expensive and less effective…." (Evans and Chun 2012, 58)*

While this chapter focuses on remuneration and not specifically on benefits, the link between remuneration approaches and related benefits (for example, subsequent pension claims) and the interconnectedness of elements of overall (or "total") reward schemes needs to be kept in mind.

4.2 Intrinsic versus Extrinsic Motivation – Basic Questions of Incentivizing Academic Performance

Traditionally, academic work has been considered a vocation in which the intrinsic factors and "inner calling" are considered more important than the extrinsic motivational factors (Weber 1994). However, monetary rewards can be considered not only as part of dissatisfaction avoidance in the workplace, but as part of recognition of work itself.

The topic of monetary versus nonmonetary rewards is linked to the key question of what motivates academics and, thus, what are the factors most suitable to increase their motivation and incentivize academic performance. In short, intrinsic motivation is linked to a person enjoying or finding interest in an activity per se, without a need for external incentives. In contrast, a person is extrinsically motivated if such an "internal motive" does not play a prominent role and the execution of an activity is, rather, driven by fear of sanctions or desire for external rewards. This is an important distinction in the context of performance-based remuneration due to concerns that a strong emphasis on external rewards might have negative impacts on intrinsic motivation.

One of these concerns is related to a "crowding-out effect," that is, the fear that activities initially considered interesting and rewarding per se are later performed only if there is an external reward attached to them (Ziegele and Handel 2004, 11; see also Müller-Böling, Arnhold, and Langer 2004). Analytical papers and policy statements produced in the build-up to a comprehensive academic remuneration reform in Germany in the early 2000s thus raise attention

to this particular issue (see, for example, Frankenberg 1999, 51). Ziegele and Handel (2004, 11) list potential reasons for the crowding-out effect: reduced self-determination (or an impression of external determination), reduced self-esteem (the individual does not have the impression that his or her actual motivation is valued), and a selective "over-motivation" related to the external reward. In Box 43, the "crowding-out effect" and its impact on incentive systems is discussed in more detail.

Box 43 Design of incentive systems – balancing extrinsic and intrinsic factors

To effectively counter the crowding-out effect, some aspects need to be considered when designing incentive systems:

- Incentive systems are particularly effective when the external incentive acknowledges the goals of the addressee of the incentive. This can, for example, be ensured by involving the addressees in the design of the incentive system.
- Extrinsic incentives should be used when intrinsic incentives lead to negative effects, and thus need to be corrected (*Authors' Note: this could, for example, be the case if there is a strong individual emphasis on research activities at the expense of teaching duties*), and/or if tasks perceived as less interesting need to be upgraded.
- Incentive systems should not be directly linked to single activities. The more the reward is directly linked to a single action, the more the incentivizing effect will be perceived as a controlling intervention and thus as endangering the intrinsic motivation. This means: If [academic] staff is promoted and/or rewarded based on his or her overall performance (and it is perceived like this by the individual), she or he will feel confirmed in his or her engagement, that is, the intrinsic motivation will be reinforced. This is not the case if the employee is rewarded for a single, specific activity which, when perceived as controlling, might harm intrinsic motivation.
- Incentive systems need to be differentiated. The more homogeneous remuneration systems are, the more there is a danger that employees with a high work ethos reduce their engagement due to the perception that this engagement is not valued (at least through the remuneration system).
- Incentive systems need to consider the aspect of fairness, since the perceived fairness impacts strongly on the motivation. Besides performance justice, procedural justice is particularly important in this context. Procedural justice requires that, in principle, everyone has a chance to receive the rewards in the incentive system and that the information on which the performance assessment is based are valid.

In addition, there are possibilities of strengthening intrinsic motivation in a targeted way. Factors related to intrinsic motivation that can be influenced, include:

- The type of activity: The more interesting the activity is, the more scope there is for intrinsic motivation. However, what makes an activity interesting differs among individuals.
- The personal relationship between Principal and Agent: The stronger the personal relationship between Principle and Agent, the stronger the intrinsic motivation usually is. It is thus, however, also prone to the crowding-out effect.
- Participation: Under conditions of significant participation, employees usually display a stronger work ethic, as is the case in highly hierarchical organizations.

Source: Authors based on Ziegele and Handel 2004.

From the discussion in this section it has become clear that designing remuneration systems and incentive systems more broadly is a balancing act that needs to take into account a variety of factors. Incentive systems need to support extrinsic motivation without destroying intrinsic motivation, and they need to combine performance orientation and selectivity with justice and fairness. Other factors that remuneration models need to balance are continuity (for staff and HEIs), and flexibility (mainly for HEI), stability, and incentivizing effects and institutional versus subject-specific considerations, to name just a few.

4.3 What is Regulated at the System Level?

Remuneration models reflect national and institutional assumptions, priorities, and value systems. The comprehensive German reform of the academic employment law of the early 2000s reflected a desire to break away from the heritage of the past, including what was increasingly perceived as the burden of the *habilitation* and an outdated, age-based system of progression in remuneration. Interestingly, however, this reform was *not* used to do away with the civil servant status of German professors, and it still echoes the old supremacy of the *ordinarius*, the traditional chair of an institute or department (see Arnhold 2006), by foreseeing a higher staff category.

Evans and Chun (2012, 57) point to the importance of a "compensation philosophy" that underpins far-reaching remuneration reforms. In this context, of interest is what aspects of the model are determined by a supra-structure (state) or defined through agreements that include different HEIs, like collective bargaining agreements.

State legislation usually contains a framework for remuneration policies, to ensure basic principles like clarity and transparency, but also to make cross-border but also cross-institutional academic mobility possible. For the sake of simplicity, one could thus consider two main levels in determining remuneration policies: the state and the institutional level, particularly when HEIs enjoy financial and human resource autonomy. However, reality tends to be more complicated: Some countries display different determining state levels, as in the German example, which will be discussed further. Also, the institutional level tends to be less homogeneous, with some roles taken up by the central level of the institution and others by the faculty or department level (and specific tasks and duties allocated to an evolving group of HR professionals; see also Chapter 3.4 "Professionalization of Actors Involved").[36]

A key question concerning national legislation is whether it contains actual models or whether it is restricted to basic aspects of the remuneration system. In the German case, the federal framework legislation contained principle considerations but no actual models. One key question in the German context was thus whether state legislators would pass on the resulting freedom to HEIs or whether more detailed provisions would be put into state legislation, leaving little scope for HEIs to design their own performance-based salary (PBS) models, in accordance with their own strategic priorities. It can be noted positively that most German states abstained from detailed regulations, thus giving significant scope but also significant responsibility for future PBS to their institutions. This is further illustrated in Box 44.

[36] The role of HR managers and staff will not be discussed here in detail; however, more information on their evolving role can be found, for example, in Dowds 2010.

Box 44 What is regulated at the state level – comparing Germany with the Netherlands

In Germany, as a federal republic, most education issues are regulated on the state level as opposed to the federal level. A common basis, however, is realized through, among others, framework legislation.

The year 2002 saw a new *Higher Education Framework Law*, which had two major goals: (a) a redesign of the qualification and promotion trajectories of academic staff, and (b) the introduction of a more performance-oriented and competitive remuneration system (through a *Law on the Reform of Remuneration of Professors*[a]). Both were meant to strengthen performance and innovation within the German higher education and research system, as well as its competitiveness. The framework law stipulated important changes for the entire German higher education sector. These included:

- Phasing out the habilitation and introduction of the Junior Professorship position.
- The possibility of a tenure track, that is, the possibility to employ a previous Junior Professor subsequently as a full professor without advertising the position.

The remuneration legislation, in addition, introduced:

- Two types of professors (in addition to the Junior Professor) "W2" and "W3" and their respective basic salaries – 3,724 euro for W2 and 4,522 euro for W3[b] (HRG/*Law on the Reform of Remuneration of Professors* 2002, 78).
- Three types of (additional) performance allowances:
  1. On the occasion of negotiations in the context of a new appointment (or related negotiations for remaining at the same HEI);
  2. For particular achievements in research, teaching, the arts, further education, and support of junior academics; and
  3. For academics who take on certain positions or special tasks in academic administration or the leadership of an institution.

The details of these provisions could, subsequently, be stipulated in the legislation of individual German states or – if the state-level legislator abstained from closely regulating the related provisions, by HEIs themselves. Observers of the reform at the time issued a warning that a too tight regulation of the provisions of the new model by the states would lead to problems and be in contradiction with the principle of higher education autonomy (Müller-Böling, Arnhold, and Langer 2004).

One of the early movers was the State of Lower Saxony and the respective state legislation – passed in December 2002 – provides a good example of the compromises state legislators opted for. With regard to the financial frame foreseen for the performance allowances (point 2), the state legislation stipulates that up to 60 percent and at least 20 percent of the overall available funds for the three types of allowances need to be allocated to the category "particular achievements." The allowances themselves can be either limited or unlimited in time. The legislator provides a catalogue of achievements/performance categories which *can* be considered by HEIs, including awards, publications, inventions and patents, and so on.

It also stipulates the type of functions that can be foreseen for type 3 allocations, namely full-time members of the presidency of an HEI and professors who are (part-time) vice-presidents or a member of the deans', office but leaves the option open for HEIs to add further functions to the catalogue. This left a significant amount of freedom in the development of models to the HEIs (and later sections will elaborate on how this freedom has been used).

However, there are two things to keep in mind. First, while the German remuneration reform of the early 2000s displayed some particularities, due, among other factors, to the federal structure of Germany, it went hand in hand with a thorough discussion of major aspects of academic career and remuneration reforms. Second, despite two main layers of legislation (federal and state), primarily the HEIs were tasked with the development of actual performance-based remuneration models, an opportunity that was welcomed by some and viewed with some skepticism by others. This, however, means that different remuneration models can be found across Germany – beyond what was discussed above and some convergence in practice, there is no standardization of models.

This is a major difference from countries like Finland and the Netherlands. In these countries, HEIs are not only confronted with one legislator or level of legislation; in both cases, actual remuneration models are agreed and stipulated at the central level based on collective bargaining agreements.

For the Netherlands, for example, the size of the personnel costs to be funded can be looked up in the salary tables of the Association of Universities in the Netherlands (VSNU). The salary tables have been agreed upon in the "Agreement for Funding Scientific Research" and are based on the collective labor agreement (CAO) of the Dutch universities. While this means a high level of standardization and potentially little flexibility for HEIs in matters of allowances, it ensures a high degree of transparency. The salary tables for academics at public HEIs in the Netherlands are publicly available and can be found at https://www.nwo.nl/en/documents/nwo/salary-tables/salary-table-universities-per-1-july-2017. Performance rewards for exceptional achievements can be given in the form of an extra salary step above the annual step in case of satisfactory/good performance, or staff can be given a one-time bonus.

Sources: Authors based on BMBF 2002 and Arnhold 2006; https://www.nwo.nl/en/funding/funding+process+explained/salary+tables.

Note:
a. This law was published in connection with the Framework Law (Section 5 of the respective publication).
b. These amounts were later challenged in a legal process.

Apart from legislation, collective wage agreements can play a determining role in the details of remuneration models. Germany, Austria, and Finland provide different examples for the role such agreements can play for salary models. An important distinction comes from the employment status of academic staff, namely, whether they are civil servants or employees.

Box 45 The role of unions vis-à-vis the remuneration of academics – Germany, Austria, and the United Kingdom

Germany: The right to determine the salaries (and working conditions) of professors as civil servants (*Beamte*) lies with the respective legislative body, which regulates them via laws and regulations. That includes the tariff group W (*Besoldungsordnung W*) that is covered by the federal salary law (*Bundesbesoldungsgesetz*) and regulated in detail by the salary laws of the federal states (*Landesbesoldungsgesetz*). In contrast to the salaries of other employees (including those of universities who are not civil servants), which are in most cases framed by labor agreements, unions are not involved formally in the process of determining professors' salaries.

There are, however, unions covering the higher education and science sector (including to some extent professors), which try to influence the law-making process:

- The *Verband Hochschule und Wissenschaft (vhw),*[a] which is part of the *DBB Beamtenbund und Tarifunion*;
- The *Gewerkschaft Erziehung und Wissenschaft (GEW),*[b] which is part of the *Deutscher Gewerkschaftsbund (DGB)*;
- The *Vereinte Dienstleistungsgewerkschaft (VERDI)*.[c]

In addition, the professional associations for professors are also trying to influence laws and regulations on remuneration. The two main professional associations for professors are the *Deutscher Hochschulverband*[d] for professors at universities, and the *Hochschullehrerbund*[e] for professors at universities of applied sciences. There is furthermore the *Deutsche Gesellschaft Juniorprofessur*[f] for Junior Professors.

The unions as well as the professional associations can be involved in the official hearings on legislation on the higher education sector.

Austria: The civil servant status of professors in Austria was abolished in 2004, at least for new appointments. After that, the university employer organization (*Dachverband der Universitäten*[g]) and the union covering the public sector (*Gewerkschaft öffentlicher Dienst [GÖD]*) established an agreement for the employees of universities (*Kollektivvertrag für die ArbeitnehmerInnen der Universitäten*[h]), which became effective in 2009 and also covers professors. That agreement covers various aspects of the employment of academics, including a basic salary in the case of professors. The actual salaries of professors, however, are determined by individual negotiations. Nevertheless, professors' salaries increase in line with the pay negotiations between the university employer organization and the public sector union.

United Kingdom: In the United Kingdom, the Universities and Colleges Employers' Association (UCEA)[i] and the unions for academic and academic-related staff (such as the University and College Union [UCU][j]) negotiated a basic pay framework agreement in 2004.[k] That agreement includes the national higher education pay spine, and additional provisions on pay and grading (that is, the development of grade structures and the assignment of different positions to that structure).[l] There are annual negotiations between the parties on wage increases and other parts of the agreement under the Joint Negotiating Committee for Higher Education Staff (JNCHES).[m] At least in Oxford, professors and readers (the two most senior academic ranks) are not part of the institutional pay spine, but negotiate their salaries on an individual basis.

The national framework (including the pay spine) is implemented at the regional/institutional level with the involvement of local unions/union chapters. The national framework stipulates, for example, that local unions are supposed to be involved in the development of both grading arrangements and policies on attraction and retention premiums.

The unions resent the introduction of performance-related pay (PRP) into the national negotiations (and PRP in general), a step which the university employer organization, however, would be interested in.[n]

Source: Authors based on listed sources.

Note:
a. http://www.vhw-bund.de/.
b. https://www.gew.de/.
c. https://www.verdi.de/.
d. https://www.hochschulverband.de/#.
e. http://hlb.de/startseite/.
f. https://www.juniorprofessur.org/.
g. https://uniko.ac.at/dachverband/.
h. https://www.uni-salzburg.at/fileadmin/multimedia/Serviceeinrichtung Personal/KollV_2017.pdf.
i. http://www.ucea.ac.uk/.
j. https://www.ucu.org.uk/.
k. https://www.ucu.org.uk/media/277/Framework-Agreement-for-the-modernisation-of-pay-structures/pdf/frameworkagreement.pdf.
l. https://www.ucu.org.uk/framework.
m. https://www.ucu.org.uk/hepay.
n. https://www.ucu.org.uk/article/5624/Performance-related-pay.

In summary, regulations on the system level are necessary conditions for standardization of employment categories and conditions. These aspects are linked to system-inherent requirements, like mobility and the perception of transparency and basic fairness.

State legislators are, however, advised to observe the principles of university autonomy and subsidiarity, and give universities sufficient scope to develop models that comply with their institutional focus and strategy. Unions can play an important supporting role when it comes to ensuring consistency, transparency, and fairness, as, for example, the Finnish model shows (see Box 49).

Based on the discussion above, the national legislation and policies on salaries and financial remuneration must be taken into account. As in other areas, the principles of subsidiarity and university autonomy should ensure, however, that legislation is as "light" as possible. In addition, the role of unions should be carefully analyzed. If collective agreements have an important role in defining the salary systems, it needs to be assured that all parties are well informed on national higher education policies, especially regarding financial steering. It is of crucial importance that there are no conflicting aims between the national funding model and national remuneration policies. Regardless of the national labor market model, the national salary system should leave space for institutions to build individual and collective incentive structures to meet the national performance aims.

4.4 Defining and Measuring Performance[37]

With PBS gaining in importance, the question of how to define and measure performance becomes a focus of attention. In many European countries, salaries used to reflect seniority. This was a principle that gave everyone some kind of positive prospect on the future (since people grew older automatically and their salary levels increased accordingly). Reputation was often the only coin that paid for achievement. This system, however, had several flaws: (1) it did not offer sufficient incentives for high performers, particularly those who did not renegotiate their salary in the context of a call — usually a situation which would allow for a salary increase — or otherwise engage in negotiations about their employment and salary status. (2) The only option to increase one's salary was to engage in such negotiations; however, there was little transparency concerning the outcomes (see, for example, Heneman [2007, 9] on pay secrecy). (3) In some countries, the fulfillment of certain functions on a part-time basis (like vice rector or dean) was either not properly rewarded or there was again little consistency and transparency within and across institutions. This led to criticism of the existing system and subsequent changes. "Instead of awarding employees pay increases and other incentives simply for seniority, the so-called 'New Pay' linked rewards to achievement of the organization's strategic objectives" observed Heneman's (2007, 1), based on developments in the U.S. private and public sectors.

[37] The question of performance and how it can be measured on the system and institutional level has been the subject of early World Bank advisory work in Latvia (see 1. Introduction).

Performance Dimensions

There are different ways in which performance at higher education institutions are discussed. A narrower approach focuses on particular achievements that can be reflected through the award of bonuses or (more permanent) allowances. A broader interpretation includes these particular achievements but goes beyond them by considering a "market bonus"[38] (as negotiated in a context of a call or retention) and allowances for specific institutional functions.[39]

However, defining the performance aspect of certain functions or the way the market determines what can be considered as performance[40] appears more straightforward than defining performance in the context of particular achievements (potentially leading to an allowance or bonus). For the latter, again, the main determining factor is what an HEI (and the higher education system) *considers or singles out as rewardable performance*, in accordance with its own strategy.

While performance considerations generally derive from the key functions of academic staff (teaching, research and development, and service), the emphasis needs to be put across and within these categories in accordance with strategic institutional priorities. This leads to the definition of performance categories and subsequent "criteria." As later sections will show, it is not advisable to break down salary models and available funds to the level of individual departments or other subunits. This means that performance levels defined at the central institutional level need to be broad enough to accommodate different disciplinary cultures. A more general description of performance levels might appear less desirable at first sight. However, (1) PBS models, in principle, need to give everyone a chance to participate. In practice, this means a need to allow for differences across fields (for example, fine arts and natural sciences), organizational units, and disciplines. In addition, (2) a detailed definition of what is considered performance might have counterintuitive effects (leading, for example, to an inflation in "desirable" actions"[41]; see also Chapter 4.2 "Intrinsic versus Extrinsic Motivation — Basic Questions of Incentivizing Academic Performance" on intrinsic vs. extrinsic motivation) and paralyze the managerial work.

The challenge is thus to find a balance between the desire to be specific (flexible and context specific) and to provide broad opportunities to participate in PBS schemes (transparent and equal). The Royal Institute of Technology (KTH) in Sweden provides an interesting example of a resulting compromise (see Box 46).

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[38] Witte, Schreiterer, and Müller-Böling (2004) stress that the new PBS system in Germany will also reflect differences in the market value of different [disciplinary] areas' (Witte, Schreiterer, and Müller-Böling 2004, 64). What is meant is that in certain areas, academic staff has (also financially) attractive possibilities for alternative employment — including outside the higher education sector. HEIs thus need to decide to what extent they want to pay some kind of a "market allowance" to attract some highly sought after academics in these particular area (this could concern management or technical subjects, for example).

[39] Or the first combined with any of the latter elements: Dowds (2010), for example, includes recruitment and retention, but not explicitly institutional functions, in her discussion of PBS.

[40] Though the authors agree with Witte and Schreiterer (2004, 54), who note that all (PBS) systems and HEIs are struggling to combine internal performance justice and consistency of performance-based salaries with an orientation toward the private sector.

[41] Rewards for publications are a suitable example: the negative consequences of publication inflation have repeatedly been lamented.

Box 46 Performance criteria at the Royal Institute of Technology (KTH), Sweden

KTH's salary policy is designed to ensure "good performance, commitment and job satisfaction." To achieve this, KTH has opted for salaries to be "individual, differentiated and objective to assist KTH to recruit, retain and develop a first-class workforce." The *Central Level and Benefit Collective Agreement (RALS)* together with operational requirements, financial conditions, and "competence planning" sets the framework for local salary levels. "Salary structure and salary setting must work to achieve operational aims and to ensure that operations are run efficiently and rationally" (RALS Section 5). Levels are determined, for example, by factors like responsibilities and the degree of difficulty of the job-related tasks. Special attention is paid to questions of equality, diversity, and equal opportunity in a nondiscrimination context at KTH. Salaries are primarily determined when staff is newly employed and at annual salary reviews. KTH documents highlight the need for managers to start from the same baseline when setting salaries, and that there is full transparency when it comes to the respective criteria.

Individual salaries at KTH are based on an assessment of the following overall criteria: (1) responsibilities, (2) job requirements, and (3) skills and results.

Responsibilities are assessed using the following aspects, among others:

- *Management responsibility:* This includes, among other aspects, responsibility for leading and coordinating teaching, supervision, project management, work management, and financial and administrative tasks.
- *Financial responsibility:* This refers to the ability to secure and monitor the financial management of operations. Budget and closing of accounts responsibility.
- *Personnel responsibility:* This includes, among other responsibilities, leading and distributing working tasks, conducting performance reviews and salary reviews, and holding workplace meetings (APT). Responsibilities for coordinating systematic work environment activities for the unit. At the unit level, dealing with the physical and psychosocial work environment, rehabilitation, gender issues, and so forth.
- *Technical responsibility:* This refers to responsibilities for technical management. Responsibilities for operations and maintenance of complex and/or expensive equipment.

The degree of difficulty of working tasks is assessed using the following aspects, among others:

- *Qualifications:* This refers to educational and experience qualifications, the skills necessary to perform the duties of the position.
- *Degree of independent working:* This refers to the degree of independent work in the position in relation to unit management. The degree to which the employee himself or herself plans, executes, and supervises the work. How much the employee needs support, direction, or detailed instructions. The extent to which the employee is self-sustainable. Areas of responsibility, operational responsibilities, operates and/or works in internal and external networks, represents KTH externally.
- *Impact:* The extent to which the position affects unit performance.
- *Working environment:* The physical and psychosocial work environment factors that surround operations. Requirements concerning mental and physical exertion and concentration/attention abilities.

Skills and results are assessed using the following aspects, among others:

- *Expertise:* This refers to knowledge and experience in the relevant subject or field. Development potential, as well as analytical and creative skills.
- *Flexibility:* This includes, among other aspects, the ability to adapt to new conditions and situations. Ability/willingness to take on new tasks and develop new skills. Ability to apply a flexible approach to his or her own role.
- *Service:* This refers to the ability/willingness to provide quality service and to respond to colleagues and managers in a positive and respectful manner. Versatility and initiative.
- *Ability to cooperate:* This refers to the ability to work with people at different levels inside and outside the university, build and maintain relationships and networks. The ability to share knowledge and experience.
- *Efficiency and effectiveness:* This refers to the ability to quickly familiarize themselves with new issues and identify rational solutions. A measure of the employee's productivity. Does the employee deliver, or do merely planning and discussion take place?
- *Results:* This includes, among other aspects, the ability to achieve agreed work performance within the planned time frame. The ability to focus and refine work based on operational objectives. Achieving results linked to operational objectives. The ability to improve methods and approaches. The ability to take initiatives and be an active driving force at work.
- *Quality:* A person can be efficient and fast, but the quality of the work and its results are of great importance. How skillfully does the employee perform his or her work and what is the quality level of the results.
- *Communications:* This refers to the ability to communicate both verbally and in writing.
- *Leadership abilities:* This refers to the ability and willingness to help colleagues to develop, to respond positively, and to highlight other colleagues' efforts.
- *Representation abilities:* This refers to the ability to represent KTH as an employer in the proper manner.

However, beyond these overarching criteria that apply to all KTH staff, there are specific salary criteria for academic teachers and researchers:

Pedagogical skills are assessed using the following aspects, among others:

- Ability to implement, develop, and lead educational operations of high quality.
- Ability to create commitment to and interest in the subject.
- Ability to successfully carry out pedagogical development activities and teaching material production, and so forth.
- Teaching at other universities nationally and internationally.

Research activities are assessed using the following aspects, among others:

- Amount of national and international publishing, measured as concerns both quality and quantity.
- Number of citations in national and international articles or publications, measured as concerns both quality and quantity.
- Ability to apply for, and win, external research funding.
- Ability to supervise doctoral candidates up to graduation as PhD.
- Scope of appointments in external research organizations.
- Scope of guest research at other universities, national and international.

Administrative activities and liaison with society are assessed using the following aspects, among others:

- Scope of management tasks or appointments to bodies within the university.
- Ability to communicate research information, popular scientific lectures, and appearances in mass media.
- Scope of appointments as expert, faculty opponent, or as member of grading council for theses defense.
- Scope of collaboration with external partners.

Finally, there are specific criteria for the assessment of managers:

- *Strategic competence:* This includes, among other aspects, the ability to lead operations toward the university's vision and goals, implementing policy documents and policies, and developing operations based on the KTH Strategic Plan.
- *Leadership skills:* This includes, among other aspects, the ability to delegate, communicate, follow up with constructive feedback to employees, and create opportunities for employee development.
- *Judgement:* This includes, among other aspects, the ability to work, lead, and make decisions in accordance with the KTH value platform.
- *Loyalty:* This includes, among other aspects, the ability to represent their group in a proper manner without compromising their role as employer.
- *Initiative:* This includes, among other aspects, the ability to take initiatives and be an active driving force at work. Ability/willingness to develop operations.
- *Social competence/creative ability:* This includes, among other aspects, the ability to create and maintain good relationships with people at different levels within and outside the university. Proven ability to respect, support, and provide recognition for their employees. Sensitive to others' views and ideas.
- *Financial responsibility:* This refers to the ability to secure and monitor the financial management of operations. Budget and closing of accounts responsibility.
- *Administrative ability:* This refers to the ability to understand, communicate, and apply governing documents and policies within administrative matters (finance, personnel, and so forth). Ensuring structured, efficient, and quality-assured internal processes and methods.
- *Job satisfaction:* This includes, among other aspects, the ability to create commitment and a good psychosocial work environment in the group, creating an open, positive atmosphere and equitable work environment. Responsibility for systematic work environment activities which may, for example, involve preventing and/or resolving conflicts.
- *Results:* This includes, among other aspects, the ability to, in a positive manner, create successful results concerning working atmosphere, finances, working environment, and timely delivery.

Source: Authors based on KTH 2014.

On one hand, the KTH example appears to be clearly structured and transparent. It makes a distinction between overarching performance aspects for the institution and those for teaching and research staff (of particular importance for this chapter). Covering details of the teaching, research, and service function of academics, it seems to be rather comprehensive and contrasts with a more straightforward way of describing performance at the University of Oxford. On the other hand, it is detailed and complicated and thus requires certain professional competencies to be properly implemented, managed, and communicated to employees.

The Oxford model puts a clear emphasis on research, and this is reflected in the descriptors used for its five-level, qualitative model. Under this model, Level 5 is foreseen for individuals "whose academic distinction is of the highest quality, with a corresponding quite outstanding worldwide reputation which is universally acknowledged across the broadest subject areas." Academics at that level "will have made a formative contribution through their research and through their overall role across their general field of study"[42] (see also Box 48). Interestingly, there is also a "No award" descriptor:

> *"[T]he University expects all of its professors and readers to be academically distinguished, with an international reputation and research record which is outstanding in comparison with the majority of academic staff in the United Kingdom. It also expects all of its professors and readers to contribute fully and well to all relevant aspects of the academic work of the University. Meeting these baseline expectations does not in itself justify the making of a distinction award." (University of Oxford n.d., 3)*

However, Witte and Schreiterer (2004, 55f) summarize that performance allowances in most cases take into account the work of professors in research, teaching, and service, based on "soft" (such as the descriptors of the Oxford model) rather than "hard" criteria (such as quantitative indicators) and are rarely linked to defined and exclusive lists (of what is considered performance). At the same time, they confirm that some research universities tend to focus strongly on research and development when defining performance.

Assessments

The descriptors or criteria discussed in the previous section are needed as a basis for transparent decisions as the KTH's *Regulations and Guidelines for Salary Level setting at KTH* point out:

> *"Salary criteria clarify what is to be assessed when setting salary levels. These criteria provide support for managers and employees in their salary dialogue and form a tool for managers to be able to make an objective assessment of employee performance and skills.*
>
> *If individual salary level setting is to achieve the desired effect on operations and not be perceived as arbitrary, it is of great importance that the salary level setting manager makes careful and objective judgements when establishing salaries." (KTH 2014, 7, see also Box 46).*

When assessing performance, one important decision is whether to rely more on quantitative or qualitative criteria. Both have distinct advantages and disadvantages. "Hard factors" mean that (ideally quantifiable) aspects of performance are linked to points or amounts (see Witte and Schreiterer 2004). They seem to display greater simplicity, transparency, and objectivity (at least at first sight). However, it is difficult to find a set of "hard criteria" that are suitable for comprehensive universities or even systems, given that many of these criteria

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[42] https://www.admin.ox.ac.uk/media/global/wwwadminoxacuk/localsites/personnel/documents/academicemployment/Call_for_Applications_and_Procedures_2016.pdf.

do not apply equally to all subject areas or that more comprehensive criteria are not directly quantifiable. "Soft factors" at first sight appear less transparent; however, they leave a greater latitude for decision makers to account for specific cases, and thus seem more adequate in an academic environment. Leaning toward "soft factors" (or potentially a mix favoring "soft factors") already excludes a formula-based distribution system (see next section).

Much of the perception of fairness and transparency of a PBS model depends on a clearly structured assessment approach with clear responsibilities and timelines. This normally corresponds to annual or multiannual performance reviews; however, there are also exceptions to this model (see Box 47). As the example of the TU Munich, shows that even highly research-active technical universities might want to reflect a variety of performance factors and assess them though a mix of approaches — in contrast to focusing on research and development only and basing any assessment exclusively on hard factors.

Box 47 Post-tenure performance monitoring of associate/full professors at the TU Munich

In order to validate and substantiate its claim to excellence, TUM is introducing ad-hoc monitoring of the performance of its associate and full professors. This review will not, however, compromise the academic freedom of its scientific staff.

These quality reviews will document the candidate's performance over the previous five years and examine specific projects (Research & Development and Academic Teaching) to assess the candidate's prospects for developing the professorship, using international benchmarks.

The outcome of these reviews can influence decisions on whether to continue or grant new supplemental packages from TUM's central budget, which were initially granted for a period of five years when the professor was first appointed. The findings may also have a bearing on performance-related bonuses.

Prerequisites for a positive post-tenure performance monitoring assessment:

- Excellent performance in Research & Development benchmarked against elite international researchers, and very good performance in Academic Teaching – clearly exceeding the norm, or
- Excellent performance in Academic Teaching and very good performance in Research & Development – clearly exceeding the international norm.

In addition to the criteria outlined under [...], the international reputation and visibility of the professor in Research & Development and Academic Teaching (leadership in the scientific community) are weighted highly in this assessment. Other criteria taken into consideration are Academic Engagement – supporting TUM, TUM's young scientists, and the academic community – and leadership skills.

Source: Authors based on https://www.tum.de/en/about-tum/working-at-tum/faculty-recruiting/tum-faculty-tenure-track/resources/.

4.5 Linking Performance to Remuneration Models and Procedures

While previous sections have discussed the background and nature of PBS systems, the following section will focus on the technicalities of designing PBS systems in practice.[43]

[43] The focus of this chapter is on incentives and related mechanisms with regard to salaries, not on *levels* of salaries, which vary significantly across Europe and beyond. A discussion on this topic is included in Eurydice (2017, 75–76). See also, for example, http://www.eui.eu/ProgrammesAndFellowships/AcademicCareersObservatory/CareerComparisons/SalaryComparisons.aspx).

Designing PBS systems poses a list of challenges. The key question is what has been agreed as a "particular achievement" and (a) can, and (b) should, be translated into a monetary reward. The reward system provides one option for increasing motivation and organizational performance. It should not be the primary source of motivation in professional work. Thus, a careful cost-benefit analysis needs to be done taking into account the externalities of such a system. Externalities include the impact on the organizational culture as well as quality of work.

It is key in this context that a range of aftereffects are taken into account. These aftereffects can be financial or motivational in nature. For example, while it is perfectly appropriate to reward single, time-limited activities with a one-time bonus, the withdrawal of a once granted allowance (while performance levels are stable or increase) could be counterproductive and likely to decrease the motivation of the individual.

Financial repercussions go beyond direct aspects of the model (for example, the need to plan for future increases) and may, for example, affect future pensions (and thus in many cases the realm of the Ministry of Finance). Some of these aspects will be discussed in the following section.

Beyond how to define and assess performance, aspects to be decided include responsibilities and decision-making procedures (including a potential role for external evaluators), and the amount and frequency of the distribution of allocations (Witte and Schreiterer 2004, 65).[44]

Types of Monetary Rewards

Performance can be monetarily rewarded in a variety of ways, including through:

- *Bonuses,* which are a suitable instrument to reward a one-time (or temporary) achievement or particular temporary challenge that has been mastered.

- *Open-ended allowances,* which are used to reward "permanent exceptional[45] performances or a [significant] increase in experience to the extent that they have not been reflected in salary increases in the context of a call or retention" (Witte and Schreiterer 2004, 71). This type of allowance requires particular planning capacity at HEIs. Moreover, it needs to be checked if these allowances are pensionable (depending on the specific national and employment context).

- *Temporary allowances,* which can either be used to provide an incentive at a particular point in time or if it is not clear whether the observed performance is of a permanent nature. Therefore, they might well be used in the context of call or retention negotiations. Their temporary nature makes them attractive from a financial management perspective; however, motivational aspects (as discussed above) need to be kept in mind.

- *Other forms* (variable salary components or the combination of different monetary rewards).

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[44] The following section is based on Witte and Schreiterer (2004).

[45] While the term "exceptional" can be found in the literature and also in legislation, it has to be taken with a pinch of salt. Truly "exceptional" models would exclude the vast majority of academic staff at an institution, which can hardly be the intention of policy makers and leadership.

Box 48 shows how different types of rewards are applied for different staff categories and areas of activity at the University of Oxford.

Box 48 University of Oxford – Balancing permanent increases and bonuses

The University of Oxford, United Kingdom, established an elaborate system for financially rewarding the performance of its academic staff members. The system consists of two parts: the "Professorial Distinction Awards" for professors and readers, and the "Reward and Recognition Scheme for Academic-Related and Support Staff" for the other academic staff categories (and for support staff members). That system forms a part of the overall remuneration system of the university, which is based on individual salary negotiations in the case of professors and readers, and a salary grade structure for the other academic staff categories. The overall system also includes possibilities for salary increases for recruitment and retention purposes.

The "Professorial Distinction Awards" reward exceptional performance with a permanent salary increase. The award procedure revolves around five levels of awards.[a] A fixed amount of money is attached to each of the levels. In 2016, those amounts ranged from GBP 3,428 for level 1 to GBP 28,139 for level 5. Receiving an award translates into a permanent, pensionable salary increase in accordance with the respective level. The overall amount of funding that can be disbursed via the awards is capped. For that reason, the awards are usually restricted to an advancement by one level only. In addition, the procedure's regulations stipulate that the current salary level of an applicant and those of his or her colleagues within the university are taken into account.

The granting of awards follows a multistage procedure based on predefined criteria. The procedure begins with the application by eligible candidates. The application documents must include, among others, the names of three persons from outside of the university, who must provide an evaluation of the applicant. A Professorial Distinction Awards Committee, which exists in every academic division, assesses the applications based on criteria defined by the university's Personal Committee. Those criteria put a focus on research, but take into account other activities as well. That includes minimum requirements related to teaching and to the involvement in the administration of the university. A level-5 award, for example, is available only to individuals "whose academic distinction is of the highest quality, with a corresponding quite outstanding worldwide reputation which is universally acknowledged across the broadest subject areas." Academics at that level "will have made a formative contribution through their research and through their overall role across their general field of study."[b] The Distinction Awards Committee then forwards a recommendation to the Senior Appointments Panel of the University's Personnel Committee. The panel consists of the Vice-Chancellor, the Pro-Vice-Chancellors for Personnel and Equality, for Education, and for Research and Innovation, and the Registrar. It assesses whether the award procedure was followed properly and whether the requirements were applied consistently. If that is the case, it ratifies the recommendation. There are no possibilities to appeal the panel's decisions or to receive feedback on them.

The "Reward and Recognition Scheme for Academic-Related and Support Staff" rewards academics' performance with one-off bonuses and permanent salary increases. The scheme consists of two parts. One part is the "Awards for Excellence Scheme" under which all eligible academic staff members are assessed by their line manager on an annual basis. Line managers then nominate candidates whose performance they consider exceptional.[c] A panel at the department level reviews the nominations based on evidence provided by the line managers. Two criteria must be fulfilled to receive an award. Academics must "have performed well in all the key areas of their jobs" and "have consistently demonstrated exceptional performance, significantly above that which might reasonably have been expected for their grade."[d] The award can translate into (a) a pensionable advancement within the respective pay grade of the academic,[e] or (b) a one-time payment equaling the annual increase of an advancement within the respective pay grade. The university policy on the awards stipulates that the majority of awards should be one-time payments.[f] It is expected that, per year, around 10 percent of eligible staff members receive an award. The second part of the overall scheme is the "Recognition Scheme," under which a GBP 200 one-off bonus can be awarded for outstanding contributions at any time of the year.

Source: Authors based on the website of the University of Oxford; http://www.ox.ac.uk/.

Note:
a. In principle, there are 12 award levels. However, levels 6 to 12 are reserved for exceptional cases.
b. https://www.admin.ox.ac.uk/media/global/wwwadminoxacuk/localsites/personnel/documents/academicemployment/Call_for_Applications_and_Procedures_2016.pdf.
c. If there is a disagreement between line manager and academic, academics can also nominate themselves.
d. http://www.admin.ox.ac.uk/personnel/reward/rewardandrecognitionscheme/awardsexcell/.
e. Each pay grade consists of several scale points. Academics progress automatically to the next scale point each year until reaching the maximum point of the grade. Above that maximum point, there is the so-called "discretionary range," consisting of additional scale points. The scale points of the discretionary range cannot be reached via the automatic progression, but, among others, via the "Awards for Excellence Scheme."
f. The permanent increases are reserved mainly for those academics who have reached the maximum point of their grade. They cannot be awarded to individuals who reached the top of the discretionary range.

Like with other aspects of remuneration schemes, the type of monetary reward needs to fit the specific purpose of the award and motivational and financial implications need to be thought through.

Aspects of Performance-Based Salary Model Development

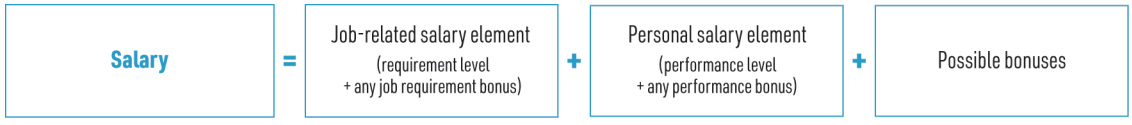
While bonuses, as mentioned above, are easy to handle from a financial management perspective, temporary and/or permanent allowances raise a wider set of issues. The first question is whether these allowances should be freely negotiated or whether there should be a more structured approach. While the former seems to be the approach chosen by some universities in the UK, freely negotiating *all* allowances at an HEI with a PBS approach seems to be a particularly challenging undertaking from an administrative perspective. From a financial management point of view, this might cause a nonpredictive and ever increasing cost item and make HR budgeting very difficult. However, Witte and Schreiterer (2004, 77) define aspects under which such an approach might be possible. In the context of the German PBS reforms, universities opted for a structures approach in the form of a multistep model for allowances connecting performance descriptors with euro amounts (see Box 50). Allowances in the context of calls or retention negotiations were frequently connected to such a model, allowing for more transparency and better planning. In the Finnish case, the multistage model is determined by two dimensions, resulting in a matrix structure: job responsibilities and actual performance. This is illustrated in Box 49.

Box 49 Finland – Example of a matrix model determined at the system Level

In both, Finland and the Netherlands, academic staff is remunerated in accordance with a multistage model, which is established at the system level.

In Finland, as of 2008, all universities (except Aalto University, for which special arrangements are in place), have adopted a performance-based salary system ("YPJ") under general collective agreements. The salary system has the following components: (a) a job-related salary element (requirement level plus any job requirement bonus), (b) a personal salary element (performance level plus any performance bonus), and (c) possible bonuses.

Figure 15 The Finnish performance-based salary system ("YPJ")



Source: https://yll.fi/en/about-employment/salary-system/.

While this model applies to the system overall, there are variations of how the system is applied (that is, median salaries for all positions differ significantly across universities). Only a few universities pay bonuses in addition to the YPJ-based salaries. The median salary of academic staff is about 3,900 euro per month (as a comparison, the state administration median salary is about 3,500 euro per month). Level of task requirements are thus combined with levels of individual performance. An example of levels of task requirements (YPJ requirement levels 8–10 of teaching and research staff) is presented in Table 11.

Table 11 Example for levels of task requirements

Level	Nature of work	Interaction skills and responsibility	Knowledge and skills
8	Teaching and research work highly valued by the academic community	Creating and maintaining an academic cooperation network – also internationally Extensive responsibility for the discipline and its development Planning, organizing, and coordinating research projects and networks Responsibility for using research resources Extensive responsibility for the educational program or responsibility for leading and improving research Extensive responsibility for postgraduate education Extensive academic and social specialist duties	Eligibility to serve as a professor Diversified teaching experience in both undergraduate and postgraduate education
	Principal difference from the preceding level: Diversity of duties, broad scope of duties and responsibilities, in-depth ability and emphasis on academic appreciation, international dimension, eligibility to serve as a professor		
9	Teaching and research work highly valued by the academic community	Creating and maintaining an extensive academic cooperation network – especially internationally Extensive responsibility for the discipline and its development Strategic planning, organizing and coordination of research projects and networks Extensive responsibility for using research resources Extensive responsibility for the educational program or extensive responsibility for leading and improving research Extensive responsibility for postgraduate education Demanding academic and social specialist duties	Eligibility to serve as a professor Diversified teaching experience in both undergraduate and postgraduate education
	Principal difference from the preceding level: Emphasis on the diversity and extent of academic esteem, duties, responsibilities, and cooperation networks		
10	Teaching and research work very highly valued by the academic community	Extensive creation and maintenance of an academic cooperation network – especially internationally Extensive responsibility for the discipline and its development Strategic planning, organizing and coordination of major research projects and networks Extensive responsibility for using research resources Extensive responsibility for the educational program or extensive responsibility for leading and improving research Extensive responsibility for postgraduate education, including directing a postgraduate education organization Highly demanding academic and social specialist duties	Eligibility to serve as a professor Diversified teaching experience in both undergraduate and postgraduate education
	Principal difference from the preceding level: Highly demanding level, advancement to this level requires very broad responsibilities and job demands		

Source: Authors adapted from http://www.sivistystyonantajat.fi/tiedostopankki/684/University_CA_period_2017__2018.pdf, p. 99.

Examples of levels of individual performance are:

- *Level 9: The employee's performance is excellent and clearly exceeds all job requirements and the quantitative and qualitative objectives assigned to the employee.*
- *Level 7 & 8: The employee's performance satisfies all job requirements very well. The performance exceeds the quantitative and qualitative objectives assigned to the employee in many respects.*

- *Level 5 & 6: The employee's performance satisfies the job requirements and the objectives assigned to the employee well. Performance attains a high-quality standard in key fields of duty.*
- *Level 3 & 4: The employee's performance satisfies the basic job requirements and the principal objectives assigned to the employee. Some aspects of performance are nevertheless in need of improvement.*
- *Level 1 & 2: There is a substantial need for improvement in the employee's performance.*

The resulting model is an 11 by 9 matrix in which staff can be mapped according to requirement and performance level, as in Table 12.

Table 12 Salary scales for teaching and research staff, valid as of February 1, 2016 (*in EUR*)

Requirement level	Personal performance level								
	1	2	3	4	5	6	7	8	9
1	1,808.42	1,880.76	1,991.07	2,099.58	2,208.08	2,318.39	2,426.90	2,537.21	2,645.72
2	1,985.85	2,065.28	2,186.42	2,305.57	2,424.72	2,545.86	2,665.01	2,786.15	2,905.30
3	2,181.44	2,268.70	2,401.77	2,532.65	2,663.54	2,796.61	2,927.49	3,060.56	3,191.45
4	2,475.31	2,574.32	2,725.32	2,873.83	3,022.35	3,173.35	3,321.87	3,472.86	3,621.38
5	2,865.30	2,979.91	3,154.70	3,326.61	3,498.53	3,673.31	3,845.23	4,020.02	4,191.93
6	3,340.77	3,474.40	3,678.19	3,878.63	4,079.08	4,282.87	4,483.31	4,687.10	4,887.55
7	3,851.33	4,005.38	4,240.31	4,471.39	4,702.47	4,937.41	5,168.48	5,403.42	5,634.50
8	4,656.16	4,842.41	5,126.43	5,405.80	5,685.17	5,969.20	6,248.57	6,532.59	6,811.96
9	5,244.48	5,454.26	5,774.17	6,088.84	6,403.51	6,723.42	7,038.09	7,358.01	7,672.67
10	5,934.94	6,172.34	6,534.37	6,890.47	7,246.56	7,608.59	7,964.69	8,326.72	8,682.82
11	6,860.10	7,134.50	7,552.97	7,964.58	8,376.18	8,794.65	9,206.25	9,624.72	10,036.33

Source: Authors adapted from http://www.sivistystyonantajat.fi/tiedostopankki/684/University_CA_period_2017__2018.pdf, p. 121.

Sources: Authors based on https://yll.fi/en/about-employment/salary-system/; Kivistö 2017.

If the HEI decides in favor of a structured approach, the suitable amounts and the maximum increase need to be defined. The allowance can either be defined in absolute (euro) terms or as a percentage of the salary. There can be fixed amounts or levels that then can or cannot be index-linked. Predefined levels restrict the latitude; however, they help simplify processes, increase comparability, facilitate planning, and allow for connecting different remuneration elements.

While more levels for allowances might lead to lower thresholds (and thus, more possibilities), increases between levels need to be sufficiently significant as a factor to enhance motivation. In the context of multistage PBS systems, a mix between temporary and permanent might be advisable, for example, with initial allocations, particularly when awarded in the context of negotiations later being transformed into permanent allowances.

In any case, the model development needs to include considerations of regular inflation adjustments and the link to pensions. In Germany, state legislation determined the percentage of maximum allowances compared to the basic salary, with a view to pension implications.

Box 50 Performance-based salary model of the University of Bremen, Germany

Following the federal framework legislation, the State of Bremen had advanced comparatively liberal state legislation delegating most decisions concerning the new salary model to its HEIs. The state had confirmed that in Bremen professors would either be in the W2 or W3 category and that key functions, like the rector, vice-rector, and head of administration would be W3 positions. It was also decided that special performance allowances will be initially awarded on a term base, but can in following rounds be awarded on a term or open-ended basis. The state legislation proposed performance criteria which, however, were neither mandatory nor exclusive. It was also decided that the rector would decide on the performance allowance based on the proposal of the dean. The decision of whether performance allowances would be pensionable remained with the respective ministry for those related to a call, and with the rector for special performance allowances (performance allowances in the narrower sense).

In the years before the introduction of the W salary scheme, Bremen and its university had seen remarkable development. This was reflected in the university's position in research rankings and the award of the title "City of Science" to the town of Bremen. In the early 2000s, the university was not only busy with the introduction of the new salary scheme, but also with the establishment of Junior Professorships and the Bologna Process. Most importantly for the smooth introduction of the W salary scheme was previous work on strategic management of personnel. The University of Bremen had devoted considerable time and energy to rethink, for example, the process leading to an appointment of professors and related selection criteria. For them, not only teaching and scientific expertise were relevant, but also certain managerial capabilities and skills going beyond narrow subject expertise. Professors were increasingly expected to be able to manage resources allocated to them in an efficient manner and to contribute to the university as a *corporation*. Besides these new approaches related to calls, there were three additional questions that guided the work on the new salary model:

- Profile of the University of Bremen and its consequences for human resource policies: Does the personnel portfolio correspond to the intended profile "light-towers"?
- How should we go about nonmonetary incentives?
- How are positions equipped and financed and how can these two aspects be linked to performance agreements?

During and initial workshop, the W salary working group considered the legal framework for its work (federal and state level), resulting model and procedural options, and some initial financial implications. This specifically related to the professorial positions (number of W2 compared to number of W3 positions, the latter with higher basic salaries), and their implications for the distribution frame, that is, the amount available for performance allowances. If the University of Bremen had decided to have only W2 professor positions (with a basic salary of 3,724 euro, as initially stipulated by federal legislation), the theoretical distribution frame per professor would have been 1855.84 euro. In the case of only W3 positions (with a basic salary of 4,522 euro, as initially stipulated by federal legislation), the distribution frame per person would have been 1,057.84 euro, and thus significantly lower. The University of Bremen decided to use the historic split between C3 and C4 professorships as guidance concerning the new W2–W3 split, leading to a distribution frame of 1,407.11 euro.

In a next step, the university decided on the allowances for certain functions. The functions under discussion were exclusively part-time functions, since the state law already stipulated the full-time functions for which allowances would be provided. The amount foreseen for the full-time functions like rector were determined by external boards where those bodies already existed in Germany. Part-time functions include (in some cases) vice-rectors and in most cases deans. The University of Bremen decided on differentiated amounts not only for vice-rectors and deans but also for the equal opportunities commissioner, vice-deans, and study deans (for study deans, this was differentiated on the basis of department size, measured by the number of disciplines covered).

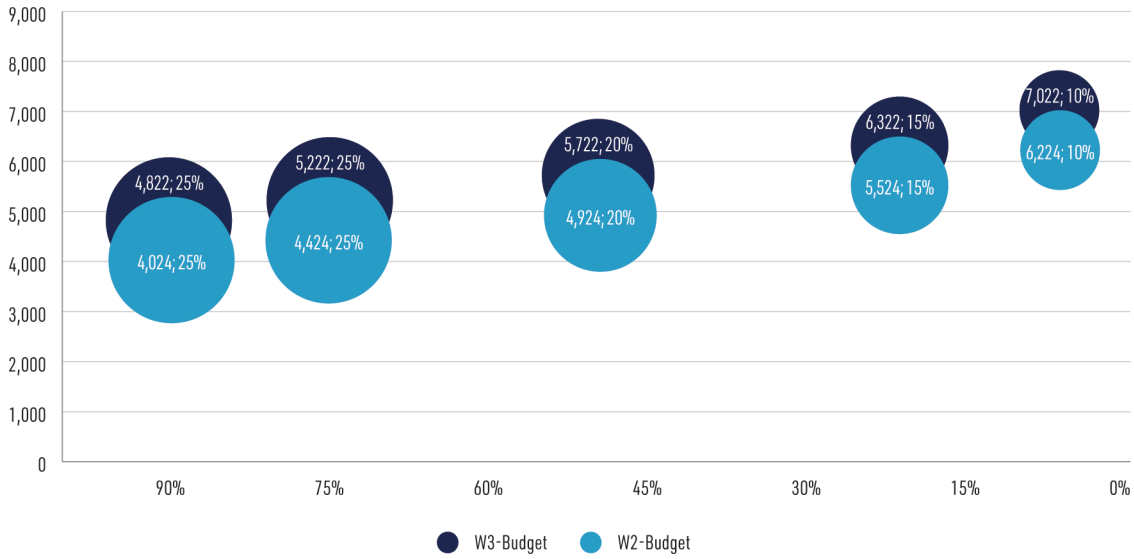
Concerning the type of allowances awarded in the context of negotiations around a call or extension of employment, the key point is that universities need to strike a compromise between what might appear desirable and what can reasonably be financed. There is only one "pot" for all three types of allowances: Spending more on calls thus means that there is less available to reward functions and for the performance allowances in the narrower sense. Here, the university needs to answer the following questions:

- Which positions are supposed to be filled in the coming years;
- In which areas the university wants to see "'light towers' of achievement" (it would be unrealistic to expect this in all areas to the same extent and at the same time);
- To what extent professors are expected to join from other spheres of employment (industry, the public sector);
- Whether the university expects to recruit younger or older professors.

The answer to these questions depends on the individual higher education strategy. However, there are two aspects to keep in mind: Especially those institutions that recruit younger professors need to set up accruals (see Section 4.6 on Remuneration and Financial Management). Finally, institutions that opt for a staged model that integrates negotiations (that is, the amounts that can be negotiated correspond to stages of the model) circumvent some of the risks and imponderables associated with the financial implications of negotiations.

The most important aspect of the W reforms, however, relates to the "special performance allowances," awarded for achievements on the job. Based on the analysis of international experience, the Center for Higher Education propagated a stage model for German universities, and this was also discussed at the University of Bremen. In principle, performance allowances can be awarded as a monthly allowance of a one-time bonus. The University of Bremen decided to allow both options, particularly since some types of performance might relate to activities restricted in time. Once the university had decided on the multistage model, discussions focused on the number and (euro-) level of the steps. This resulted in the following multistage model for the University of Bremen (depicted is the state in 2002, which was based on the distribution frame resulting from the 2001 average salary). Figure 17 shows the euro amounts on the y-axis and the percentage of professors expected to reach this stage on the x-axis).

Figure 16 The multistage model for the University of Bremen



Source: Authors adapted from Arnhold and Handel 2004, 18.

The University of Bremen planned for a zero level (initial performance level) followed by five steps. The increase for the W2 category is parallel to the W3 category, and for both categories equal shares of the distribution frame are foreseen. The amount allocated per level increases from Level 1 (300 euro) step-by-step up to Level 5 (700 euro); there is a written description of achievement for each level. For example, Level 7 is allocated for "achievements which help form the international reputation of the university in a decisive manner.

Procedural questions were to some extent already determined by the state legislation (for example, role of the rector and the deans). As with other remuneration models, not all implications can be anticipated at the introduction stage. An evaluation of the new model after a few years is thus highly advisable.

Source: Authors based on Arnhold and Handel (2004).

Procedural Considerations

To keep administrative efforts manageable but also to increase predictability of the process, it is recommended to have a determined and regular process for the evaluation of existing, or the allocation of new, performance allowances. The model "allocation at any point in time" would mean flexibility, but again poses challenges from an administrative and financial management perspective. Therefore, most institutions opt for a regular process. The process could be initiated by application or proposal, and can potentially be connected to performance agreements between the HEI and the individual.[46] An alternative option is to link the process to an already existing review process.

[46] This is, for example, possible in tenure track systems; however, individual performance agreements need to be considered carefully where performance of (for example, research) teams is rewarded. The use of individual performance agreements thus needs to be considered carefully and should not be used as a standard option in all cases.

Again, the University of Bremen provides a good example of how the process can work in practice:

> *"The process is at least partially already determined through [state legislation] (role of rectors and deans). It is supposed to take place once per year; after an allocation, a professor can apply again after three years. This is supposed to reduce [administrative] effort and, on the other hand, allow for the individual to produce awardable achievements between two assessments.*
>
> *There are clear deadlines for individual parts of the process: By 31 July, the rectorate informs in an anonymized form about the current distribution of professors on achievement levels and communicates possible increases. If a professor wants to apply for an allowance, he or she needs to hand in an application for which a clear format exists. The application goes via the Dean to the Rector and needs to be reach the Dean by 31 August. The Dean after consultation at the Dean's Office provides a statement on the application. This statement needs to reach the Rector by 30 September. The Rector decides on the application by 30 November." (Arnhold and Handel 2004, 195f)*

Responsibilities at the Institutional Level

A key role in the development and execution of PBS models rests with the institutional leadership. This does not mean that the rectorate needs to be involved in every single detail of the process that might better rest with commissions, internal bodies, of external reviewers. However, the institutional leadership has the final responsibility for the functioning of the model. The involvement of other players depends on various factors, including the profile and size of the institution and the role and responsibilities of deans.

Deans can be involved in the process in different ways, such as through proposals or by providing statements as in the case of the University of Bremen, provided in the previous section. If performance agreements are used, it would normally be the dean who leads the negotiations with the individual professor (Arnhold and Handel 2004).

Commissions can be helpful in terms of increasing transparency, quality, and acceptance of decision-making processes and can serve as a "clearing house" (Witte and Schreiterer 2004, 66), potentially with a veto function. It is important, however, that such commissions also include members who are able to oversee the budgetary consequences of proposed options.

In summary, clearly defined processes and criteria accessible and comprehensible to all institutional members are key for the transparency and acceptance of performance-based remuneration models.

4.6 Remuneration and Financial Management

Remuneration models cannot be developed in isolation from financial management considerations, and financial management should not be done without careful analysis of HR issues. Typically, most of the nonfixed cost of an HEI are personnel related. This applies to reform attempts at the state level as well as to model development on the institutional level. Key questions here include what is the overall available amount for performance allowances, and how is it distributed (from the state to HEIs and potentially within HEIs if contingents are foreseen). Another question is whether certain quotas are foreseen for types of performance (allowance for functions vs. particular achievements), future implications of budget models, staff retirement plans, and considerations related to staff mobility.

Besides these model-related questions, states and HEIs need clarity on pension implications and need to be closely coordinated, where needed, with the Ministry of Finance and relevant line ministries likes those in charge of health and social protection.

Further, institutional leadership needs to have not only a strategic but also a budgetary vision on how the PBS model is going to develop. A major consequence of these considerations is a considerate and prudent approach to reserve-building, which keeps the HEI out of troubled waters. As mentioned, there are two preconditions that should be fulfilled before a PBS approach is implemented on the institutional level. One concerns lump-sum budgets allowing for flexibility and reserve-building. The other one is that, ideally, HEIs should become the employers of academics and handle the consequences of salary and other budgetary decisions made on the institutional level.

Box 51 shows some of the financial management implications and related considerations on the state and HEI level in the context of the introduction of the W salary scheme in Germany.

Box 51 Financial management issues and the introduction of the W salary scheme in Germany

As mentioned, the introduction of the W salary scheme in Germany in the early 2000s was influenced by three important framework conditions: (a) the German federal structure led to three determining levels of the new scheme (federal, state, and HEI); (b) the reform was not used to level the playing field and there were thus *two* new types of professors beyond the Junior Professor, namely, W2 and W3; and (c) performance in the more narrow sense was accompanied by two more types of "performance" as determined by federal legislation: interinstitutional functions (like rector, vice-rector, and dean) and salary increases in the context of call-related negotiations. While these aspects provided the frame for salary models, another important determining factor – besides principles and procedures determined at the institutional level – was the amount of funds to be distributed.

The federal government via the framework legislation made sure that the reform was not used for savings, that is, decreases of the overall amount available for professors' salaries at the state level, or that there would be "too much of a spread" (Witte, Schreiterer, and Müller-Böling 2004, 18) across states, though one could argue that such a spread was already a reality and was difficult to counteract with the means proposed by federal legislation. The average annual salary of professors in the State of Baden-Wurttemberg, for example, was 74,000 euro, compared to Sachsen Anhalt, with an average salary of 49,000 euro, according to initial calculations for 2001. The federal law stipulated that the distribution frame of a state would be determined in such a way that the average salary expenses for C2, C3, and C4 professors (that is, for professors remaining in the old system) and for W2 and W3 professors would correspond to the overall salary expenses for the respective group of individuals in 2001. This means that the so-called distribution frame, that is, the amount available for performance-related expenses in the categories described above (A–C) equaled the delta between the average salary expenses in 2001 minus the actuals for the remaining C professors, and the basic salaries for the W professors in a given year as the following formula (for the example of 2003) shows[a]:

Distribution frame =C–Ø(2001) x n(2003) – (∑ C and W basic salaries (2003))

Further, the federal legislation stipulated the following:

- The salary average was established separately for universities and *Fachhochschulen* (UASs) for 2001 according to a standardized calculation that was applied to all states.
- Entering the new system, states were allowed to raise the average salary once to the level of the highest-ranking state (Baden-Wurttemberg).
- Afterward, states were allowed to exceed the established average salary annually by 2 percent up to a maximum of 10 percent.
- In addition, the established average salary was subject to annual salary adjustments.

Within this frame, there were now financial management questions to be answered on the state and institutional level, primarily related to the final amount available and to the distribution of these funds.

State level: States had to decide if they want to make use of the opportunities regarding raising the average salary through the means listed above. This required close consultations, not only between Ministries of (Higher) Education and HEIs, but also between these players and Ministries of Finance. The questions of state- and institutional-level competitiveness and fiscal prudence were at the center of discussion. Another question was how the established average salary should be interpreted for HEIs, which did not have line-item budgets but lump-sum budgets. It soon became clear that more financial autonomy, also in the form of institutional lump-sum budgets, made working with the average salary easier. In these cases, the average salary could simply be used as a theoretical operand (parameter), while in the case of line-item budgets, the distribution frame could only be calculated ex post, since it actually depended on the retirement of C (and later W) professors. Concerning the distribution of funds available for the distribution frame for performance, states had to decide whether to allocate the actual delta that was theoretically available for every institution or whether they wanted to withhold some of the funds to support some redistribution. While it made perfect sense to disconnect funds available for performance-related pay from a historically grown (and thus to some extent arbitrary) age structure, this, proved to be a consideration difficult to justify in practice, since universities would have considered that the state was 'taking money back which actually belonged to them.'

Institutional level: Driven by considerations of university autonomy and subsidiarity, most states allowed for considerable scope so that universities could not only determine criteria and procedures of performance pay, but also had flexibility concerning amounts, as long as institutions and states complied with the established *average* salary. Also, here, the situation was different for institutions with global or lump-sum budgets, which in principle were able to cross-subsidize with funds from other sources, and for institutions with line-item budgets. The introduction of the W salary scheme demanded considerable attention from the university administration (particularly heads of administration and budget personnel). While the overall discussion at institutions often focused on what is desirable in terms of performance pay, heads of administration had to translate this into "budgetary reality." This meant careful consideration of future implications of budget models in terms of future salary increases, and so on. Especially "young" universities saw the need to transform these considerations into accruals and deferrals, which, subsequently, reinforced the need for global budgets at HEIs and showed how closely salary reforms are connected to other key reforms of higher education.

Source: Authors based on Witte, Schreiterer, and Müller-Böling 2004.

Note:
a. https://www.che.de/downloads/Folien_Dienstrechtsreform1_44.ppt.

4.7 Reform Process Toward New Models and Procedures

A key learning from salary reforms in Europe is that it is difficult to get everything right on the first attempt. Often introduction of a new salary system also requires introduction of other changes in personnel management such as time management, performance reporting, and performance management, as well as potential organizational changes like establishment of salary/reward committees. In addition, it requires close coordination among social partners and consideration of legislative issues related to fair treatment, pensions, status of employees, and so forth.

It is therefore crucial for governments and HEIs to allow for a learning and adjustment period and not to set everything immediately in stone. States and HEIs are well advised to revisit new models after a period of time (for example,

three years or possibly the time span normally used for performance contracts) to reassess the new model and jointly reflect on the learning experience.

However, in the same way that assessment demands an inclusive process, **the initial model development should take experience in other systems into account and reflect on its importance in the national and institutional setting in a structured and inclusive manner.** Policy makers and institutional leaders might want to keep in mind that salary reforms often cause concerns with potentially affected staff. Clarity, transparency, and frequent communication are thus essential for a successful process. An example for the process leading to the introduction of a PBS system at the University of Hannover can be found in Box 52.

Finally, everyone involved needs to remember that **salary reform is not an end in itself. Salary reforms need to be linked to wider and agreed system-level and institutional goals,** otherwise change attempts are futile. A joint and agreed strategy thus provides the necessary starting point for related reforms.

Box 52 How to develop a PBS model at an HEI?

Procedural options at the University of Bremen and the University of Hannover

When the W salary scheme was introduced in Germany in the early 2000s, universities were tasked with developing or refining aspects of their institutional salary models (within the respective frame provided by state legislation). It soon became clear that transparency had to be a key aspect, not only of the models themselves but also of the process leading to their development.

As mentioned, the University of Bremen was an early mover and started developing its institutional model in 2002. It sought the expertise and support of the Center for Higher Education, a think tank that had already collected experience with the W salary scheme in terms of both policy questions and aspects of model development. The CHE had also collected and analyzed examples of performance-based salary models in other European and non-European countries (see Witte and Schreiterer 2004), and the University of Bremen was thus able to profit from experience beyond its immediate environment.

To develop a PBS model for the university, including criteria for performance that would be rewarded under this scheme, the institution set up a working group consisting of 16 members plus the representative of the CHE. Besides members of the rectorate (rector, head of administration, vice rectors for research, teaching, and internationalization), the working group included deans and members of the academic senate. As Arnhold and Handel (2004, 176) highlight, the involvement of these actors led to a broad discussion on the topic within the institution and thereby paved the way for a later broad acceptance of the new salary model.

Other universities went for different procedural options. The University of Hannover, for example, developed the model in a multistage process. There, the model development was initially the task of a small group coordinated by the Vice President for Administration and Finances. The group received advice from the Office of the Rectors Conference of the State of Lower Saxony (the state in which Hannover is located). The group developed a model and procedure that was subsequently discussed by the *Praesidium* of the University and later passed by the Senate.

As the examples show, German institutions chose different approaches; however, in all cases, successful model development was based on clear administrative procedures and constructive communication with the wider institutional public.

Source: Authors based on Arnhold and Handel 2004.

Also in this example, an inclusive but also “actionable” approach and clear communication, including via workshops, were essential for the later acceptance of the new PBS model.

4.8 Key Learnings and Good Practice Criteria

Regulation at the system level

- **C.1** – *System level* – The question as to how remuneration should be regulated at the system level and what should be regulated on the institutional level depends on the national setting (for example, the size of the system, the political structure, and the status of academics). It is advisable to regulate key questions like types of professorships and, possibly, basic principles of remuneration on the system level, while more detailed questions like procedures and institution-internal responsibilities are delegated to HEIs in accordance with the principles of institutional autonomy and subsidiarity.

- **C.2** – *System level* – Unions can play an important role when questions like overall salary increases are addressed. Like with other stakeholders, it pays off to involve them early on in questions of future salary models.

Concept and measurement of (good) performance

- **C.3** – *System and institutional level* – The concept of performance has to be open and reflect diversity, that is, it needs to be open to different kinds of academic performance (including, for example, artistic performance) and functions fulfilled in an academic context.

- **C.4** – *System and institutional level* – The concept of performance relates to different types of activities and functions: (a) what can be considered as performance in the narrower sense (related primarily to teaching and research), and (b) the takeover of certain functions or fulfillment of certain roles (like vice-rector or dean). Further, (c) performance-based remuneration systems tend to provide for a market allowance, awarded in the context of negotiation (which might not relate to performance in the narrower sense but is also covered by respective models). Along these lines, good PBS models take different performance categories into account.

- **C.5** – *System level* – Countries need to have a clear approach to handling those three categories (that is, academic performance, takeover of functions and roles, and market allowance) – either as part of one PBS model or as three separate ones. As usual, the simpler, the better.

- **C.6** – *System and institutional level* – Diverse higher education systems need to mirror diversity in their approaches to performance and remuneration. Some HEIs that focus strongly on research are likely to reward related individual (or collective) performance through their PBS systems. Other countries and institutions might want to use the opportunities PBS provides to counteract undesirable tendencies (for example, the neglect of teaching and service). Further, PBS models can be combined with other instruments such as performance contracts.

Aspects of model development – linking performance to models and procedures

- **C.7** – *System and institutional level* – PBS systems combine fixed salary components (ensuring academic freedom and providing stability) with performance rewards. The basic architecture needs to be anchored at the system level while HEIs form related models according to their strategic priorities.

- **C.8** – *Institutional level* – PBS systems reflect institutional strategies. While performance considerations generally derive from the key functions of academic staff (teaching, research and development, and service), the emphasis needs to be put across and within these categories in accordance with strategic institutional priorities. This has to translate into the definition of performance categories and subsequent "criteria."

- **C.9** – *Institutional level* – Further, PBS systems avoid crowding-out effects (that is, when intrinsic motivation is supplanted by extrinsic motivation) and support (or, at least, do not negatively impact) intrinsic motivation through the incentives they set. In particular, incentive systems should not be directly linked to (every) single activity, which would support the perception of the incentive as a controlling intervention and thus endanger intrinsic motivation. However, rewarding single activities on a temporary basis that can be considered as "extra" rather than a "normal" part of academic work, is less likely to lead to crowding-out effects. Also, institutional models that accommodate different types of individual performance enhance motivation and avoid crowding-out effects.

- **C.10** – *System and institutional level* – Performance criteria, assessment, and the related award process need to be considered fair, transparent, and clearly structured. This also applies to the use of different instruments like bonuses and temporary and permanent allowances.

- **C.11** – (*System and) institutional level* – While PBS models are supposed to reflect institutional priorities, they should also be "actionable," that is, their design and implementation should reflect constraints with regard to administrative processes and financial management. In practice, this favors more structured approaches (for example, multistage salary systems with a suitable number of level and descriptors).

- **C.12** – *Institutional level* – Decision-making processes related to the institutional framework for remuneration need to combine adequately top-down and bottom-up elements to mediate among interests and reach adequate decisions, while at the same time ensure efficiency. HEI leadership plays a key role in the development and implementation of PBS models; however, deans are likely to fulfill routine functions like proposing staff members for awards or providing written statements for applications.

Remuneration and financial management

- **C.13** – *System and institutional level* – Financial management considerations are an integral part of the development and implementation of PBS systems. These concern, among others, a clear understanding of the available funds,

the development of financial scenarios of how the PBS system (and related reserves) is likely to develop in future, and considerations regarding the pension implications of allowances. The development and implementation of PBS systems furthermore requires managerial and administrative staff members with the right competencies. On the system level, financial management considerations need to involve the Ministry of Finance.

Reform process toward new models and procedures

- **C.14** – *System and institutional level* – Model development, consultations, and subsequent model evaluations should guarantee a transparent and inclusive approach. Excellent communication on principles and procedures is key to the success and acceptance of the model. HEIs' leadership needs to ensure that institutional stakeholders are appropriately involved and consulted.

- **C.15** – *System and institutional level* – Governments and HEIs need to allow for a learning and adjustment period; at a time of reform, not everything should immediately be set in stone. States and HEIs are well advised to revisit new models after a period of time (for example, three years or possibly the time-span normally used for performance contracts) to reassess the new model and jointly reflect on the learning experience.

- **C.16** – *System and institutional level* – A salary reform is not an end in itself. Salary reforms need to be linked to wider and agreed system-level and institutional goals, otherwise, change attempts are futile. A joint and agreed strategy thus provides the necessary starting point for related reforms.

5 Outlook

5.1 Toward Strategic Human Resource Management

HEIs across the world have witnessed significant shifts in HR management over the last 30 years. Personnel matters used to be perceived primarily as an administrative function consisting of providing legal and administrative support and oversight (Guest and Clinton 2007). However, in the 1990s, there were already the first attempts to modernize "staffing" (as it was called) in higher education.

Kogan, Moses, and El-Khawas (1994) — summarizing the results of a project under the OECD Programme on Institutional Management in Higher Education (IMHE) — highlight that HR policies should be aligned with strategic planning and the overall management of a HEI. First, institutions should have explicit HR plans that are linked to their institutional strategy. Second, institutions should develop integrated policies for the selection and development of staff. Third, also with a view to the stronger incentives for individuals to conduct research, there should be a clear decision on the division of labor. Fourth, institutions should clarify how resources (and time in particular) are allocated. Fifth, temporary and part-time staff should be accommodated better into an equitable and effective staffing structure. Sixth, institutions should consider possibilities to remove obstacles to effective HR policies (Kogan, Moses, and El-Khawas 1994, 121–122). Those recommendations can be considered as sound guiding principles for the revision of HR management in many higher education systems, in particular, in those where ("modern") personnel management is still in its infancy. As a general trend, however, personnel administration in higher education has been evolving slowly toward a more strategic management of human resources during the last decades. Recent literature underlines the importance of an alignment of HR management with organizational strategies, and the importance of managing human resources as part of an integrated management approach and not as a separate process (see, for example, AON Hewitt 2012; Arslan, Akdemir and Karsli 2013; Mansour, Heath, and Brannan 2015; Guest and Clinton 2007; Hall 2009; Waring 2013).

A suitable starting point for strategic HR management is to analyze and strengthen the alignment of national higher education policies, institutional strategies, and HR policies in everyday management practices related to HR tasks. In Box 53, a suitable framework for analyzing HR management is described. It can be used as a basis for developing strategic HR management practices in an HEI.

Box 53 **Human resource management in higher education institutions – A functional approach**

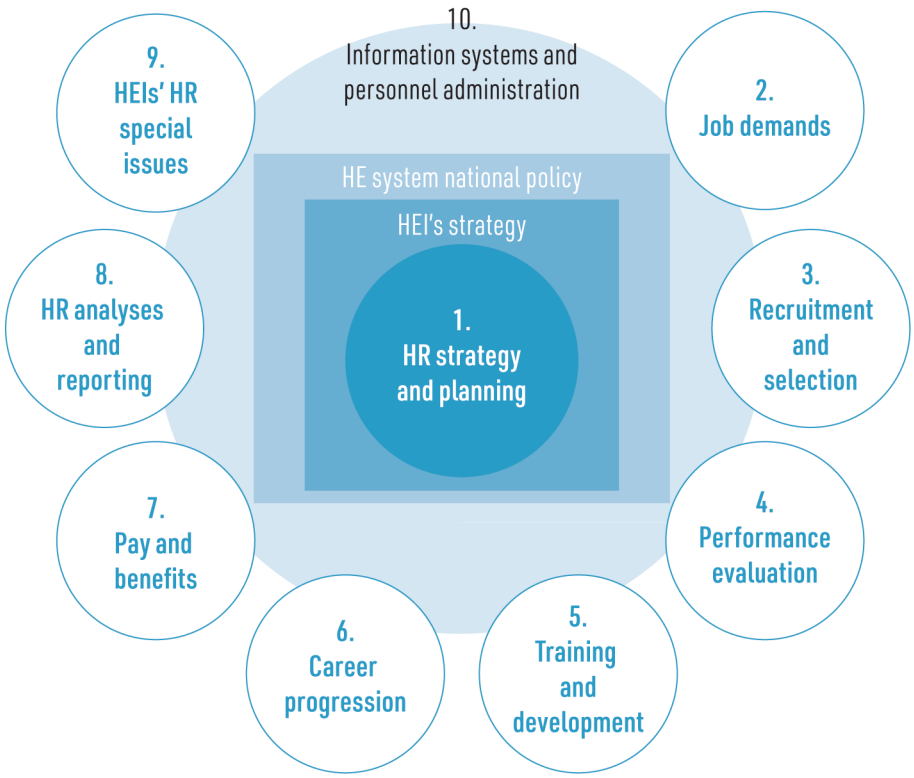
One way of analyzing the status of HR management in HEIs is a function-based approach (see Figure 17). That approach was proposed by an international research team as part of a EC-funded project on the development of HR management in European HEIs.[a] It assumes that higher education and academic work are anchored in governments' higher education policies, which are reflected in institutional strategies.

1) Thus, *HR strategies and planning* need to be developed in that context and aligned with institutional strategies.

Concerning HR strategies and their implementation, institutions need to take into account the following HR-related aspects:

2) *Job demands:* translating the strategic directions of the HEI into specific academic and administrative positions with certain qualification requirements;
3) Recruitment and selection: selecting transparently and in a fair manner the personnel that support the strategic aims and priorities of the HEI;
4) *Performance evaluation:* steering and rewarding the work that is aligned with the mission and vision of the HEI;
5) *Training and development:* supporting the skills and capacity-building relevant for the achievement of strategic aims;
6) *Career progression:* building attractive career trajectories to compete in international academic labor markets and to motivate staff, and ensuring the transparency of promotions;
7) *Pay and benefits:* creating a remuneration system that supports academic development, is fair, and supports the institutional goals;
8) *HR analyzing and reporting:* building a system that enables strategic decision making in HR matters and a follow-up of the HR strategy;
9) *HR special issues:* taking into account higher education-specific aspects of work such as national legislation on retirement, specificities of academic work, and academic freedom.
10) *Information system and personnel administration:* actively apply and use information systems in a way that is directly beneficial to functional areas of HR.

Figure 17 **A function-based approach to human resource management in higher education**



Source: Pausits and others 2017, 12.

Note: a. http://hrminhei.azvo.hr/.

5.2 Summary of Criteria

Table 13 provides an overview on the criteria for good system- and institution-level HR policies.

Table 13 Overview of the criteria for good system- and institution-level human resource policies

A. Early-stage researchers: doctoral candidates and postdoctoral fellows		
System-level framework	**A.1** The system-level framework for doctoral training finds an appropriate balance between regulation and flexibility. While regulations and quality criteria need to be applied rigorously and consistently, doctoral training also requires room to accommodate personalized paths, and room for a reasonable level of institutional and disciplinary differences. This necessitates a national consensus on the essence and standards of the doctorate developed jointly by all relevant stakeholders of the higher education system.	System level
	A.2 The autonomy of HEIs in the field of doctoral training is complemented by mandatory internal accountability mechanisms and appropriate external quality assurance processes of research and doctoral education. This includes regulations on which HEIs have the right to confer the doctorate and the related requirements. The regulations need to reflect that original research is the core component of the doctorate and, therefore, stipulate that institutions provide a suitable research environment.	System level
	A.3 Doctoral training needs to be incentivized financially to promote efficiency and quality.[a]	System level
	A.4 Public funding for doctoral training is allocated in accordance with national needs and competencies required, while ensuring a diversity of doctorates.	System level
	A.5 Research support programs designed and funded at the system level ensure that doctoral candidates are appropriately involved in research projects wherever possible and that suitable co-supervision agreements are in place.	System level
Anchoring the doctorate in the institution	**A.6** Admission, progression, and assessment of doctoral candidates are monitored and supported. This includes published criteria and transparent processes for admission, an orientation and the provision of relevant information for newly recruited candidates, contractual agreements between doctoral candidates and supervisors with clear milestones (including any requirements for publications), sound assessment procedures based on clear and transparent criteria and processes, and the monitoring of the students' progression and completion.	Institutional level
	A.7 The supervision of doctoral candidates is framed by appropriate institutional policies and guidelines (among others, outlining the respective responsibilities and rights of supervisors and doctoral candidates), training and ongoing support for supervisors, and monitoring their performance. Co-supervision is encouraged and continuity of supervision is assured.	Institutional level
	A.8 HEIs provide a stimulating research environment for doctorates with a critical mass of research-active staff; adequate learning and research tools; sufficient physical and financial resources; support for, among others, mobility and conference participation; and an overall environment supportive of research achievements.	Institutional level
	A.9 There is a policy outlining the balance between course work and research (thesis). Such a policy reflects the competencies that a doctoral candidate is supposed to acquire. Courses include research methodology and scientific integrity, and professional competencies such as grant writing, and written and oral communication.	Institutional level
	A.10 An institution-wide policy and related procedures for establishing an examination committee ensure objectivity and fairness.	Institutional level

	A.11 Institutions provide doctoral candidates with a range of academic courses (for example, subject-based courses, and courses on research methodology, teaching competencies, and scientific integrity), and soft-skills courses to prepare them for both their academic and nonacademic careers. Furthermore, HEIs provide career support and, where possible, teaching and research assistantships. Career support includes helping students, when appropriate, to find nonacademic jobs (including in the private sector).	Institutional level
	A.12 Open access to doctoral theses is promoted. Normally, all doctoral theses are available in open access, except if there are reasons requiring an embargo for a designated period of time (such as copyright issues, and ethical sensitivities related to, for example, the protection of human subjects).	Institutional level
	A.13 Formal appeals and complaints mechanisms are available to all doctoral candidates. The procedures are clear, fair, safe, comprehensive, and up to date, and are described in an easily accessible document. While respecting confidentiality and anonymity, the complaints and appeals that have been lodged are analyzed periodically to ensure that clusters of problems are addressed.	Institutional level
	A.14 The quality of all aspects of the doctorate is continuously monitored and assured. Internal quality assurance mechanisms are adapted to the specificity of doctoral training and include feedback from doctoral candidates and their supervisors.	Institutional level
	A.15 Doctoral schools are a particularly effective way of institutionalizing doctoral training and promoting its quality. HEIs that establish doctoral schools consider their number and their location within the institution to maximize benefits with respect to critical mass and interdisciplinarity.	Institutional level
	A.16 Doctoral-granting institutions have a clear mission for their doctoral schools (with appropriate attention to disciplinary differences), and a comprehensive and explicit policy on the governance and organization of doctoral training that is published and easily accessible.	Institutional level
Managing the doctorate with partners	**A.17** Partnerships with national and international HEIs, research bodies, and the private sector (including industry) can improve the quality of doctoral training. To manage related risks, partnerships are framed by a strategic approach, appropriate governance arrangements, adequate policies and procedures, and a co-tutelle agreement.	Institutional level
	A.18 Stakeholder involvement in framing and evaluating the doctorate is important, among others, because the majority of doctoral holders occupy positions outside academia.	Institutional level
The postdoc	**A.19** The postdoc is framed by appropriate policies and guidelines covering, among others, recruitment procedures and the objectives of appointments. The postdoctoral position is considered part of the academic career ladder, and the institution takes responsibility for related HR issues.	Institutional level
	A.20 Postdocs have access to career support to help them develop career objectives, whether within or outside academia.	Institutional level
B. Academic selection and promotion		
The status and role of academics	**B.1** System-level regulations are primarily applied to secure academic freedom and academic quality, and to promote transparency, including for national and international mobility. Defining the role, status, and tasks of academics is mainly an institutional responsibility. System-level policies support healthy competition among individuals, and avoid practices that lead to the marginalization of certain staff groups.	System level
	B.2 The status and role of academics are considered thoroughly in institutions and are reflected against the funding sources of academic work, the system-level policy and regulatory framework, international trends in academic work and careers, and the traditions of academic work and its values. Institutional managers are well-informed on the contractual arrangements (duration and type) and funding of their staff.	Institutional level
	B.3 Institutional policies aim for equal treatment of staff with project and budget funding, and acknowledge the equal importance of research, teaching, and administrative tasks.	Institutional level

General career patterns	**B.4** On the national level, there is a systematic approach to career stages that allows domestic and foreign academics, ministries, and other stakeholders to compare positions among countries and institutions. This framework is flexible enough to allow institutions to engage in strategic HR management. The system-level policy guarantees the mobility between academia and industry and among institutions, and supports attractiveness of careers. It also provides a solid legal framework for career structures such as tenure track or other systematic approaches to career development, and establishes clear entry and exit points for academic careers.	System level
	B.5 System-level policies may provide resources to HEIs for strategic career initiatives, for example, with regard to young academics.	System level
	B.6 Institutional career patterns are realistic for most of the staff members. They are aligned with a systematic approach to career stages at the national level and they are internationally comparable.	Institutional level
	B.7 Institutional policies ensure transparency and clarity of career patterns and promotion criteria, and maintain an appropriate balance among research, teaching, and administrative excellence. Candidates and employees of HEIs are aware of promotion criteria and career progression possibilities. Institutions communicate clearly the qualifications needed for different positions to their employees and persons seeking recruitment.	Institutional level
	B.8 Institutional policies link key aspects of academic career patterns (recruitment, promotion, remuneration) so that these support the implementation of institutional and unit-level strategies.	Institutional level
	B.9 Data on all staff categories (including academic staff on part-time/ hourly contracts) are gathered and analyzed to enable effective human resource development and strategic human resource management.	Institutional level
	B.10 Organizational structures and HR services support the career patterns within an institution. HR policy is important for the development and implementation of strategies. In the context of academic careers, institutions: • Clearly define duties and responsibilities related to HR; • Ensure that sufficient resources are allocated for HR-related tasks; • Support a strategic role of the HR director; • Develop the competencies of HR professionals; • Assure the quality of HR policies and initiatives; • Set indicators for measuring HR success.	Institutional level
Selection and recruitment of academic staff	**B.11** Recruitment plays a vital role in the strategic development of institutional profiles. Thus, the national framework steering the recruitment practices needs to allow for institutional development and differentiation. National policies primarily guarantee equal opportunity for, among others, different nationalities, genders, and minorities.	System level
	B.12 The most important way of assuring the quality of recruitments is to ensure the transparency and clarity of processes. That encompasses the clarity and transparency of job definitions, selection processes, and criteria; the provision of clear guidelines (and training) and definitions on the role of different actors involved in the decision-making process; a clear definition of entry points to academic careers; and a clear policy on equity issues/affirmative actions. Applicants are made aware of the practices.	Institutional level
	B.13 Institutions deliberately balance the selection criteria in the context of their mission, acknowledging academic excellence (professional evaluation of teaching and research), organizational commitment, and fit (organizational recruitment). The institutions ensure that academic units have the capacity to select their workforce in a flexible, fair, and transparent manner, to meet the requirements of external funding and to support the overall aims of HR policies.	Institutional level

	B.14 Positions are advertised sufficiently broadly (including, where suitable, on the international level). Institutions use tools facilitating the systematic search for candidates, and, where appropriate, headhunting. The selection process is efficient, transparent, and not overly time-consuming. Transparency of the process also extends to the candidate, who is informed about key milestones of the process. There needs to be clarity on the tools used to evaluate the skills of candidates (for example, lectures, evaluations by students, and assessment centers).	Institutional level
	B.15 Selection processes go hand in hand with the clarity of roles (for example, of academic selection committees, including possibly stakeholders from industry, academics from other faculties, and a representative from the institutional leadership).	Institutional level
	B.16 There is a system of checks and balances that ensures, among others, the strategic fit of candidates for the position, and a balance between professional and organizational recruitment.	Institutional level
Career advancement and promotion patterns	**B.17** Promotion patterns are important instruments for steering academic work. Institutions have clear, transparent, and well-documented promotion patterns that are aligned with the institution's mission and profile, and clearly distributed roles and responsibilities during the promotion processes.	Institutional level
	B.18 Promotion patterns take into account different aspects of academic work (research, teaching, administration, and service). The merits in different academic tasks are defined in a transparent and understandable manner. To ensure the fairness and effectiveness of promotion patterns, they are repeatedly communicated to staff members.	Institutional level
	B.19 Career development and career advancement are part of institutional planning and strategic management, and supported by modern HR instruments (for example, target agreements and skills development tools). In this, HEIs support academics in evaluating and developing their competencies required for conducting high-quality scientific work and for succeeding in their careers within their scientific community and within organizations in the higher education sector and beyond.	Institutional level
International mobility in academic careers	**B.20** International mobility is crucial, particularly for small higher education systems. National policies support inward and outward mobility. Incoming mobility can be marketed and facilitated on the national level. With respect to outgoing mobility, the return of academics and related mechanisms are taken into account, in addition to the provision of grants for outward mobility. The system-level policies guarantee legal conditions conducive to the recruitment of foreign academics, and ensure the availability of information in English (or, potentially, another major European language) for international staff. Further relevant aspects include support for mobility, dual career services, English-speaking contact points in the administration, support on social security issues, and other aspects of mobility support.	System level
	B.21 Internationalization is one way of improving the quality of academic work. However, that impact cannot be taken for granted. It is important that institutions have defined the aims related to internationalization, planned and organized the career patterns, tasks, and overall working environment (including family life) in a way that a foreigner without local language skills can successfully work, and have organized sufficient support structures for incoming (and outgoing) staff.	Institutional level
Alignment of elements of human resource policies	**B.22** To promote good academic work and careers, job descriptions and tasks, performance appraisal, career progression, reward systems and strategic objectives are aligned.	System level
	B.22 To promote good academic work and careers, job descriptions and tasks, performance appraisal, career progression, reward systems, and strategic objectives are aligned.	Institutional level
	B.23 All higher education policies take into account the HR policy aspect, not least because the implementation of all policies and outcomes will be ensured by, or will have an impact on, academics.	System level

C. Remuneration		
Regulation at the system level	**C.1** The question as to how remuneration should be regulated at the system level and what should be regulated on the institutional level depends on the national setting (for example, the size of the system, the political structure, and the status of academics). It is advisable to regulate key questions like types of professorships and, possibly, basic principles of remuneration on the system level, while more detailed questions like procedures and institution-internal responsibilities are delegated to HEIs in accordance with the principles of institutional autonomy and subsidiarity.	System level
	C.2 Unions can play an important role when questions like overall salary increases are addressed. As with other stakeholders, it pays off to involve them early on in questions of future salary models.	System level
Concept and measurement of (good) performance	**C.3** The concept of performance has to be open and reflect diversity, that is, it needs to be open to different kinds of academic performance (including, for example, artistic performance) and functions fulfilled in an academic context.	System level
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	C.4 The concept of performance relates to different types of activities and functions: (a) what can be considered as performance in the narrower sense (related primarily to teaching and research), and (b) the takeover of certain functions or fulfillment of certain roles (like vice-rector or dean). Further, (c) performance-based remuneration systems tend to provide for a market allowance, awarded in the context of negotiation (which might not relate to performance in the narrower sense but is also covered by respective models). Along these lines, good PBS models take different performance categories into account.	System level
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	C.5 Countries need to have a clear approach to handling those three categories (that is, academic performance, takeover of functions and roles, and market allowance) – either as part of one PBS model or as three separate ones. As usual, the simpler, the better.	System level
	C.6 Diverse higher education systems need to mirror diversity in their approaches to performance and remuneration. Some HEIs that focus strongly on research are likely to reward related individual (or collective) performance through their PBS systems. Other countries and institutions might want to use the opportunities PBS provides to counteract undesirable tendencies (for example, the neglect of teaching and service). Further, PBS models can be combined with other instruments such as performance contracts.	System level
	C.6 Diverse higher education systems need to mirror diversity in their approaches to performance and remuneration. Some HEIs that focus strongly on research are likely to reward related individual (or collective) performance through their PBS systems. Other countries and institutions might want to use the opportunities PBS provides to counteract undesirable tendencies (for example, the neglect of teaching and service). Further, PBS models can be combined with other instruments such as performance contracts.	Institutional level

Aspects of model development – linking performance to models and procedures	**C.7** PBS systems combine fixed salary components (ensuring academic freedom and providing stability) with performance rewards. The basic architecture needs to be anchored at the system level while HEIs form related models according to their strategic priorities.	System level
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	C.8 PBS systems reflect institutional strategies. While performance considerations generally derive from the key functions of academic staff (teaching, research and development, and service), the emphasis needs to be put across and within these categories in accordance with strategic institutional priorities. This has to translate into the definition of performance categories and subsequent "criteria."	Institutional level
	C.9 Further, PBS systems avoid crowding-out effects (that is, when intrinsic motivation is supplanted by extrinsic motivation) and support (or, at least, do not negatively impact) intrinsic motivation through the incentives they set. In particular, incentive systems should not be directly linked to (every) single activity, which would support the perception of the incentive as a controlling intervention and thus endanger intrinsic motivation. However, rewarding single activities on a temporary basis that can be considered as "extra" rather than a "normal" part of academic work, is less likely to lead to crowding-out effects. Also, institutional models that accommodate different types of individual performance enhance motivation and avoid crowding-out effects.	Institutional level
	C.10 Performance criteria, assessment and the related award process need to be considered fair, transparent and clearly structured. This also applies to the use of different instruments like bonuses and temporary and permanent allowances.	System level
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	C.11 While PBS models are supposed to reflect institutional priorities, they should also be "actionable," that is, their design and implementation should reflect constraints with regard to administrative processes and financial management. In practice, this favors more structured approaches (for example, multistage salary systems with a suitable number of levels and descriptors).	Institutional level
	C.12 Decision-making processes related to the institutional framework for remuneration need to combine adequately top-down and bottom-up elements to mediate among interests and reach adequate decisions, while at the same time ensuring efficiency. HEI leadership plays a key role in the development and implementation of PBS models; however, deans are likely to fulfill routine functions like proposing staff members for awards or providing written statements for applications.	Institutional level
Remuneration and financial management	**C.13** Financial management considerations are an integral part of the development and implementation of PBS systems. This concerns, among others, a clear understanding of the available funds, the development of financial scenarios of how the PBS system (and related reserves) is likely to develop in future, and considerations regarding the pension implications of allowances. The development and implementation of PBS systems furthermore requires managerial and administrative staff members with the right competencies. On the system level, financial management considerations need to involve the Ministry of Finance.	System level
	C.13 Financial management considerations are an integral part of the development and implementation of PBS systems. This concerns, among others, a clear understanding of the available funds, the development of financial scenarios of how the PBS system (and related reserves) is likely to develop in future, and considerations regarding the pension implications of allowances. The development and implementation of PBS systems furthermore requires managerial and administrative staff members with the right competencies. On the system level, financial management considerations need to involve the Ministry of Finance.	Institutional level

Note: a. Questions of how to provide financial incentives to HEIs, also vis-à-vis an increase in effectiveness and efficiency, have been the subject of earlier World Bank advisory work in Latvia.

Annex 1
The "Supervisory Agreement and Study Plan for Doctoral Studies" of Finland's University of Tampere School of Management

SUPERVISORY AGREEMENT AND STUDY PLAN FOR DOCTORAL STUDIES

The purpose of this agreement is to record the content and timetable of each individual student's doctoral project and to agree the responsibilities and duties of the student (supervisee) and the supervisor(s). Both the supervisee and supervisor(s) get a copy of the agreement after which it will be archived. The agreement will be mutually revised at least once a year and the revised versions are stored.

1. STUDENT'S BASIC INFORMATION

Name	
Student number	
Street address	
Mailing address	
Telephone	
E-mail	
Main subject and doctoral program	
Target degree	
Admission to doctoral studies granted (date)	

2. THE DISSERTATION

Preliminary title and a short description (if needed)	
Dissertation format	☐ Monograph ☐ Article-based dissertation ☐ To be decided
Dissertation language	☐ Finnish ☐ English ☐ Swedish ☐ Other language, what?

3. RESOURCES

Studying is	☐ Full-time ☐ Part-time
Funding of studies	☐ Funding is secured at least for some time. Specify time and source of funding. ☐ No funding is secured, but intending to apply. Specify source. ☐ No external funding will be applied. Short description of the funding of studies:

4. TIMETABLE

The purpose of the timetable below is to help the supervisee and the supervisor(s) to concretely perceive the progress and structure of the degree and its main objectives and to support systematic guidance and supervision. The timetable can also be used to help to identify student's existing researcher and working life skills and to help career planning (to answer to the question: Why do I conduct research?). Please, use your doctoral program curriculum as a reference.

Degree timetable and objectives

Orientation to postgraduate studies (5 ECTS)

Orientation studies may comprise teaching offered by the School of Management or other studies orientation postgraduates to research work as agreed upon with the supervisor.	**Year of realization**

To add more columns please press button tabulator

Methodological studies (15 ECTS)

Methodology studies may include studies arranged by the School of Management, the graduate schools or other studies as agreed with the supervisor.	**Year of realization**

Studies supporting the development of the postgraduate student's scientific professionalism (30 ECTS)

Content studies comprise postgraduate studies, studies at graduate schools and possibly advanced studies or subsidiary studies in subjects which support the individual's major subject.	**Year of realization**

Research seminar for postgraduate studies (10 ECTS)

Postgraduate students will be required to participate actively in the postgraduate seminars of their own subjects and/or graduate schools.	**Year of realization**

The doctoral dissertation (180 ECTS) / Licentiate's thesis (90 ECTS)

Dissertation, studies within the discipline, other studies, studies abroad, publications, etc.	**Year of realization**

5. SUPERVISION

Supervisor(s)

1st Supervisor

Name
Title
Discipline
Contact information
Percentage (%) of supervision

2nd Supervisor

Name	
Title	
Discipline	
Contact information	
Percentage (%) of supervision	

Meetings between supervisee and supervisor

Frequency of joint supervising meetings	Joint meetings	times per year
Main means of contacting		
Revision and updating the plan	Time(s) per year	

Supervisee and supervisor's responsibilities and duties are in Appendix 1.

Revisions to this agreement are to be made in co-operation between the supervisee and the supervisor(s). Possible disagreements are first solved through mutual conversation, second in the doctoral education committee or in some body appointed by the School in question.

Date

/ /

_____

Signature of the supervisee

_____ _____

Signature of the 1st supervisor Signature of the 2nd supervisor

Appendix 1
Supervisee and supervisor responsibilities and duties

The supervisee commits:

- To keeping to the agreed working timetable and to informing the supervisor about things that may affect the progress of the work.
- To sending the supervisor agreed parts of the manuscript to be commented in due time before agreed meetings.
- To bringing in the meetings all potential questions and possible worries concerning the work.
- To taking notice of the supervisors' comments on the doctoral work.
- To following the rules of good scientific practice in the supervisory relationship and in conducting research and to discussing these with the supervisor if needed.
- To discussing possible research funding and career opportunities with the supervisor.

The supervisor commits:

- To keeping to the agreed working timetable and to informing the supervisee about things that may affect supervising. If the supervisor cannot take care of his/her supervisory duty, (s)he tries to find a new supervisor.
- To reading beforehand the texts delivered for supervisory meetings.
- To bringing in the meeting's agenda questions and possible worries concerning the work.
- To complying with the rules of good scientific practice in the supervisory relationship and to discussing issues with the supervisee.
- To discussing possible research funding and career opportunities with the supervisee.
- To forming a mutual agreement on the principles of joint publications well in advance.

Annex 2
The "Agreement on Joint Doctoral Studies and Supervision (Cotutelle)" of the University of Tampere

Agreement on Joint Doctoral Studies and Supervision (Cotutelle)

between the University of Tampere, hereafter referred to as UTA, represented by <name>, Dean of the School/Faculty of <name of the school/faculty>,

and

the <name of the university[47]>, hereafter referred to as <acronym or abbreviation of the name of the university>, represented by <name>, <title>, <name of the faculty/school>

concerning <name of the doctoral student (date of birth)>

(If there is a framework agreement or a joint doctoral program between the universities, please specify the cooperation arrangement here: This agreement is based on an agreement on <cooperation/joint doctoral program> signed by the concerned Universities in <place> on <date>.)

Preamble

This agreement on joint doctoral studies and supervision refers to an arrangement where the doctoral student pursues a doctoral degree at the two concerned universities, satisfying each institution's admission and degree requirements, and leading to one doctoral thesis with a thesis supervisor at each institution. The doctoral student will receive a degree from both universities, with a notation on the degree certificate stating that the degree was obtained under a joint doctoral studies and supervision (cotutelle) agreement leading to two doctoral degrees from the respective universities.

This agreement is subject to the following regulations:
Universities Act 558/2009;
Government Decree on University Degrees 794/2004;
University of Tampere's Regulations on Degrees, 1 August 2015;
University of Tampere's Regulations on the Assessment of Studies, 1 August 2015;
The School/Faculty of …s at the University of Tampere: Regulations on postgraduate/doctoral degrees.

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[47] The term "university" denotes any institution of higher education which has the power to award doctoral degrees according to current national legislation.

The aims, organizing and good practices of doctoral training at the University of Tampere (Rector's decision D/1461/401.03/2015).
…

Article 1 – Purpose

This agreement covers the terms according to which the doctoral student <name> will be granted the degrees and diplomas in the area of <field of study/working title of thesis>.

A research plan is presented in Annex 1.

Article 2 – Co-supervisors and supervisory arrangements

At UTA, the doctoral student is supervised by <title> <name of supervisor>, <academic unit>. At the University of <name of university>, the student is supervised by <title> <name of supervisor>, <academic unit>.

The division of labor and responsibilities of each supervisor agreed between the supervisors and preferably specified in the study and supervisory plan (Annex 2).

In case there is a need to find a replacement for the supervisor, the academic unit of each university is responsible for finding a replacement in consultation with the doctoral student.

Article 3 – Admission to studies leading to a doctoral degree, fees and yearly enrolment

A prerequisite for a cotutelle arrangement is that the doctoral student has been granted admission to a doctoral program at both universities, according to the admission criteria at each university. The doctoral student is registered at both universities and completes the yearly enrolment according to the regulations of each university. At the University of Tampere, no fees can be charged for studies leading to a doctoral degree according to Universities Act 558/2009. However, the partner university may charge fees for the studies and supervision given for their part in the cotutelle arrangement. The financial arrangement for fees will be as follows:

Article 4 – Insurance

The doctoral student is obliged to have sufficient insurance coverage required by the relevant national legislation of either country. The responsibility of being properly insured is with the doctoral student. Insurance packages for international students, including doctoral students, coming to Finland have been collectively negotiated by higher education institutions in Finland with MARSH/SIP company.

Article 5 – Duration of the doctoral studies (distribution of time between the universities)

The doctoral degree consists of 240 ECTS corresponding to four years of full-time study. Therefore, the public oral defense is expected to take place during the academic year [Please specify academic year]. A detailed plan for the doctoral studies is included in the personal study and supervisory plan of the doctoral student. The personal study and supervisory plan is to be updated on a regular basis, at least every academic year.

The distribution of time spent at each university has been agreed by the two supervisors as follows:

dd/mm/yyy to dd/mm/yyy to be carried out in <name of the appropriate university>
dd/mm/yyy to dd/mm/yyy to be carried out in <name of the appropriate university>
(etc.)

Article 6 – Content of the doctoral studies, grading and assessment

The doctoral student must meet the doctoral degree requirements in force at both universities (Annex 3). Details of the content of the doctoral studies are agreed between the supervisors and the doctoral student and are specified in the study and supervisory plan of the doctoral student in Annex 2.

The doctoral student's academic performance is assessed according to the assessment criteria and regulations of the university responsible for the course or the part of the programme to be assessed. Grading criteria shall be communicated to the doctoral student at the beginning of their studies.

Article 7 – Doctoral thesis

The language in which the doctoral thesis and its summary are written must take into account the requirements of the degree-awarding universities. The doctoral students' doctoral thesis will be written in [Please specify language] and will consist of [Please specify: an abstract in [please specify language], monograph, publications, manuscripts, a written summary in [please specify language]…]. [Please also specify, for example, in the case of an article-based thesis, how many articles are requested, when the articles need to be published, can the articles be conference publications, if the doctoral student must be the first author, etc.]

At UTA, open access and data policy must be followed. The modalities of deposit and reproduction of the thesis are governed by the regulations in force in both universities.

Article 8 – Doctoral thesis pre-examination and public defense

If the requirements for a doctoral thesis are very similar at both universities, the doctoral student can submit his/her thesis and undergo oral defense either at both universities or at one university to be specified in this agreement.

The pre-examination, granting the permission to defend the thesis as well as the public defence will comprise a combination of processes satisfying regulations and practices of both institutions.

The following must be determined in writing at the outset:

Format of defence (whether oral defence is required, number and role of opponents and custos)
The division of costs of the public defense
Place of the defense
Pre-examination
Assessment

Article 9 – Graduation and awarding the doctoral degree

After completing successfully the requirements for the doctoral degree in conformity with the regulations in force within each university, the universities agree to award the following degrees to the doctoral student:

the <name of University>: the degree of <name of degree> and
the <name of University>: the degree of <name of degree>

The student will be awarded a certificate/diploma for both degrees from both universities. (Where appropriate it may carry the seal/stamp and representative signatures of both universities.) The text of the degree certificate must specify that the supervision of the thesis has been jointly conducted at the two universities.

The decision to award the degree by one of the universities is not binding upon the other.

Article 10 – Intellectual property rights

The cotutelle doctoral student owns the copyright to his/her thesis.

Concerning potential patentable inventions or using the joint ownership generated as a result of this agreement, arrangements to safeguard and divide any intellectual property must be determined in writing at the outset and will be as follows:

– for example, affiliation of articles, patents, and inventions

Article 11 – Settlement of disputes and applicable law

This agreement shall be construed in accordance with and governed by the laws of Finland excluding its conflict of law provisions.

The universities shall endeavor to settle their disputes amicably through negotiations within a reasonable period of time not to exceed thirty (30) days after the date of a notice from either university to the other describing such claim or controversy. If the universities fail to reach agreement, the matter shall be forwarded to Pirkanmaa District Court for resolution.

Nothing in this Agreement shall be deemed to require the university to breach any mandatory statutory law under which the university is operating.

Article 12 – Entry into effect and termination

The present agreement will take effect upon signature by the representatives of the two universities and by the doctoral student. It will be valid until the completion of the doctoral studies and thesis according to the personal study and supervisory plan.

This agreement can be terminated should the student renounce writing the joint thesis. Should the supervisors jointly decide not to allow the student to continue writing the thesis because of inadequate academic progress (about which the student should have been be given suitable warning), the matter must be brought to the attention and consideration of the doctoral education committee. After hearing the doctoral student and the supervisors, the committee will give recommendations for further actions and a statement whether the agreement can be fulfilled.

This agreement can also be terminated by the mutual consent of all parties. In case a university/doctoral student fundamentally violates the terms of this agreement, the other university/doctoral student shall be entitled to terminate the agreement by a written notice. Before termination of the agreement is contemplated, there must be consultation between the universities and the doctoral student.

This agreement is drawn up in [specify number] original copies in English.

Article 13 – Signatures

For the University of Tampere:

Title:
Name:
Position: Dean of the School/Faculty
Signature:
Date:

For [university 2]:

Title:
Name:
Position:
Signature:
Date:

Co-supervisors of the doctoral student

Title:
Name:
Signature:
Date:

Title:
Name:
Signature:
Date:

The doctoral student

Title:
Name:
Signature:
Date:

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Report 2

ACADEMIC CAREERS IN LATVIA: STATUS QUO REPORT

31 January 2018

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Abbreviations

AAL	Art Academy of Latvia
CoHE	Council of Higher Education
DU	Daugavpils University
ESF	European Structural Funds
HEI	higher education institution
HR	human resource
LAoS	Latvian Academy of Sciences
LASE	Latvian Academy of Sports Education
LIHE	Law on Institutions of Higher Education
LIZDA	Latvian Trade Union of Education and Science Employees
LLU	Latvia University of Agriculture
LSA	Law on Scientific Activity
MoES	Ministry of Education and Science
PBS	performance-based salary
RSU	Riga Stradins University
RTA	Rezekne Academy of Technologies
RTU	Riga Technical University
SSQC	State Scientific Qualifications Commission
UAS	University of Applied Sciences
UL	University of Latvia
ViA	Vidzeme University of Applied Sciences
VUAS	Ventspils University of Applied Sciences

Executive Summary

Latvia has a "fragmented" approach to academic careers, aspects of which have developed historically but which are now likely to hamper the development of a dynamic higher education and research system. A key issue is the division of academic careers into a teaching-focused track and a research-focused track — reflected in two separate sets of legislation. The fragmentation of positions leads, for the individual academic, to a "portfolio" of jobs rather than one integrated post, and is an obstacle to the intended unity of teaching and research. The fragmentation of tasks results in a fragmented approach to various human resource (HR) issues, including the handling of employment contracts and the way academics are remunerated.

Higher education institutions (HEIs) in Latvia attribute great value to the doctorate; however, the field of doctoral education displays a number of features that need to be strengthened and modernized. That applies particularly to the "apprenticeship model," with a strong master-apprentice relationship between supervisor and doctoral student at the center. Doctoral students are enrolled in programs that display a mix of taught elements and independent research work. While there are some colloquiums, sometimes misleadingly coined "doctoral schools," doctoral schools in the European and international sense as an "institutional home" for those involved in doctoral education, which enables interdisciplinary doctoral training and realizing synergies, and could promote a systematic approach to skills development, do not exist. Also, strategic approaches to international cooperation and to collaboration with the private sector are currently not sufficiently developed in the context of doctoral education. Funding for doctoral students is insufficient, resulting in many of them working in or outside academia, which can have a negative impact on progression and completion.

A main aspect where the Latvian doctorate diverges from European and international practice is the organization of the process leading to the conferral of the doctoral degree. In Latvia, doctoral studies conclude with an exam that allows the doctoral student to become a "doctoral candidate" and to enter the so-called "promotion process," which is overall distinct from the doctorate and complicated, and contains unnecessary procedural barriers.

Postdocs in the European and international sense do not exist in Latvian legislation; however, certain funding sources (the state budget and European funds) trigger the establishment of postdoc positions (albeit on a small scale). Here, it is difficult for Latvian HEIs to integrate in practice the postdoc positions into the common academic career framework determined by the legislation.

The fragmentation of academic careers results in complicated HR arrangements and processes on the institutional level, and often fragile arrange-

ments for individuals. While the legislation defines positions, minimum salaries, and a band of working hours for full-time positions, workload and the resulting salaries are established individually and negotiated between academics and institutions. In some institutions, declining student numbers due to the demographic situation make it difficult for academics to arrive at a full teaching workload. In such situations and in the absence of (externally funded) research projects that could compensate that loss in income, academics need to complement their work at an HEI with work outside academia. The risks associated with that "portfolio approach" to academic employment are borne by the individual — even though one more positive effect of this approach is that it creates "academic entrepreneurs" who are able to raise funding, which is an important skill for researchers.

Academic careers in Latvia are a succession of individual jobs, which makes planning for such a career difficult and the academic career overall less attractive. The reason for that is that all academic appointments at HEIs are confined to six years. All academics are elected into their (teaching-focused and research-focused) positions. In some cases, where a Council of Professors — the body responsible for electing (associate) professors — does not exist at the hiring HEI, the design of the election process reduces the role of the HEI in the recruitment process and can potentially lead to conflicts of interest. A tenure track model, as is common in Western but also neighboring countries, does not exist in Latvia. While academic careers have a defined starting point in Latvia, they do not have a defined exit point, because there is no mandatory retirement age. Views diverge on that approach; however, the situation makes HR planning and also planning of individual careers for young academics more difficult. While HEIs offer various opportunities for staff development, not all skills required for academic careers, which are particularly relevant in the context of the fragmented academic career system in Latvia, are necessarily covered.

An apparent lack of internationalization impacts on various aspects of academia. Inward mobility is not only hampered by salary levels, but also by language requirements and a current lack of concerted efforts and instruments for attracting foreign academics. That is important as internationalization is a major source of "fresh thinking" and potential quality enhancement in higher education. Furthermore, it is particularly important for small higher education systems, and fostering internationalization could thus lead to a positive dynamic in Latvia.

While there are attempts to reward performance at the institutional level, remuneration as an instrument to incentivize performance is currently underutilized. That is partially due to the low salary levels in the academic sector; however, there is neither a structural model that foresees performance pay nor a potential "market allowance" (that could compensate the higher salary levels in the private sector in some selected cases) at this stage. Some universities have developed or are in the process of developing bonus systems, often in connection with performance-based funding established on the system and institutional level.

1 Introduction

This report analyzes how the government and HEIs in Latvia shape key aspects of the career trajectories and employment conditions of academics.[48] The analysis consists of an assessment of the status quo in Latvia against a set of normative criteria for good system- and institution-level HR policies. A World Bank team developed those criteria in a second report (World Bank 2017b), based on the relevant research literature, an examination of selected cases of good practice, and the authors' expertise and experience in the field and their perspective on successful examples. This report covers (a) doctoral training and the postdoc, (b) academic careers with a focus on the selection and promotion of academics, and (c) the remuneration of academics and the evaluation of their performance.[49] The three corresponding chapters address system-level regulations and policies, and the policies and practices within HEIs. Building on the status quo assessment and the criteria mentioned, a third report — to be published in spring 2018 — will provide recommendations on how to improve system- and institution-level HR policies in Latvia.

The main sources of information of this report are key documents and interviews with stakeholders of the Latvian higher education system. More specifically, the assessments in this report are based mainly on the analysis of key documents such as laws, regulations, and policies; information and data provided by the Ministry of Education and Science (MoES) and six HEIs that volunteered as case study institutions;[50] and interviews with representatives of these HEIs and various system-level stakeholders during site visits in September 2017.

All three reports are part of a series of World Bank advisory services on higher education in Latvia. The first World Bank higher education advisory service was carried out in 2013/14, and addressed the Latvian higher education funding model on the system level. It led to the introduction of a new, three-pillar

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[48] In this report, the terms "academic" and "academic staff" refer to HEIs' staff members whose main responsibility is teaching and/or research. That definition excludes staff members with primarily administrative responsibilities, technical staff, and secretarial/support staff.

[49] Members of the World Bank team that authored this report are Dr. Nina Arnhold, Senior Education Specialist and Task Team Leader, World Bank; Dr. Elias Pekkola, University of Tampere, Finland; Vitus Puttmann, Consultant, World Bank; and Dr. Andrée Sursock, Senior Adviser at the European University Association (EUA). Adjunct Professor Jussi Kivistö, University of Tampere, Finland; Professor Hans Vossensteyn, Director of the Center for Higher Education Policy (CHEPS), the Netherlands; and Professor Frank Ziegele, Director of the Centre for Higher Education (CHE), Germany, provided substantial input and comments. The team would like to thank the Latvian Ministry of Education and Science (MoES), the six case study institutions, and other sector representatives involved for the strong collaboration that has made the preparation of this report possible.

[50] These institutions are the University of Latvia, Riga Technical University, Daugavpils University, Vidzeme University of Applied Sciences, the Art Academy of Latvia, and the Latvian Academy of Sport Education. The different size, profile, and strategies of the case study institutions allowed the World Bank team to obtain an overview on developments in the Latvian higher education sector.

funding model including a performance-based funding pillar. The second higher education project with World Bank support[51] started in 2016. In the first of its two phases, it turned to the internal funding models and governance arrangements of Latvian HEIs. It focused on the effects of the system-level reforms, in particular, on the HEIs' responses to the introduction of the performance-based funding pillar. The project's second phase — which comprises the three reports mentioned — covers strategic HR management, doctoral training and the postdoc, academic careers with a focus on the selection and promotion of academics, and the remuneration of academics and the evaluation of their performance.

[51] This report uses the term "project" for this World Bank higher education advisory service.

2 Doctorate and Postdoctorate

Doctoral education is of significant strategic importance for HEIs and the higher education and science system in Latvia, and features high on the agenda of most institutions. Many countries increased the attention paid to doctoral education as the initial stage of academic careers and an important element in the education and training process of highly qualified individuals. The demand for individuals with advanced skills in the private sector and the need for young academics in the higher education sector make doctoral education particularly important in Latvia. Latvian HEIs are aware of those demands. Several of them engage intensively in doctoral education (see Table 1) or have made promoting it a strategic objective.

State HEIs	2014/15	2015/16	2016/17
Art Academy of Latvia (AAL)	39	42	44
BA School of Business and Finance	19	32	35
Daugavpils University (DU)	131	153	149
Jāzeps Vītols Latvian Academy of Music	9	9	10
Latvian Academy of Culture	17	17	18
Latvian Academy of Sports Education (LASE)	33	33	34
Latvia University of Agriculture (LLU)	188	185	184
Liepaja University	33	28	27
Rezekne Academy of Technologies (RTA)	26	30	27
Riga Stradins University (RSU)	174	227	214
Riga Teacher Training and Educational Management Academy	22	24	31
Riga Technical University (RTU)	483	532	588
University of Latvia (UL)	804	762	693
Ventspils University of Applied Sciences (VUAS)	39	42	45
Vidzeme University of Applied Sciences (ViA)	2		2
Total	**2019**	**2116**	**2101**
Private HEIs	**181**	**194**	**190**
Grand Total	**2200**	**2310**	**2291**

Table 1 **Doctoral students by higher education institution, 2014/15–2016/17 (*total number*)**

Source: Authors based on data provided by the MoES.

2.1 System-Level Framework of the Doctorate

The process of acquiring a doctoral degree in Latvia exhibits unique features compared to the processes in other countries. As in other higher education systems, individuals pursuing a doctorate in Latvia enroll in a doctoral program that lasts three to four years (full-time). In Latvia, a written examination marks the point at which a doctoral student becomes a "doctoral candidate."[52] However, instead of proceeding immediately to the thesis defense, the "doctoral candidate" must complete a "promotion process," which is implemented in parts outside of the HEI that will confer the doctorate (for details on the promotion process see Box 1; for the number of completed doctorates see Table 2).

Box 1 The promotion process in Latvia

The doctoral thesis approval procedure in Latvia combines HEI internal and external elements in a complex process. The internal part of the process revolves around the Promotion Council, which all HEIs need to establish to confer the doctorate – or the promotion process is implemented by another HEI. The councils' members must be vetted by the Latvian Council of Science, which checks whether potential members have published two papers in journals included in certain databases (namely, Scopus and Web of Science) in the last three years. A first function of a Promotion Council is to evaluate doctoral theses, which, if found acceptable, are sent to the State Scientific Qualifications Commission (SSQC), which is part of the Latvian Academy of Sciences. The SSQC then selects an anonymous reviewer, who evaluates the thesis.

If that evaluation is positive, the Promotion Council sets up a committee of three reviewers who manage the thesis defense. The HEI appoints those reviewers, but they must be vetted by the Science Council. The final decision on a thesis takes place in the form of a vote after the thesis defense by the reviewers and several members of the respective Promotion Council. After a positive vote, the thesis is sent once more to the SSQC, which has the right to dispute the final decision. The HEI also has the right to dispute the final decision. Students have the right to appeal to the Science Council and, if they are not satisfied with the outcome of the appeal to the Science Council, to the court.

Source: World Bank 2016.

Table 2 Completed doctorates by thematic group, 2011–2015 (*total number*)

Source: Authors based on data provided by the MoES.

	2011	2012	2013	2014	2015
Education	21	25	26	21	18
Humanities and Arts	36	24	41	24	48
Social Sciences, Commerce and Law	59	74	71	61	52
Life Sciences, Math and IT	66	53	68	46	53
Engineering, Manufacturing and Construction	42	51	58	64	55
Agriculture	12	5	10	9	1
Health Care and Social Welfare	34	19	30	30	22
Services	17	16	11	11	14
Total	**287**	**267**	**315**	**266**	**263**

[52] In principle, obtaining a doctoral degree is also possible without completing a doctoral program. However, that route seems not to be used.

A strict classification of doctoral degrees and the related regulations for doctoral programs restrict the flexibility of HEIs in adequately designing doctoral education. High-quality doctoral education requires that HEIs adapt their offerings to the research interests of doctoral students. That necessitates a system-level framework that leaves room for developing cutting-edge research. In Latvia, a detailed classification of doctoral degrees and programs by discipline, field, and subfield restricts HEI flexibility, especially with respect to doctoral work that crosses disciplinary boundaries. Tailoring doctoral programs to individual students' research interests by selecting appropriate courses is difficult under the current framework.

The promotion process can fulfill a quality assurance function, but prevents HEIs from taking full responsibility for the quality of doctoral education. The institution-external elements of the promotion process (see Box 1) add an additional layer of quality assurance to doctoral education. That layer might have served a relevant function in the absence of comprehensive regulations that restrict the right to confer the doctoral degree to certain institutions which fulfill defined requirements, and also before the existence of the national accreditation agency. However, the promotion process in its current form limits the capacity of HEIs to design quality assurance processes autonomously. The Promotion Councils as standing committees with a focus on only one discipline are unsuitable for the adequate evaluation of interdisciplinary doctoral work. The external influence on their composition prevents HEIs from implementing them appropriately, for example, by involving foreign experts. It is also questionable what the added value is of the involvement of nonpeers (that is, academics from a discipline entirely unrelated to the field or topic of a doctoral thesis) in evaluating the quality of dissertations outside the scope of their expertise during the internal procedures relating to the promotion process is. In addition, putting actors outside of HEIs in charge of deciding on the quality of doctoral theses as part of the promotion process conveys the impression that institutions are not capable of assuming responsibility for quality — even though the doctoral education process might already include external quality assurance elements such as those related to peer-reviewed publications. That is highly unusual from an international perspective and could reflect negatively on the standing of the Latvian higher education institutions.

The time required for the completion of the promotion process can lead to hardship for those aspiring to obtain a doctorate. Funding a doctoral education is challenging in Latvia (see Box 2). Challenges can be particularly pronounced during the time of the promotion process. The state stipends for doctoral students, even though low, end with the completion of the doctoral program. At least in some cases, doctoral students have not completed their thesis by then. That requires them to search for additional funding for the remaining period, during which they also must finish their thesis and the promotion process. Moreover, the promotion process can take time and increase noncompletion. For doctoral candidates, the promotion process is free of charge only if it is completed within the official time limit; when doctoral candidates exceed that time frame, HEIs can decide to charge them for the promotion process. That can be seen as a motivating factor, but for doctoral candidates in a challenging financial situation, it can create a major obstacle to graduation.

Box 2 Funding for doctoral students

There is hardly any financial support available to doctoral students, wherefore most of them must work in parallel to their studies and thesis work. The monthly state stipend available to doctoral students of EUR 113.8 is not enough to cover living expenses, and some students must also pay tuition fees.[a] In exceptional cases, there can be additional costs for acquiring the doctorate. If the promotion process cannot be completed within the stipulated two years, about EUR 1,000 has to be paid to complete it. In the absence of other support mechanisms, most doctoral students work during their doctoral education and the promotion process.

While several doctoral students work outside the higher education sector, HEIs also employ many of them in teaching and/or research in elected positions and in per-hour contracts (for details on academic positions in Latvia, see Chapter 3.1 'Academic Work and Careers'). In a survey of doctorate degree holders in Latvia, 1,240 out of a total of 3,455 respondents (that is, 35.9 percent) stated that a teaching and/or research assistantship was their main source of funding during the phase of doctoral education.[b] The second largest group (933 respondents) were those who funded their doctoral education (primarily) via "other occupations" (that is, employment other than teaching and research). At the case study institutions, the share of doctoral students employed at the HEI ranged from 25 percent to 100 percent.[c] Employment in research is considered to be conducive to the doctoral education process when it is related to the topic of the thesis, while other forms of employment might negatively impact success if they do not leave doctoral students enough time for their dissertation work. At least one HEI provides additional support for doctoral students enrolled as researchers to cover scholarships, mobility, and publishing.

Source: Authors.

Note:
a. Doctoral candidates also have the option to take a stipend of (at least) EUR 85 per month, which need not be to be paid back unless the candidate does not graduate in a specific time frame.
b. The data were collected under the OECD project "Careers of Doctorate Holders" via a sample survey (online survey, face-to-face interviews and telephone interviews) conducted in September and October 2016. The survey covered residents of Latvia (national and foreign citizens) with a degree at the International Standard Classification of Education (ISCED) 1997 level 6 who were below the age of 70 years at the time of the data collection.
c. Authors' calculations based on data provided by case study institutions.

External quality assurance processes of doctoral education are underdeveloped. The legislative framework contains a definition of the basic requirement for obtaining a doctoral degree, namely, that an individual demonstrates by the thesis "that he or she has independently conducted original scientific research, knows how to independently plan research, has acquired research methodology and the methods necessary for work in the area of specialisation, is capable of independently analysing the acquired results and drawing conclusions corresponding thereto" (Law on Scientific Activity (LSA): Section 11 (2)). Apart from that, the national framework for doctoral education loosely defines which institutions can engage in doctoral education. The main quality assurance mechanism is the accreditation of doctoral programs. However, the quality assurance agency's activities in the area are not yet fully developed. In addition, the accreditation criteria are not sufficiently adapted to the specifics of doctoral education, since almost the same criteria are used for programs at different levels and with different orientations (that is, professional and academic programs).

Public funding for doctoral education takes into account national needs and promotes quality. HEIs finance their doctoral programs via funding received from state-funded budget places, and in some cases also via tuition fees.[53] The allocation of budget places by the MoES is based on the perceived needs for specialists in the different disciplines. The coefficient used within the formula for research base funding allocations to HEIs includes the number of doctoral theses defended by candidates who were supervised at an HEI. In addition, the involvement of doctoral students in research activities, an important factor behind the quality of

[53] Some institutions also establish budget places financed from their own budget.

doctoral education, is incentivized by the funding allocations under the second, performance-based pillar of the state funding model. The involvement of doctoral students in research projects is also promoted in research projects financed through European Structural Funds (ESF). Applications for those projects receive a bonus during the assessment if the involvement of doctoral students is envisaged. There is also direct ESF-financed government support for the involvement of doctoral students in academic work (that is, teaching and research).

2.2 Institutionalization of Doctoral Education

Doctoral education in Latvian HEIs has a clear focus on academic careers in most cases, even though a common, elaborated concept within institutions does not exist. Many members of HEIs express the view that doctoral education is a preparation for an academic career and should focus on research. Institutions have designed taught components accordingly. In at least some institutions, that view seems to correspond to the interests of the doctoral students, who want to stay in academia.[54] Nevertheless, several institutions also stress the relevance of doctoral studies for work outside of academia. The orientation of doctoral education toward academic careers is also visible with respect to the widespread practice of employing doctoral students as lecturers and researchers, which also serves as an important component of doctoral students' funding (see Box 2). The common focus of doctoral education on academic careers, however, does not translate into a distinct idea about the definition and standards of doctoral education that would be related to each HEI's profile and mission. There is no shared understanding within institutions of a detailed concept of the doctorate. In some cases, it is not clear either whether those in doctoral education are considered primarily students or young researchers.

Despite the growing importance of structured elements in doctoral education, its main element remains primarily a personal relationship between doctoral student and supervisor. A development common in many European countries is a shift away from an "apprentice model" of the doctorate characterized by the importance of the doctoral student-supervisor relationship toward more structured forms of organization. That shift is, among others, supposed to avoid situations where students are too dependent on an individual supervisor. The introduction of structured approaches comprises adopting a set of processes related to:

- Admission, for example, students apply for positions in a program rather than to a specific supervisor;
- Co-supervision, which is meant to break the dependence of doctoral students on a single supervisor;
- Establishing an overarching structure for doctoral education such as a doctoral school;

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[54] However, according to a survey of doctorate degree holders in Latvia, less than two thirds work in the higher education sector (2,160 respondents out of a total of 3,620), including individuals who are not employed in research (274 respondents). The data were collected under the OECD project "Careers of Doctorate Holders" via a sample survey (online survey, face-to-face interviews and telephone interviews) conducted in September and October 2016. The survey covered residents of Latvia (national and foreign citizens) with a degree at the International Standard Classification of Education (ISCED) 1997 level 6 who were below the age of 70 years at the time of the data collection.

- Providing students with a peer group and fostering a stimulating intellectual environment, for example, via interdisciplinary seminars and conferences.

Even though doctoral education in Latvia is organized mainly in the form of doctoral programs, and some steps have been taken to establish doctoral schools, the personal relationship between doctoral student and supervisor remains paramount. The relevance of supervisors for acquiring sufficient funding for one's doctoral education (for example, via the involvement in research projects) further increases the importance of that relationship. That overall situation might be one reason for the lack of comprehensive and publicly available policies on the governance and organization of doctoral training, and for the fact that the set of processes listed has mostly not been implemented by Latvian HEIs.

Admission, Progression, and Assessment

Various procedures, involving many actors, frame the doctoral cycle, but there is no comprehensive system that covers all its steps. An important component of a quality-oriented approach to doctoral education is that students are inducted into the program and provided with good information, and that their progress is monitored and supported, from the point of admission to the assessment of their doctoral theses. Even though HEIs introduced a range of measures accompanying the different phases and steps of the doctoral education process, there are gaps (for example, related to orientation and academic policy information) and a lack of a coherent framework across some of the institutions. The latter reflects the decentralized structure of some HEIs that translates into a decentralized approach to doctoral education.

The process of entering doctoral education is determined mainly by the relationship between the prospective doctoral students and their supervisors. In most cases, prospective doctoral students start with a research proposal, then contact potential supervisors, and finally enroll in a doctoral program. During the admission process, a faculty committee reviews the application documents and must approve the doctoral student. At one specialized institution, that committee also decides on a doctoral student's supervisor. Often, the entire process of entering doctoral education depends on the personal connections that doctoral students established during their previous studies, even though there are also examples of more structured approaches. Many doctoral students know their supervisors already from their Bachelor's- or Master's-degree-level studies. The importance of that relationship is reflected in the lack of structured admission and selection systems for doctoral students, which would include published criteria and transparent processes for admission, and provisions for an orientation and relevant information material for newly recruited students. In addition, the monitoring activities related to admission processes that HEIs implemented tend to take place at the unit level, without the systematic and direct involvement of the central level in several cases, while this is an area where a central oversight also seems warranted.

HEIs and their subunits have established various processes to monitor the progression of doctoral students. It is a common practice for doctoral students to prepare a work plan together with their supervisor that contains milestones for either the next semester or the entire duration of the doctoral program. Those plans and, in some cases, progress assessments produced by doctoral students

or supervisors, serve as the basis for regular progress monitoring procedures. Those procedures are complemented in at least one case by a decision on whether doctoral students can progress to the next year. Some institutions have a formal policy determining specific progression targets for the taught component of doctoral programs and the work on the doctoral thesis. At several institutions, progress assessment and support take place also via regular meetings of groups of doctoral students and supervisors for the presentation and discussion of dissertation projects, potentially complemented with special courses tailored to the thesis. The responsibility for progress monitoring and support usually resides with the unit level, and connections to the central level (for example, an institution-wide monitoring and benchmarking of progression) are rare. The limited oversight from the central level is one reason why not all units might implement the measures stipulated for an institution as a whole.

Various bodies and actors serve as contact points for doctoral students who seek advice and assistance, but comprehensive support and counseling structures are rare. Depending on the organization of doctoral education in HEIs, there are certain contact points to whom doctoral students can turn with their problems. That includes the Heads of Doctoral Programs, representatives of (Doctoral) Studies Departments, Vice-Rectors for Studies, and supervisors and colleagues. There are, furthermore, examples of more systematic approaches, such as an institution-wide network of mentors at one HEI, a handbook on the doctorate, and options for professional psychological counseling. However, receiving support depends strongly on the initiative of the individual doctoral student, and in most cases is rather informal. It is questionable whether those forms of support are adequate, especially in the face of the challenging situation of many doctoral students. A specific challenge for some doctoral students is the recognition of learning outcomes from study periods abroad. Some academics are reluctant to accept those learning outcomes as equivalent to the students' studies at their HEI, which can be a severe problem for doctoral students and create disincentives for international mobility.

The responsibility for the assessment of the doctoral thesis does not lie with HEIs exclusively, but some institutions implemented procedures to support a successful completion of the doctorate. As an important part of the overall process of awarding a doctoral degree, the promotion process, which is regulated by law and includes the involvement of actors outside of HEIs, limits the extent to which HEIs can influence assessment procedures and the related criteria (see Chapter 2.1 'System-Level Framework of the Doctorate'). Nevertheless, it is possible that HEIs decide on the format of the doctoral thesis, for example, allowing for an article-based dissertation. Furthermore, some HEIs introduced procedures to support doctoral students during the promotion process, including a seminar on the process. At least one institution has a systematic approach to the promotion process, and provides the possibility to continue to work with the supervisor until the thesis is accepted. Another HEI established a procedure to prepare doctoral students for the promotion process that includes a discussion of the research project/thesis, a first internal defense, and a second internal defense. The committees for the two defense processes comprise external experts, which doctoral students cite as one reason for feeling well prepared for the promotion process.

A systematic approach to the monitoring of doctoral students' progression that also covers the completion of the promotion process is lacking in institutions. In most countries, acquiring a doctoral degree is challenging. That makes

the monitoring of progression, including the identification of the underlying causes of delays and noncompletion, an important element of a quality-oriented approach to doctoral education. By and large, Latvian HEIs have not implemented any monitoring processes yet, including during and after the promotion process.

Supervision

Supervision arrangements are mainly determined by the personal relationship between doctoral student and supervisor. Formal supervisory agreements between doctoral students and supervisors have become common in many countries. They are supposed to improve the quality of doctoral education by ensuring equal and effective supervision practices throughout institutions, and by setting standards for monitoring study and thesis progression for all doctoral students. Such standardized agreements, which explicitly define the rights and responsibilities of students and supervisors, are rarely used in Latvian HEIs. At least one institution has introduced something comparable to that in the form of an agreement between the institutional leadership and the structural unit to which a doctoral student is attached (with the supervisor and the doctoral student signing that they are aware of the agreement), and a study agreement between the HEI and the doctoral student. Nor do all institutions have clear regulations on the maximum number of doctoral students per supervisor, while one has determined a minimum number. Even the requirements for being eligible to supervise doctoral students, as determined on the system level, appear to be more a formality, although one institution introduced the additional requirement that supervisors have a certain number of publications per year. That leaves, overall, the commitment of supervisors as the main determinant of the quality of the supervision process.

HEIs have established a range of measures that aim at increasing supervision quality, even though not all of them might actually be implemented across institutions. Elements of doctoral supervision in different HEIs include:

- Regular meetings of supervisors for the exchange of experiences;
- Guest lectures and trainings related to “supervision skills” (for example, in pedagogy and conflict management);
- Evaluations of the performance of supervisors (based on the progress of doctoral students and an examination of their complaints);
- Recruitment of external international supervisors/advisors and supervisors from industry;
- Development of network doctoral schools.

One institution even provides clear incentives for a successful engagement in doctoral supervision by making it a requirement for academics that they supervised at least two successful doctoral candidates during the last six years. However, not all of those procedures are deployed by all HEIs and each of their subunits. In some cases, they might exist on paper without being implemented properly. Often, measures to promote supervision quality are introduced on an ad-hoc basis, so that the different instruments are not connected to each other under the overarching objective of attaining high-quality supervision.

Cases of conflict between doctoral students and their supervisors can be settled by changing the supervisor, but are insufficiently regulated. When doctoral students encounter problems with their supervisor, changing the supervisor is possible, and actually done. However, changing the supervisor is hardly possible in some units, because of their small size and the limited choice of potential supervisors. Changing the supervisor might also create tensions in the unit to which a doctoral student is attached, and lead to a problematic situation for them. In addition, doctoral students themselves bear the brunt of responsibility for that process. Precautionary measures, which could mitigate challenges related to a change of the supervisor, such as a structured, confidential procedure, do not exist at Latvian HEIs. Neither are there designated contact points for cases of conflict, even though various actors might be willing in principle to support students.

Co-supervision of doctoral students is possible and practiced, but in most cases it is ad hoc and understood to apply to the involvement of external experts. The main responsibility for the supervision of doctoral students remains with one supervisor from the HEI at which the student is enrolled. Nevertheless, several doctoral students have a second supervisor — in some cases called "consultant". The second supervisors are mainly experts on the topic of the doctoral thesis from outside HEIs, such as academics from other (in some cases foreign) HEIs or professionals from the private sector. Co-supervision, understood as a coherent team approach to supervision, is not a systematic practice.

Research Environment

Whether doctoral students benefit from a stimulating research environment depends strongly on their particular circumstances. An overall environment supportive of research achievements is one of the most important preconditions for a successful doctoral education experience. Key characteristics of such an environment include a critical mass of research-active staff, adequate learning resources and research infrastructure, sufficient financial resources, and support for, among others, mobility and conference participation. Latvian HEIs are aware of the need to provide a suitable research environment; however, this is not always provided as a comprehensive package. For instance, attendance at conferences is not systematically provided, and suitable library resources are not always available.

Key determinants of a stimulating research environment are the size of doctoral programs, intra-institutional cooperation, the research intensity of units, and their financial situation. Whereas smaller HEIs have only one doctoral program, larger institutions have several. Nevertheless, doctoral programs tend to be small, in general. The small size of programs can lead to an inspiring, "family-type" environment for doctoral students, and might further promote interdisciplinarity within and across institutions since it necessitates collaboration. However, those programs do not reach a critical mass in all cases. Intra-institutional cooperation (in larger institutions) is usually not sufficiently developed to compensate for that deficit, even though steps have been taken to promote interdisciplinary doctoral courses and research in some institutions. In a few cases, there are doctoral programs in units that do not engage in research at all. Furthermore, the availability of infrastructure and equipment, and of mobility support, varies in line with the financial situation of units. The most important factor

in that respect, especially from the perspective of doctoral students, is externally funded research projects. As long as those projects are available and doctoral students are engaged in them, there are favorable conditions for conducting doctoral work. However, given the other potential deficiencies in the research environment mentioned, doctoral students might not enjoy the conditions required for conducting high-quality research.

Taught Component and Skills Development

HEIs design, in a manner comparable to each other, the balance between course work and research/thesis work. Almost all institutions have a predetermined ratio of taught component and thesis work per doctoral program, with around 20 to 30 percent of European Credit Transfer and Accumulation System credits (ECTS) foreseen for the taught component and the rest for the thesis work. Institutions tend to divide the taught component into obligatory courses and electives, even though there are units within HEIs that stipulate no mandatory coursework at all.

Despite the general framework, there are differences in the implementation of the taught component. Some institutions define a curriculum for their doctoral programs and organize courses in a traditional way, that is, lectures are spread throughout the semester (and not organized as bloc seminars or similar). The organization of doctoral programs is in some cases not sufficiently flexible in terms of the implementation of the taught component, notably with respect to possibilities for accommodating studying and working in parallel. One institution recently increased the length of doctoral programs from three to four years to accommodate the challenges students face. Not all courses stipulated in the (formal) frameworks for doctoral programs are necessarily implemented. A more common practice is to replace taught elements by direct involvement in academic work. That is the case especially in smaller programs, where the (per-capita) costs of offering courses are high and the involvement of doctoral students in research and teaching is comparatively easy. Opinions on the relevance of the taught component differ. In some institutions, it is considered as very valuable for doctoral work, whereas in others it is criticized for its inflexibility and lack of relevance.

HEIs provide doctoral students with a range of skills development opportunities, which in some cases also cover soft skills. Some doctoral programs promote the development of scientific skills as part of the taught component of doctoral programs; others consider that the involvement of doctoral students in research work is sufficient to acquire those skills. Such differences can also be observed among doctoral programs within institutions, if these have a decentralized approach to doctoral education. In several cases, courses on ethics and academic/scientific integrity are part of the taught component. Other relevant skills are not necessarily covered. That concerns, particularly, soft skills and skills relevant for academic and nonacademic careers such as pedagogical skills; higher education management skills; proposal writing, academic writing, and science communication; conflict management, time management, and project management; and entrepreneurship and other practical skills related to careers in the private sector. There is the possibility, in some cases, for doctoral students to take courses at another institution that are not offered at their own HEI, even though this practice is not in all cases appreciated by those responsible for

the doctoral program. Nevertheless, there are some institutions that offer a broad range of courses and other skills development opportunities such as summer schools, including summer schools in international cooperation. Some institutions provide soft-skills courses in collaboration with the private sector and other types of organizations.

Skill-development opportunities other than through formal courses play an important role, but their availability depends on the individual circumstances of doctoral students. One possibility for the development of skills available to many doctoral students is the close interaction with their supervisor. Doctoral students whom the World Bank team met report being close to and having easy access to their supervisors and teachers, even though doctoral students working outside HEIs might benefit less from these opportunities. Another important form of skills development is the involvement of doctoral students in academic work and research projects, in elected positions such as lecturer, (teaching) assistant and researcher, on per-hour teaching contracts, or in technical positions such as laboratory work on per-hour contracts. Whether doctoral students can benefit from those opportunities depends on their form of engagement at the HEI and the (financial) situation of the unit to which they are attached, even though some institutions are committed to providing their students with teaching experience. Similarly, opportunities for international mobility and attendance at (international) conferences vary depending on the institution.

HEIs lack a framework that relates the skills that doctoral students should acquire to a systematic offering of skills development support. As discussed, there are various opportunities for skills development at HEIs, and it might be possible to avail of additional opportunities upon request. However, there are no comprehensive reflections on the skills profiles of prospective doctoral degree holders, and no policies that could guide the skills development activities of institutions accordingly. In addition, not all institutions have contact points that could offer support when doctoral students have specific requests for skills development opportunities.

Internal Quality Assurance

There is scope for developing further doctoral education by establishing comprehensive internal quality assurance systems adapted to the specificities of doctoral education. There are several procedures at Latvian HEIs that assess and promote the quality of doctoral education. Doctoral programs are subject to the same external quality assurance procedures as other study programs. Those consist mainly in the accreditation of study directions, that is, the accreditation of Bachelor's degree, Master's degree, and doctoral programs in one discipline. That leads to similar processes for all types of programs, including self-evaluation reports prepared at the decentralized level and submitted to the central level of institutions. A common internal quality assurance mechanism is the course evaluation by doctoral students. Other processes target specific facets of the quality of doctoral education, such as the procedures surrounding the supervision of doctoral students discussed (see above). When considering all those different elements from the perspective of an overall approach to quality assurance, the impression is that Latvian HEIs have not yet established continuous quality monitoring and assurance systems that cover all aspects of the doctorate and are adapted to the specific characteristics of

doctoral education, for example, taking into account the elevated importance of the research environment for doctoral education (in contrast to Bachelor's- and Master's-degree-level studies) and the full range of skills development needs of doctoral students. That is linked to two reasons. First, in most institutions the shift from the apprentice model to structured doctoral programs has yet to happen. Second, the large institutions tend to be decentralized, which is not conducive to the implementation of institution-wide internal quality assurance frameworks, while the smaller institutions rely on informal processes to secure feedback.

Appeal and complaints mechanisms for doctoral students are insufficiently developed and formalized. A sound approach to the quality of doctoral education needs to comprise adequate mechanisms for students to lodge complaints and to appeal decisions. In some cases, appeal and complaints mechanisms available to doctoral students in Latvia are the same as those for students at other degree levels, consisting mainly of designated individuals to whom doctoral students can turn when problems occur. In other cases, HEIs do not provide any procedures (complemented by a systematic process for analyzing complaints to ensure that clusters of problems are addressed).

Doctoral Schools

The potential of overarching structures for doctoral education such as doctoral schools is underutilized in Latvia. Doctoral schools have become widespread in many higher education systems in Europe. They are a particularly effective way of institutionalizing doctoral education and promoting its quality by, among others, increasing critical mass in doctoral education, promoting interdisciplinarity, and ensuring the quality of all processes related to that cycle. The common understanding of a doctoral school is that of an organizational unit that fulfills several of the following functions:

- Implementing administrative procedures such as the admission of doctoral students and the recognition of their prior experience;
- Providing student support services and information to doctoral students;
- Serving as a contact point for doctoral students on matters such as individual wishes for trainings, and personal and career counseling;
- Supporting the international mobility of doctoral students;
- Monitoring supervision;
- Offering (soft) skills development opportunities;
- Providing a collaborative workspace for students;
- Bringing together professors from different faculties around a joint purpose;
- Setting standards, for example, on the basic philosophy of doctoral education and the responsibilities of units;
- Ensuring that good practices are shared among units;
- Assuming responsibility for quality assurance and improvement processes.

Doctoral schools in that sense are not common in Latvia, although at least one HEI has an organizational unit called "doctoral school" that acts as an umbrella for doctoral education, aims at improving the research environment, promotes intra-institutional cooperation, coordinates and organizes courses and programs to support doctoral students in their academic and professional development, communicates with doctoral students, and monitors and promotes the quality of the study process and supervision, including a survey of graduates. Other institu-

tions mention having a "doctoral school," but this refers to what would be considered colloquiums (that is, series of workshops for academic discussions) in other countries. In the face of several of the challenges for doctoral education in Latvia, such as a lack of a critical mass of research-active staff in some disciplines and insufficient skills development opportunities (see above), it appears that the absence of doctoral schools is a missed opportunity.

2.3 Collaboration in Doctoral Education

Partnerships with domestic and foreign HEIs and with the private sector are a particularly promising approach for promoting the quality of doctoral education in Latvia. Cooperation in the field of doctoral education is used by many HEIs around the world to improve quality. Benefits of cooperation include the possibilities for developing and increasing critical mass, gaining access to expertise not present within institutions, and supporting doctoral students in building professional networks. In the face of the characteristics of the Latvian higher education system such as its small size and the challenges for doctoral education discussed, different types of collaboration could be of great value for a quality-oriented approach to doctoral education in Latvian HEIs.

Cooperation among Latvian HEIs in the field of doctoral education is limited. There are a few cases where institutions in Latvia collaborate in doctoral education, or plan to do so in the near future. However, efforts in that area focus mainly on skills development activities, and more rarely on developing joint programs/co-tutelle. More comprehensive, strategically embedded approaches that pool resources on a broader scale and systematically broaden the offerings available to doctoral students would be beneficial.

In many cases, international cooperation contributes to the quality of doctoral education in Latvia, even though comprehensive, formalized collaborations are rare. Much of the international cooperation in the field of doctoral education takes place via the networks of supervisors and other academics, and collaboration agreements that do not include joint programs or joint degrees. Those networks can play a crucial role for accessing valuable resources such as equipment and expertise. Co-supervision by foreign academics and experts is a particularly important element in that respect. There are also more comprehensive collaborations in a few cases such as common programs. Nevertheless, there remains great potential for Latvian HEIs to foster international collaborations,[55] especially via a more strategic approach in this field, even if the process of developing joint doctoral programs can be complicated. At the moment, financial support via ESF funding also targets the development of joint doctoral study programs in an EU language.

Systematic links between HEIs and the private sector are insufficiently developed. Comparable to the field of international cooperation, most collaborations of HEIs with the private sector are based on the connections of individual acade-

[55] The legislative framework contains a few provisions on these collaborations, including the requirement that joint study programs and joint doctoral schools comprise a jointly developed quality assurance system (LIHE: Section 55[1]).

mics. An important link is the co-supervision of doctoral students by external experts, but some are also engaged in research projects in collaboration with the private sector or financed by companies, on the basis of an agreement between the private partner and the HEI. Work in the private sector can be recognized as work toward the thesis if it fulfills certain requirements. Some HEIs have hardly any links with the private sector; others foster them on a broader basis. Although systematic collaborations in the field of doctoral education that go beyond personal ties are rare at the moment, there are attempts to improve collaboration, for example, via the development of doctoral programs in close cooperation with the private sector or efforts to introduce a professional doctorate. One institution tries to incentivize that via its bonus system (without financial involvement of the private sector in this system).

The different forms of cooperation in the field of doctoral education are not sufficiently formalized to maximize their benefits. Important issues in that respect are a strategic approach to collaborations, which relates them to institutional missions and objectives, appropriate governance arrangements, and adequate policies and procedures (including co-tutelle agreements[56]). None of those elements have been implemented by Latvian HEIs on a broader scale so far.

2.4 The Postdoctorate

The activities of Latvian HEIs with respect to the postdoc reflect the absence of a clear concept of "postdocs" in the Latvian system-level framework (for example, a definition of what a postdoc is, and targeted policies related to that definition). A lack of attention to the postdoc — even though it is not necessarily an obligatory step to advance in an academic career — is a common phenomenon in many countries. It applies also to Latvia. An important reason for that is that the legislation and the (formal) Latvian academic career system do not provide for such a position in the form of a clearly defined potential step to advance in an academic career. That can also be a disadvantage in the international competition for young researchers and for young Latvian researchers looking for a period of mobility abroad. A first "definition" of "postdoc" was only recently introduced in Latvia. That "definition" derives from a government support program for postdocs financed via ESF funding, which has as an eligibility criterion that the postdoc earned his or her doctorate no longer than five years ago. However, that "definition" has no legal significance beyond the government program. In addition, some academics consider themselves postdocs due to their involvement in EU-funded research projects, which use that term in administering programs.

ESF-financed postdoc grants, which were introduced recently, provide a new impetus for support measures for young academics. In many countries, support for postdocs aims at enabling them to focus on their research and boost their career progression. Such a form of support for young academics can hardly

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[56] A co-tutelle agreement is a "bilateral inter-institutional agreement signed by the Rectors, which usually involves two supervisors, one from each university, some periods of study and research at the other university for each participating candidate, and a double diploma issued after the defence of the doctoral thesis" (http://www.eua.be/eua/jsp/en/upload/Doctoral_Programmes_Project_Report.1129278878120.pdf, p. 28).

be found in Latvia, even though young academics, who tend to be employed as (senior) researcher or docents, have access to the support that all academics receive (for details on these opportunities, see Chapter 3.2 'Institutional Human Resource Management'), and institutions might try to provide them with positions. As of late, postdoc grants financed via ESF funding are one opportunity to support academics at an early stage of their careers. In addition, at least one institution had already introduced support measures for "postdocs" before that by supporting the participation of around 27 of them in projects financed via institutional funding that lead to higher salaries and better equipment, and providing them with a manual for academic career progression. That institution now attempts to use the new funding opportunity to systemize its activities in the field. However, Latvian HEIs have not yet developed comprehensive policies and guidelines on postdoc positions, which would be one important element of career support for young academics.

3 Academic Careers: Development and Advancement

3.1 Academic Work and Careers

Status and Role of Academics

System-level provisions on academic work and positions have major direct implications for the status of academics. Regardless of the high staffing autonomy of Latvian HEIs on paper, the national framework is substantially steering the recruitments, salaries, positions, and ranks of academics. The system-level framework of academic careers consists of at least four dimensions:

1) The system-level regulations distinguish between "academic" and "research" positions, which primarily focus on teaching and research, respectively — at least in the case of professors and associate professors, this is not an exclusive focus according to the legislation, since the task portfolio of position holders is supposed to comprise research (LIHE: Section 28; Section 30).[57]
   a. Academic positions are stipulated in the Law on Institutions of Higher Education (LIHE).
   b. Research positions are also determined by the Law on Scientific Activity (LSA).

2) The system-level regulations on academic careers and qualifications
   a. The academic career track consists of the positions of assistant, lecturer, docent (often translated as assistant professor by academics), associate professor, and professor (LIHE: Section 27 (1)).
   b. The research track of academic careers consists of the positions of (research) assistant, researcher, and senior researcher.
   c. The system-level regulations on qualifications for associate professors and professors.

[57] In the following, the term "academic" still refers to individuals engaged in teaching and/or research unless used in combination with "position" to refer to the specific position defined in the Latvian legislation.

d. The regulations on the share of doctoral degree holders among academic faculty.
e. The regulations on the minimum number of doctoral degree holders in branches of science.

3) The system-level regulations on selection and recruitment
   a. The selection of academics is based on elections.
   b. All academic positions are based on six-year fixed-term contracts (that is, all positions are reopened every six years).

4) The system-level regulations on salaries and working time
   a. The workload (teaching hours) for academic positions is defined in the legislation.
   b. The minimum salaries of academic positions and management positions are defined in the legislation.

While some of the regulations in the four dimensions provide flexibility for institutions, they strongly steer the personnel management of HEIs. The personnel policies and HR management were discussed in institutions in the context of the abovementioned national framework. There is some variation among HEIs in how strictly the framework is applied, and what is considered to be the level of institutional autonomy in personnel affairs. However, the national framework has significant impact on institutional policies, thereby restricting the ability of HEIs to decide freely on several key aspects of personnel management. Those impacts are discussed below.

Teaching and research tasks are institutionally disconnected. While the LIHE stipulates that academic positions also comprise research activity, in practice, this often does not seem to be the case or takes place only to a limited extent. The clear separation of the two tracks (academic positions and research positions) seems unusual from an international perspective, since academic jobs in most other countries generally comprise both teaching and research tasks.

Contractual arrangements of academics are highly complex and consist of changing individual combinations of positions and tasks. Academics in Latvia can hold one position from each track at the same time. In contrast to other higher education systems, most academics in Latvia do not hold one (full-time) position for which a certain, more or less stable task portfolio is defined. Their contractual arrangements with an HEI can comprise several positions with a separate contract for each, and their task portfolios can be subject to frequent change. An important reason for that is the separation of academic and research positions in legislation, since many academics hold one position from each track. In addition, there is a close connection between the different types of positions and HEIs' income sources, which makes it all but impossible for institutions to offer "integrated" contractual arrangements. Additional posts in the academic self-governance and tasks not covered by the positions mentioned, such as the involvement in externally funded research projects, further increase the complexity of contractual arrangements.

Holding any position for more than six years requires being reelected in an open competition. The Latvian approach contrasts with an element important for most other higher education systems, namely, to provide senior-level academics with the stability in employment needed for long-term research pro-

grams and academic freedom. In addition, the way in which elections must take place restricts HEIs in engaging strategically in matters of staffing (for a detailed discussion see Chapter 3.2 'Institutional Human Resource Management').

The workload (that is, the total volume of paid work at one HEI) and the composition of an individual's portfolio of positions and tasks seldom remain stable over time. The volume and share of different positions and tasks among the workload of academics can change because of, for example, a shift in student numbers and the related demand for teaching capacities, and the acquisition of a new research project. Such changes can take place from one year or semester to another, or even every second month, and are reflected in an annex to the respective contract.

In addition to academic positions and researchers' positions, another staff category defined in the legislative framework is "visiting academic," an elected academic (for details on the election process see below) who holds a position at another institution. Visiting academics can hold a professor, associate professor, docent, or lecturer post, and a senior researcher or researcher post for up to two years. They can be hired directly by the Senate, that is, they do not have to be elected. The framework also allows for academics on per-hour contracts (who are not visiting academics).[58]

In addition to direct implications, the national framework has many indirect implications for academic work and careers, including:

- **Employment at an HEI is often complemented by side jobs.** The salary levels in academia are rather low in Latvia, especially at lower academic ranks (for a detailed discussion of salary levels, see Chapter 4.1 'Academic Salaries in Latvia'). Since academics do not necessarily have a full-time position at one HEI, they might have to top up their salaries to make a decent living. That is why many of them have side jobs. That includes giving lectures at other HEIs as visiting academics and/or on per-hour contracts, and working outside of the higher education sector, for example, in industry.

- **The volatility of contractual arrangements and low salary levels lead to continuous challenges for many academics.** Academics need to ensure that they have a sufficient work portfolio by combining positions and tasks at one HEI and, potentially, by taking up multiple jobs. Even though many HEI administrations support academics in that respect, the main responsibility remains with the individual academic. Challenges can be particularly great for those who work (primarily) on per-hour contracts. Salaries for per-hour contracts are comparatively low, and HEIs appear to use per-hour contracts to cope with the volatility of institutional income in the Latvian higher education system.

- **A high workload adds to the strain of academics.** The need to combine different positions and tasks can easily lead to high workloads, particularly if there are sudden changes in work portfolios such as when academics acquire an externally funded research project. Insufficiently clear definitions in the legislation add to that in some cases. HEIs interpret differently the workload band of

[58] Some HEIs appear to subsume academics on per-hour contracts under the category of "visiting academics."

600 to 1,000 hours per year for academic positions stipulated by the legislative framework, which serves as the basis for negotiations on the exact workload between an academic and an HEI's leadership. Whereas some institutions consider those hours to cover the preparation of courses, management activities related to study programs and other tasks, some institutions interpret them as contact hours.[59] In some cases, the need to prove to the MoES work in research projects in a very detailed way further increases workloads.

- **The fragmented character of the work of many academics and the high workload can lead to unfavorable conditions for academic work and development, especially related to the connection between teaching and research.** The working conditions of academics are often characterized by fragmentation. That raises the question of to what extent a compilation of different positions and tasks provides the same conditions for academic development as one "integrated" full-time job — even though one effect of this system is that it creates "academic entrepreneurs" who are able to raise funding, which is an important skill for researchers. Among the challenges that are particularly pronounced is the need to ensure the link between teaching and research — even though at least one HEI does not consider this a problem (though this might be due to particular institutional circumstances) — since academics need to be research-active for (re-)elections. One strategy is for academics to ensure that they hold parallel positions in the two tracks. Nevertheless, the framework conditions are not conducive to that, particularly the separation of teaching and research positions in the legislation. In addition, institutions might foster that separation to increase efficiency. Another challenge for academic development is the scarce time for research, which is a key determinant of successful academic careers. High workloads and heavy engagement in teaching are important factors in that respect.

- **The working conditions in academia negatively impact the overall attractiveness of academic careers.** Unfavorable conditions for academic work make intrinsic motivation an important factor in choosing to become an academic. Thus, there are many highly motivated individuals in Latvian HEIs. However, in some cases, the effect of the working conditions appears to be a spirit of resignation. Overall, the conditions might restrict the attractiveness of academic careers in Latvia, with a negative impact on the HEIs' possibilities of recruiting domestic talent and foreign academics. The lack of attractiveness is a problem, especially for young academics who had not committed themselves to an academic career before the financial crisis and are flexible in building their career. The problem is particularly evident for teaching positions, in which the salaries are much lower than in (externally funded) research positions.

- **The complexity of contractual arrangements affects the management of human resources.** Due to the multiple contracts and major differences among individuals in employment, the human resource management is fragmented and complex. Individuals are not seen as "resources"; rather, the hours are resources that are shared among individuals. In the worst case, this makes the personnel management a zero-sum game and a platform for individual optimization.

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[59] There are also other cases where HEIs lack a clear understanding of government regulations. In some cases, that leads to the assumption that "all that is not explicitly allowed is forbidden," which might prevent institutions from engaging in certain activities.

Unions are not always systematically involved in the discussions surrounding the framework and conditions of academic work. Many of the provisions in the legal framework and in the HEIs' policies, and their effects on academic work and careers in Latvia concern issues that lie at the heart of the work of Unions. Nevertheless, unions do not systematically participate in the discussions on those issues in all cases. That applies to the national-level trade Union, the Latvian Trade Union of Education and Science Employees (LIZDA), and the HEI-specific unions (some of which are LIZDA members).

Considering academic careers in Latvia from the perspective of the "three careers of an academic" highlights the magnitude of challenges for academic development. One way of approaching the complexity of the career development of academics is to distinguish analytically three different academic careers (Gläser and Laudel 2015):

1) A "cognitive career" that refers to the research conducted;[60]
2) A "community career" that refers to the position within the scientific community, including an academic's reputation, status, and role;
3) An "organizational career" (Gläser and Laudel 2015, 13) that refers to the organizational positions.

Academics pursue the three careers in parallel, and these are interlinked. When applying the model to the situation in Latvia, it appears that overall the organizational career is highly fragmented and that the conditions for the cognitive career are not always supportive, which can make progressing in one's academic work and career(s) comparatively challenging.

Career Patterns

Two particular factors of the system-level framework have far-reaching implications for academic career patterns in Latvia: the election system and the six-year rule. As mentioned, academics in Latvia (with only a few exceptions[61]) are elected to academic and research positions for a period of six years, and there are no other national policies or recommendations on academic careers. Those elections are conducted by academic peers, and are preceded only by an assessment of candidates according to certain criteria, which are in parts determined by the system-level framework. As a result of the system, there are no contracts for individuals on academic and research positions with a shorter or longer duration than six years, nor are there permanent positions. Even renowned academics who have acquired research grants need to be (re-)elected, despite their obvious value for institutions and the approval via other peer-based procedures such as grant applications.

However, in some cases, there appears to be hardly any competition during elections. Even though the elections stipulated by the system-level framework are supposed to be competitive procedures, the actual extent of competition

[60] The analytical model focuses on research when it comes to the content of academics' work.

[61] Exceptions are visiting academics, academics on per-hour contracts (who are not visiting academics), and, under some circumstances (see below), retired academics. In addition, there appears to be a possibility to hire academics who were not reelected for an additional year.

appears to be limited in many cases. Due to the small size of the Latvian higher education system and its limited level of internationalization (see also below), there are often only few candidates competing for positions, or maybe even only one suitable candidate. Positions might also be tailored to a particular candidate, restricting the actual possibilities of competitors from the outset. In addition, networks among academics might have a strong influence on the outcomes of election processes, since those who elect academics have themselves to be elected at some point, potentially by the same academics they elected. Nevertheless, the election system and the continuous competition (in some cases) can also have negative effects on the working atmosphere within HEIs and subunits, and on individual academics. Where there is no real competition, the election procedures unnecessarily consume a lot of time of the applicants and the committees involved.

Because of the vacancy-based model, the Latvian system-level framework precludes systematic approaches to career progression by HEIs, wherefore academic careers are highly individualized. The sequence of academic positions in Latvia is mostly comparable to those in other countries. However, as is often the case, the middle positions (that is, lecturer, postdoc, and docent) might cause some confusion in an international comparison.

A structured and linear progression from one rank to another (that is, a tenure track or similar promotion scheme), which many countries introduced, would currently clash with the election system and the six-year rule, regardless of the clear definition (including qualifications) of the academic ranks. The fragmented character of academic work poses additional barriers for structured career patterns. As a result, there are no predictable and transparent career tracks in Latvia, so that career perspectives are opaque — even though some academics consider their possibilities for career advancement to be clear. Each career is quite individual and specific in its successive combinations of different types of positions and tasks in the higher education sector and employment outside of it.

The unpredictable workload and the related risk (and stress) are particularly prevalent during the early and middle stages of careers. Even though there appear to be positions at lower academic ranks and in the academic self-governance that are rather easy to get, ensuring a sufficient income and good conditions for academic development seem to be major issues for younger academics. Advancement to senior positions is mainly dependent on the availability of posts and — while this might be a more common situation in other countries, as well — this is further impacted by the absence of a mandatory retirement age in Latvia (see below).

Personal ties and the opportunities for acquiring certain types of funding play an important role for career progression due to the lack of structured career paths. Thus, securing favorable conditions for academic work (especially for engaging in research) and a good position for obtaining posts are the most important factors for career advancement. A key determinant for possibilities to engage in research is the involvement in externally funded projects, which also leads to comparatively high salaries. Therefore, acquiring those projects or having the possibility to participate in them is imperative for (young) academics. Sufficient research experience and output is also an important factor behind obtaining posts. Another important factor is personal connections. There

are hardly any possibilities for mobility within Latvia in several disciplines, wherefore connections to a particular unit of an HEI can be necessary to have a realistic chance of entering a higher position. In general, personal ties are important, since election decisions are made for the most part by future colleagues. Again, that may lead to unhealthy academic conformity and prevent new ideas and initiatives from emerging that could challenge the status quo.

Another element of the system-level framework that shapes academic careers in Latvia is the absence of a mandatory retirement age in the higher education sector. Most higher education systems stipulate the automatic retirement of academics at a certain age. As the result of a Constitutional Court ruling, however, since 2003, there has been no automatic retirement in Latvia, which took place previously when academics turned 65. The court ruled that the mandatory retirement age contradicted the legal right to freely choose one's occupation and place of work unless one's skills and qualifications are not sufficient. Since then, academics can be elected at any age, and might receive their pension in addition to their salary. In addition, HEIs can provide academics with "emeritus" status, the details of which institutions are free to design themselves. Some academics benefit from additional state support as "state emeritus scientists."[62] Currently, the share of professors over 65 years of age among all professors ranges from 22 to 51 percent at five of the six case study institutions, whereas there is no professor in that age group at one institution.[63]

The opinions on forced retirement in the higher education sector were mixed at the time of the Constitutional Court ruling and are still mixed today. Those supporting the absence of a mandatory retirement age stress its discriminatory character, the value of older academics for HEIs, and the challenges of filling senior posts in some institutions and fields (especially under the current circumstances that sometimes make it difficult to attract young academics). The issue of retirement was also linked to the quantitative targets of having a minimum number of professors and doctoral degree holders in an institution and study direction. Those who support a mandatory retirement age point out that its absence hampers the rejuvenation of the academic staff body and the overall development of the higher education system (also because not all older professors might continuously update their knowledge, competences, and teaching style), and restricts the opportunities of young academics (including in some cases the number of teaching hours available to them, which are relevant for their salaries), and that mandatory retirement motivates academics to plan their succession.

Even though the six-year rule is responsible for several of the downsides of academic career patterns in Latvia, the interviewed academics and managers where not unanimously against the rule. The absence of a mandatory retirement age attaches some value to the six-year rule. That absence poses obstacles

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[62] The Latvian Academy of Sciences (LAoS) confers the status of "state emeritus scientist" on exceptional scholars who have reached the overall pension age in Latvia. The conferral requires the opinion of the Council of the State Emeritus Scientists, whose composition is approved by the MoES. A state emeritus scientist receives a lifelong allowance of EUR 213.43 per month. The allowance is financed from the state budget and administered by the LAoS. The overall amount allocated that way is EUR 606,994 in 2017, with the number of recipients capped at 237. The entire procedure (from the process for establishing the Council of the State Emeritus Scientists, to the nomination process of state emeritus scientists, to the amount of the allowance) is determined by the Cabinet of Ministers.

[63] Data provided by the case study institutions; latest year available.

for the rejuvenation of the academic staff body — which is also an objective of the system-level policy framework — and for good career perspectives for young academics. The termed contracts due to the six-year rule and the possibility of evaluating the performance of academics during the election process provide for one possibility to terminate employment in the absence of sufficient performance, as long as elections actually work as intended.

Internationalization

Internationalization[64] could play an important role in the development of the Latvian higher education system. Incoming and outgoing international mobility is crucial for higher education systems, because of the exchange of highly skilled individuals and the knowledge it enables. That is particularly relevant for smaller higher education systems such Latvia's, where mobility within the country is limited. However, Latvia has a closed and — it seems — to some extent inward-looking higher education system, wherefore the question of how it could open up is imperative.

The legal framework and the conditions for academic careers pose major obstacles for internationalization in Latvia. One of the major obstacles is language restrictions. Any individual who wants to become an elected academic must be fluent in Latvian. The only exception is visiting academics. However, at least one HEI introduced a rule stipulating a maximum of two consecutive nominations as visiting academic. In addition, institutions must offer their study programs in Latvian.[65] Since those restrictions apply only to the public higher education sector, this sector is at a disadvantage compared to the private sector. Many of the characteristics of academic careers in Latvia are highly unusual from an international perspective and limit the attractiveness of academic work and careers in Latvia (see above). That further restricts the possibilities for internationalization. Low salaries, especially compared to Western countries, and the challenging financial situation of many HEIs add to that. If an HEI were to attract foreign academics and pay them an internationally competitive salary under the current zero-sum approach, that would imply that other staff members would need to earn less than they otherwise would.

There appear to be hardly any national policies supporting international mobility that could help HEIs overcome the barriers. Potential options in that direction — beyond establishing conducive legal conditions — include:

- Marketing and facilitating incoming mobility at the national level, for example, via ensuring the availability of information in English (or, potentially, another major European language)

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[64] Internationalization can be defined as "the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of higher education" (Knight 2004, 11). As a set of activities, internationalization can be "described as study abroad, curriculum, academic programmes, international students, institutional linkages and networks, development projects, and branch campuses" (Knight 2009, 10). In the context of academic careers, mobility plays a particularly important role, wherefore this section focuses on the mobility aspect of internationalization.

[65] Exceptions are programs for foreign students and programs developed under EU programs and interstate agreements, where up to one-fifth of credit points can be offered in an official EU language; language and culture studies and language programs where foreign language teaching is required for achieving the program objectives; and joint study programs, which can be implemented entirely in official EU languages.

- Ensuring that there are English-speaking contact points in the administration;
- Providing dual career[66] services;
- Offering support on social security issues.

With respect to outgoing mobility, options include providing grants, even though it is crucially important to take into account the return of academics and related mechanisms. None of those mechanisms appears to be in place in Latvia (on a broader scale), with the exception of ESF-financed support for the mobility of academics. However, one requirement for applications for ESF-financed support is to demonstrate the mobility of researchers and their collaborations with foreign partners, and ESF-financed support programs target HEIs' efforts to attract foreign academics.

HEIs nevertheless maintain some internationalization, and individual career trajectories of many academics in Latvia exhibit some international mobility. HEIs manage to tackle the challenges for internationalization to some extent, and employ a number of foreign academics, in particular, as visiting academics. With respect to both incoming and outgoing mobility, support instruments such as Erasmus+,[67] KUNO,[68] and Nordplus[69] are important factors. A form of internationalization of greater importance in Latvia is international networks build via, for example, the participation of academics in international conferences and the involvement of foreign academics in the supervision of doctoral students. Those activities seem to be of great value for HEIs to, among other things, access equipment and expertise not available to HEIs.

The closed character of the Latvian higher education system makes internationalization an important activity for HEIs, but there appear to be deficiencies in the HEIs' approaches in that area. In general, internationalization is one way of improving the quality of academic work, especially if institutions have developed adequate policies and activities. Under the challenging framework conditions in Latvia, devising adequate policies and activities would require institutions to find a realistic interpretation of their internationalization in HR development objectives. At the moment, it appears questionable whether HEIs have such an interpretation, and adequate policies and activities related to it. Nevertheless, institutions have established various international partnerships, including via mobility instruments such as Erasmus+, which are used to also attract visiting academics.

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[66] This refers to couples where both partners pursue an (academic) career and their specific needs.

[67] "Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. Its budget of €14.7 billion will provide opportunities for over 4 million Europeans to study, train, gain experience, and volunteer abroad.
Set to last until 2020, Erasmus+ doesn't just have opportunities for students. Merging seven prior programmes, it has opportunities for a wide variety of individuals and organisations."
(https://ec.europa.eu/programmes/erasmus-plus/about_en)

[68] KUNO is a Nordplus network of 18 Nordic-Baltic fine art academies that promotes cooperation, including financial support for student mobility (https://www.kunonetwork.org/).

[69] "Nordplus is the Nordic Council of Ministers' most important programme in the area of lifelong learning. More than 10,000 people in the Nordic and Baltic region benefit from it every year." (http://www.nordplusonline.org/) The activities of Nordplus include the Nordplus Higher Education Programme that supports cooperation and mobility among HEIs from the Nordic and Baltic countries.

3.2 Institutional Human Resource Management

Staffing

Requirements concerning the composition of HEI academic staff and the framework conditions for contractual arrangements with academics limit the latitude of institutions in managing their academic staff. In principle, Latvian HEIs are autonomous in managing their academic staff, for example, opening and closing positions, defining the task portfolios of academics, and hiring senior academics without needing approval from the government. However, system-level regulations and framework conditions limit that autonomy. First, institutions need to secure a sufficiently broad range of teaching and research activities. That includes covering several areas of (sub-)specialization to meet the needs of students and external stakeholders such as the general education sector and industry. Additional requirements in terms of academic staff composition relate to stipulated shares of certain types of academics. That includes defined numbers of professors for opening programs and getting them accredited, and fulfilling system-level provisions such as a defined share of doctoral degree holders among the academic staff body and of foreign visiting academics.[70] Second, institutions do not have the possibility of freely creating positions for which certain task portfolios are designed (for details see Chapter 3.1 'Academic Work and Careers'). Due to the legal framework, HEIs must assemble the contractual arrangements with their academics from different positions and tasks. The connection of positions and tasks to different funding sources, and the overall complexity of contractual arrangements further restrict the flexibility of institutions in designing employment relations with academics.

Continuously reassembling the task portfolios of academics and making use of certain staff categories are the main strategies for HEIs to function under the given circumstances. The magnitude of challenges and the potential solutions related to managing the human resources vary among institutions and, in particular, subunits, where many HR-related processes are located. Important factors in that respect are the institutions' and units' student numbers, activity profiles, and funding sources, which also have a major influence on the overall financial situation. Nevertheless, all institutions and units need to deal with the challenges mentioned. A first approach followed by institutions and units is to reassemble the contractual arrangements with academics in line with changing circumstances and demands, and the funding available. A second approach consists of using the possibility of hiring visiting academics and/or academics on per-hour contracts (who are not visiting academics) to cover all specialties and to absorb volatility. That includes professionals from outside the higher education sector who have additional advantages such as the professional experience they bring to HEIs.

The way in which HEIs and their subunits (have to) approach the management of their staff has several critical implications. The complexity of contractual arrangements and the need to engage in continuous negotiations require

[70] However, there appears to be no systematic enforcement of these requirements by the government.

much time from the leadership and administration of institutions. Those conditions make it challenging to deliberately promote a staff structure where appropriate importance is attached to research, teaching, and administrative tasks, since external requirements and the funding available are the main determinants of academics' activity profiles. That also makes it hardly possible to ensure equal treatment of staff with different funding sources such as project and budget funding.

Some HEIs face challenges in providing academic staff members with a sufficient workload and adequate working conditions. That concerns, among others, ensuring that they have a sufficient workload to earn a decent salary. That has become particularly challenging in some institutions, which appear to have protected existing positions during the various funding cuts in recent years via major cuts in the workload attached to the positions and which, in addition, face challenges due to demographic decline affecting student numbers. In addition, it is not clear whether the individual combinations of several positions and tasks is in line with HEI needs, which might benefit from academics working on one "integrated" position.

The involvement of external staff members (on per-hour contracts) has implications for sustainable personnel management. While necessary to deal with external requirements and the associated volatility, hiring external staff members might reduce the (teaching) workload of regular staff members. Moreover, a large number of external staff members can create challenges for HR management since they are not working under the same employer's policies as the regular staff members.

HEIs have almost no possibility of steering the secondary employment of their academics, but many consider academics' side jobs to be an asset for the institution. There are only scant options for institutions to influence whether and to what extent their academics take side jobs, since there are no sector-specific regulations covering side jobs of academics outside the higher education sector. Nevertheless, several HEIs do not consider that problematic. One reason for that is the perceived positive effects of secondary employment outside of the higher education sector on HEI activities. Academics working in the private sector gain professional experience, which some HEIs value, also with respect to the benefits for students.

Gender equality appears to be less of an issue in Latvia than in other higher education systems. Whereas many countries make great efforts to increase gender equality in academia, Latvian HEIs perform well in that respect. Women comprise 55 percent of academic staff members at public HEIs.[71] Among professors, that share is 41 percent, which is a comparably high share in Europe. One reason for that might be that salaries are significantly higher in the private sector. However, gender equality might be less advanced when it comes to leadership positions.[72]

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[71] Authors' calculations based on data provided by the MoES; latest data available.
[72] However, the World Bank team does not have any statistical data on this issue.

Selection and Recruitment

HEIs have only limited possibilities to design strategic recruitment procedures because of restrictions deriving from the system-level framework. Recruitment plays a vital role in the strategic development of institutions. Thus, the national framework needs to provide HEIs with sufficient latitude in that area. That is not the case in Latvia, in particular, with respect to the recruitment of professors and associate professors. Provisions of the system-level framework such as the separation of two career tracks (which results, among others, in complex contractual arrangements) and the six-year rule determine important characteristics of the contracts HEIs can offer academics and, therefore, limit the HEIs' flexibility in designing the contracts strategically. Furthermore, the legislation prescribes several aspects of recruitment procedures — whose implications for strategic selection and recruitment are discussed also in the following paragraphs. That includes criteria for assessing the eligibility of candidates — even though there are possibilities for HEIs to adapt them (see below) — and the bodies responsible for recruitment decisions, including the involvement of external reviewers (even though this provision seems not to be implemented in all cases).

Provisions regarding the bodies responsible for recruitment decisions preclude the involvement of the institutional leadership, and, in some cases, lead to undue external influences on recruitment procedures. Recruitment procedures and decisions involve the institutional leadership in many countries, in particular, when it comes to senior academic positions. That involvement is important to, among other things, ensure that recruitment decisions are in line with institutional strategies and to counterbalance internal dynamics within units that might reduce the quality of selection outcomes. The recruitment procedures stipulated by the Latvian system-level framework do not allow for the (formal) involvement of the institutional leadership. The right to make decisions (that is, to vote during the elections for academic and research positions) is ascribed to a "Council of Professors" (for details see Box 3) in the case of professors and associate professors, and to collegial bodies (on the unit level) in other cases.

External influences on the Councils of Professors interfere with the principle of institutional autonomy in recruitments. Only academics who received "expert" status from the Latvian Science Council are eligible to be members. Moreover, if units do not have a sufficient number of eligible academics to form their own Council of Professors, the elections in some cases seem to be held in a Council of Professors at another HEI. While the LIHE stipulates the establishment of inter-institutional ('joint') councils for such cases, in practice, the issue described in this section seems to occur — the authors assume that this might happen in highly specialized (sub-)fields which are only offered by a very limited number of institutions. In those cases, the selection of persons to be recruited is in fact made by other HEIs, which is highly unusual from an international perspective. The institutional leaders can only approve the decision by recruiting the elected candidate. That might lead to a situation where the institution at which with the Council of Professors is located might compete for the same academic. The legislation rules out a system of checks and balances common in many other countries, which could ensure a balance between professional recruitment (which emphasizes the role of the disciplinary community in decision making) and organizational recruitment (where recruitments are made according to the organizational regulation, emphasizing the strategic fit of the recruited person).

Box 3 The Council of Professors

A Council of Professors is a field-specific body staffed mainly with senior academics with the responsibility to appoint professors and associate professors. HEIs must establish Councils of Professors in the respective (sub-)field for the election process for professors and associate professors. The Council of Higher Education (CoHE) approves lists of those fields for which councils have to be established.[a] Each council consists of at least five elected professors. At least one-third of its members shall be external members (professors or representatives of professional associations). A council's chairperson proposes its composition, which needs to be approved by an institution's Senate. If an HEI does not have five professors in the relevant field, professors from other institutions can participate in a Council of Professors. That requires the approval of the Senates of all HEIs involved. If three or more professors from other institutions are part of a council, the CoHE must approve the composition.

Source: Authors based on the LIHE and information provided by the MoES.

Note:
a. http://www.aip.lv/prof_saraksts.htm (in Latvian).

There are a few elements of selection procedures that HEIs can influence, including the criteria for determining the eligibility of candidates. The comparatively greater latitude in implementing selection procedures for lower academic ranks leaves some room for adapting them strategically. However, since the senate of HEIs decides on the design of those election procedures, adaptations appear to be challenging in some cases due to potentially conflicting interests that make any change unlikely. With respect to selection procedures for all positions, HEIs are able to influence the basic requirements for obtaining positions and the criteria used to determine whether an applicant is eligible for a position during the election process.[73] The legal framework allows institutions to select criteria from a defined list that covers teaching, research, and administrative tasks (see Table 3), while prescribing a minimum number of criteria that must be chosen from each of the three fields for professor and associate professor positions. The related assessments cover only the last six years. In addition, HEIs appear to be able to adapt the criteria also beyond choosing them from the list, which allows them to adapt the criteria to their profile and strategy.

Nevertheless, there seem to be problems with the criteria in some cases. Criteria might not be defined sufficiently clearly, especially those determined by the legislation, which makes it difficult to assess them. There might also be a problem with research-related criteria for those academics who are engaged almost exclusively in teaching. Another challenge can be that criteria are not adapted to disciplinary cultures, for example, when bibliometric indicators common in the sciences are used in the same way in the humanities.

[73] There are additional minimum requirements for positions determined in the legislation, for example, the need to have a doctoral degree and three years of work experience as associate professor or professor for a professor position (LIHE: Section 28).

Table 3 Criteria for the evaluation of the scientific qualifications, pedagogical qualifications, and organizational skills and competence

Scientific qualifications
Professor: at least three criteria; associate professor: at least two criteria
4.1.1. Scientific publications in the editions that are included in the list of generally recognized scientific editions[a]
4.1.2. Participation in international scientific conferences (with any kind of reports) in Latvia and abroad[b]
4.1.3. Management of or participation in the implementation of the Latvian Science Council's or other national research projects and programs
4.1.4. Management of or participation in the implementation of internationally funded research projects
4.1.5. Management of scientific contract work or participation in its implementation
4.1.6. Expert activity in the Latvian Science Council's and international projects and programs
4.1.7. Management or participation in the implementation of international artistic creativity and sports projects, as well as participation in exhibitions and competitions
4.1.8. Received patents and licenses
Pedagogical qualifications
Professor: at least five criteria; associate professor: at least four criteria (two criteria for professional programs)
4.2.1. Supervision of the work of doctoral students
4.2.2. Supervision of the work of master's students
4.2.3. Management of lectures and seminars
4.2.4. Design of study courses
4.2.5. Design and management of study program
4.2.6. Participation with presentations at academic conferences
4.2.7. Preparation and publication of textbooks and teaching aids (already published works)
4.2.8. Raising of qualification in foreign and Latvian HEIs or research institutions[c]
4.2.9. Reading lectures at foreign universities
Organizational skills and competence
Professor: at least three criteria; associate professor: at least one criterion
4.3.1. The management or participation in the activities of scientific and academic commissions or collegial bodies
4.3.2. The management or participation in the activities of organization commissions of international conferences
4.3.3. The management or participation in the activities of the editorial board of scientific publications
4.3.4. Management of a faculty, institute, professors' group, chair, laboratory
4.3.5. The management or participation in the activities of international scientific, academic, or artistic associations
4.3.6. Engagement as officially approved consultant of state, local government, or other juridical or nonjuridical companies

Note:
a. This list is approved by the Council of Science (http://www.lza.lv/ZV/zv991600.htm#10). Professors need to have five publications, associate professors three publications.
b. Professors need to have attended five conferences, associate professors three conferences.
c. That is, teaching or conducting research in other scientific institutions.

Recruitment procedures are generally transparent. The transparency and clarity of processes is one important way of ensuring the quality and reliability of recruitments. In Latvia, that is the case when it comes to the procedures, roles, and responsibilities of the actors involved, and the basic requirements for being eligible to obtain a position. One reason for that are the national-level regulations on the process.

Job descriptions, another important element of recruitment procedures, appear to be communicated less transparently. Even though several HEIs develop some sort of job descriptions/specification, they might not be very specific, and are not made publicly available and shared with applicants in all cases. In addition, they might be hardly related to the institutional and unit strategy. Measures to ensure equal treatment appear to consist mainly of compliance with national-level provisions ruling out differential treatment.

The recruitment processes are fast compared to many other countries, but their frequency leads to a lot of work for those involved, making the recruitments institutionally inefficient. Recruitment procedures for a professor position lasting on average around three months are common in Latvia, which appears to be fast. However, the frequency of recruitment procedures, which take place every six years for each position, leads to a high workload for HEIs and the respective councils.

There is a lack of procedures preceding the election process. Additional tools facilitating the systematic search for candidates are rarely used by HEIs (besides personal invitations of potential candidates at at least one HEI). That concerns special search committees with the mission to define the job description, search actively for candidates, oversee the recruitment process, and interact with candidates. However, some HEIs have introduced a "procedure" to evaluate the skills of academics by hiring them on per-hour contracts for one year before elections for a position take place.

Some HEIs have established procedures to facilitate the start of academics in their new jobs. At one institution, new employees receive information material on working at the institution. The heads of departments and colleagues at that HEI provide additional, informal support. At another institution, superiors introduce new academics to their job description and sign them jointly with them.

The size of the Latvian higher education system and the extent of mobility have several implications for recruitment processes. Latvia's higher education system is small with limited in-country mobility and comparatively low levels of foreign academics (see also Chapter 3.1 'Academic Work and Careers'). One effect of that situation is that internal recruitments are the norm rather than the exception. As is typical in small systems, HEI academic staff members were in many cases the institutions' own students, graduates, and doctoral students. Another effect concerns the extent to which HEIs and their subunits are able to fill vacancies and to which they encounter competition during elections. While there are some HEIs that encounter hardly any challenges with respect to filling vacancies, others do. More importantly, many institutions — as stated before — experience hardly any competition for open positions.

Promotion Patterns and Career Advancement

The system-level framework and the resulting conditions for academic careers in Latvia limit the possibilities for HEIs to design clear institutional promotion patterns. That includes, first, the six-year rule that — as also discussed below — bars HEIs from designing formal career patterns spanning more than six years. Second, the separation of two career tracks stipulated in the law splits many academic careers in two parts pursued in parallel, each of which HEIs need to deal with separately. Third, the formal regulation of the election of professors and associate professors in the LIHE — which was discussed also in earlier sections — prevents HEIs from designing recruitment procedures strategically, for example, when it comes to the involvement of the institutional leadership.

The approach to promotions in Latvia clearly diverges from the approach in most Western countries. Promotion in Latvia is based on a vacancy model and dependent on open positions (see also Chapter 3.1 'Academic Work and Careers'). While open positions are also important for career advancement in other countries, in Latvia, that system results in a chain of academic and research positions for which academics can apply and reapply, but there are no promotions in the sense of advancement from one career step to another. The main formal policy option for HEIs to promote the transparency and clarity of career patterns are the criteria for academic positions. Even though the criteria are to some extent predetermined by the system-level framework, HEIs have some latitude in adapting them (for details see above). The transparency of those criteria appears to be high, which is one reason why many Latvian academics consider the process of career advancement as clear. Another reason for transparency mentioned by some academics is that the framework for careers is discussed openly in the Senate.

The limited possibilities for designing career and promotion patterns also restrict the possibilities for linking them to the implementation of institutional and unit-level strategies. Like recruitments, career patterns and promotions are an important strategic tool for HEIs. However, possibilities for strategic steering in that respect do not exist in Latvia, for example, confirming a post holder according to clearly defined criteria — even though the (re-)election criteria can to some extent promote the alignment of academics' activities with strategic objectives. To the contrary, the six-year rule might lead to an "unreasonable continuation" of the teaching and research focus of academic positions. In addition, the dependence of positions below the level of associate professor on volatile funding sources appears in some cases to restrict the leadership of HEIs in creating more strategically positions for young academics. However, some HEIs engage actively in planning academic careers (as far as this is possible) and discussing them with staff members.

In the Latvian context, with its lack of clear career paths, support for academic development emerges as an important activity of HEIs to promote the career progression of academics. Without possibilities for providing academics with clear career paths and promotion patterns, supporting them in their academic development becomes an important field of activity for HEIs. In addition to staff development activities (see below), helping academics organize and manage their workload is key in that respect. There are HEIs that provide their staff members with sufficient flexibility to organize their workload in line with changing conditions.

When applying for research projects, for example, academics can develop plans for shifting teaching responsibilities to other (newly recruited) academics or doctoral students in case the application is successful, or the potential acquisition of research projects is already accounted for in workload planning in the form of a reserve.

HEIs are not able to strategically approach the issue of retirement. The national-level framework does not allow institutions to directly influence the retirement of academics. Nevertheless, some institutions have introduced an "emeritus" status for professors, which allows institutions to hire these academics as professors without them having to be elected. Institutions appear to be able to hire professors under a one-year part-time contract after they have reached the general retirement age in Latvia, if academics initiate a renegotiation of their contracts at that stage. At the end of that contract period, both the HEI and the professors consider whether they want to extend the contract for another year.

Staff Development

Staff development activities are particularly relevant in Latvia to mitigate the effect of the lack of clear career trajectories. As discussed, possibilities for career advancement relate closely to the success of the activities of academics in certain areas, especially when it comes to attracting externally funded research projects. That makes staff development activities in those (and other) areas one of the most important measures for HEIs to support academics in their careers. In addition, at least two HEIs have made professional development one of the election criteria for academic positions.

HEIs offer a range of staff development opportunities, but some fields seem not to be covered. Offerings that can be found at at least one Latvian HEI include monthly seminars that are also used for an exchange of experiences among academics, and courses covering pedagogy, conflict management, foreign languages, online teaching skills, research methodology, proposal writing, leadership skills, and soft skills such as communication and stress management. Academics in some HEIs also benefit from opportunities and support for conference visits and international exchange, and additional development opportunities such as the possibility to enroll in doctoral programs for free. Some institutions appear to also promote the links of academics with the private sector, for example, by supporting the academics in keeping track of industrial trends. In addition, academic staff members can benefit from ESF-financed government support measures for gaining practical experience and for internships in the private sector, and for improving their higher education management skills. Another form of support on the system level are Latvia-wide seminars on funding applications. Other forms of professional development opportunities appear to be lacking. That includes regular talks with more experienced peers (mentoring), and time management training, which seems to be an important topic due to the often complex work arrangements of academics.

HEIs have hardly any systematic approaches to HR development. Key characteristics of a strategic approach to HR development include that activities:

- Are part of institutional planning and strategic management;
- Are based on analyzing the skills needed and the skills gaps;

- Lead to a regular program of staff development related to a broader framework such as plans for skills acquisition, and systematic feedback and career guidance;
- Are supported by modern HR instruments, for example, target agreements and skills development tools.

Such an approach appears not to exist at Latvian HEIs. Support for skills development and career guidance appear to be highly individualized in many cases, and furthermore dependent on the commitment of academics in senior positions. Another crucial factor in that respect is the funding available to HEIs and their subunits.

Organization of Human Resource Management and Services

HR management and services are organized differently by Latvian HEIs, but in most cases lack a clear mandate. Institutions tend to have departments responsible for HR management at the central level, and some also have HR managers within units. In other, especially smaller institutions, many processes are handled informally in direct contact among HEI members, potentially without a (senior) manager who focuses on HR management exclusively. A common characteristic in many cases is that HR departments lack a clear mandate, even though several of them are proactive and generate good ideas. The responsibilities of departments and other actors involved (for example, deans and heads of units) are often not sufficiently developed (that is, the importance of these actors for HR management is not reflected fully in their duties) or not sufficiently clear. In addition, institutional members are not always aware of all the services offered, which in some cases relates to a lack of a coherent offering and information policy on the side of HR departments. Another challenge in the organization of HR management and services is the unclear and underdeveloped relation between the central and the unit level. Relevant issues in that respect include a potential centralization of skills courses, and approaches and instruments developed at the central level are shared with decentralized levels.

HR management focuses primarily on administrative and not strategic tasks, even though there are several proactive HR managers who also engage in activities beyond their core duties. The growing importance of a strategic approach to human resources in many higher education systems led to an adaptation of the work of the units and actors responsible in that field. That includes a shift from a focus on administrative tasks to a more strategic role: HR management does not consist of processing paperwork anymore, but becomes responsible for translating strategies into operative procedures (such as key performance indicators and processes such as recruitment, selection, promotion, and staff development) and their coordination across HEIs. That shift appears to be still ahead in most Latvian HEIs, even though there are HR managers who are aware of their new roles. Relevant factors in that respect are the overall lack of a strategic approach to HR issues (see also Chapter 5 ‘Concluding Remarks on Strategic Human Resource Management’), the administrative workloads related to the complex contractual arrangements in Latvia and the various regulations pertaining to academic workloads and salaries via the different funding sources, and the small size of HR departments. Thus, many HR managers must focus on administrative tasks, in particular, the organization of employment contracts and related support for units and academics, and tasks related to election processes such as making

announcements for vacancies. Another contributing factor is the decentralized structure of many HEIs, which restricts the (direct) influence that central-level HR managers can have on units. In addition, there are questions concerning the qualifications of HR managers, for example, if they command the required skills in higher education management and have developed a robust service-oriented attitude and behavior — which could make higher education management training to develop these skills a relevant task for HEIs. Important activities that seem to be underdeveloped are providing advice for staff members on where to find funding for new activities and a service portfolio to support careers (see also above).

The work of HR units and HR managers is complemented by academic staff-related activities performed outside designated departments, for example, assuring academic integrity (see also World Bank 2017a). The LIHE contains the principle of academic freedom and stipulates that the administration of an institution has "a duty to guarantee and respect the rights of students and academic staff" (LIHE 6(5)), while also addressing an institution's staff members' duties with respect to their conduct in the context of the proper functioning of institutions, the rights of other persons, and the fulfillment of their duties (LIHE 26(2)). Instruments used by Latvian HEIs to ensure academic integrity comprise an electronic system to prevent and detect plagiarism, joining which is an eligibility requirement for state-funded study places, ethics committees, and codes of ethics.

The information base on academic staff members appears to be adequate. Institutions collect a significant amount of data on their academics, but to what extent the data are used for monitoring and strategic steering purposes appears questionable. At least one institution publishes an annual report on its staff body.

4 Remuneration and Performance Evaluation

4.1 Academic Salaries in Latvia

System-Level Framework

There are only a few explicit regulations on the remuneration of academics in the legislation, granting HEIs autonomy in determining salaries. The main provisions on academics' salaries in the legislation mandate a defined minimum salary for different academic and administrative positions, and a workload band for academic positions. The Cabinet of Ministers determines the minimum salaries for academic positions and for some administrative posts: rector (EUR 1,552 net), professor (EUR 1,293), prorector (EUR 1,035), associate professor (EUR 1,035), dean (EUR 1,035), docent (EUR 828), head of department/chair (EUR 828), pro-dean (EUR 662), lecturer (EUR 662), and assistant (EUR 528).[74] In principle, HEIs are free to pay higher salaries. The minimum salaries are also used in the context of funding allocations from the government to HEIs, including the study place funding and the research base funding. The general minimum salary in Latvia applies to the positions that are not covered by the regulation mentioned, including the positions of senior researcher and researcher. In addition to the minimum salary, the regulation of the Cabinet of Ministers contains a defined workload band for (full-time) academic positions, which ranges from 600 to 1,000 hours.[75]

Despite the few explicit regulations on remuneration, other elements of the system-level framework have far-reaching implications for academics' salaries. As discussed in greater detail below, the absence of strict regulations of remuneration does not imply that HEIs enjoy full autonomy in that area. Other elements of the legislative framework together with the conditions of the higher education system in Latvia lead to severe restrictions and to problematic effects for HEIs and academics. A first important factor is the scarcity of funds available

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[74] The regulations also define a gradual year-by-year increase in minimum salaries. Starting in 2017, salaries are increased gradually by 30 percent over three years. From 2019 onward, the salaries are going to be: rector = EUR 1,835 net; professor = EUR 1,530; pro-rector = EUR 1,225; associate professor = EUR 1,225; dean = EUR 1,225; docent = EUR 980; head of department/chair = EUR 980; pro-dean = EUR 785; lecturer = EUR 785; and assistant = EUR 625.

[75] As discussed (see Chapter 3.1 'Academic Work and Careers'), the workload band appears to be insufficiently defined, wherefore the interpretations of HEIs differ.

to HEIs, which prevents most of them from freely determining salaries (beyond the minimum levels). Against that backdrop, the structure of contractual arrangements between HEIs and academics (particularly the direct connection between specific tasks and contracts) further restricts the institutions' latitude due to, among other things, the close connections between the institutions' income sources and their possibilities to remunerate academics. In some cases, the minimum salaries are considered as a standard.

As with respect to other aspects of the framework and conditions of academic work, unions are not in all cases systematically involved in the discussions pertaining to academic salaries. In general, unions can play an important role when questions on remuneration are addressed on the system and/or the institutional level. In Latvia, unions in some cases take part in discussions on academics' salaries and related matters, especially on the institutional level. However, that involvement in negotiations is not always framed systematically.

Academics' Income

The salaries of individual academics mirror their job structure and are characterized by a compilation of remuneration components for different positions and tasks. An approach to salaries common in most other higher education systems where, as a rule, academics receive one salary for one position does not exist as an overarching framework in Latvia. Salaries are in most cases composed of several components related to the different positions and tasks that an academic's contractual arrangements with HEIs consist of (see also Chapter 3.1 'Academic Work and Careers'). Each of the positions and tasks in the fields of teaching, research, administration, and project work tends to be remunerated differently. The main responsibility for combining the different positions and tasks — and, therefore, ensuring a sufficient salary — lies with the individual academics, even though in many cases the HEIs' administrations support academics with handling their contractual arrangements.

The overall salary levels of academics are low, which is why many academics have multiple jobs. Minimum salaries in the academic sector were drastically reduced in the aftermath of the financial crisis, even though they are currently increasing again (see above). Several institutions pay hardly more than the minimum salary. Associate professors, for example, earn approximately the median salary in Latvia. In general, whereas individuals in senior academic positions such as associate professor and professor appear to be able to make a living from the salaries related to their position, this appears not to be the case for lower-rank academics (for a comparison of salaries in the higher education sector with salaries in other education sectors, see Table 4). The low salary levels, often in combination with reduced workload, are one reason many academics need to top up the salary from their main employment by working at other institutions and/or outside academia.

Job title/post	Monthly rate of pay (in EUR)	Workload per year (in hours)
General education, preschool education, and vocational education		
Teacher of preschool education	680.00	1,760
Teacher	680.00	1,320
Higher education		
Assistant	576.98	600–1,000
Lecturer	723.96	600–1,000
Docent	904.23	600–1,000
Associate professor	1,130.17	600–1,000
Professor	1,411.76	600–1,000

Table 4 Minimum salaries and workloads in the education sector, *as of January 1, 2018*

Source: Authors based on data provided by LIZDA.

The income structure of academics leads to flexibility but also major challenges, with a potentially negative impact on the attractiveness of academic careers. The compiled and negotiated character of salaries leads to significant flexibility for academics. Incomes can exhibit a direct connection between the outcomes of academics' work and their salaries, for example, in the case of attracting externally funded research projects. However, it also exhibits severe downsides. The high volatility of incomes that often relates to factors outside the control of academics can all too easily lead to precarious situations. In addition, the system requires constant efforts on the side of academics, which might translate into constant stress. The conditions can be particularly harsh for those who depend on income from per-hour contracts. In general, some academics manage to earn a decent income. However, others struggle to make a living and have hardly any positive prospects, which appears in some cases to lead to resignation. Overall, the current income situation of academics can have a strong negative impact on the attractiveness of academic careers.

4.2 Institutional Remuneration Practices

Remuneration Systems

The system-level framework strongly influences the HEIs' approach toward remunerating their academics. In principle, HEIs are autonomous in determining the salaries of their academics as long as they pay the minimum salary. The legislative framework assigns the responsibility for determining the procedures related to academics' remuneration to an institution's senate. However, the Latvian system-level framework leads to very specific contractual arrangements between HEIs and academics (see Chapter 3.1 'Academic Work and Careers'), which also impact matters of remuneration. Those arrangements are characterized by a high degree of fragmentation and volatility. Those characteristics translate directly into the remuneration practices of institutions. The salaries established and paid by HEIs consist of several components related to the various positions and tasks of academics. Paying academics fixed salaries for one posi-

tion, as it is common in most other countries, is in effect ruled out by the framework conditions under which HEIs act. The close connections of remuneration and funding sources, particularly, makes it difficult for HEIs to implement structured, strategically designed approaches to remuneration.

Comprehensive strategies and policies on remuneration seem to be rare. The fragmented character of HEIs' approaches to remuneration and the restrictions on institutions' latitude deriving from the framework conditions might be one reason why institutions lack well-developed strategies and policies in this field. Nevertheless, a few institutions have developed and adopted regulations for academics regarding tasks and payments. Other HEIs have formalized approaches in specific areas, such as a formula/mechanism to define the workload for teaching hours. In addition, HEIs also have collective agreements covering matters of remuneration (including nonfinancial benefits), which are developed with the involvement of (institution-specific) unions.

The latitude that HEIs and their subunits have vis-à-vis academic salaries and the challenges they face differ. The overall financial situation and the importance of different income sources strongly influence to what extent institutions and their subunits can design a strategic approach to academic salaries. A good funding base can allow them to remunerate academics beyond the minimum salary and to introduce elements such as performance-based payments — while performance-based payments are already made possible to some extent by funding from the second, performance-based funding pillar of the state funding model. Moreover, the flexibility with which different income sources can be spent varies. Income from tuition fees, for example, can be spent more flexibly than income from state-funded budget places, while also leading to a better overall financial situation. Since there are major differences among HEIs and units in terms of overall income and diversity of funding sources, their room for strategically designing remuneration systems varies. The same holds true for the challenges they face — which are discussed in the following.

A challenge shared by all HEIs and units is to provide their academics with a sufficient salary that is as stable as possible. Decent or at least sufficient remuneration is imperative to attract and retain good academics, especially in the face of the higher salary levels in the private sector. In Latvia, that challenge translates into providing academics with a good combination of positions and tasks. Some institutions and units face major challenges in that respect, particularly those that are dependent mainly on income from the state-funded budget places. The dependence on that income source seems to go hand in hand with HEIs and units paying more or less the minimum salary prorated per number of hours, which makes the (teaching) hours allocated to academics the core component of their salaries. That requires HEIs and units to deal with the volatility in the number of hours they can allocate, which changes in line with factors such as student numbers. Some institutions have established approaches to counterbalance volatility, including administrative procedures to deal with academics who face problems related to the number of (teaching) hours offered to them. Against that backdrop, the practice of connecting student numbers to hourly salary rates appears to be critical. Student numbers can rarely be influenced by academics and do not correlate directly with the workload of academics, and it thus seems problematic to use them as a determinant of (basic) salaries.

The inevitable salary differences among academics are tolerated by some institutions, while others try to promote a balance. The different financial situation of institutions and units can lead to major salary differences among academics, and also among those at similar stages of their careers. Those differences appear to be accepted in some institutions, where they tend to be interpreted as the result of academics' effort and success, or as the result of circumstances that cannot be influenced. In other institutions, a more egalitarian approach to workload distribution and subsequently to salaries seems to be applied. In some cases, a decentralized organizational structure makes it difficult to promote equal salaries by, for example, cross-subsidization among units. Other institutions have more possibilities in that respect, particularly if most of the financial resources are pooled at the central level. At least one institution uses those possibilities to reduce salary imbalances, including promoting equal remuneration for teaching and research tasks.

The often close connection between workload and salaries has several problematic effects that HEIs and units need to deal with. In cases where the actual workload mainly determines the salaries, a remuneration system might be promoted that focuses on quantities instead of quality and performance. In addition, the system promotes the notion that academics are paid for each task performed. Thus, academics might refuse to engage in activities that they are not paid for, which might limit creativity in the system. Another effect of the connection can be that internal synergies are not fully realized, since this could lead to a lack of workload and salary for some academics.

Differences in the financial attractiveness among tasks can lead to undesirable incentives for academics. The elements of which academics' salaries are composed differ in terms of stability and attractiveness, while the differences are not necessarily the same for all institutions. Academics' income from teaching, for example, appears to be comparatively stable in at least some institutions, while being less attractive when it comes to the size of salaries. Income from externally funded research projects, in contrast, is hardly predictable while very attractive in terms of salary levels. Depending on the preferences of academics, that can make it difficult for HEIs and units to engage staff members in those tasks that would be preferential from an institutional perspective. For example, the importance of teaching activities for academics' salaries in some cases leads professors and other senior academics to engage heavily in teaching, whereas it would be in the interest of institutions that they focus more on other tasks. There might also be restrictions on providing academics with positions they would need for their academic development. For example, if teaching is rewarded better than research, it can be difficult for young academics to get into teaching positions, as established researchers also tend to teach a lot.

HEIs offer a range of nonfinancial benefits for academics, but in many cases their actual implementation depends on the financial resources available, as they are also costly for the HEI. Nonfinancial benefits other than days of vacation covered in the legislative framework, which should in principle be available to academics, include paid study leave of three months for drafting a doctoral thesis (LIHE: Section 42 (2)) and six months of paid leave for scientific work every six years (LIHE: Section 42 (1)). Some institutions define additional nonfinancial benefits in their collective agreements. However, the actual implementation of nonfinancial benefits appears to be closely connected to the financial resources available to HEIs and units. A more recent development

in the higher education sector is that some HEIs have started to pay health insurance for their academics.

Performance-Oriented Remuneration

At this stage, almost no HEI has developed a comprehensive, long-term approach toward linking salaries to the performance of academics. Systematically linking remuneration to performance is not a common practice in Latvia. Nevertheless, at least one institution considers performance when determining individual salaries. The link between performance and salary at that HEI is established via coefficients attached to the basic salaries for academic tasks. The size of those coefficients is partly based on the performance of academics, which is translated into the coefficients via individual negotiations between academics and their superiors.

Bonus systems are a common element of HEI remuneration systems. Several institutions have implemented a bonus system that rewards specific achievements (primarily in the field of research) with a one-time bonus. Those bonus systems are often financed from the HEIs' income from the second, performance-based pillar of the state funding model, and in some cases, funding is forwarded directly as a bonus to those who contributed to generating this income. One issue vis-à-vis those bonus systems is that it is not always clear whether institutional members are sufficiently informed about them. Another issue is whether disciplinary differences are sufficiently considered. In addition, it is an open question as to what extent the direct link between financial incentives and single activities and achievements leads to unintended consequences, such as too strong a focus of academics on the activities rewarded.

Some institutions are deliberating strengthening the link between performance and remuneration in the future. Currently, several HEIs are considering further developing their performance evaluation and management systems (for details see below), including establishing a connection to salaries. One institution is quite advanced already in introducing a performance management system with a link to remuneration. That system has been discussed within the institution, and is currently in the phase of a "dry run" under which no real money is transferred to units. The system contains a points mechanism, which could translate into monetary bonuses for academics in the future.

Performance Evaluation

Further developing the institutional approach to performance evaluation and management appears to be on the agenda of several HEIs. Most institutions already have some form of performance monitoring. That includes student evaluations, evaluations of research work, performance appraisals based on activity reports of academics, and annual evaluation systems. Nevertheless, a systematic connection among different elements to form a coherent system for the evaluation of the performance of individual academics that also includes provisions on follow-up measures appears not to exist in institutions. However, there are efforts at some HEIs to establish something along those lines. That includes bringing together the various performance-evaluation procedures under one staff performance system.

Performance monitoring and management systems encounter several challenges in the context of the Latvian higher education system, which also affect their potential future connection to remuneration. One challenge relates to the underlying concept of performance. Developing such a concept, which reflects diversity in terms of different kinds of academic performance, is a challenging task in every country and institution. In Latvia, that challenge is reinforced by particularly pronounced differences in academics' task portfolios. For example, a performance monitoring and management system with a too strong focus on research would not reflect and adequately reward the performance of academics who are for the most part engaged in teaching. Another challenge could be to develop a system that is capable of actually having an impact. That might be difficult to achieve in Latvia due to a lack of possibilities for rewarding good performance, for example, via remuneration systems (also due to a lack of funding). Relevant issues in that respect are the decentralized structure of some HEIs (which limits the central level's influence on units and their staff members), the deep-rooted consensual culture in many HEIs, and the fact that in some cases there might be only one candidate for a position.

5 Concluding Remarks on Strategic Human Resource Management

Latvian HEIs are aware of the importance of their human resources, but lack a fully developed strategic approach to HR management. The leadership of institutions, their administration, and many academics in senior positions place great emphasis on attracting and developing talent. There are various procedures and instruments to support their efforts. Strategic objectives on human resources are part of several institutions' strategies, and some institutions have dedicated HR strategies. However, a key challenge that emerges across all areas covered in this report is that connections between the strategic framework and HR management activities appear to be limited and not systematic. That restricts the overall strategic alignment of basic HR elements such as HR objectives, job definitions, recruitment processes, career progression support, performance evaluation, and reward systems. It furthermore limits the extent to which HEIs can promote good academic work and careers.

The decentralized structure of some HEIs is a major obstacle to effective implementation of HR objectives. Subunits and/or individual academics are the main budget holders and those responsible for most HR decisions in several (larger) institutions. That restricts the possibilities for the institutions' leadership and administration to effectively promote implementation of HR objectives and to strategically steer HR development. It also constrains the development of approaches and processes shared across institutions. Complex governance structures and the strong influence of academic self-governance bodies further reduce those possibilities for steering from the central level.

The generic character of some institutional strategies poses an additional challenge to effective strategic HR management. Not all strategies of Latvian HEIs are based on an adequate analysis of the institution's circumstances and profile and sufficient consideration of the framework conditions for academic careers in Latvia. The character of those strategies can lead to a misalignment between HR policy objectives and HR management activities on the one hand, and the actual possibilities for HR management and the working conditions of academics on the other hand.

In many cases, the way in which Latvian HEIs approach HR issues can be described as traditional personnel administration. The main reason for that is the contractual nature of academic employment in Latvia (see also Chapter 3.1

'Academic Work and Careers'). It is based typically on individual teaching hours and/or externally funded research activities. HEIs frequently renegotiate the contracts with their academics — three times per year on average at one institution — which makes HR development difficult, creates multiple motivational structures for employees, narrows the time perspective needed for strategic development and management, and hinders the integration of teaching and research.

Further developing strategic HR management could greatly enhance the institutions' capacities to advance their approaches to academic careers. Improving their activities in the field of academic careers is a challenge that all Latvian HEIs need to face. In light of the various good practices and approaches that institutions have already implemented, and of the differences in circumstances and profiles, the specific tasks ahead differ among HEIs. Determining priorities, focusing resources on them, and ensuring that different reform efforts are aligned, requires a strategic framework for the Latvian higher education system developed in cooperation among key actors and the implementation of which is supported effectively.

Developing strategic HR management is a major task that lies ahead for the entire Latvian higher education sector, not only institutions. Tackling some of the key issues that need improvement is beyond the capacity and authority of institutions, and requires changes on the system level. In particular, the separation of teaching-focused and research-focused positions reflected in two separate sets of legislation, overly complicated promotion processes leading to the conferral of the doctoral degree, the absence of postdoc positions in the system-level framework, the election process for senior academic positions, strict language requirements, and the absence of a mandatory retirement age are major barriers to strategic HR management that need to be changed.

Annex
Overview of Assessment of Status Quo in Latvia Compared to Criteria for Good System- and Institution-Level Human Resource Policies

The following overview of the assessment of the status quo in Latvia compared to a set of normative criteria for good system- and institution-level HR policies, which were developed by the World Bank team (World Bank 2017b), gives an account of general trends. That implies that a particular HEI could be an exception to those trends. Where a range of assessments is indicated, a general assessment relevant for most HEIs was not possible. The overview contains five assessment categories — not achieved, achieved only to a limited extent, partially achieved, mainly achieved, and achieved — and the category "not applicable." Despite the differentiation of the assessments into five categories, each of them still covers a broad scope of degrees of achievement.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
A. Early-stage researchers: doctoral candidates and postdoctoral fellows		
System-level framework		
System level	**A.1** The system-level framework for doctoral training finds an appropriate balance between regulation and flexibility. While regulations and quality criteria need to be applied rigorously and consistently, doctoral training also requires room to accommodate personalized paths, and room for a reasonable level of institutional and disciplinary differences. This necessitates a national consensus on the essence and standards of the doctorate developed jointly by all relevant stakeholders of the higher education system.	*Not achieved*. There is a strict classification of doctoral degrees and accreditation regulations for doctoral programs, but they restrict the flexibility of HEIs in adequately designing doctoral education.
System level	**A.2** The autonomy of HEIs in the field of doctoral training is complemented by mandatory internal accountability mechanisms and appropriate external quality assurance processes of research and doctoral education. This includes regulations on which HEIs have the right to confer the doctorate and the related requirements. The regulations need to reflect that original research is the core component of the doctorate and, therefore, stipulate that institutions provide a suitable research environment.	*Achieved only to a limited extent*. Internal and external quality assurance procedures are still at an incipient stage and the focus on a suitable research environment as a condition for training doctoral students and conferring the doctoral degree is insufficient.
System level	**A.3** Doctoral training needs to be incentivized financially to promote efficiency and quality.[a]	*Achieved only to a limited extent*: State funding for higher education incentivizes the doctorate to some extent. However, the state stipend for doctoral students is very low, and access to research project funding is weak. This might lead to low completion rates.
System level	**A.4** Public funding for doctoral training is allocated in accordance with national needs and competencies required, while ensuring a diversity of doctorates.	*Achieved only to a limited extent*: Public funding for doctoral education to a limited extent considers national needs.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
System level	**A.5** Research support programs designed and funded at the system level ensure that doctoral candidates are appropriately involved in research projects wherever possible and that suitable co-supervision agreements are in place.	*Achieved only to a limited extent*: Research support programs designed and funded at the system level provide very weak incentives to ensure that doctoral candidates are appropriately involved in research projects. As a result, there are students working on their doctorate in units that are not research active. This issue will be tackled in new regulations. Although sometimes students have access to a second supervisor, this cannot be construed as co-supervision, which implies a team effort.
Anchoring the doctorate in the institution		
Institutional level	**A.6** Admission, progression, and assessment of doctoral candidates are monitored and supported. This includes published criteria and transparent processes for admission, an orientation and the provision of relevant information for newly recruited candidates, contractual agreements between doctoral candidates and supervisors with clear milestones (including any requirements for publications), sound assessment procedures based on clear and transparent criteria and processes, and the monitoring of the students' progression and completion.	*Partially achieved in some institutions and not achieved in others*. Most institutions are still offering the doctorate on the apprenticeship model, which means that admission, progression, and assessment of doctoral students are monitored and supported by the individual supervisor without much accountability to the faculty of the institution. A few institutions are developing more systematic processes, but their decentralized nature hamper those efforts.
Institutional level	**A.7** The supervision of doctoral candidates is framed by appropriate institutional policies and guidelines (among others, outlining the respective responsibilities and rights of supervisors and doctoral candidates), training and ongoing support for supervisors, and monitoring their performance. Co-supervision is encouraged and continuity of supervision is assured.	*Partially achieved in some institutions and not achieved in others*. Regulations concerning supervision are evolving in some institutions toward setting appropriate institutional policies and guidelines. Some institutions require signed agreements between supervisors and supervisees. Training and ongoing support for supervisors, and monitoring their performance, is not yet a practice. Co-supervision is not a policy but an ad-hoc practice, and continuity of supervision is assured to the extent that the students take the initiative to ensure such supervision.
Institutional level	**A.8** HEIs provide a stimulating research environment for doctorates with a critical mass of research-active staff; adequate learning and research tools; sufficient physical and financial resources; support for, among others, mobility and conference participation; and an overall environment supportive of research achievements.	*Partially achieved in some institutions and not achieved in others*. A few institutions have a critical mass of research-active staff and an overall environment supportive of research achievements. The underfunding of the sector has a negative impact on the learning and research tools applied at the institutional level and available financial support for conference participation and mobility.
Institutional level	**A.9** There is a policy outlining the balance between course work and research (thesis). Such a policy reflects the competencies that a doctoral candidate is supposed to acquire. Courses include research methodology and scientific integrity, and professional competencies such as grant writing, and written and oral communication.	*Partially achieved in some institutions and not achieved in others*. The policy in large institutions is not always applied consistently across the faculties and, in many institutions, does not always include courses in research methodology and scientific integrity, and professional skills such as grant writing, and written and oral communication.
Institutional level	**A.10** An institution-wide policy and related procedures for establishing an examination committee ensure objectivity and fairness.	*Not applicable* since this is regulated nationally through a complex and opaque process.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
Institutional level	**A.11** Institutions provide doctoral candidates with a range of academic courses (for example, subject-based courses, and courses on research methodology, teaching competencies, and scientific integrity), and soft-skills courses to prepare them for both their academic and nonacademic careers. Furthermore, HEIs provide career support and, where possible, teaching and research assistantships. Career support includes helping students, when appropriate, to find nonacademic jobs (including in the private sector).	*Partially achieved in some institutions and not achieved in others*. The policy in large institutions is not always applied consistently across the faculties. The majority of institutions prepare students for academic careers and do not offer soft skills courses. There is no formal career support, but in some institutions, there are opportunities for teaching and research assistantships to which students can apply.
Institutional level	**A.12** Open access to doctoral theses is promoted. Normally, all doctoral theses are available in open access, except if there are reasons requiring an embargo for a designated period of time (such as copyright issues, and ethical sensitivities related to, for example, the protection of human subjects).	*Achieved in at least one institution*, which has an open access policy mandating that publications and data from research funded by public funds or the institution itself are deposited in an open access repository, and which ensures public access to doctoral theses on the institution's website before their presentation.
Institutional level	**A.13** Formal appeals and complaints mechanisms are available to all doctoral candidates. The procedures are clear, fair, safe, comprehensive, and up to date, and are described in an easily accessible document. While respecting confidentiality and anonymity, the complaints and appeals that have been lodged are analyzed periodically to ensure that clusters of problems are addressed.	*Partially achieved*. There are formal procedures for appeals and complaints but not all students seem to be informed of those opportunities and the quality mechanisms are undeveloped.
Institutional level	**A.14** The quality of all aspects of the doctorate is continuously monitored and assured. Internal quality assurance mechanisms are adapted to the specificity of doctoral training and include feedback from doctoral candidates and their supervisors.	*Partially achieved in some institutions and not achieved in others.* Some institutions are moving toward more structured doctoral programs and are developing internal quality assurance processes but this is still at an incipient stage.
Institutional level	**A.15** Doctoral schools are a particularly effective way of institutionalizing doctoral training and promoting its quality. HEIs that establish doctoral schools consider their number and their location within the institution to maximize benefits with respect to critical mass and interdisciplinarity.	*Partially achieved in one institution and not achieved in others.* Some institutions have an overarching structure that they call "doctoral school," which is mostly construed as providing colloquiums. There is only one example of an institution that has given administrative responsibilities to the doctoral school, including for quality assurance; in all other cases, the doctoral schools are viewed as a place to offer conferences and workshops.
Institutional level	**A.16** Doctoral-granting institutions have a clear mission for their doctoral schools (with appropriate attention to disciplinary differences), and a comprehensive and explicit policy on the governance and organization of doctoral training that is published and easily accessible.	*Partially achieved in one institution and not achieved in others.* While one institution has a doctoral school that serves as the starting point for a structured approach to the governance and organization of doctoral training, others do not have such schools (in the traditional sense of the word) (see A.15).
Managing the doctorate with partners		
Institutional level	**A.17** Partnerships with national and international HEIs, research bodies, and the private sector (including industry) can improve the quality of doctoral training. To manage related risks, partnerships are framed by a strategic approach, appropriate governance arrangements, adequate policies and procedures, and a co-tutelle agreement.	*Partially achieved* to the extent that some institutions have relevant partnerships with industry and other partners; however, they are not necessarily accompanied by the necessary governance arrangements, policies, and procedures. A formalized industrial doctorate is currently not in place.
Institutional level	**A.18** Stakeholder involvement in framing and evaluating the doctorate is important, among others, because the majority of doctoral holders occupy positions outside academia.	*Not achieved* as there is no structured and systematic involvement, for example, in governance of the doctorate.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
The postdoc		
Institutional level	**A.19** The postdoc is framed by appropriate policies and guidelines covering, among others, recruitment procedures and the objectives of appointments. The postdoctoral position is considered part of the academic career ladder, and the institution takes responsibility for related HR issues.	*Not achieved*. The status of postdocs is left rather vague (anyone within five years of obtaining the doctorate); the explicit nature of the responsibilities attached to this position are not clearly defined or understood.
Institutional level	**A.20** Postdocs have access to career support to help them develop career objectives, whether within or outside academia.	*Not achieved*. There is no formal support that is extended to postdocs (besides the support available to all academics).
B. Academic selection and promotion		
The status and role of academics		
System level	**B.1** System-level regulations are primarily applied to secure academic freedom and academic quality, and to promote transparency, including for national and international mobility. Defining the role, status, and tasks of academics is mainly an institutional responsibility. System-level policies support healthy competition among individuals, and avoid practices that lead to the marginalization of certain staff groups.	*Partially achieved*. The current system-level regulations are causing several problems for academic careers and their institutional management. First, they are hindering the integration of research and teaching. Second, they are not allowing for the development of tenure systems (that is, the promotion of academics from one career step to another and permanent employment contracts securing academic freedom). Third, they are challenging for strategic recruitments. However, according to the site visits, the current national regulations enable transparency.
Institutional level	**B.2** The status and role of academics are considered thoroughly in institutions and are reflected against the funding sources of academic work, the system-level policy and regulatory framework, international trends in academic work and careers, and the traditions of academic work and its values. Institutional managers are well-informed on the contractual arrangements (duration and type) and funding of their staff.	*Partially achieved in some institutions and not achieved in others*. The status and roles of academics are tailored mainly in the context of external factors and funding. The management is mainly reactive to the scarce funding, changing student numbers and, sometimes, a lack of suitable candidates. The individual contractual arrangements are complex and difficult to manage in relation to academic work.
Institutional level	**B.3** Institutional policies aim for equal treatment of staff with project and budget funding, and acknowledge the equal importance of research, teaching, and administrative tasks.	*Only to a limited extent achieved in some institutions and not achieved in others*. Institutional policies are considered to be fair and equal under the given circumstances (in particular, the financial constraints). However, the separation of research positions and academic positions makes the integration of the tasks difficult. In monetary terms, the externally funded research work and budget-funded academic work are valued in a highly unequal way.
General career patterns		
System level	**B.4** On the national level, there is a systematic approach to career stages that allows domestic and foreign academics, ministries, and other stakeholders to compare positions among countries and institutions. This framework is flexible enough to allow institutions to engage in strategic HR management. The system-level policy guarantees the mobility between academia and industry and among institutions, and supports attractiveness of careers. It also provides a solid legal framework for career structures such as tenure track or other systematic approaches to career development, and establishes clear entry and exit points for academic careers.	*Not achieved*. The system-level approach provides a well-recognized and widely accepted framework for academic and research positions, and for recruitment and selection procedures. The requirements (in terms of qualifications) for different career positions are commonly known. However, the system-level framework prevents the institutions from developing tenure track models or other promotion patterns, and there is no defined exit point due to the absence of a mandatory retirement age.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
System level	**B.5** System-level policies may provide resources to HEIs for strategic career initiatives, for example, with regard to young academics.	*Achieved*. Dedicated resources are deployed by the central level in support of the doctorate and postdoc positions, and second pillar funding allows for the design of bonus systems and other means to incentivize staff. However, the current funding system would not provide the scope for more permanent performance-based salary systems on the institutional level.
Institutional level	**B.6** Institutional career patterns are realistic for most of the staff members. They are aligned with a systematic approach to career stages at the national level and they are internationally comparable.	*Partially achieved*. The career patterns are dependent on open vacancies that are often dependent on retirements (or the lack of retirements) and national regulations and recommendations on the number of professors and doctoral degree holders. While positions are comparable from an international perspective, there are no structured and coherent career patterns.
Institutional level	**B.7** Institutional policies ensure transparency and clarity of career patterns and promotion criteria, and maintain an appropriate balance among research, teaching, and administrative excellence. Candidates and employees of HEIs are aware of promotion criteria and career progression possibilities. Institutions communicate clearly the qualifications needed for different positions to their employees and persons seeking recruitment.	*Partially achieved*. The institutional policies are closely related to national policies and, are therefore, well-known and considered to be transparent and clear. However, the collegial election as a selection method may politicize selection processes and lead to a potential conflict of interest.
Institutional level	**B.8** Institutional policies link key aspects of academic career patterns (recruitment, promotion, remuneration) so that these support the implementation of institutional and unit-level strategies.	*Partially achieved in some institutions and not achieved in others*. Because of a lack of contractual security and the volatility of academic employment (and remuneration), and the lack of a retirement age, among other aspects, career management is almost disconnected from institutional strategies in some institutions, while others, nevertheless, try to link career development to institutional strategies.
Institutional level	**B.9** Data on all staff categories (including academic staff on part-time/ hourly contracts) are gathered and analyzed to enable effective human resource development and strategic human resource management.	*Partially achieved*. The data are collected but seldom analyzed. A more detailed analysis of different contracts of individuals could make the remuneration and careers of academics more transparent, and enable institutions to plan personnel costs for a longer time period.
Institutional level	**B.10** Organizational structures and HR services support the career patterns within an institution. HR policy is important for the development and implementation of strategies. In the context of academic careers, institutions: • Clearly define duties and responsibilities related to HR; • Ensure that sufficient resources are allocated for HR-related tasks; • Support a strategic role of the HR director; • Develop the competencies of HR professionals; • Assure the quality of HR policies and initiatives; • Set indicators for measuring HR success.	*Achieved only to a limited extent*. As in many other countries, HR services in Latvia are in their infancy in many institutions. Personnel management is mostly reactive and deals with acute contractual/workload issues.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
Selection and recruitment of academic staff		
System level	**B.11** Recruitment plays a vital role in the strategic development of institutional profiles. Thus, the national framework steering the recruitment practices needs to allow for institutional development and differentiation. National policies primarily guarantee equal opportunity for, among others, different nationalities, genders, and minorities.	*Mainly achieved*. National legislation sets the framework and includes requirements concerning equal treatment. However, it also attributes an important role to elections in the selection process. The election process is typically considered to be fair, but there might be conflict of interest issues and various imponderables.
Institutional level	**B.12** The most important way of assuring the quality of recruitments is to ensure the transparency and clarity of processes. That encompasses the clarity and transparency of job definitions, selection processes, and criteria; the provision of clear guidelines (and training) and definitions on the role of different actors involved in the decision-making process; a clear definition of entry points to academic careers; and a clear policy on equity issues/affirmative actions. Applicants are made aware of the practices.	*Partially achieved*. The current system is considered to be transparent and clear, and the national framework for required qualifications and its institutional applications are quite well known. However, the election process leads to many questions and makes the final decision making a process with many imponderables.
Institutional level	**B.13** Institutions deliberately balance the selection criteria in the context of their mission, acknowledging academic excellence (professional evaluation of teaching and research), organizational commitment, and fit (organizational recruitment). The institutions ensure that academic units have the capacity to select their workforce in a flexible, fair, and transparent manner, to meet the requirements of external funding and to support the overall aims of HR policies.	*Partially achieved in some institutions and not achieved in others*. Institutions are allowed to adjust the qualification criteria, and some institutions do this strategically. However, the recruitment of professors and associate professors is done from a professional (and not from an organizational) perspective, so that it might not be aligned with institutional missions.
Institutional level	**B.14** Positions are advertised sufficiently broadly (including, where suitable, on the international level). Institutions use tools facilitating the systematic search for candidates, and, where appropriate, headhunting. The selection process is efficient, transparent, and not overly time-consuming. Transparency of the process also extends to the candidate, who is informed about key milestones of the process. There needs to be clarity on the tools used to evaluate the skills of candidates (for example, lectures, evaluations by students, and assessment centers).	*Partially achieved*. The Latvian higher education system is small and closed. Thus, the advertisement probably is sufficient, if the search focuses only on candidates in the country. However, in many cases, the real selection process during early career stages is based on prior supervisor relations. The selection process is time-consuming and involves many individuals, who often are already overtly committed to committee work.
Institutional level	**B.15** Selection processes go hand in hand with the clarity of roles (for example, of academic selection committees, including possibly stakeholders from industry, academics from other faculties, and a representative from the institutional leadership).	*Partially achieved*. Roles are clear; however, the election process is a professional (peer-based) process that does not involve other stakeholders.
Institutional level	**B.16** There is a system of checks and balances that ensures, among others, the strategic fit of candidates for the position, and a balance between professional and organizational recruitment.	*Achieved only to a limited extent*. The election to lower academic positions is made by the faculty council, which may take into consideration organizational aspects. However, the final decision is by voting. The election of associate professors and professors is a purely professional (peer-based) process (which can take place at an institution which is not the recruiting one).

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
Career advancement and promotion patterns		
Institutional level	**B.17** Promotion patterns are important instruments for steering academic work. Institutions have clear, transparent, and well-documented promotion patterns that are aligned with the institution's mission and profile, and clearly distributed roles and responsibilities during the promotion processes.	*Not achieved*. Promotions are based on open vacancies. There are no promotion patterns for an individual to advance in his/her own career (position/post).
Institutional level	**B.18** Promotion patterns take into account different aspects of academic work (research, teaching, administration, and service). The merits in different academic tasks are defined in a transparent and understandable manner. To ensure the fairness and effectiveness of promotion patterns, they are repeatedly communicated to staff members.	*Partially achieved*. While there are no clear promotion patterns, election processes take into account the three aspects of academic work. However, in some cases they are not aligned with the tasks of the position (i.e. the required emphasis on research also for teaching-focused positions).
Institutional level	**B.19** Career development and career advancement are part of institutional planning and strategic management, and supported by modern HR instruments (for example, target agreements and skills development tools). In this, HEIs support academics in evaluating and developing their competencies required for conducting high-quality scientific work and for succeeding in their careers within their scientific community and within organizations in the higher education sector and beyond.	*Partially achieved in some institutions and not achieved in others*. Career advancement is difficult because of the unpredictable conditions of work and the vacancy model. There are several attempts to support the career advancement of talented individuals. However, the management of careers lacks a systematic approach.
International mobility in academic careers		
System level	**B.20** International mobility is crucial, particularly for small higher education systems. National policies support inward and outward mobility. Incoming mobility can be marketed and facilitated on the national level. With respect to outgoing mobility, the return of academics and related mechanisms are taken into account, in addition to the provision of grants for outward mobility. The system-level policies guarantee legal conditions conducive to the recruitment of foreign academics, and ensure the availability of information in English (or, potentially, another major European language) for international staff. Further relevant aspects include support for mobility, dual career services, English-speaking contact points in the administration, support on social security issues, and other aspects of mobility support.	*Not achieved*. The Latvian higher education system is small and closed. The language restrictions deriving from the legal framework and potentially other factors create an obstacle for the internationalization of the academic workforce. There are no systematic policies for supporting mobility.
Institutional level	**B.21** Internationalization is one way of improving the quality of academic work. However, that impact cannot be taken for granted. It is important that institutions have defined the aims related to internationalization, planned and organized the career patterns, tasks, and overall working environment (including family life) in a way that a foreigner without local language skills can successfully work, and have organized sufficient support structures for incoming (and outgoing) staff.	*Partially achieved*. Institutions are supporting the internationalization of their staff and especially young researchers. The guest lecturer system creates a mechanism for foreign academics to work in Latvia. However, internationalization would require more attention on the strategic level and would need more resources and changes in language policies.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
Alignment of elements of human resource policies		
System level	**B.22** To promote good academic work and careers, job descriptions and tasks, performance appraisal, career progression, reward systems and strategic objectives are aligned.	*Not applicable.* Elements are not defined on the system level. However, because of various policies impacting and constraining academic work and careers (the six-year-rule, the election system, etc.), the national framework does not support the alignment of the different elements.
Institutional level	**B.22** To promote good academic work and careers, job descriptions and tasks, performance appraisal, career progression, reward systems, and strategic objectives are aligned.	*Partially achieved in some institutions and not achieved in others*. Because of the fragmented contractual nature of academic work and its funding, institutions face difficulties in aligning their policies. However, some seem more successful than others in designing coherent career patterns.
System level	**B.23** All higher education policies take into account the HR policy aspect, not least because the implementation of all policies and outcomes will be ensured by, or will have an impact on, academics.	*Partially achieved*. While academic positions and key HR processes are determined by the legislation, there is no systematic and overarching approach toward academic work that is consistently reflected in higher education policies.
C. Remuneration		
Regulation at the system level		
System level	**C.1** The question as to how remuneration should be regulated at the system level and what should be regulated on the institutional level depends on the national setting (for example, the size of the system, the political structure, and the status of academics). It is advisable to regulate key questions like types of professorships and, possibly, basic principles of remuneration on the system level, while more detailed questions like procedures and institution-internal responsibilities are delegated to HEIs in accordance with the principles of institutional autonomy and subsidiarity.	*Achieved*. Basic positions and minimum salaries are established in the law, and institutions are autonomous in determining the details of remuneration approaches.
System level	**C.2** Unions can play an important role when questions like overall salary increases are addressed. As with other stakeholders, it pays off to involve them early on in questions of future salary models.	*Partially achieved*. Unions are involved in legislative processes but not systematically in all relevant discussions on the system (and/or institutional) level.
Concept and measurement of (good) performance		
System level	**C.3** The concept of performance has to be open and reflect diversity, that is, it needs to be open to different kinds of academic performance (including, for example, artistic performance) and functions fulfilled in an academic context.	*Achieved.* The election criteria reflect different dimensions of performance, and institutions with a special profile have the possibility of adapting the criteria.
Institutional level	**C.3** The concept of performance has to be open and reflect diversity, that is, it needs to be open to different kinds of academic performance (including, for example, artistic performance) and functions fulfilled in an academic context.	*Partially achieved*. While selection criteria covering different kinds of academic performance are determined by the national legislation, some institutions put a particular emphasis on research performance (also for teaching-focused positions).

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
System level	**C.4** The concept of performance relates to different types of activities and functions: (a) what can be considered as performance in the narrower sense (related primarily to teaching and research), and (b) the takeover of certain functions or fulfillment of certain roles (like vice-rector or dean). Further, (c) performance-based remuneration systems tend to provide for a market allowance, awarded in the context of negotiation (which might not relate to performance in the narrower sense but is also covered by respective models). Along these lines, good PBS models take different performance categories into account.	*Partially achieved*. While there is no framework for PBS models on the national level, system-level regulations do not prevent institutions from establishing such models (while the financial situation might in fact create a major obstacle). Minimum salaries for some functions are determined by the law.
Institutional level	**C.4** The concept of performance relates to different types of activities and functions: (a) what can be considered as performance in the narrower sense (related primarily to teaching and research), and (b) the takeover of certain functions or fulfillment of certain roles (like vice-rector or dean). Further, (c) performance-based remuneration systems tend to provide for a market allowance, awarded in the context of negotiation (which might not relate to performance in the narrower sense but is also covered by respective models). Along these lines, good PBS models take different performance categories into account.	*Achieved only to a limited extent*. Salaries for some functions are determined by the national framework. While there are no PBS models at the institutional level, there are some initial considerations on introducing monetary rewards for performance.
System level	**C.5** Countries need to have a clear approach to handling those three categories (that is, academic performance, takeover of functions and roles, and market allowance) – either as part of one PBS model or as three separate ones. As usual, the simpler, the better.	*Partially achieved.* There is a systematic approach to one of the categories (namely, academic functions), while there is no systematic approach to or considerations on the other two categories or a comprehensive framework covering all three categories. However, current legislation does not prevent institutions from developing PBS models.
System level	**C.6** Diverse higher education systems need to mirror diversity in their approaches to performance and remuneration. Some HEIs that focus strongly on research are likely to reward related individual (or collective) performance through their PBS systems. Other countries and institutions might want to use the opportunities PBS provides to counteract undesirable tendencies (for example, the neglect of teaching and service). Further, PBS models can be combined with other instruments such as performance contracts.	*Partially achieved*. While institutions enjoy autonomy in designing incentive systems, performance-based funding allocations to institutions are geared toward research, which is likely to reflect on bonus systems at the institutional level.
Institutional level	**C.6** Diverse higher education systems need to mirror diversity in their approaches to performance and remuneration. Some HEIs that focus strongly on research are likely to reward related individual (or collective) performance through their PBS systems. Other countries and institutions might want to use the opportunities PBS provides to counteract undesirable tendencies (for example, the neglect of teaching and service). Further, PBS models can be combined with other instruments such as performance contracts.	*Achieved only to a limited extent.* Some institutions have started to develop or implement reward systems (mainly bonus systems); however, these are primarily geared toward research. Also, criteria might not sufficiently reflect disciplinary differences.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
Aspects of model development – linking performance to models and procedures		
System level	**C.7** PBS systems combine fixed salary components (ensuring academic freedom and providing stability) with performance rewards. The basic architecture needs to be anchored at the system level while HEIs form related models according to their strategic priorities.	*Not applicable.* There is no framework/architecture for PBS systems in place.
Institutional level	**C.7** PBS systems combine fixed salary components (ensuring academic freedom and providing stability) with performance rewards. The basic architecture needs to be anchored at the system level while HEIs form related models according to their strategic priorities.	*Not applicable.* There are no PBS systems in place. While some institutions have developed or are in the process of developing bonus systems, current arrangements surrounding academic employment and remuneration make basic salary components more volatile than in comparator systems (World Bank 2017b).
Institutional level	**C.8** PBS systems reflect institutional strategies. While performance considerations generally derive from the key functions of academic staff (teaching, research and development, and service), the emphasis needs to be put across and within these categories in accordance with strategic institutional priorities. This has to translate into the definition of performance categories and subsequent "criteria."	*Not applicable.* There are no PBS systems in place. However, approaches to bonus payments are aligned with institutional strategies (with both of them being geared mainly toward research).
Institutional level	**C.9** Further, PBS systems avoid crowding-out effects (that is, when intrinsic motivation is supplanted by extrinsic motivation) and support (or, at least, do not negatively impact) intrinsic motivation through the incentives they set. In particular, incentive systems should not be directly linked to (every) single activity, which would support the perception of the incentive as a controlling intervention and thus endanger intrinsic motivation. However, rewarding single activities on a temporary basis that can be considered as "extra" rather than a "normal" part of academic work, is less likely to lead to crowding-out effects. Also, institutional models that accommodate different types of individual performance enhance motivation and avoid crowding-out effects.	*Not applicable.* There are no PBS systems in place. However, some institutions display a tendency to reward single activities that can be considered a "normal" part of academic work in a very detailed way, an approach which might jeopardize intrinsic motivation.
System level	**C.10** Performance criteria, assessment and the related award process need to be considered fair, transparent and clearly structured. This also applies to the use of different instruments like bonuses and temporary and permanent allowances.	*Not applicable.* Performance criteria feeding into PBS or bonus systems and related processes are not established at the system level.
Institutional level	**C.10** Performance criteria, assessment, and the related award process need to be considered fair, transparent, and clearly structured. This also applies to the use of different instruments like bonuses and temporary and permanent allowances.	*Achieved* in institutions where a bonus system is in place (*not applicable* to other institutions).
Institutional level	**C.11** While PBS models are supposed to reflect institutional priorities, they should also be "actionable," that is, their design and implementation should reflect constraints with regard to administrative processes and financial management. In practice, this favors more structured approaches (for example, multistage salary systems with a suitable number of levels and descriptors).	*Not applicable.* There are no PBS systems in place. However, the bonus systems at some institutions do not seem to pose particular administrative or managerial challenges. Nevertheless, it would be advisable to take these aspects into consideration as the models evolve.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment
Institutional level	**C.12** Decision-making processes related to the institutional framework for remuneration need to combine adequately top-down and bottom-up elements to mediate among interests and reach adequate decisions, while at the same time ensuring efficiency. HEI leadership plays a key role in the development and implementation of PBS models; however, deans are likely to fulfill routine functions like proposing staff members for awards or providing written statements for applications.	*Not applicable.* There are no PBS systems in place. However, criteria of the bonus systems at some institutions tend to be developed and applied at the central level, even though the senate plays a role in approving them.
Remuneration and financial management		
System level	**C.13** Financial management considerations are an integral part of the development and implementation of PBS systems. This concerns, among others, a clear understanding of the available funds, the development of financial scenarios of how the PBS system (and related reserves) is likely to develop in future, and considerations regarding the pension implications of allowances. The development and implementation of PBS systems furthermore requires managerial and administrative staff members with the right competencies. On the system level, financial management considerations need to involve the Ministry of Finance.	*Not applicable.* There is no framework/architecture for PBS systems in place.
Institutional level	**C.13** Financial management considerations are an integral part of the development and implementation of PBS systems. This concerns, among others, a clear understanding of the available funds, the development of financial scenarios of how the PBS system (and related reserves) is likely to develop in future, and considerations regarding the pension implications of allowances. The development and implementation of PBS systems furthermore requires managerial and administrative staff members with the right competencies. On the system level, financial management considerations need to involve the Ministry of Finance.	*Not applicable.* There are no PBS systems in place.

Note:
a. Questions of how to provide financial incentives to HEIs, also vis-à-vis an increase in effectiveness and efficiency, have been the subject of earlier World Bank advisory work in Latvia.

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LIHE (Law on Institutions of Higher Education) (as amended up to January 1, 2012)

LSA (Law on Scientific Activity) (as amended up to January 1, 2011)

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Report 3

ACADEMIC CAREERS IN LATVIA: RECOMMENDATIONS

6 April 2018

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Abbreviations

HEI	higher education institution
HRs	human resources
PBS	performance-based salary

Executive Summary

This report covers the career trajectories and employment conditions of academics in Latvia and presents recommendations for higher education institutions (HEIs) and the Latvian government on how to improve academic careers. Increasing the performance of its higher education system is an avowed goal of the Latvian government. Having started to address issues of system-level funding and university-internal funding and governance, the consideration of the field of academic careers has recently moved to the forefront. All those efforts have been supported by World Bank engagement in Latvia. A first World Bank higher education advisory service addressing the Latvian higher education funding model on the system level was carried out in 2013/14. A second higher education project with World Bank support[76] started in 2016. In the first of its two phases, it turned to the internal funding models and governance arrangements of Latvian HEIs. This report is part of the project's second phase, and covers strategic human resources (HR) management, doctoral training and the postdoc, academic careers with a focus on the selection and promotion of academics, and the remuneration of academics and the evaluation of their performance. Based on an examination of good international practices in the area of academic careers and the development of a set of criteria for good system- and institution-level HR policies (World Bank 2017), and an assessment of the related status quo in Latvia (World Bank 2018), this report comprises recommendations on how academic careers could be strengthened in Latvia.

Recommendations concerning Doctoral Education and the Postdoc

Tasks lying ahead for Latvian HEIs to improve doctoral education — which is a crucial part of any attempt to enhance the approach to academic careers — revolve around further developing its institutionalization and framing it with adequate policies and procedures. That includes designing and implementing clear and consistent processes for the admission, progression, and assessment of doctoral students in a transparent and fair way. Similar requirements apply to policies and processes surrounding the doctoral education process, such as appeals and complaints mechanisms for doctoral students. HEIs would be well advised to ensure basic preconditions for high-quality doctoral education, including the supervision of doctoral candidates, a stimulating research environment, and taught elements of doctoral programs and skills development opportu-

[76] This report uses the term "project" for this World Bank higher education advisory service.

nities that prepare students for academic and nonacademic careers. Contributing to a successful future of doctoral students, career support measures and assistantships allowing for competence development should likewise be addressed by institutions. Particularly, a promising way of institutionalizing doctoral education are doctoral schools, which would merit being established or developed further by HEIs. All activities mentioned need to be covered by comprehensive internal quality assurance mechanisms that ensure continuous monitoring and improvement of all quality facets. In addition, framing the postdoc by suitable policies and providing postdocs with career support would contribute to an overall supportive environment for young researchers.

To support HEIs in their efforts to improve the quality of doctoral education, the Latvian government is tasked with adapting framework conditions where necessary and providing direct support for institutions. Initiating an open discussion with the higher education sector on the essence and standards of the doctorate constitutes a starting point for engaging in further reforms. Those reforms should aim at a sufficient degree of regulation where necessary, while providing HEIs with flexibility to implement their own approaches where possible. Based on agreed standards, promoting external quality assurance processes is key, as are institutional funding mechanisms that incentivize quality improvements. Tailored system-level funding mechanisms for research priorities and doctoral students should be used to promote national research priorities.

Recommendations concerning the Development and Advancement in Academic Careers

Providing academics with attractive and conducive working conditions and career opportunities requires that HEIs reconsider their current practices and policies. The overarching objective in that respect should be to reduce the risks, volatility, and fragmentation of employment that many academics face under the current system. To achieve that, HEIs — within the possibilities of the current system-level framework — will need to establish predictable and transparent career structures, and efficient and fair recruitment and promotion procedures. However, HEIs are also tasked with considering HR issues as part of the strategic institutional development, which requires, among others, ensuring a close connection of these two areas, for example, via strategic recruitment procedures and support for the internationalization of the academic staff. HEIs also need to engage more strongly in the strategic planning of human resources and to adopt a more dynamic approach to HR issues, which in turn requires the development of additional HR management capacities.

In all areas related to academic careers and working conditions, the efforts of HEIs and the Latvian government need to reinforce each other. Important framework conditions that the government would need to address are the two-track system of teaching-focused and research-focused positions, the overall national academic career framework (in particular, barriers to institutions introducing structured promotion patterns), and regulations that currently hamper the institutions' internationalization efforts. Furthermore, incentives for institutions to engage in HR development more strategically could provide a new impetus to the entire sector. Generally, HR issues should be considered a crucial part of any reforms in the higher education sector.

Recommendations concerning Remuneration and Performance Evaluation

While the development of performance-based salary systems and performance-supporting measures are still at an incipient stage, considering early on basic preconditions for future activities in this area could prove to be very useful for HEIs. Basic issues worth considering in that respect include developing a concept of performance that accounts for the diversity of academic tasks, and thinking about models that comprise an adequate balance between fixed salary components and performance rewards that are actionable from an administrative and financial management perspective. In that respect, it would be particularly important to consider how performance-based forms of remuneration and incentives can be connected to institutional strategies.

In the absence of specific system-level regulations on performance-based salary and performance-supporting measures, the key tasks for the Latvian government are to create preconditions for potential future reforms and to avoid a system-level framework that restricts the introduction of such measures. That requires maintaining clarity on basic principles of remuneration and types of positions in the legislation, while at the same time investigating possibilities to make salaries more adequate and performance oriented. A close consultation process with the sector, including unions, would be a basic precondition for the success of such an endeavor. With respect to HEI efforts in this area, the government could encourage institutions to further develop their concept of performance, incentivize them to promote an orientation toward performance in matters of remuneration, and engage in capacity building via bringing together institutional leaders and HR managers from different institutions.

1 Introduction

This report presents recommendations for Latvian HEIs and the Latvian government on how to further develop the career trajectories and employment conditions of academics. Building on an examination of good international practices in the area of academic careers (World Bank 2017), which also included a list of criteria for good system- and institution-level HR policies, and an assessment of the related status quo in Latvia (World Bank 2018), the World Bank team has developed recommendations on how academic careers can be improved in Latvia.[77] The recommendations cover (a) doctoral training and the postdoc, (b) academic careers with a focus on the selection and promotion of academics, and (c) the remuneration of academics and the evaluation of their performance. Furthermore, system-level framework conditions as well as policies and practices within HEIs are addressed. Additional, detailed information and data underpinning the recommendations presented below can be found in the two previous reports.[78]

All three reports mentioned are part of a series of World Bank advisory services on higher education in Latvia. The first World Bank higher education advisory service was carried out in 2013/14, and addressed the Latvian higher education funding model on the system level. It led to the introduction of a new, three-pillar funding model including a performance-based funding pillar. The second higher education project with World Bank support started in 2016. In the first of its two phases, it turned to the internal funding models and governance arrangements of Latvian HEIs. It focused on the effects of the system-level reforms, particularly on the HEIs' responses to the introduction of the performance-based funding pillar. The project's second phase — which comprises the three reports mentioned — covers strategic HR management; doctoral training and the postdoc; academic careers with a focus on the selection and promotion of academics; and the remuneration of academics and the evaluation of their performance.

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[77] Members of the World Bank team that authored this report are Dr. Nina Arnhold, Senior Education Specialist and Task Team Leader, World Bank; Dr. Elias Pekkola, University of Tampere, Finland; Vitus Puttmann, Consultant, World Bank; and Dr. Andrée Sursock, Senior Adviser at the European University Association. Adjunct Professor Jussi Kivistö, University of Tampere, Finland; Professor Hans Vossensteyn, Director of the Center for Higher Education Policy (CHEPS), the Netherlands; and Professor Frank Ziegele, Director of the Centre for Higher Education (CHE), Germany, provided substantial input and comments. The team would like to thank the Latvian Ministry of Education and Science, six case study institutions, and other sector representatives involved for the strong collaboration that has made the preparation of this report possible.

[78] http://www.izm.gov.lv/images/izglitiba_augst/2_1_LV_Acad_Careers_Intern_Practice_Report_FINAL.PDF; http://www.izm.gov.lv/images/izglitiba_augst/2018/2.2_LV-Acad-Careers-Status-Quo-31Jan18-FINAL.pdf.

The recommendations presented in the following are based on criteria for good system- and institution-level HR policies, and an assessment of the status quo in Latvia. The criteria — which are outlined in detail in the report *Academic Careers: Learning from Good International Practice* (World Bank 2017) — were derived from the relevant research literature (including scholarly articles, policy reports, and consultative papers), the examination of selected cases of good practice, and the authors' expertise and experience in the field and their perspectives on successful examples. With the exception of selected references to staff members working in HR management, the criteria — as well as the status quo assessment and recommendations — focus on academic staff members, that is, those whose main responsibility is teaching and/or research (as opposed to staff members with primarily administrative responsibilities, technical staff, and secretarial/support staff). The status quo — which is presented in detail in the report *Academic Careers in Latvia: Status Quo Report* (World Bank 2018) — was assessed against those criteria. It is based mainly on the analysis of key documents such as laws, regulations, and policies; information and data provided by the Latvian Ministry of Education and Science, and six HEIs that volunteered as case study institutions[79]; and interviews with representatives of these HEIs and various system-level stakeholders during site visits in September 2017. The recommendations presented in this report are based on both the criteria for good system- and institution-level HR policies and the status quo assessment. The Annex provides an overview of the criteria, of the findings of the status quo assessment, and of the recommendations.

[79] These institutions are the University of Latvia, Riga Technical University, Daugavpils University, Vidzeme University of Applied Sciences, the Art Academy of Latvia, and the Latvian Academy of Sport Education. The different size, profile, and strategies of the case study institutions allowed the World Bank team to obtain an overview on developments in the Latvian higher education sector.

2 Recommendations on the Doctorate and Postdoctorate

Doctoral education is a first important element of efforts to further develop academic careers, and is also relevant for sectors outside academia. As a precondition for an academic career, acquiring a doctoral degree is a stage that every future academic must pass through. Thus, doctoral education is a key lever for promoting the quality of academic careers, and of the science and higher education system more generally. In addition, many doctoral degree holders proceed to important positions within society and the economy, making doctoral education also relevant for societal and economic development. To attain high-quality doctoral education in Latvia — and the sound design of the postdoc — HEIs responsible for implementing it and the government responsible for setting framework conditions must act in a concerted manner. With respect to a sound institutionalization, for example, the government needs to provide institutions with latitude in designing their structures and programs, and with incentives to continuously improve them. HEIs need to make use of their autonomy and implement doctoral education with a focus on the necessary conditions for successful preparation of doctoral students for academic and nonacademic careers.

2.1 Recommendations for Higher Education Institutions

Anchoring the Doctorate in the Institution

1. **(A.6) The principles for the admission, progression, and assessment of doctoral students should be defined at the central level of an institution.**

The admissions process in Latvia is based, with some exceptions, on students getting in touch with a potential supervisor. During the interviews conducted by the World Bank team, it appeared that students did not always know where to find appropriate information on all aspects of doctoral education, because their point of entry was through a potential supervisor. The promotion process in Latvia does not give HEIs full responsibility for the assessment of doctoral theses.

Admission procedures for doctoral students should be clear, fair, and applied consistently on the basis of published criteria and procedures. To ensure fairness, at least two academic members of staff need to be involved in reviewing the qualifications and applications of the candidates. Admission procedures should give consideration to the availability of supervision in a particular program and to issues of discrimination on the basis of gender, ethnicity, and disabilities.

Doctoral students should be provided with access to up-to-date information about regulations and processes regarding their program (for example, academic requirements; rules and regulations; availability of funding; time commitment; supervision) and their specific rights and responsibilities (for example, costs; intellectual property rights to the outcomes of their work; appeals and complaints procedures). Such information should be provided as part of an orientation session and be available at all times (for example, via a dedicated web page).

Progression should be monitored regularly during the students' time at an HEI; doctoral students should be advanced to candidacy when they have demonstrated their capacity to undertake original research. The institution should be responsible for organizing the assessment and defense of the theses, which currently is not the case (for details see Recommendation 5 (A.10) below and World Bank 2016).

2. **(A.7) As a key condition for the quality of doctoral training, good supervision should be framed by a set of regulations and procedures.**

In Latvia, regulations concerning the supervision of doctoral students are evolving to the extent that some institutions are setting appropriate institutional policies and guidelines, and require signed agreements between supervisors and supervisees. However, training and ongoing support for supervisors, and the monitoring of their performance, are rare. Co-supervision is not a policy but an ad-hoc practice, and continuity of supervision is left to the students' initiative (which can be a challenge in case of disagreement with a supervisor, particularly in small institutions and faculties). Other forms of support, such as access to a general advisor, are informal and rely on the students' initiative.

The supervisor is fundamental to the success of students undertaking research. A good relationship with a supervisor is one of the major conditions for the successful completion of a thesis. Latvian HEIs should have a supervision policy in place that is public and consistently applied. A good policy specifies the qualifications of academic staff who are allowed to supervise (for example, being active researchers, in the relevant field), how supervision is considered as part of the teaching workload, the maximum number of doctoral students per supervisor, and the supervisors' responsibilities (for example, expectations regarding regular interactions with the doctoral student; requirements about monitoring their progress; the support given to attain the identified learning outcomes). In addition, regulations should specify whether co-supervision is required or optional, and any mandatory or optional supervisor training; the formal performance appraisal of supervisors; and the complaints and appeals procedures available to supervisors. Regulations should also explain what would happen in case a supervisor leaves, is removed, or is the subject of a student's complaint.

In an increasing number of countries in Europe, supervisors are trained for their supervisory tasks. Supervisors are generally required to monitor student progression and completion via signed contractual agreements between doctoral stu-

dents and supervisors. The contracts should include clear milestones (including any requirements for publications) and require doctoral candidates and supervisors to meet regularly. Appropriate procedures should be available to deal with circumstances that have an impact on the duration of studies. Doctoral agreements should be reviewed as required if the personal circumstances of the candidates change (for example, parental leave, changing status from part-time to full-time or vice versa).

Alongside their primary supervisors, doctoral candidates in many European countries have a second supervisor and the two supervisors work together as a team; students also have access to an advisor to discuss their supervision in a safe environment. Any conflict and issues with the supervisor can be addressed through the advisor.

3. **(A.8) All institutions that engage in doctoral education should ensure a stimulating research environment to their doctoral students.**

In several Latvian HEIs, doctoral education would benefit from a significant number of research-active staff and an adequate research environment. However, the financial situation of some HEIs has a negative impact on those aspects, including on the learning opportunities and research equipment found in institutions, and on the available financial support for conference participation and international mobility for doctoral students.

In addition, students in Latvia can prepare a doctorate at an HEI that is not a doctoral-conferring institution. Under such an arrangement, it is not ensured that the student is part of a research project or team and has access to appropriate research resources (such as libraries, databases, lab equipment, funding opportunities to attend international conferences, and so forth). All institutions that are allowed to confer the doctorate should ensure that students are working in a stimulating research environment. Such an environment should be characterized by the availability of qualified supervisors, a collegial community of research-active academic staff who participate in regular discussion of research within and across disciplines, funding opportunities to attend relevant international and national conferences and to spend short research visits at another institution, and adequate physical resources (such as infrastructure; information technology, including computer access, technical support, specialist software and the possibility to securely store large amounts of data; access to research facilities including high-quality research infrastructure and laboratory; access to adequate library resources; a desk and study space for each doctoral student).

4. **(A.9) The taught component of doctoral programs and skills development opportunities should be developed to prepare doctoral students for both academic and nonacademic careers.**

Almost all Latvian institutions have a predetermined ratio of taught components and thesis work. Institutions tend to divide the taught component into required courses and electives, even though there are faculties that do not stipulate mandatory coursework. Taught components do not always include courses in research methodology and scientific integrity, and professional skills such as grant writing and written and oral communication. Learning outcomes for doctoral programs are generally not identified, and the general understanding of the doctorate is that it leads to an academic career only.

All HEIs should identify the learning outcomes at the doctoral level, specify the balance between research and coursework, and provide guidance to faculties for a suitable application across different fields. The goal should be to ensure that doctoral students develop a range of skills through their research and coursework in order to prepare them for both academic and nonacademic careers. Coursework includes academic courses in their subject and cognate fields, and soft skills development.

The most important learning outcomes at the doctoral level include learning to do research, thinking critically, and producing new knowledge; planning, managing, and delivering research projects; and behaving ethically and professionally. To achieve those outcomes, it is necessary to provide doctoral students with formal research training adapted to their discipline and research topic. That includes training in research methods, and discussion of research ethics and scientific integrity. Digital issues, such as open research and data management, are gradually becoming important in the world and are increasingly discussed in the courses on research methods and writing for publication.

5. **(A.10) An institution-wide policy and related procedures for establishing an examination committee should ensure objectivity and fairness.**

The promotion process in Latvia is very complex; therefore, institutions should ensure that their doctoral students are well informed about it, while in the medium term the process needs to be simplified.

Importantly, Latvian HEIs are not fully responsible for the promotion process, which includes a very important external judgment on the evaluation of the thesis. The Latvian policy should be changed to be in line with common practice in Europe and the rest of the world, and should entrust HEIs with full responsibilities for the promotion process. In this context, the HEIs need to include the following aspects in their institutional policy:

- Clear regulations about the format of the thesis should be issued. Students need to be informed about acceptable formats for their thesis. Clear guidelines should be available for each permissible format, including the deadline that students must respect for indicating the format of their thesis.

- Assessment of the theses should be based on clear, fair, and published criteria. Those criteria should be benchmarked nationally and internationally, and should be communicated to both doctoral candidates and supervisors. The institution should periodically review the theses that have been accepted to ensure that they are of consistent quality across disciplines.

- The examination of the theses should be based on procedures that are applied rigorously and consistently. If there is an oral defense, such regulation should specify whether the session is public or private, its approximate length, and the responsibility for arranging and communicating the time and place of the event.

- The theses should be evaluated by an examining committee, which includes at least two external examiners. External examiners are academics who are not affiliated with the institution conferring the degree. A confirmation that no conflict of interest exists with the candidate or his or her supervisors must be signed by

each examiner. The committee members should write an individual report evaluating the thesis. There should be a formal process for appointing the examiners and for evaluating their reports. The supervisors could be allowed to attend the oral defense as observers.

- Doctoral candidates should be informed of possible examiners before they are appointed and should have the right to raise concerns. The institution should consider these concerns and decide whether they warrant changing a proposed nominee.

- The examining committee should collectively produce a statement for candidates that explains the outcome of their examination and the rationale for the final decision. The institution should specify the basic requirements of that statement and should have a procedure in place to deal with situations where examiners disagree.

6. **(A.11) HEIs should provide career support for doctoral students to move into academic and nonacademic jobs, and grant them access to teaching and research assistantships.**

In Latvia, there is widespread belief in the academic community that doctoral students should be prepared only for an academic career. Nevertheless, teaching and research assistantships are not systematically provided to all students, and there is no career service dedicated to doctoral students.

Doctoral students should have full access to the institution's student support services, including advice and guidance on career opportunities. Support services staff should be trained to understand the particular circumstances of doctoral students and, among other tasks, be able to help them find nonacademic jobs. Doctoral students should have access to teaching and research assistantships as opportunities to develop their academic and scholarly skills.

7. **(A.12) Open access to doctoral theses should normally be promoted.**

Currently, in Latvia, at least one institution promotes open access to doctoral theses. The institution mandates that publications and data from research funded by public funds or the institution itself are deposited in an open access repository and ensures public access to doctoral theses on the institution's website before their presentation.

Elsewhere in the world, all theses are being increasingly made available in open access, except if there are reasons requiring an embargo for a designated period of time (for example, due to copyright issues, ethical sensitivities such as protection of human subjects). Latvian HEIs would be well advised to adopt that practice.

8. **(A.13) Adequate information about formal appeals and complaints mechanisms should be available to all doctoral students, and institutions should analyze them.**

Formal appeals and complaints procedures are available in Latvia, but students did not seem well-informed about them.

HEIs should ensure that appeals and complaints procedures are clear, fair, safe, comprehensive, and up-to-date; they should be described in an easily accessible document and should be discussed with new students during the orientation session. While respecting confidentiality and anonymity, the complaints and appeals that have been lodged should be periodically analyzed to ensure that the roots of serious individual problems and clusters of problems are addressed.

9. (A.14) The quality of all aspects of the doctorate should be continuously monitored and assured.

In Latvia, some institutions are moving toward more structured doctoral programs and are developing internal quality assurance processes, but this is still at an incipient stage.

Latvian HEIs should monitor all phases and aspects of the student-life cycle to ensure quality. They should develop an institution-wide framework for internal quality mechanisms that would allow some degree of flexibility in faculty-level implementation. The framework should be evaluated regularly to ensure its fitness and relevance.

The framework should include institution-wide data collection (such as completion rates and career tracking), which can be analyzed according to relevant categories (for example, by gender, by faculty, by program, and so forth). Those data collection mechanisms should also be used to monitor the progression of individual students. The framework should include feedback from doctoral students and supervisors, and from internally initiated evaluations of academic and professional courses and research activities (research institutes, research groups, and so forth).

As part of the internal quality assurance processes, institutions should monitor the performance of doctoral students' supervisors. Their department head, or other relevant staff member, should organize a yearly meeting with the supervisors to discuss their students' progress and any issues arising (for example, an unusual number of students who are not progressing normally, patterns of students' complaints, and so forth). If necessary, the department head should require a supervisor to seek training or should remove a supervisor from his or her role.

If more than two institutions are involved in the training and education of doctoral students, a written agreement should describe the division of responsibilities, including with respect to the internal quality management of the degree.

Data analyses and the results of the evaluations should be provided to the relevant HEI, faculty, and departmental officers and bodies to allow them to monitor quality in a continuous manner. The institution should be able to demonstrate how it uses the results of those quality assurance processes to improve, including how the senior leadership monitors improvement at the levels of the faculties and departments.

10. (A.15) Doctoral schools should institutionalize doctoral training and promote its quality.

Some HEIs in Latvia have an overarching structure that is called "doctoral school." With one exception, the main function of those structures is to deliver colloquiums, conferences, and workshops. At the time of this project, only one

institution had given administrative responsibilities to the doctoral school, including for quality assurance.

Doctoral schools are a particularly effective way to institutionalize doctoral training and promote its quality by ensuring standard processes, providing students with an intellectual community, and promoting cooperation and exchange. Typical functions of doctoral schools in Europe include the following aspects: implementing administrative procedures such as the admission of doctoral students and the recognition of their prior experience; providing student support services and information to doctoral students; funding international mobility of doctoral students; training, supporting, and monitoring supervisors; offering (soft) skills development opportunities; providing workspace for students and a place for faculty members to meet; and setting standards and being responsible for quality assurance and improvement processes.

Doctoral schools in Latvia should evolve toward this model. HEIs should identify clearly, albeit flexibly, the mission and functions of their doctoral schools. HEIs seeking to establish doctoral schools should determine the optimal number of doctoral schools in relation to their size and the need to promote interdisciplinarity.

11. (A.16) The mission and governance of doctoral schools should be clearly defined.

Apart from one HEI, Latvian institutions do not have doctoral schools that have a mission larger than as a provider of conferences and workshops. Therefore, to date, there has been no need to define the governance of those doctoral schools.

As Latvian doctoral schools are entrusted with more responsibilities, HEIs should define the governance of their doctoral schools, including their reporting mechanisms to the highest body in the institution. Information about the mission, functions, and governance of doctoral schools should be easily accessible to all interested parties and designed in a way that contributes to the branding of the university.

Managing Partnerships

12. (A.17) Doctoral partnerships must be framed by a general policy and specific agreements for each student.

Some HEIs in Latvia have relevant partnerships with industry and other partners, which provide opportunities for doctoral students to conduct research in an industrial setting; however, these are not necessarily accompanied by the necessary governance arrangements, policies, and procedures to ensure quality. A formalized framework for those students interested in a doctorate in cooperation with industry should be in place in all universities that offer these opportunities.

Different types of cooperation arrangements, with academic and nonacademic partners, are possible. HEIs should develop a strategy about their partnerships at the doctoral level, that includes identifying strategic industrial partners and strategic HEI partnerships nationally and internationally. Those partnerships should be framed by a general policy that describes their governance and management, the policies and procedures that affect the students, the decision-making process,

and the human and financial resources that are available to support such partnerships. Specific agreements for each student should ensure good management of those relationships and minimize risks. Doctoral research carried out in partnership between an HEI and a company requires an arrangement integrating the industrial supervisor in a supervision team, with the academic supervisor in the lead.

HEIs should also develop guidelines for doctorates in cooperation with industry and cotutelles, and faculties should be assisted in preparing contractual agreements with external partners and be required to report to a high-level institutional body that is responsible for monitoring those partnerships.

13. (A.18) Stakeholder involvement in doctoral school governance should be encouraged to contribute to preparing doctoral degree holders for nonacademic careers.

In Latvia, there was no evidence of a structured and systematic involvement of external stakeholders in the design of doctorates and the governance of doctoral schools.

HEIs should encourage faculties to identify appropriate external stakeholders who will update academic staff about professional trends and provide opportunities to doctoral students during their studies or after they earn their doctorate. Quality of partnerships, based on trust and long-term commitment, should be the primary goal, and also cover the evaluation of doctoral programs.

Postdoc

14. (A.19) The postdoc should be framed by appropriate policies and guidelines.

The status of postdocs in Latvia is left rather vague (that is, it is defined as anyone conducting research in an institutional setting within five years of obtaining the doctorate); the explicit nature of the rights and responsibilities attached to this position are not clearly defined or understood.

The postdoc should be seen as an opportunity to strengthen one's research capacity, and the postdoc position must be framed by appropriate policies and guidelines covering, among others, recruitment procedures and the objectives of appointments. The postdoctoral position should be considered (an optional) part of the academic career ladder, and the institution should take responsibility for related human resource issues. HEIs should clearly define the rights and obligations of postdoctoral fellows and treat them as part of their staff.

15. (A.20) Postdocs should have access to career advising.

In Latvia, HEIs do not offer specific career support to their postdocs.

Because postdocs are not yet fully-fledged professionals, they need to have access to career counseling in the same way as doctoral students. Therefore, HEIs should provide career advice to postdoctoral fellows to prepare them for academic and nonacademic careers.

2.2 Recommendations for the Government

System-Level Framework

16. (A.1) Define the standards of the doctorate, in consultation with the higher education sector.

Latvia has a strict classification of doctoral degrees and accreditation regulations for doctoral programs, but the regulations restrict the flexibility of HEIs to design doctoral education in emerging fields or in interdisciplinary areas.

The national framework for doctoral training should seek to find an appropriate balance between regulation and flexibility. While regulations and quality criteria need to be applied rigorously and consistently, doctoral training also requires room to accommodate personalized paths, and a reasonable level of institutional and disciplinary differences. That necessitates a national consensus, notably with the academic community, on the essence and standards of the doctorate. Regulations should be focused on quality standards for the doctoral level that are defined in a generic way.

17. (A.2) Define the standards and criteria for conferring the doctorate and the associated quality assurance mechanisms.

Internal and external quality assurance procedures are still at an incipient stage in Latvia, and the focus on a suitable research environment and quality supervision as conditions for training doctoral students and conferring the doctoral degree is insufficient. As a result, it is possible for doctoral students to prepare a doctorate in an institution with very limited research capacity.

It is crucial to review the criteria for deciding which HEIs have doctoral degree conferring powers, and to envisage having formal cooperation agreements between those institutions with doctoral awarding powers and those that do not. Those agreements should provide a general framework for dealing with individual students; each student would have a specific agreement in line with the framework that has been agreed between the two institutions.

The external and internal quality assurance systems must be developed and designed together. HEIs should be required to develop internal quality assurance mechanisms, and the external quality assurance process should take these internal mechanisms into account and design a process specific for the evaluation of the third cycle. Those developments require capacity-building mechanisms to ensure a good understanding of the mechanisms, tools, and procedures that are most effective. At least for the first quality assurance cycle, the external quality assurance agency should accredit each doctoral program separately (and not as part of an accreditation of a cluster of programs). Later quality assurance cycles could then move to the evaluation of the doctorate at the faculty or institutional level.

18. (A.3) Review funding mechanisms for the doctoral level to ensure completion, and to promote efficiency and quality.

State funding for higher education incentivizes the doctorate to some extent. However, the state stipend for doctoral students is very low; this may be a con-

tributing factor to the slow progression and low completion rate. In addition, funding ends when the thesis is sent for the external assessment process ("promotion process"), which is unfair to the students, while national research project funding is low and on an irregular cycle, which does not provide HEIs with any stability for planning research activities and doctoral recruitment.

Doctoral training needs to be incentivized financially to promote efficiency and quality. That should be done through a stable funding source; Structural Funds programs and other sources should be viewed as complements to state funding. Doctoral students should be funded in priority fields at a sufficient level to allow them to be full-time students. An increase in research funding would provide stability and the possibility for long-term institutional planning.

19. (A.4) Set national priorities in broad (inter)disciplinary fields (including arts, humanities, and social sciences) while preserving some funding for blue sky research.

Public funding for doctoral education considers, to some extent, national needs based on labor force planning. The allocation of budget places by the Latvian Ministry of Education and Science is based on the perceived need for specialists in the different disciplines. That work needs to be further developed: national priorities in broad disciplinary and interdisciplinary areas should be established, while preserving some funding for blue sky research.

That work could be bolstered through labor market observatories tracing graduates into the labor market and providing information on career tracks, income patterns, and other relevant factors to help students (including graduate students) and their families to make well-informed choices.

20. (A.5) Ensure that research is at the center of the doctoral experience.

The national research support programs provide very weak incentives to ensure that doctoral candidates are appropriately involved in research projects. As a result, there are students working on their doctorate in units that are not research active. That issue will be tackled in new regulations.

Research funding should include financial incentives to promote doctoral students' participation in funded research. Involvement in research should be made a defining criterion and condition for doctoral training. HEIs should be required to provide co-supervision to their students and to frame doctorates in cooperation with industry and cotutelles with framework agreements.

3 Recommendations on the Development and Advancement in Academic Careers

Academic career patterns are a complex phenomenon, whose design requires system-level regulations and policies and institutional policies and practices that are well coordinated. Working conditions and career opportunities of academics have a direct impact on the motivation and performance of those working in science and higher education, and on the extent to which the right persons advance to the right positions. Their specific shape in Latvia derives from a range of interdependent factors, including the career structures within HEIs and their recruitment and promotion procedures, and key legislation and policies such as the national academic career framework (with its barriers to structured promotion patterns) and the two-track system of teaching-focused and research-focused positions. Thus, to increase the predictability and stability of contractual arrangements — currently one of the most pressing challenges with respect to academic careers in Latvia — the efforts of HEIs and the Latvian government need to reinforce each other across several issues.

3.1 Recommendations for Higher Education Institutions

Status and Role of Academics

21. (B.2) Increase the predictability and stability of contractual arrangements, and move toward long-term HR planning.

As the authors of this report concluded earlier (World Bank 2018), academic careers are fragmented in Latvia. One of the main reasons for the fragmentation is the contractual form of academic work. It is mostly commissioned based on contracts that contain a rather detailed breakdown of tasks. Individual academics have "collections" of contracts (one for each task at an HEI), and are thereby able to combine teaching, research, and administrative duties, even though not all

academics are engaged in all different types of academic duty. That has severe consequences. Individual academics shoulder the risk of changes affecting their working environment, since the content of contracts (for example, the hours of a teaching contract) can be frequently adapted. That might result in significant volatility in individual careers.

The level of economic risk and the volatility of contractual arrangements should be reconsidered, especially by taking the perspectives of institutional and individual planning into account. HEIs need to move toward medium-to-long term planning horizons with a view to HR and financial planning instead of keeping an "ad-hoc" approach, which seems to have developed under the conditions of the financial crisis. Administrative and financial management capacity will need to be strengthened to that end. Responsible HR units will need to have adequate financial resources to carry out their duties regarding personnel and enable longer-term planning.

Under an ideal scenario, HEIs will create medium-to-long term HR plans with matters of personnel being firmly anchored in institutional strategies. Plans will need to be developed for how to arrive at a more holistic academic profession — combining teaching and research, as required by law, with other duties — and allowing individuals to focus on performance and meaningful contributions instead of "assembling" a portfolio of contracts with different institutions or units. When transitioning toward a more holistic notion of the academic profession, institutions would be well advised to ensure that all academic activities receive sufficient attention, particularly the academics' engagement in teaching and learning processes.

22. (B.3) Gradually develop consistent working conditions and resources for budget-funded (teaching-focused) and externally funded (research-focused) staff.

The salary level and other working conditions of budget-funded teaching work and externally funded research work differ drastically. That creates a situation in which the same person might have unequal pay for equally important work, or a situation in which another member of the same working unit has a drastically lower or higher salary due to a different funding source. HEIs and their units are tasked to consider how benefits of different funding sources can be distributed more equally within units without hampering related incentives.

The institutions should gradually develop a time management system that allows the allocation of working time to different tasks. However, that should be done in such a way that successful applications for external funding are still motivating at an individual level.

General Career Patterns

23. (B.6) Ensure that individual career trajectories are predictable and compatible with formal career structures.

A range of specific features of the Latvian approach to academic careers, like the six-year rule (that is, that all contracts are fixed-term contracts with a duration of six years), the nonexistence of a mandatory retirement age, and a funding

model that is based at the program level on the numbers of students enrolled, make career planning for individuals and HR planning for institutions very difficult.

In some institutions, it seems nearly impossible for most young (and even older) academics to plan their career. HR planning should be based on the strategic planning of institutions and should create a predictable framework for individuals to plan their future. In many countries this is achieved through tenure track models.

Institutions should communicate their personnel plans to faculty members and have a transparent and predictable personnel policy. Individuals should be aware of the (re)opening and closing of positions. Institutional career frameworks need to be anchored in a national career framework to ensure that there are no institutional practices that hinder national mobility or restrict the transferability of academic merits between institutions or internationally.

24. (B.7) Maintain the transparency of institutional promotion criteria and develop balanced criteria for promotion.

The promotion (election) criteria were overall considered well-known, transparent, and clear. That is an important achievement and should be maintained and further strengthened. The respective criteria in evaluating teaching, research, and other merits should be well defined and transparent.

25. (B.8) Ensure and communicate the alignment between institutional strategy and career framework.

The overall institutional career structure should consist of and link the recruitment, promotion, and remuneration processes. To ensure that the institution has the right body of academic (and other) personnel for the tasks at hand, it is of utmost importance that the career structure and personnel policies are aligned with the institutional strategy. After all, the strategy of an institution is implemented by individual academics and other staff.

In addition to active leadership, the most important instruments in steering the tasks of HEIs are the recruitment, promotion, and remuneration practices. To ensure the consequent implementation and further development of agreed strategic directions, institutions need to limit staff turnover and have an adequate number of full-time and tenured staff members. In reforming the career structures, the specificities of the institutional strategy should be taken into account, because the career structures should be considered as a tool for implementing the strategy.

26. (B.9) Make sure that the institutional leadership and middle management are aware of the contractual arrangements of their staff.

As mentioned, the contractual arrangements of academic staff at Latvian HEIs are fragmented and complex. It seems that in many institutions, human resource planning is done in a rather administrative manner and coordinated by personnel departments, a process that seems largely detached from the strategic management of the institution or unit.

To tackle the issue of the instability of academic work and decrease the related volatility, institutional leadership, deans, and heads of departments will need to

take a more active role in following the contractual arrangements and personnel statistics. A close monitoring of the situation should provide the basis for more consistent and strategic HR planning, allowing for more balanced arrangements at the unit and individual level.

27. (B.10) Prepare a midterm plan for developing HR services.

In Latvia, like in many higher education systems, HR services would benefit from being developed further. Institutions should make a midterm plan to develop their HR services to be more compatible with institutional strategies, while also taking into account a changing higher education landscape.

A first and crucial step toward more strategic HR services is to align the HR functions (HR planning, recruitment, selection, promotion, staff development, and so forth) (see Box 53 in World Bank 2017) with the institutional strategy and decide on the optimal centralization/decentralization of these services (see Table 9 in World Bank 2017). In addition, the participation of HR managers in matters of institutional strategic management needs to be discussed. The HR plans should include follow-up mechanism related to the development of the respective HR services (see above).

Selection and Recruitment of Academic Staff

28. (B.12) Strengthen the efficiency, transparency, and fairness of recruitments.

Latvian academic staff selection procedures in recruitment processes are based on a vote by the faculty council or a council of professors. Those elections seem to be widely considered as a fair and acceptable way of selecting academics; however, there are also critical voices who believe that this process opens the door to ambiguity and clientelism.

In the short term, it would be advisable to strengthen more formal aspects of the selection process by utilizing HR experts and institutional management in preparation of recruitment meetings to make the election process more efficient and less time-consuming for academics. It is also worth considering giving a stronger role to the institutional and faculty leadership in the selection process, also with a view to a stronger link between HEI strategic priorities and personnel decisions. For example, after consultations in the faculty council, the dean could consolidate the input received until this stage of the process and formally propose a candidate to the rector. In the longer term, however, it would be advisable to consider and promote a more radical overhaul of the system as a way to overcome the inertia and complexity related to the current approach. The envisaged stronger role of the leadership could and should still be balanced by collegial control via responsibilities of the faculty council and the role of external evaluators.

29. (B.13) Communicate the selection criteria of academics to employees and candidates.

Each vacant position should be reconsidered and aligned with the institutional strategy. The selection criteria for an open position should reflect the profile of

the unit and the tasks of the position. Currently, institutions are to some extent allowed to alter and amend the national qualification criteria. Institutions should use that possibility and balance the criteria based on teaching, research, and other merits to respond to the organizational needs.

In recruitments, transparency is one of the key success factors. The selection and qualification criteria, and the rationale for their selection, should be communicated openly in job descriptions and advertisements. That is one way of avoiding a mismatch between individual ambitions and organizational needs.

30. (B.14) Streamline the selection procedures.

The recruitment process in Latvian HEIs is time-consuming and requires a considerable amount of time from the academics involved. Many academics seem to be members of several boards, councils and committees (for example, faculty council, promotion council, council of professors), and the same individuals seem overly committed in institutional decision making. For that and other reasons, a more streamlined selection process is advisable. However, while changes to the process can and should be promoted by HEIs, a revised approach will also need to find the endorsement of the government.

The advertisement of positions is currently done in a pragmatic way, in accordance with what is stipulated in the legislation. While that has some administrative advantage, announcements of positions tend to reach the Latvian scholarly community only within the country. It would be worth considering how to advertise open positions to a broader audience. Institutions should, for example, identify and make use of international outlets for recruitments, including for the advertisement of junior positions. However, a comprehensive internationalization of advertisements and recruitments would only make sense in the context of more accommodating arrangements for foreign academics.

31. (B.15) Strengthen the strategic role of HR services alongside institutional leaders, and consider the involvement of stakeholders in recruitment.

While it would be advisable to reconsider the recruitment process, particularly with respect to the election of academics, the roles of different parties involved generally seem clear. Under a future model, there also needs to be clarity and the proper articulation of roles and responsibilities will need to be ensured. The role of HR services and institutional leaders should be strengthened in strategic recruitments to ensure a strong link between institutional priorities and profile and personnel decisions. Institutions might also consider involving external stakeholders in the recruitment process, especially in cases where positions have a strong third-mission-related component.

32. (B.16) Build a system of checks and balances in basic units.

Recruitment systems need to be based on institutional strategies as well as values of the academic collegial community. An objective, fair, and transparent procedure is key for the acceptance of the system. A system of checks and balances should be created to ensure aspects such as an appropriate representation of the collegial community — while not overburdening individuals — in decision making, efficient implementation of decisions, and equal treatment of individuals.

The roles of different players in the process need to be balanced; however, this balance depends on the specific type of recruitment. In professorial recruitments, for example, the academic community tends to play a key role; in organizational recruitments of lower-level academic staff, the unit head has a major role; and in short-term recruitments for projects, the project managers have a significant role. The differences of aims and processes of recruitment in different types of recruitments should be acknowledged (see Table 6 in World Bank 2017). In general, there should also be room for strategic recruitments, giving the institutional leadership the possibility to reflect major strategic considerations in recruiting professors and other teaching staff.

Career Advancement and Promotion Patterns

33. (B.17) Develop predictable, transparent, and clear promotion patterns.

Currently, promotions in the Latvian higher education system are based on vacancies for which individuals apply. The fact that there is no mandatory retirement makes it difficult to estimate when related vacancies occur.

Institutional promotion patterns should be developed in a way that they are aligned with national qualification criteria, are transparent and well documented, and provide predictable and realistic targets for talented and hardworking young scholars, that is, these scholars should be well aware of what they are expected to achieve if they decide to continue with an academic career. In some countries, this is realized via tenure track systems. If such clarity is not achieved, the attractiveness of the academic profession in Latvia is likely to suffer, impacting both the pool of available future academics and, most likely, the migration patterns of academics.

34. (B.18) Continuously improve promotion patterns via balanced, flexible, and transparent promotion criteria.

Currently, the Latvian promotion system is based on vacancies and collegial (sometimes labelled “democratic”) evaluations and decision making. The current system takes into account different aspects of academic work. However, if in the future institutions decided to also reflect the reality of more research- or teaching-intensive positions in promotions, the promotion criteria would need to reflect this reality. Institutional and unit leaders will need scope to tailor criteria for promotions in accordance with institutional priorities. In all cases, the transparency and fairness of the process should be maintained. In any case, job descriptions should be developed further to reflect a realistic (teaching) load.

35. (B.19) Develop a systematic approach to follow and steer career advancement.

Some of the Latvian HEIs have a proactive way of establishing new positions and altering their personnel structure to strengthen institutional capacity while promoting individual development. However, several system-level variables are causing inertia (for example, the six-year rule, the lack of mandatory retirement, quotas on qualifications, language requirements) and constrain systematic development of motivating career structures and individual career advancement. Regardless of the system-level restrictions, institutions should explicitly discuss career advance-

ment as part of their strategic human resource development, while trying to advance much-needed system-level changes through consultations.

Career advancement should not be constrained and viewed exclusively as an individual's application for an open position. The leadership should be aware of the aims and professional ambitions of its faculty. A systemic career dialog between an academic and his or her supervisor should be organized in every academic unit, for example, as part of development discussions.

International Mobility in Academic Careers

36. (B.21) Strengthen an organizational culture that supports internationalization.

HR departments and institutional leaders responsible for HR management can significantly influence the degree of internationalization of institutions. To develop an organizational culture that provides good working conditions for foreign faculty members, several small steps can be taken. For instance, all important HR documents, regulations, and policies should be made easily accessible in English (or other major European languages, as appropriate) and proactively communicated to foreign staff, and a welcome center might facilitate the introduction phase. In addition, suitable forms of support and services for the families of the foreign faculty members should be considered, as well as dual career issues (that is, the needs of couples where both partners pursue an academic/professional career).

Internationalization of faculty should be encouraged by aligning the remuneration and promotion criteria with the agreed internationalization strategy. Faculty members should be systematically encouraged to apply for international projects, to co-publish internationally, and to take advantage of opportunities of international staff exchange as provided, for example, by Nord+, Erasmus+, and other programs.

Alignment of Elements of Human Resource Policies

37. (B.22) Align HR practices with the institutional strategy.

The institutional strategy development process should be planned in such a way that individuals responsible for HR planning and the implementation of HR management have a voice. HR issues should be one explicit topic of the strategy development process. The institutional strategy should, furthermore, be reflected in job descriptions, performance appraisals, career progression, and approaches to remuneration.

3.2 Recommendations for the Government

The Status and Role of Academics

38. (B.1) Initiate a policy dialog on the reform of the two-track system with the aim of overcoming a dichotomy between teaching and research.

Integration of research and teaching is a precondition for developing a research-intensive and research-informed public higher education system with diversified institutional profiles. Regardless of the integration of research institutes and the stipulated unity of teaching and research, the Latvian career model is still based on a legislative distinction between research-focused and teaching-focused positions. The varying balance among research and teaching activities, management, and service tasks should be approached as an institutional matter of division of labor, not as a distinction enshrined in legislation.

A policy dialog on the legislative distinction between research and teaching duties needs to be launched. When the legislation is reformed, all three missions of higher education (that is, teaching and learning, research, and service), should be taken into account within a national career framework. It would be important in that respect to ensure that all academic activities receive adequate attention, in particular, that teaching activities are not sidelined by a focus on research. The national career framework should allow institutions to develop a distinct profile of their staff — a step that will require adjustments to the current list of criteria for elections to the extent that they limit the scope of HEIs to select and promote academics in accordance with the institution's profile and needs.

The introduction of a new framework for academic careers would require careful consideration of the transition process and its challenges. While applying a new framework to academics who entered the higher education system after its introduction does not pose challenges, potential gains and losses for academics who already were in the system before need to be taken into account. Thus, a condition for a successful transition to a new system is a clear plan for its introduction, comprising distinct successive steps. In addition, it would be expedient to devise incentive and/or compensation mechanisms to facilitate the shift of academics who were hired under the old system to the new system. Legal issues that might arise in connection with the transition also merit to be considered in advance.

General Career Patterns

39. (B.4) Develop the national career framework to be compatible with international frameworks and to support mobility among different sectors (industry, public administration, and others) within the Latvian society.

The national career framework should be aligned with the (stages of the) career frameworks used by international agencies and foundations and reflected in related programs and instruments (for example, European funding instruments, mobility programs) to improve conditions for attracting funding and supporting international mobility. The national career framework should also allow for mobility

among sectors. Thus, when developing the national career framework, the entry and exit points of academic careers — including from/to other sectors of society/the economy — should also be considered. Other points to be considered pertain to mobility and international recognition issues at different career stages.

40. (B.5) Continue developing system-level incentives to ensure a strategic approach to HR development.

Providing system-level incentives is an efficient way of developing suitable career structures and research competencies at the institutional level. Policy measures like the recent introduction of postdoc positions have an immediate and stimulating impact on the personnel policies. While further qualifications of academic staff should be encouraged, it is not advisable to set rigid quotas for certain types of qualifications, especially for small and innovative institutions, which need flexibility and time to develop their academic staff.

Selection and Recruitment of Academic Staff

41. (B.11) Develop further national regulations to ensure equal treatment.

National legislation needs to ensure the required openness of the system and equal treatment of its members and potential candidates. Legislative reforms should aim at removing any obstacles to internationalization and ensure equal treatment in term of gender, minorities, and other such status. For instance, narrowly defined language requirements for filling academic positions need to be avoided to make internationalization and an open system a reality.

Career Advancement and Promotion Patterns

42. (B.17) The national career framework should allow for predictable career models in institutions, including a tenure track option.[80]

Currently, promotions in the Latvian higher education system are based on vacancies for which candidates can apply. Latvia currently does not have a tenure track option; thus, it is not possible to promote a person "in situ." Because of the lack of a mandatory retirement age and due to the small size of the system, career progression seems almost impossible to individuals active in some fields. The national career framework should be designed in such a way to allow institutions to develop career models that include predictable promotion practices and a possibility to eventually obtain tenure.

If the sector decided to move in the direction of a tenure track system, the tenure track would need to be anchored in national legislation, that is, a longer probationary period should be regulated, as should permanent positions and the option of "in situ" promotions. However, with regard to a future tenure track model, transparency and clarity will need to be ensured according to the standards of international good practices of tenure track models.

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[80] This recommendation relates to institutional level recommendation B.17 in the matrix in the annex of this document. It was included here, since the realization of the related recommendation would also require system-level changes.

In a first step, a tenure track model could be piloted in such a way that major legislative changes would not be required. The Ministry could work with HEIs (for example, by providing administrative or financial support) with the latter announcing positions leading to professorships in areas of strategic importance. This would mean that persons in these positions could be promoted to the next career step without establishment of a new position. Individuals recruited as a docent/postdoc could, for example, be promoted to associate professor and further to professor on the basis of periodic assessments. The pilot positions could be either newly established or vacant professorial positions. From a financial management perspective, this would allow for savings during the initial phase and ensure a time frame where the financial implications of the new model can be explored. The assessment could be done after six years in the position or earlier, if requested by the academic. It would further be worth considering aligning the type of pilot positions and promotion criteria with Pillar 2 funding criteria or other agreed priorities.

In the medium term and following legislative changes, the professorship should be a permanent (tenured) position with a clearly established retirement age. If from a legal perspective this cannot be realized, HEIs will need to find pragmatic solutions, for example, by timing contract duration with the retirement age established for comparable professions.

International Mobility in Academic Careers

43. (B.20) Reconsider and revise legislation hindering mobility.

Latvia has a small higher education system. Traditionally, the academic labor force has consisted mostly of Latvian nationals. One way of increasing the dynamics and adaptability of the system is to ensure international outward and inward mobility of staff. Internationalization of the academic workforce is also important for students, because it supports internationalization at home.

As an academic labor market, the Latvian higher education system seems almost closed, and the current approach allowing for visiting lecturers does not provide an adequate framework for internationalization of academic work.

Existing language restrictions will need to be reconsidered and revised in a way that allows for scientific dialog (in teaching and research) in major European languages (alongside the national language) that are mastered by the respective academic community. The role of the English language, especially, needs to be strengthened to ensure that academic activity in the country stays internationally connected and relevant. System- and institution-level information should be easily accessible in English to help promote Latvian higher education. These and other steps can be taken by government and institutional actors immediately to promote the internationalization of Latvian higher education. In addition, the government would be well advised to further develop mobility schemes that bring talent from neighboring countries and beyond to Latvia and provide Latvian academics with international experience early in their careers. In addition, academic exchange during the later stages of a career should be supported. Specific attention needs to be devoted to reentrance after a period of mobility and work with the academic diaspora in a way that benefits the Latvian higher education system.

Alignment of Elements of Human Resource Policies

44. (B.23) Take HR issues into consideration when reforming higher education policy, funding, and legislation.

According to the European University Association Autonomy Scorecard (EUA 2017), staffing autonomy is high in Latvian HEIs. However, from an institutional perspective, there are many minor regulative norms that as an aggregate determine HR policies.

At this stage, Latvia does not have a comprehensive policy on academic work and careers. In future higher education reforms, also pertaining to academic careers, it will be important that the academic community has a voice. In particular, it should be ensured that academics at different career stages are heard in the policy process. The legislation on academic work and careers will need to be well aligned with the aims of national higher education policy. If the system is striving for excellence and internationalization, this will need to be reflected in national HR-related regulations and incentives that ensure a highly attractive and internationally open academic profession. The government would be well advised to provide a vision on the development of the academic profession in the country, which should include the vision with respect to teaching (education export included), research (global knowledge transfer included), and social innovations and technological advancement (mobility among sectors).

4 Recommendations on Remuneration and Performance Evaluation

Since the system-level framework and institutional policies and practices currently hardly address performance-oriented forms of remuneration, a key task for Latvian HEIs and the Latvian government is to pave the way for future reforms. System-level funding arrangements and institution-internal allocation mechanisms have both been on the higher education reform agenda in Latvia. One option for further promoting the system's orientation toward performance would be to translate performance orientation to the level of the individual academic. Currently, there are no specific system-level regulations on performance-based salary systems and performance-supporting measures. Nor do HEIs engage in this area to a broader extent. That creates the possibility for HEIs and the government to conjointly develop ideas on how this matter could be tackled in the future. Basic issues that would merit consideration at this stage include an adequate notion of performance, system-level regulations that incentivize institutions to increase performance orientation while granting sufficient institutional autonomy, and managerial and financial implications of potential reforms.

4.1 Recommendations for Higher Education Institutions

Regulation at the System Level

There are no specific regulations on the system level pertaining to performance-based salaries (PBS) or bonus systems on the institutional level. That means that institutions are in principle free to develop such models, if their financial situation allows. Minimum salaries for different staff categories are, however, determined at the system level (see World Bank 2018, 39).

Concept and Measurement of (Good) Performance

45. (C.3) Ensure the integration of teaching and research functions, including in individual academic careers, at the institutional level.

This recommendation is fueled by the need to maintain an open concept of performance that reflects the diversity of academic tasks. In principle, Latvian academics are supposed to display strong performance in both teaching and research. However, various HEIs put a stronger emphasis on research performance. The reason might be that research was put "on the back burner" during and after the year of the financial crisis, and is now specifically rewarded through performance-based financing provided by the government under Pillar 2 of the reformed funding system. While the system level needs to define key features of academic tasks, HEIs should have the flexibility to (a) promote an integrated vision of academic duty (comprising of teaching, research, service, and managerial activities), while (b) also allowing for a certain amount of specialization within this broad definition of academic duty, to the extent that it fits with the profile and needs of the respective HEI.

46. (C.4) Further develop the concept of, and provide incentives for, performance on the institutional level.

To the extent that PBS models are developed in the future, it will be important to take different performance categories into account while striving to ensure an integrated approach to careers with regard to different types of academic duty (teaching, research, service, and management) — see previous paragraph.

47. (C.6) Strive to achieve a more balanced view on performance, particularly by incentivizing excellence in both teaching and research.

As mentioned, financial cuts in the context of the financial crisis, in particular, impacted research funding and subsequently research performance. It is thus no surprise that the Ministry and HEIs currently try to compensate for this shortcoming through financial incentives and a strategic emphasis on research. However, the Latvian higher education sector would be well advised to follow the example of neighboring countries (for example, Poland) and put more emphasis on excellence in teaching. Incentives could be set on different levels, including performance-based funding on the system and institutional level, and via future performance-based salary models, if the sector chooses to go in that direction. Thus, this concerns the system overall as well as individual HEIs.

Aspects of Model Development – Linking Performance to Models and Procedures

The criteria for good system- and institution-level human resource policies list a range of model development aspects to be considered when developing PBS models and performance-supporting measures. Fully-fledged PBS models currently do not exist in Latvia, nor are they being developed. However, there are initial experiences with bonus systems, mainly for research-related performance.

If Latvian HEIs embarked on the development of PBS models, they would be well advised to:

- Combine fixed salary components with performance rewards (and ensure that the fixed part is substantial, as performance is also required as part of normal duty)
- Develop PBS systems that reflect institutional strategies
- Avoid crowding-out effects by developing incentive systems that do not reward every single (small) activity and that accommodate different types of performance with a clear goal to enhance individual motivation
- Make sure that performance criteria, assessments, and the related award process are fair, transparent, and clearly structured
- Develop models that are "actionable," that is, that reflect constraints with regard to administrative and financial management
- Combine top-down and bottom-up aspects.

Detailed guidance on model development and good practice examples are provided in an earlier World Bank publication (World Bank 2017).

Remuneration and Financial Management

As stated in the criteria for good system- and institution-level human resource policies (see Annex section C.13, pp. 62–63), financial management considerations are an integral part of the development and implementation of PBS systems. Such systems need to be developed with the short-, medium-, and long-term funding basis in mind and carefully consider the various financial implications of performance-supporting measures proposed.

The bonus systems currently under development in some Latvian HEIs can be implemented without a long-term financial commitment on the part of the HEI. However, all performance-supporting measures lead to an expectation that comparable performance leads to comparable rewards in the future. Nevertheless, ad-hoc rewards can be steered more easily than comprehensive performance-based salary models with a medium-to-long-term impact. Besides predicting future available funds, model developers also need to consider how performance of staff is likely to develop (triggering a respective reward), which might be related to increasing experience and thus questions of age cohorts. The latter will also determine when larger amounts of funds become available due to retirement of staff higher up the career ladder. This, of course, is more difficult in a system without a mandatory retirement age and, relatedly, less predictability of the availability of institutional resources.

Finally, complex planning processes, for example, in the context of PBS models, require well-trained and experienced administrative and financial management capacity at the institutional level and related capacity-building measures.

4.2 Recommendations for the Government

Regulation at the System Level

As mentioned, there are no specific regulations on the system level in Latvia that define or incentivize the introduction of PBS or other performance-related measures. The following considerations thus mainly pertain to creating preconditions for a potential introduction of PBS or other performance-related measures in the future, and to avoiding a system-level framework that would hamper the introduction of such measures.

48. (C.1) Maintain clarity on basic principles of remuneration and types of positions in the legislation while exploring ways to make salaries more adequate and performance oriented.

In Latvia, the main types of academic positions and the related minimum salaries are regulated by legislation. The resulting clarity needs to be maintained in the future. However, the Ministry would be encouraged to explore options to make salaries in the higher education sector adequate — also in a competitive European environment — and to incentivize performance. The former will be needed to increase the attractiveness of the academic profession, which already faces many imponderabilities (previous sections have discussed the difficulties of career planning in a system that lacks a tenure track option and a mandatory retirement age) and attractive alternative options, and to avoid academic mobility from becoming a one-way street with Latvia losing able young academics.

49. (C.2) Strengthen the role of unions at the institutional level and, where appropriate, the system level, while at the same time seeking measures to enhance the capacity of unions.

Feedback collected from the academic community and its representatives, as well as from the representatives of HEIs as employers, could play an important role in articulating and discussing the needs, demands, and policy proposals of academic staff. It is thus important to strengthen the voice of academics, including via unions, and make them an important discussion partner wherever appropriate. If that requires capacity enhancement, this seems to be an agenda in the interest of all partners involved, who might want to discuss and agree on suitable related measures.

Concept and Measurement of (Good) Performance

50. (C.3) Maintain transparency and adaptability of election criteria while exploring diverse ways of career advancement.

Election criteria need to be considered under two different aspects. The first aspect relates to the criteria that appear to be, overall, perceived as fair and clear. That clarity needs to be maintained. The second aspect is the mechanism of electing academics to their position. That approach raises many questions, as discussed in earlier sections. The mechanisms of elections open the door to matters of personal preferences and can potentially trigger conflict of interest

issues. Election as a key mechanism for career advancement thus needs to be reconsidered.

51. (C.4) Further develop the concept of performance by encouraging HEIs to consider — and provide incentives for — the introduction of performance-supporting measures on the institutional level.

Performance pay is a relatively new concept in the Latvian higher education sector. While the scarcity associated with financing higher education at the time of the financial crisis did not leave much room for additional pay, now might be a good time to reconsider the appropriateness and performance orientation of salaries. The national legislation stipulates minimum salaries; in principle, HEIs are free to pay more, based on criteria established on the institutional level.

However, in reality, the minimum pay seems to be considered as the defined salary at some HEIs. In combination with hourly contracts, that can lead to a precarious situation for some academics. The government might want to signal the importance of performance-related pay by including this topic in its policy dialogue, and start building related capacity at the system and institutional level. Nucleus bonus systems under development at some HEIs can be showcased, and the pros and cons of PBS openly discussed to advance considerations on the institutional level.

52. (C.5) Promote a more diverse approach to performance (beyond incentivizing academic functions).

To follow up on the previous point, capacity-building measures should also include a discussion on what is considered performance or, more broadly, an "extra task" worthy of additional pay. It would be suitable to include considerations concerning the market value of work in certain areas and skills in that discussion. Is it fair that academics in certain "marketable" fields can achieve higher salaries than those in less "marketable" fields? To what extent should salary models compensate for a lack of alternative income, for example, through consulting or other work with a private clientele? Should staff who generate extra income for HEIs (and the sector) also be rewarded by HEIs? These are some of the questions that need to be answered.

Even though — taking into account the personnel and financial autonomy of Latvian HEIs — key decisions will be taken at the institutional level, it will be beneficial to support a joint discussion on these important questions at the system level. Ministry and HEI leadership might want to deepen their knowledge about the pros and cons of models that have been developed elsewhere and related implementation experience.

53. (C.6) Consider broadening the criteria for performance allocations ("Pillar 2") to HEIs in future to incentivize teaching excellence and third-mission-related activities.

Criteria of good (or excellent) performance will also need to be discussed at the institutional level and fit individual institutional profiles. However, public funding will have an important signaling function. Currently, performance allocations by the Ministry largely focus on research performance. That seems to be mirrored by some institutional strategies, which primarily focus on research excellence.

Funding under Pillar 2 (performance-based funding) by the government can trigger a stronger focus on teaching excellence, while institutions might need some guidance on how teaching excellence can be supported and measured.

Aspects of Model Development – Linking Performance to Models and Procedures

The development of a PBS system at the system level is currently not planned in Latvia. As mentioned, current regulations, however, do not prevent HEIs from developing such models. Related recommendations have been provided in Section 3.3. General considerations on model development on the system level have been discussed earlier by the authors of this report (World Bank 2017).

Remuneration and Financial Management

The same applies to financial management considerations at the system level. However, given the importance of administrative and financial management capacity at the institutional level (discussed in Section 3.3), the Ministry might want to organize peer learning events and capacity building for institutional leaders and HR management.

5 Considerations on Promoting Strategic Human Resource Management in Latvia

The HR management function of Latvian HEIs is still at an early stage of development. In that respect, the Latvian higher education system is not an exception within Europe. In most HEIs, HR departments are still largely carrying out traditional tasks of personnel administration. Within the given context, the development of a more strategic approach toward personnel policies needs to be initiated by institutional leadership with a strong drive from academic departments and faculties, that is, ideally in a combined top-down and bottom-up approach. However, moving to the next stage of strategic HR management will need to be done in a realistic and gradual way.

The World Bank's International Practice report on academic careers (see Box 53 in World Bank 2017) refers to a European project on HR management in HEIs. That project is a practical attempt to map and develop HR management in European HEIs (Pausits et al. 2017). The framework developed under that project is also useful when considering the development of strategic HR management in Latvia (Figure 1).

Regardless of their degree of autonomy, public HEIs are instruments for national higher education policy (Pekkola and Kivistö 2016). That provides a starting point for the strategic management of public HEIs and has important implications for policy makers and institutional leaders. That also explains why national higher education policy is an important point of reference for HR management in HEIs.

Academic careers and the attractiveness of the academic profession are a shared responsibility of policy makers and HEIs. Autonomous institutions play an important role in the design of academic careers. However, strategic HR management still needs a suitable national framework, and policy makers willing to play an active role in supporting institutional HR management and to ensure a conducive environment for the academic profession. National higher education policies provide a framework or the type of playing field for HEIs to act strategically. With regard to HR-related issues, higher education policies and legislation determine several conditional factors that have an impact on the HR management at HEIs, including the following:

- Content of work (research, teaching, management)
- Positions and (related) qualifications

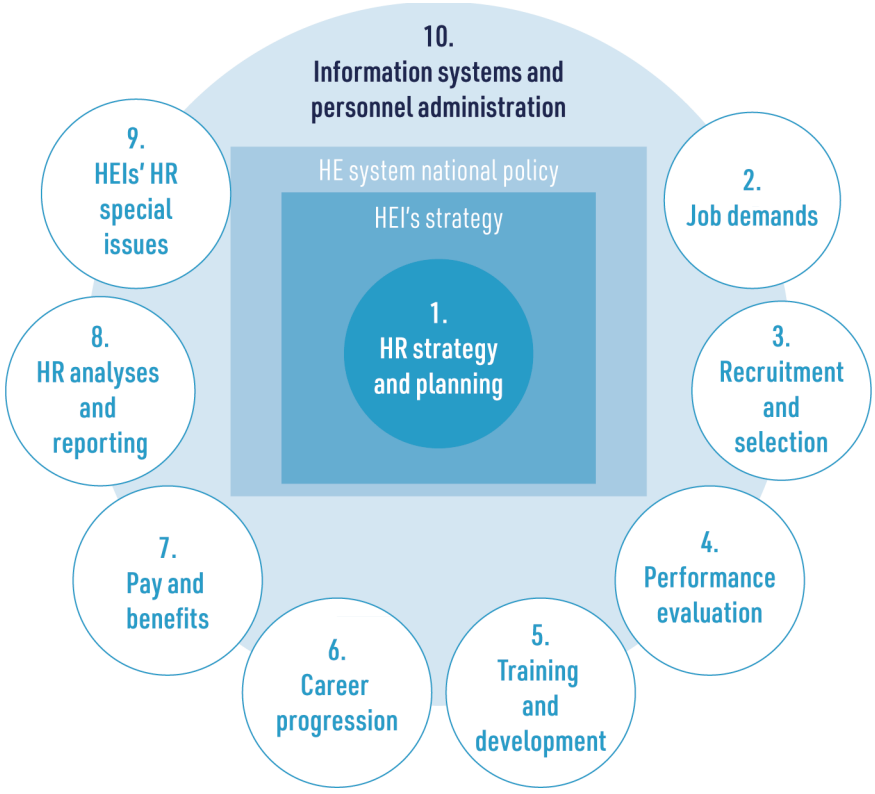

Figure 1 Framework for mapping and developing HR management

Source: Pausits et al. 2017, 12.

- Recruitments and promotions
- Payments (minimum salary)
- Requirements for professionalization opportunities
- Retirement.

Latvia is considered one of the leading nations in Europe in terms of staffing autonomy (7th position in the EUA Autonomy Scorecard; EUA 2017). However, based on the authors' observations on academic careers in Latvia (World Bank 2018) and related policies and regulation, there are system-level factors in all above-mentioned areas that have a major impact on HR management in Latvian HEIs.

HR management is not only an institutional matter but also highly related to the external environment (Beer et al. 1984). To promote strategic HR management at HEIs, policy makers in Latvia should consider:

1. Strengthening the dialog between institutions and academic staff (including via unions)
2. Carefully assessing the HR impacts of policies on funding (for example, study places), internationalization, and the ratios and quotas for academic staff, among others
3. Reassessing intentions compared to the reality of a two-track career system (that is, a career system which, in practice, has academics in either a teaching or research track) and how to mitigate undesired effects.

However, in addition to a conducive HEI-external environment, strategic HR management calls for proactive leadership of HEIs. While national policies and scarce resources are challenges, institutions need to explore all suitable

options within their environment (while triggering discussions on system-level changes, where needed). This is well illustrated by the fact that some institutions proactively develop reward systems for their academic staff while others have not yet explored such options.

The strategic management of public institutions always takes place in a policy environment that sets constraints for institutional management. Within this environment, however, HEI managers need to provide a vison for their institutions with regard to acquiring resources for their actions and ensuring their operational capacity to carry out their mission (Moore 1995). To strategically manage human resources in HEIs, institutional leaders need to:

1. Actively discuss the role of higher education and academic staff within society
2. Actively promote and support the dialog on HR management with the Ministry and other institutional stakeholder (industry, unions, local authorities, other stakeholders)
3. Approach academic staff as an institutional resource and not primarily as an individual cost item.

First and important steps for introducing strategic HR management at Latvian HEIs would be (a) the development of institutional HR strategies, (b) the alignment of HR activities with the overall institutional strategy, and (c) the inclusion of HR managers in the institutional strategy process. This would also imply that deans and other academic leaders and line managers should be involved in the development of the institutional HR strategy and in HR planning, and that HR functions are considered in the light of the institutional strategy. Table 1 summarizes the general recommendations on HR functions in relation to the strategic management of HEIs. The following section discusses what this means in detail in Latvia.

Table 1 Recommendations on human resources functions in relation to the strategic management of higher education institutions

Function	Strategic dimension	Recommendation for strategic HRM
HR strategy and planning	Link to institutional strategy and national policies	Include HR functions and actors in strategy process Align HR policies with institutional strategy
Job demands	Consideration of staff as an institutional resource and as individual contributors who can be developed Definition of job demands is the most efficient method of division of labor and integration of academic tasks	Develop HR planning (either a strategic HR plan, or a HR section in other institutional strategies)
Recruitment and selection	The most efficient way of profiling and steering autonomous professional workforce Define the access points of external talents into the system	Balance individual (equity considerations), organizational, and professional needs
Performance evaluation	Alignment of activities, institutional strategy, and national performance requirements	Clearly define what is considered and rewarded as performance in institutional context, as well as related criteria and procedures
Training and development	An effective way of profiling the institutions in teaching, research, and management, as well as internationalization	Develop an institutional policy on the training and development of academic staff

Function	Strategic dimension	Recommendation for strategic HRM
Career progression	Alignment of performance evaluation, institutional missions (tasks), and motivational systems Strengthen work-related well-being and attractiveness, as well as predictability of careers	Develop predictable, transparent, and clear promotion patterns Maintain transparency
Pay and benefits	Set incentives to reach goals on various levels (individual, institutional, system)	Develop stable, transparent, and motivating systems for pay/benefits
HR analysis and reporting	Provide sufficient level of information for strategic and operational decision making and professional HR planning	Develop HR reporting to support everyday management of HEIs
HEI-specific issues[a]		
Doctorate	Shared understanding of the role of doctoral education as part of studies and in relation to employment policies in HEIs and beyond Strengthened university industry/society linkage Staff development	HEIs should develop institutional policies on the doctorate
Doctoral schools	Cross-disciplinary collaboration Interinstitutional collaboration	HEIs should develop institutional practices for doctoral education and its administration and quality assurance
Postdocs	Strengthened university industry/society link Staff development	HEIs should have an institutional understanding of the position and role of postdocs
Internationalization	Institutional and staff development Resource acquisition	Support internationalization activities

Note: a. That is, issues pertaining to the specific profile and scope of the HEI.

A viable HR strategy and HR planning are essential for creating and implementing the institutional strategy. The outcomes of HEIs are mostly produced by academics. Without a shared understanding of profile and directions of the HEI, the strategic management of, and effective support for, individual academics, programs, departments, and faculties is impossible. Institutional strategies and national policies have a direct impact on academic work and its resources at the basic level. Thus, this connection should be made explicit, in order for academics and units to proactively adapt to the changing environment.

Job demands should be considered at the departmental and faculty level. A basic unit for HR planning should not be an hourly-based work contract that covers a task and is managed primarily in an administrative fashion, but a group of positions within an organizational structure to meet changing demands. The job demands and descriptions should be explicitly stated so that an individual holding a position knows what he or she is expected to do (and should be capable of doing). This applies to related tasks, as well. While overall strategic questions on the integration of research and teaching will need to be considered by the Ministry and institutional leadership, a suitable division of labor will need to be ensured at the unit level.

Recruitment and selection are essential processes for ensuring an adequate institutional profile, professional excellence, and predictability of career steps at the individual level. The strategic dimension should be taken into

account when opening and defining positions, and in determining procedures as well as criteria. The strategic importance of selection and recruitment to senior positions will be even more elevated if Latvia decides to follow international practice in implementing permanent academic positions via a tenure track model. The selection criteria should reflect the institutional strategy (that is, put an emphasis on certain research areas, applied sciences, or teaching excellence) and provide room for strategic decision making, but also be transparent and predictable.

Performance evaluation is a way of aligning national demands; institutional strategy; and departmental, group level, and individual activities and ambitions. Performance appraisals are a means of establishing a common understanding of the aims of academic work and its efficiency. Currently, in Latvia, performance is often evaluated in a context of hourly-based agreements, with student numbers serving as an indicator for individual performance. In a context of demographic decline and outward migration, this raises several questions, makes strategic management challenging, and may encourage individuals to act in an opportunistic manner.

Training and development should be planned in the context of institutional missions and visions. Depending on the institutional strategy, academic personnel should have opportunities to develop their skills and competences in teaching, supervision, research, and institutional management. These training and development activities can be planned in a way to simultaneously increase the productivity of the institution. Examples of areas where competences can be deepened are joint degrees, joint supervision, collaboration in research projects, joint authoring, and participation in international exchange programs.

Career progression is a practical step allowing an HEI to align aspects of selection and recruitment, promotion, pay and benefits, internationalization, and performance evaluation with the institutional strategy. Career progression criteria should be communicated clearly to the employees so they know how they can advance their career. This advancement should also support the overall goals of the institution. The introduction of a tenure track system should be considered accordingly at the system and, subsequently, the institutional level.

Performance-oriented pay and benefits build on performance evaluation and allow the HEI to incentivize desired activities in line with strategic priorities. PBS systems should be kept simple and manageable, and financial management implications need to be carefully considered. It is advisable to start rewarding particular types of performance through bonuses — several Latvian HEIs have some initial experience with this — before embarking on designing and piloting PBS systems.

HR analysis and reporting should support strategic and operational decision making in personnel management. It should be organized in such a way that it enables institutional leaders to have a sound overall understanding of the situation of their staff and adequate information on its long-term development, as well as of staff-related expenses. HR reporting should also be tailored toward the needs of departmental and faculty managers. They should have a realistic picture of their staff that increases their operational management capacity. In relation to HR strategy and planning, a set of indicators should be developed for systematic follow-up of the implementation of the strategy and adapting it

to a changing environment. HR analysis and reporting should be supported by an adequate higher education management and information system.

The doctorate, early careers, and the organization of doctoral education are of strategic importance for the future of science and higher education in Latvia more generally, as well as in HR development in Latvian HEIs, as documented in earlier reports by the authors (World Bank 2017, 2018). Doctoral education needs to be taken into account in strategic HR management as it is an important way of increasing the talent pool in Latvia.

Early career positions have a strategic role in knowledge transfer between HEIs and the surrounding society. The early career positions have a decisive role in the attractiveness of academic careers, recruitment of talent and mobility of young talent between HEIs and other organizations. Thus, it is important also from an HR management perspective that the career advancement and counseling system is in place, and that institutions have transparent and well-communicated principles in admission, recruitment, and quality assurance of the early career phase. The doctoral schools in HEIs can provide an important platform for interdisciplinary collaboration and for internationalization and national collaboration, in addition to improved educational quality.

Internationalization is a vital condition that should be taken into account in institutional planning. Institutions should explicitly ponder the benefits and risks associated with internationalization and, if selected to be a strategic goal, have a practical HR policy supporting the inward and outward mobility of their staff.

In summary, strategic HR management in Latvian higher education calls for:

1. National support and dialog
2. Proactive institutional leadership and stakeholder dialog
3. Strengthened management of HR
4. Alignment of institutional strategy and HR functions
5. Involvement of an HR dimension in the strategy process
6. Shared and well-communicated HR policies
7. Recognition of the importance of the early career stages.

Annex
Overview on Recommendations for Academic Careers in Latvia

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
A. Early-stage researchers: doctoral candidates and postdoctoral fellows			
System-level framework			
System level	**A.1** The system-level framework for doctoral training finds an appropriate balance between regulation and flexibility. While regulations and quality criteria need to be applied rigorously and consistently, doctoral training also requires room to accommodate personalized paths, and room for a reasonable level of institutional and disciplinary differences. This necessitates a national consensus on the essence and standards of the doctorate developed jointly by all relevant stakeholders of the higher education system.	*Not achieved*. There is a strict classification of doctoral degrees and accreditation regulations for doctoral programs, but they restrict the flexibility of HEIs in adequately designing doctoral education.	Define the standards of the doctorate, in consultation with the higher education sector. Ensure that regulations are focused on quality standards for the doctoral level and define those in a generic way. Consult the academic community during the definition process.
System level	**A.2** The autonomy of HEIs in the field of doctoral training is complemented by mandatory internal accountability mechanisms and appropriate external quality assurance processes of research and doctoral education. This includes regulations on which HEIs have the right to confer the doctorate and the related requirements. The regulations need to reflect that original research is the core component of the doctorate and, therefore, stipulate that institutions provide a suitable research environment.	*Achieved only to a limited extent*. Internal and external quality assurance procedures are still at an incipient stage and the focus on a suitable research environment as a condition for training doctoral students and conferring the doctoral degree is insufficient.	Define the standards and criteria for conferring the doctorate and the associated quality assurance mechanisms. Review the criteria for deciding which HEIs have doctoral degree awarding powers. Promote internal quality assurance through capacity-building mechanisms. Ensure that the national quality assurance process for the third cycle covers the HEIs' internal quality assurance mechanisms.
System level	**A.3** Doctoral training needs to be incentivized financially to promote efficiency and quality.[a]	*Achieved only to a limited extent:* State funding for higher education incentivizes the doctorate to some extent. However, the state stipend for doctoral students is very low, and access to research project funding is weak. This might lead to low completion rates.	Review funding mechanisms for the doctoral level to ensure completion, and to promote efficiency and quality. Fund doctoral students in priority fields at a sufficient level to allow them to be full-time students. Increase research funding to provide stability and long-term planning.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
System level	**A.4** Public funding for doctoral training is allocated in accordance with national needs and competencies required, while ensuring a diversity of doctorates.	*Achieved only to a limited extent:* Public funding for doctoral education to a limited extent considers national needs.	Set national research priorities in broad (inter)disciplinary fields (including arts, humanities, and social sciences) while preserving some funding for blue sky research.
System level	**A.5** Research support programs designed and funded at the system level ensure that doctoral candidates are appropriately involved in research projects wherever possible and that suitable co-supervision agreements are in place.	*Achieved only to a limited extent:* Research support programs designed and funded at the system level provide very weak incentives to ensure that doctoral candidates are appropriately involved in research projects. As a result, there are students working on their doctorate in units that are not research active. This issue will be tackled in new regulations. Although sometimes students have access to a second supervisor, this cannot be construed as co-supervision, which implies a team effort.	Ensure that research is at the center of the doctoral experience. Research funding should include financial incentives to promote doctoral students' participation in funded research. Involvement in research should be made a defining criterion and condition for doctoral training. HEIs should be required to provide co-supervision and to frame doctorates in cooperation with industry and cotutelles by formal contractual agreements.
Anchoring the doctorate in the institution			
Institutional level	**A.6** Admission, progression, and assessment of doctoral candidates are monitored and supported. This includes published criteria and transparent processes for admission, an orientation and the provision of relevant information for newly recruited candidates, contractual agreements between doctoral candidates and supervisors with clear milestones (including any requirements for publications), sound assessment procedures based on clear and transparent criteria and processes, and the monitoring of the students' progression and completion.	*Partially achieved in some institutions and not achieved in others.* Most institutions are still offering the doctorate on the apprenticeship model, which means that admission, progression, and assessment of doctoral students are monitored and supported by the individual supervisor without much accountability to the faculty of the institution. A few institutions are developing more systematic processes, but their decentralized nature hamper[s] those efforts.	The principles for the admission, progression, and assessment of doctoral students should be defined at the central level of an institution. HEIs should develop, implement, and monitor an admissions process across all faculties. It should involve committees in the relevant units (departments or faculties) and not be based on individual admission decisions by potential supervisors. HEIs should develop and publish institution-wide admission criteria (while also leaving some discretion for faculty/department-level specificities). HEIs should inform students of their rights and responsibilities and the expected requirements during all phases of their doctoral education. HEIs should develop procedures to monitor students' progress and completion, and monitor the consistent implementation of procedures in all faculties.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**A.7** The supervision of doctoral candidates is framed by appropriate institutional policies and guidelines (among others, outlining the respective responsibilities and rights of supervisors and doctoral candidates), training and ongoing support for supervisors, and monitoring their performance. Co-supervision is encouraged and continuity of supervision is assured.	*Partially achieved in some institutions and not achieved in others*. Regulations concerning supervision are evolving in some institutions toward setting appropriate institutional policies and guidelines. Some institutions require signed agreements between supervisors and supervisees. Training and ongoing support for supervisors, and monitoring their performance, is not yet a practice. Co-supervision is not a policy but an ad-hoc practice, and continuity of supervision is assured to the extent that the students take the initiative to ensure such supervision.	As a key condition for the quality of the doctoral training, good supervision should be framed by a set of regulations and procedures. HEIs should put in place a clear process for ensuring continuity of supervision and consider co-supervision as an effective solution for that. HEIs should develop a process to train, support, and monitor supervisors. Students should have access to an advisor to discuss any supervision issue.
Institutional level	**A.8** HEIs provide a stimulating research environment for doctorates with a critical mass of research-active staff; adequate learning and research tools; sufficient physical and financial resources; support for, among others, mobility and conference participation; and an overall environment supportive of research achievements.	*Partially achieved in some institutions and not achieved in others*. A few institutions have a critical mass of research-active staff and an overall environment supportive of research achievements. The underfunding of the sector has a negative impact on the learning and research tools applied at the institutional level and available financial support for conference participation and mobility.	HEIs should provide a stimulating research environment to their doctoral students.
Institutional level	**A.9** There is a policy outlining the balance between course work and research (thesis). Such a policy reflects the competencies that a doctoral candidate is supposed to acquire. Courses include research methodology and scientific integrity, and professional competencies such as grant writing, and written and oral communication.	*Partially achieved in some institutions and not achieved in others*. The policy in large institutions is not always applied consistently across the faculties and, in many institutions, does not always include courses in research methodology and scientific integrity, and professional skills such as grant writing, and written and oral communication.	The taught component of doctoral programs and skills development opportunities should be developed to prepare doctoral students for both academic and nonacademic careers. HEIs should define the competencies that doctoral students should develop to prepare them for both academic and nonacademic careers. HEIs should specify the balance between research and coursework, and provide guidance to faculties for a suitable application across different fields.
Institutional level	**A.10** An institution-wide policy and related procedures for establishing an examination committee ensure objectivity and fairness.	*Not applicable* since this is regulated nationally through a complex and opaque process.	An institution-wide policy and related procedures for establishing an examination committee should ensure objectivity and fairness. If the national promotion process is changed, HEIs should be required to develop an institution-wide policy and related procedures for establishing examination committees that ensure a fair and objective process in line with best international practice.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**A.11** Institutions provide doctoral candidates with a range of academic courses (for example, subject-based courses, and courses on research methodology, teaching competencies, and scientific integrity), and soft-skills courses to prepare them for both their academic and nonacademic careers. Furthermore, HEIs provide career support and, where possible, teaching and research assistantships. Career support includes helping students, when appropriate, to find nonacademic jobs (including in the private sector).	*Partially achieved in some institutions and not achieved in others*. The policy in large institutions is not always applied consistently across the faculties. The majority of institutions prepare students for academic careers and do not offer soft skills courses. There is no formal career support, but in some institutions, there are opportunities for teaching and research assistantships to which students can apply.	HEIs should provide career support for doctoral students to move into academic and nonacademic jobs, and grant them access to teaching and research assistantships.
Institutional level	**A.12** Open access to doctoral theses is promoted. Normally, all doctoral theses are available in open access, except if there are reasons requiring an embargo for a designated period of time (such as copyright issues, and ethical sensitivities related to, for example, the protection of human subjects).	*Achieved in at least one institution*, which has an open access policy mandating that publications and data from research funded by public funds or the institution itself [...] [be] deposited in an open access repository, and which ensures public access to doctoral theses on the institution's website before their presentation.	Open access to doctoral theses should normally be promoted.
Institutional level	**A.13** Formal appeals and complaints mechanisms are available to all doctoral candidates. The procedures are clear, fair, safe, comprehensive, and up to date, and are described in an easily accessible document. While respecting confidentiality and anonymity, the complaints and appeals that have been lodged are analyzed periodically to ensure that clusters of problems are addressed.	*Partially achieved*. There are formal procedures for appeals and complaints but not all students seem to be informed of those opportunities, and the quality mechanisms are undeveloped.	Adequate information about formal appeals and complaints mechanisms should be available to all doctoral students, and institutions should analyze them. HEIs should ensure that students are aware of the formal appeals and complaints procedures. HEIs should periodically analyze the complaints and appeals that have been lodged to identify recurring problems.
Institutional level	**A.14** The quality of all aspects of the doctorate is continuously monitored and assured. Internal quality assurance mechanisms are adapted to the specificity of doctoral training and include feedback from doctoral candidates and their supervisors.	*Partially achieved in some institutions and not achieved in others.* Some institutions are moving toward more structured doctoral programs and are developing internal quality assurance processes, but this is still at an incipient stage.	The quality of all aspects of the doctorate should be continuously monitored and assured. HEIs should develop an institution-wide framework for internal quality mechanisms that would allow some degree of flexibility in faculty implementation. This framework should include feedback from students and supervisors. The framework should be evaluated regularly to ensure its fitness and relevance.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**A.15** Doctoral schools are a particularly effective way of institutionalizing doctoral training and promoting its quality. HEIs that establish doctoral schools consider their number and their location within the institution to maximize benefits with respect to critical mass and interdisciplinarity.	*Partially achieved in one institution and not achieved in others.* Some institutions have an overarching structure that they call "doctoral school," which is mostly construed as providing colloquiums. There is only one example of an institution that has given administrative responsibilities to the doctoral school, including for quality assurance; in all other cases, the doctoral schools are viewed as a place to offer conferences and workshops.	Doctoral schools should institutionalize doctoral training and promote its quality. HEIs should establish doctoral schools to achieve three key objectives: raising quality by ensuring standard processes across the institutions, providing students with an intellectual community, and promoting cooperation and exchange. HEIs should determine the optimal number of doctoral schools in relation to their size and the need to promote interdisciplinarity.
Institutional level	**A.16** Doctora[…][te]-granting institutions have a clear mission for their doctoral schools (with appropriate attention to disciplinary differences), and a comprehensive and explicit policy on the governance and organization of doctoral training that is published and easily accessible.	*Partially achieved in one institution and not achieved in others.* While one institution has a doctoral school that serves as the starting point for a structured approach to the governance and organization of doctoral training, others do not have such schools (in the traditional sense of the word) (see A.15).	The mission and governance of doctoral schools should be clearly defined. HEIs should define clearly, albeit flexibly, the mission and functions of their doctoral schools. HEIs should identify the governance of the doctoral schools, including their reporting mechanisms to the highest body in the institution. Information about the mission, functions, and governance of doctoral schools should be easily accessible to all interested parties.
Managing the doctorate with partners			
Institutional level	**A.17** Partnerships with national and international HEIs, research bodies, and the private sector (including industry) can improve the quality of doctoral training. To manage related risks, partnerships are framed by a strategic approach, appropriate governance arrangements, adequate policies and procedures, and a cotutelle agreement.	*Partially achieved* to the extent that some institutions have relevant partnerships with industry and other partners; however, they are not necessarily accompanied by the necessary governance arrangements, policies, and procedures. A formalized industrial doctorate is currently not in place.	Doctoral partnerships must be framed by a general policy and specific agreements for each student. HEIs should develop a strategy about their partnerships at the doctoral level that includes asking faculties to identify strategic industrial partners and other HEIs. HEIs should develop guidelines for doctorates in cooperation with industry and cotutelles, and assist faculties in preparing contractual agreements with external partners. A high-level institutional body should be monitoring those partnerships.
Institutional level	**A.18** Stakeholder involvement in framing and evaluating the doctorate is important, among others, because the majority of doctora[…][te] holders occupy positions outside academia.	*Not achieved* as there is no structured and systematic involvement, for example, in governance of the doctorate.	Stakeholder involvement in doctoral school governance should be encouraged to contribute to preparing doctoral degree holders for nonacademic careers. HEIs should require doctoral schools/faculties to involve appropriate external stakeholders in the evaluation of their doctoral programs.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
The postdoc			
Institutional level	**A.19** The postdoc is framed by appropriate policies and guidelines covering, among others, recruitment procedures and the objectives of appointments. The postdoctoral position is considered part of the academic career ladder, and the institution takes responsibility for related HR issues.	*Not achieved*. The status of postdocs is left rather vague (anyone within five years of obtaining the doctorate); the explicit nature of the responsibilities attached to this position are not clearly defined or understood.	The postdoc should be framed by appropriate policies and guidelines. HEIs should clearly define the rights and obligations of postdoctoral fellows and treat them as part of their staff.
Institutional level	**A.20** Postdocs have access to career support to help them develop career objectives, whether within or outside academia.	*Not achieved*. There is no formal support that is extended to postdocs (besides the support available to all academics).	Postdocs should have access to career advising. HEIs should provide career advice to postdoctoral fellows to prepare them for academic and nonacademic careers.
B. Academic selection and promotion			
The status and role of academics			
System level	**B.1** System-level regulations are primarily applied to secure academic freedom and academic quality, and to promote transparency, including for national and international mobility. Defining the role, status, and tasks of academics is mainly an institutional responsibility. System-level policies support healthy competition among individuals and avoid practices that lead to the marginalization of certain staff groups.	*Partially achieved*. The current system-level regulations are causing several problems for academic careers and their institutional management. First, they are hindering the integration of research and teaching. Second, they are not allowing for the development of tenure systems (that is, the promotion of academics from one career step to another and permanent employment contracts securing academic freedom). Third, they are challenging for strategic recruitments. However, according to the site visits, the current national regulations enable transparency.	Initiate a policy dialog on the reform of the two-track system with the aim of overcoming a dichotomy between teaching and research. Initiate a system-wide consultation on how to strengthen the integration of teaching and research.
Institutional level	**B.2** The status and role of academics are considered thoroughly in institutions and are reflected against the funding sources of academic work, the system-level policy and regulatory framework, international trends in academic work and careers, and the traditions of academic work and its values. Institutional managers are well-informed on the contractual arrangements (duration and type) and funding of their staff.	*Partially achieved in some institutions and not achieved in others*. The status and roles of academics are tailored mainly in the context of external factors and funding. The management is mainly reactive to the scarce funding, changing student numbers and, sometimes, a lack of suitable candidates. The individual contractual arrangements are complex and difficult to manage in relation to academic work.	Increase the predictability and stability of contractual arrangements, and move toward long-term HR planning. Transform the time/hour-based contracts and aggregation of contracts to full-time contracts and allocation of time. Recruit academics who are able to fulfill research, teaching, and administrative tasks.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**B.3** Institutional policies aim for equal treatment of staff with project and budget funding, and acknowledge the equal importance of research, teaching, and administrative tasks.	*Only to a limited extent achieved in some institutions and not achieved in others*. Institutional policies are considered to be fair and equal under the given circumstances (in particular, the financial constraints). However, the separation of research positions and academic positions makes the integration of the tasks difficult. In monetary terms, the externally funded research work and budget-funded academic work are valued in a highly unequal way.	Gradually develop consistent working conditions and resources for budget-funded (teaching-focused) and externally funded (research-focused) staff. Maintain the motivation to attract external funding. Ensure that there are entry (and exit) points in academic careers in all career steps.
General career patterns			
System level	**B.4** On the national level, there is a systematic approach to career stages that allows domestic and foreign academics, ministries, and other stakeholders to compare positions among countries and institutions. This framework is flexible enough to allow institutions to engage in strategic HR management. The system-level policy guarantees the mobility between academia and industry and among institutions, and supports attractiveness of careers. It also provides a solid legal framework for career structures such as tenure track or other systematic approaches to career development, and establishes clear entry and exit points for academic careers.	*Not achieved*. The system-level approach provides a well-recognized and widely accepted framework for academic and research positions, and for recruitment and selection procedures. The requirements (in terms of qualifications) for different career positions are commonly known. However, the system-level framework prevents the institutions from developing tenure track models or other promotion patterns, and there is no defined exit point due to the absence of a mandatory retirement age.	Develop the national career framework to be compatible with international frameworks and to support mobility among different sectors (industry, public administration, etc.) within Latvian society. Anchor the national career framework to international frameworks reconciled by international funding agencies and foundations that are funding international mobility and advanced research. Develop the career framework to be recognized and applicable to other sectors of society.
System level	**B.5** System-level policies may provide resources to HEIs for strategic career initiatives, for example, with regard to young academics.	*Achieved*. Dedicated resources are deployed by the central level in support of the doctorate and postdoc positions, and second pillar funding allows for the design of bonus systems and other means to incentivize staff. However, the current funding system would not provide the scope for more permanent performance-based salary systems on the institutional level.	Continue developing system-level incentives to ensure a strategic approach to HR development. Keep developing system-level policies and incentive structures that support HEIs in developing their personnel.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**B.6** Institutional career patterns are realistic for most of the staff members. They are aligned with a systematic approach to career stages at the national level and they are internationally comparable.	*Partially achieved*. The career patterns are dependent on open vacancies that are often dependent on retirements (or the lack of retirements) and national regulations and recommendations on the number of professors and doctoral degree holders. While positions are comparable from an international perspective, there are no structured and coherent career patterns.	Ensure that individual career trajectories are predictable and compatible with formal career structures. Develop the career stages and promotion patterns into transparent and predictable direction, that is, ensure that individuals are aware of the personnel plans of their department (retirements, (re)opening and closing of positions). Anchor the institutional career model to national career framework to ensure the functionality of academic labor markets.
Institutional level	**B.7** Institutional policies ensure transparency and clarity of career patterns and promotion criteria, and maintain an appropriate balance among research, teaching, and administrative excellence. Candidates and employees of HEIs are aware of promotion criteria and career progression possibilities. Institutions communicate clearly the qualifications needed for different positions to their employees and persons seeking recruitment.	*Partially achieved*. The institutional policies are closely related to national policies and, are therefore, well-known and considered to be transparent and clear. However, the collegial election as a selection method may politicize selection processes and lead to a potential conflict of interest.	Maintain the transparency of institutional promotion criteria. Maintain and further strengthen the transparency of criteria and evaluation of merits.
Institutional level	**B.8** Institutional policies link key aspects of academic career patterns (recruitment, promotion, remuneration) so that these support the implementation of institutional and unit-level strategies.	*Partially achieved in some institutions and not achieved in others*. Because of a lack of contractual security and the volatility of academic employment (and remuneration), and the lack of a retirement age, among other aspects, career management is almost disconnected from institutional strategies in some institutions, while others, nevertheless, try to link career development to institutional strategies.	Ensure and communicate the alignment between institutional strategy and career framework. Develop the recruitment and incentive structures (promotions and remunerations) of academics to be aligned with institutional strategy. Make sure that the institution has an adequate number of core/strategic academic staff who are employed full-time and whose time allocation can be managed without additional contracting. Take the HR issues explicitly into consideration when renewing the strategy.
Institutional level	**B.9** Data on all staff categories (including academic staff on part-time/hourly contracts) are gathered and analyzed to enable effective human resource development and strategic human resource management.	*Partially achieved*. The data are collected but seldom analyzed. A more detailed analysis of different contracts of individuals could make the remuneration and careers of academics more transparent, and enable institutions to plan personnel costs for a longer time period.	Make sure that institutional leadership and middle management are aware of the contractual arrangements of their staff. Ensure that the heads of departments and deans (academic middle managers) are aware of the contractual arrangement of their academic staff and the actual volatility of full-time equivalent employees.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**B.10** Organizational structures and HR services support the career patterns within an institution. HR policy is important for the development and implementation of strategies. In the context of academic careers, institutions: • Clearly define duties and responsibilities related to HR • Ensure that sufficient resources are allocated for HR-related tasks • Support a strategic role of the HR director • Develop the competencies of HR professionals • Assure the quality of HR policies and initiatives • Set indicators for measuring HR success.	*Achieved only to a limited extent.* As in many other countries, HR services in Latvia are in their infancy in many institutions. Personnel management is mostly reactive and deals with acute contractual/workload issues.	Prepare a midterm plan for developing HR services. Make a midterm strategy/plan for developing HR services – tasks and competencies. Take into account the – Resources – Strategic role of HR – Centralization/ decentralization. Follow-up on implementation.
Selection and recruitment of academic staff			
System level	**B.11** Recruitment plays a vital role in the strategic development of institutional profiles. Thus, the national framework steering the recruitment practices needs to allow for institutional development and differentiation. National policies primarily guarantee equal opportunity for, among others, different nationalities, genders, and minorities.	*Mainly achieved*. National legislation sets the framework and includes requirements concerning equal treatment. However, it also attributes an important role to elections in the selection process. The election process is typically considered to be fair, but there might be conflict of interest issues and various imponderables.	Develop further national regulations to ensure equal treatment.
Institutional level	**B.12** The most important way of assuring the quality of recruitments is to ensure the transparency and clarity of processes. That encompasses the clarity and transparency of job definitions, selection processes, and criteria; the provision of clear guidelines (and training) and definitions on the role of different actors involved in the decision-making process; a clear definition of entry points to academic careers; and a clear policy on equity issues/affirmative actions. Applicants are made aware of the practices.	*Partially achieved*. The current system is considered to be transparent and clear, and the national framework for required qualifications and its institutional applications are quite well known. However, the election process leads to many questions and makes the final decision making a process with many imponderables.	Strengthen the efficiency, transparency, and fairness of recruitments. Reconsider elections as an only instrument for selection. Strengthen the role of institutional leadership in recruitments. Maintain the transparency and collegiality where possible.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**B.13** Institutions deliberately balance the selection criteria in the context of their mission, acknowledging academic excellence (professional evaluation of teaching and research), organizational commitment, and fit (organizational recruitment). The institutions ensure that academic units have the capacity to select their workforce in a flexible, fair, and transparent manner, to meet the requirements of external funding and to support the overall aims of HR policies.	*Partially achieved in some institutions and not achieved in others*. Institutions are allowed to adjust the qualification criteria, and some institutions do this strategically. However, the recruitment of professors and associate professors is done from a professional (and not from an organizational) perspective, so that it might not be aligned with institutional missions.	Communicate the selection criteria of academics to employees and candidates. Reconsider all qualification criteria in the light of the institutional strategy. Make the justifications of qualification criteria public for employees and candidates.
Institutional level	**B.14** Positions are advertised sufficiently broadly (including, where suitable, on the international level). Institutions use tools facilitating the systematic search for candidates, and, where appropriate, headhunting. The selection process is efficient, transparent, and not overly time-consuming. Transparency of the process also extends to the candidate, who is informed about key milestones of the process. There needs to be clarity on the tools used to evaluate the skills of candidates (for example, lectures, evaluations by students, and assessment centers).	*Partially achieved*. The Latvian higher education system is small and closed. Thus, the advertisement probably is sufficient, if the search focuses only on candidates in the country. However, in many cases, the real selection process during early career stages is based on prior supervisor relations. The selection process is time-consuming and involves many individuals, who often are already over[…]ly committed to committee work.	Streamline the selection procedures. Identify national and international recruitment platforms. Develop a leaner selection process by getting rid of unnecessary steps and task assignments.
Institutional level	**B.15** Selection processes go hand in hand with the clarity of roles (for example, of academic selection committees, including possibly stakeholders from industry, academics from other faculties, and a representative from the institutional leadership).	*Partially achieved*. Roles are clear; however, the election process is a professional (peer-based) process that does not involve other stakeholders.	Strengthen the strategic role of HR services alongside institutional leaders and consider involvement of stakeholders in recruitment. Make sure that the use of (HR) services in selection process is adequately designed. Consider involving external stakeholders in the recruitment process where adequate.
Institutional level	**B.16** There is a system of checks and balances that ensures, among others, the strategic fit of candidates for the position, and a balance between professional and organizational recruitment.	*Achieved only to a limited extent*. The election to lower academic positions is made by the faculty council, which may take into consideration organizational aspects. However, the final decision is by voting. The election of associate professors and professors is a purely professional (peer-based) process (which can take place at an institution which is not the recruiting one).	Build a system of check and balances in basic units. Reconsider the role of institutional leadership, academic community, and administration in the recruitment process, accounting for the differences of aims and processes of recruitment in different types of recruitments.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Career advancement and promotion patterns			
Institutional level	**B.17** Promotion patterns are important instruments for steering academic work. Institutions have clear, transparent, and well-documented promotion patterns that are aligned with the institution's mission and profile, and clearly distributed roles and responsibilities during the promotion processes.	*Not achieved*. Promotions are based on open vacancies. There are no promotion patterns for an individual to advance in his/her own career (position/post).	Develop predictable, transparent, and clear promotion patterns, which could potentially include the piloting of a tenure track system. Develop predictable career patterns to the extent that the – reformed – national framework allows. Ensure that career patterns have been communicated to employees and are aligned with realities of the organizational resource environment and individual career trajectories.
Institutional level	**B.18** Promotion patterns take into account different aspects of academic work (research, teaching, administration, and service). The merits in different academic tasks are defined in a transparent and understandable manner. To ensure the fairness and effectiveness of promotion patterns, they are repeatedly communicated to staff members.	*Partially achieved*. While there are no clear promotion patterns, election processes take into account the three aspects of academic work. However, in some cases they are not aligned with the tasks of the position (i.e. the required emphasis on research also for teaching-focused positions).	Continuously improve promotion patterns via balanced, flexible, and transparent promotion criteria. Maintain the transparency of the selection criteria and selection process. Job descriptions should be developed further to reflect a realistic (teaching) load.
Institutional level	**B.19** Career development and career advancement are part of institutional planning and strategic management, and supported by modern HR instruments (for example, target agreements and skills development tools). In this, HEIs support academics in evaluating and developing their competencies required for conducting high-quality scientific work and for succeeding in their careers within their scientific community and within organizations in the higher education sector and beyond.	*Partially achieved in some institutions and not achieved in others*. Career advancement is difficult because of the unpredictable conditions of work and the vacancy model. There are several attempts to support the career advancement of talented individuals. However, the management of careers lacks a systematic approach.	Develop a systematic approach to follow and steer career advancement. Discuss career advancement explicitly in institutional HR policies. Develop a systematic follow-up mechanism for the needs and shortcomings, as well as aims and dreams, of staff members.

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International mobility in academic careers			
System level	**B.20** International mobility is crucial, particularly for small higher education systems. National policies support inward and outward mobility. Incoming mobility can be marketed and facilitated on the national level. With respect to outgoing mobility, the return of academics and related mechanisms are taken into account, in addition to the provision of grants for outward mobility. The system-level policies guarantee legal conditions conducive to the recruitment of foreign academics, and ensure the availability of information in English (or, potentially, another major European language) for international staff. Further relevant aspects include support for mobility, dual career services, English-speaking contact points in the administration, support on social security issues, and other aspects of mobility support.	*Not achieved*. The Latvian higher education system is small and closed. The language restrictions deriving from the legal framework and potentially other factors create an obstacle for the internationalization of the academic workforce. There are no systematic policies for supporting mobility.	Reconsider and revise legislation hindering mobility. Develop funding schemes to support inward and outward mobility. Support/encourage institutions in applying funding leading to mobility. Strengthen the role of English in academic labor markets (rules and regulations as well as institutional practices and tasks).
Institutional level	**B.21** Internationalization is one way of improving the quality of academic work. However, that impact cannot be taken for granted. It is important that institutions have defined the aims related to internationalization, planned and organized the career patterns, tasks, and overall working environment (including family life) in a way that a foreigner without local language skills can successfully work, and have organized sufficient support structures for incoming (and outgoing) staff.	*Partially achieved*. Institutions are supporting the internationalization of their staff and especially young researchers. The guest lecturer system creates a mechanism for foreign academics to work in Latvia. However, internationalization would require more attention on the strategic level and would need more resources and changes in language policies.	Strengthen an organizational culture that supports internationalization. Seek resources to support internationalization. Encourage staff members to engage in international collaboration by applying for international projects, co-publishing, and utilizing the opportunities of international staff exchange (Nord+, Erasmus+, etc.).
Alignment of elements of human resource policies			
System level	**B.22** To promote good academic work and careers, job descriptions and tasks, performance appraisal, career progression, reward systems, and strategic objectives are aligned.	*Not applicable.* Elements are not defined on the system level. However, because of various policies impacting and constraining academic work and careers (the six-year-rule, the election system, etc.), the national framework does not support the alignment of the different elements.	Consider developing a system-level career framework. Take the HR-policy aspect into consideration (supply of competent academic labor, positive competition and diversification between institutions) when planning funding model, disciplinary structure of institutions, accreditations and qualification frameworks as well as developing research policy.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Institutional level	**B.22** To promote good academic work and careers, job descriptions and tasks, performance appraisal, career progression, reward systems, and strategic objectives are aligned.	*Partially achieved in some institutions and not achieved in others*. Because of the fragmented contractual nature of academic work and its funding, institutions face difficulties in aligning their policies. However, some seem more successful than others in designing coherent career patterns.	Align HR practices with institutional strategy. Take HR planning into consideration in the strategy process of the institution and departments.
System level	**B.23** All higher education policies take into account the HR policy aspect, not least because the implementation of all policies and outcomes will be ensured by, or will have an impact on, academics.	*Partially achieved*. While academic positions and key HR processes are determined by the legislation, there is no systematic and overarching approach toward academic work that is consistently reflected in higher education policies.	Take HR issues into consideration when reforming higher education policy, funding, and legislation. Take HR policy and statistics into consideration in the planning of higher education policies. Provide clear aims for the development of academic labor markets. Ensure that the academics are involved (represented) in the policy formulation considering the HR issues. Make sure that the legislation of academic work and positions support/enables the overall aims of higher education policy.
C. Remuneration			
Regulation at the system level			
System level	**C.1** The question as to how remuneration should be regulated at the system level and what should be regulated [...] [at] the institutional level depends on the national setting (for example, the size of the system, the political structure, and the status of academics). It is advisable to regulate key questions like types of professorships and, possibly, basic principles of remuneration on the system level, while more detailed questions like procedures and institution-internal responsibilities are delegated to HEIs in accordance with the principles of institutional autonomy and subsidiarity.	*Achieved*. Basic positions and minimum salaries are established in the law, and institutions are autonomous in determining the details of remuneration approaches.	Maintain clarity on basic principles of remuneration and types of position in legislation while exploring ways to make salaries more adequate and performance oriented.
System level	**C.2** Unions can play an important role when questions like overall salary increases are addressed. As with other stakeholders, it pays [...] to involve them early on in questions of future salary models.	*Partially achieved*. Unions are involved in legislative processes but not systematically in all relevant discussions on the system (and/or institutional) level.	Strengthen the role of unions at the institutional level and, where appropriate, the system level, while at the same time seeking measures to enhance the capacity of unions.

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Concept and measurement of (good) performance			
System level	**C.3** The concept of performance has to be open and reflect diversity, that is, it needs to be open to different kinds of academic performance (including, for example, artistic performance) and functions fulfilled in an academic context.	*Achieved.* The election criteria reflect different dimensions of performance, and institutions with a special profile have the possibility of adapting the criteria.	Maintain transparency and adaptability of election criteria while exploring diverse ways of career advancement.
Institutional level	**C.3** The concept of performance has to be open and reflect diversity, that is, it needs to be open to different kinds of academic performance (including, for example, artistic performance) and functions fulfilled in an academic context.	*Partially achieved*. While selection criteria covering different kinds of academic performance are determined by [...] national legislation, some institutions put a particular emphasis on research performance (also for teaching-focused positions).	Ensure the integration of teaching and research functions, including in individual academic careers, at the institutional level.
System level	**C.4** The concept of performance relates to different types of activities and functions: (a) what can be considered as performance in the narrower sense (related primarily to teaching and research), and (b) the takeover of certain functions or fulfillment of certain roles (like vice-rector or dean). Further, (c) performance-based remuneration systems tend to provide for a market allowance, awarded in the context of negotiation (which might not relate to performance in the narrower sense but is also covered by respective models). Along these lines, good PBS models take different performance categories into account.	*Partially achieved*. While there is no framework for PBS models on the national level, system-level regulations do not prevent institutions from establishing such models (while the financial situation might in fact create a major obstacle). Minimum salaries for some functions are determined by the law.	Further develop the concept of performance by encouraging HEIs to consider – and providing incentives for – the introduction of performance-supporting measures on the institutional level.
Institutional level	**C.4** The concept of performance relates to different types of activities and functions: (a) what can be considered as performance in the narrower sense (related primarily to teaching and research), and (b) the takeover of certain functions or fulfillment of certain roles (like vice-rector or dean). Further, (c) performance-based remuneration systems tend to provide for a market allowance, awarded in the context of negotiation (which might not relate to performance in the narrower sense but is also covered by respective models). Along these lines, good PBS models take different performance categories into account.	*Achieved only to a limited extent*. Salaries for some functions are determined by the national framework. While there are no PBS models at the institutional level, there are some initial considerations on introducing monetary rewards for performance.	Further develop the concept of, and provide incentives for, performance on the institutional level. To the extent that PBS models are developed in the future, take different performance categories into account while striving to ensure an integrated approach to careers with regard to different types of academic duty (teaching, research, administrative duty, etc.).

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System level	**C.5** Countries need to have a clear approach to handling those three categories (that is, academic performance, takeover of functions and roles, and market allowance) – either as part of one PBS model or as three separate ones. As usual, the simpler, the better.	*Partially achieved.* There is a systematic approach to one of the categories (namely, academic functions), while there is no systematic approach to, or considerations on, the other two categories or a comprehensive framework covering all three categories. However, current legislation does not prevent institutions from developing PBS models.	Promote a more diverse approach to performance (beyond incentivizing academic functions). This can be communicated through sectoral consultations or capacity building and supported by incentives.
System level	**C.6** Diverse higher education systems need to mirror diversity in their approaches to performance and remuneration. Some HEIs that focus strongly on research are likely to reward related individual (or collective) performance through their PBS systems. Other countries and institutions might want to use the opportunities PBS provides to counteract undesirable tendencies (for example, the neglect of teaching and service). Further, PBS models can be combined with other instruments such as performance contracts.	*Partially achieved*. While institutions enjoy autonomy in designing incentive systems, performance-based funding allocations to institutions are geared toward research, which is likely to reflect on bonus systems at the institutional level.	Consider broadening the criteria for performance allocations ("Pillar 2") to HEIs in future to incentivize teaching excellence and third-mission-related activities. This might require a broader discussion on measuring and rewarding teaching excellence.
Institutional level	**C.6** Diverse higher education systems need to mirror diversity in their approaches to performance and remuneration. Some HEIs that focus strongly on research are likely to reward related individual (or collective) performance through their PBS systems. Other countries and institutions might want to use the opportunities PBS provides to counteract undesirable tendencies (for example, the neglect of teaching and service). Further, PBS models can be combined with other instruments such as performance contracts.	*Achieved only to a limited extent.* Some institutions have started to develop or implement reward systems (mainly bonus systems); however, these are primarily geared toward research. Also, criteria might not sufficiently reflect disciplinary differences.	Strive to achieve a more balanced view on performance, particularly by incentivizing excellence in both teaching and research.
Aspects of model development – linking performance to models and procedures			
System level	**C.7** PBS systems combine fixed salary components (ensuring academic freedom and providing stability) with performance rewards. The basic architecture needs to be anchored at the system level while HEIs form related models according to their strategic priorities.	*Not applicable.* There is no framework/ architecture for PBS systems in place.	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.*

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Institutional level	**C.7** PBS systems combine fixed salary components (ensuring academic freedom and providing stability) with performance rewards. The basic architecture needs to be anchored at the system level while HEIs form related models according to their strategic priorities.	*Not applicable.* There are no PBS systems in place. While some institutions have developed or are in the process of developing bonus systems, current arrangements surrounding academic employment and remuneration make basic salary components more volatile than in comparator systems (World Bank 2017).	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.*
Institutional level	**C.8** PBS systems reflect institutional strategies. While performance considerations generally derive from the key functions of academic staff (teaching, research and development, and service), the emphasis needs to be put across and within these categories in accordance with strategic institutional priorities. This has to translate into the definition of performance categories and subsequent "criteria."	*Not applicable.* There are no PBS systems in place. However, approaches to bonus payments are aligned with institutional strategies (with both of them being geared mainly toward research).	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.* Where nucleus performance-supporting measures are under development, continue to ensure that they are aligned with institutional strategies.
Institutional level	**C.9** Further, PBS systems avoid crowding-out effects (that is, when intrinsic motivation is supplanted by extrinsic motivation) and support (or, at least, do not negatively impact) intrinsic motivation through the incentives they set. In particular, incentive systems should not be directly linked to (every) single activity, which would support the perception of the incentive as a controlling intervention and thus endanger intrinsic motivation. However, rewarding single activities on a temporary basis that can be considered as "extra" rather than a "normal" part of academic work, is less likely to lead to crowding-out effects. Also, institutional models that accommodate different types of individual performance enhance motivation and avoid crowding-out effects.	*Not applicable.* There are no PBS systems in place. However, some institutions display a tendency to reward single activities that can be considered a "normal" part of academic work in a very detailed way, an approach which might jeopardize intrinsic motivation.	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.* Institutions gathering experience with bonus systems are encouraged to focus on major aspects of performance, and not to reward "small," single activities, in order to avoid a crowding-out effect.

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System level	**C.10** Performance criteria, assessment, and the related award process need to be considered fair, transparent, and clearly structured. This also applies to the use of different instruments like bonuses and temporary and permanent allowances.	*Not applicable.* Performance criteria feeding into PBS or bonus systems and related processes are not established at the system level.	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.* However, the Ministry would be encouraged to provide a forum for HEIs who have gathered experience in this area to showcase their models and trigger a broader discussion on the subject within the sector.
Institutional level	**C.10** Performance criteria, assessment, and the related award process need to be considered fair, transparent, and clearly structured. This also applies to the use of different instruments like bonuses and temporary and permanent allowances.	*Achieved* in institutions where a bonus system is in place (*not applicable* to other institutions).	HEIs which have gathered experience with bonus systems should maintain a transparent approach to criteria, assessment, and the related award process. These HEIs are further encouraged to showcase their approaches as part of peer learning.
Institutional level	**C.11** While PBS models are supposed to reflect institutional priorities, they should also be "actionable," that is, their design and implementation should reflect constraints with regard to administrative processes and financial management. In practice, this favors more structured approaches (for example, multistage salary systems with a suitable number of levels and descriptors).	*Not applicable.* There are no PBS systems in place. However, the bonus systems at some institutions do not seem to pose particular administrative or managerial challenges. Nevertheless, it would be advisable to take these aspects into consideration as the models evolve.	To the extent that HEIs with initial experience expand their performance-supporting measures, they will need to closely monitor administrative challenges. This would apply in particular to the point in time when HEIs move from a more "ad-hoc" type reward system toward a medium-to-long-term model with longer-term implications for financial planning at the HEI.
Institutional level	**C.12** Decision-making processes related to the institutional framework for remuneration need to combine adequately top-down and bottom-up elements to mediate among interests and reach adequate decisions, while at the same time ensuring efficiency. HEI leadership plays a key role in the development and implementation of PBS models; however, deans are likely to fulfill routine functions like proposing staff members for awards or providing written statements for applications.	*Not applicable.* There are no PBS systems in place. However, criteria of the bonus systems at some institutions tend to be developed and applied at the central level, even though the senate plays a role in approving them.	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.* The need to balance top-down with bottom-up approaches will already prove beneficial at the inception stage, i.e., when HEIs start developing a PBS model or at least develop a systematic approach toward performance-supporting measures.

Level	Criteria for Good System- and Institution-Level Human Resource Policies	Status Quo Assessment	Recommendations
Remuneration and financial management			
System level	**C.13** Financial management considerations are an integral part of the development and implementation of PBS systems. This concerns, among others, a clear understanding of the available funds, the development of financial scenarios of how the PBS system (and related reserves) is likely to develop in future, and considerations regarding the pension implications of allowances. The development and implementation of PBS systems furthermore requires managerial and administrative staff members with the right competencies. On the system level, financial management considerations need to involve the Ministry of Finance.	*Not applicable.* There is no framework/architecture for PBS systems in place.	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.*
Institutional level	**C.13** Financial management considerations are an integral part of the development and implementation of PBS systems. This concerns, among others, a clear understanding of the available funds, the development of financial scenarios of how the PBS system (and related reserves) is likely to develop in future, and considerations regarding the pension implications of allowances. The development and implementation of PBS systems furthermore requires managerial and administrative staff members with the right competencies. On the system level, financial management considerations need to involve the Ministry of Finance.	*Not applicable.* There are no PBS systems in place.	*The criteria will need to be taken into account in case a PBS system is going to be designed in future.* While this is already of importance at the stage where HEIs work with or develop more "ad-hoc"-type bonus systems, this criterion will be imperative when HEIs start developing comprehensive medium-to-long-term PBS systems.

Note: a. Questions of how to provide financial incentives to HEIs, also vis-à-vis an increase in effectiveness and efficiency, have been the subject of earlier World Bank advisory work in Latvia.

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