

TENURE AND TENURE TRACK AT LERU UNIVERSITIES:

MODELS FOR ATTRACTIVE RESEARCH CAREERS IN EUROPE

LEAGUE OF EUROPEAN RESEARCH UNIVERSITIES

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About LERU

LERU was founded in 2002 as an association of research-intensive universities sharing the values of high-quality teaching in an environment of internationally competitive research. The League is committed to: education through an awareness of the frontiers of human understanding; the creation of new knowledge through basic research, which is the ultimate source of innovation in society; the promotion of research across a broad front, which creates a unique capacity to reconfigure activities in response to new opportunities and problems. The purpose of the League is to advocate these values, to influence policy in Europe and to develop best practice through mutual exchange of experience.

EXECUTIVE SUMMARY

- The key factor for successful research and research-based teaching as a basis for Europe's further success as a knowledge society is to attract the best and most creative minds to the universities and to support them in a nourishing and challenging environment. In light of Europe's demographic development and the undeniable need to keep the advantage over international competitors, it is absolutely imperative that research-intensive universities such as the LERU members and others pay special attention to the careers of the most promising excellent post-doctoral researchers.
- To attain this goal, we need to create reliable and projectable post-PhD career paths for young academics¹, who often also have to reconcile the demands of family and career in this phase of their lives. Particular attention must therefore be paid to providing them with equal opportunities and balancing existing gender-based disadvantages (LERU, 2012, 2010). To this end, we see the concept of tenure track as a key tool for attracting and keeping the brightest minds at an early career stage in Europe's universities.
- An attractive and open labour market for researchers is also one of the goals of the European Commission, identified as one of five European Research Area (ERA) priorities (EC, 2012). LERU supports and actively engages with this agenda (LERU, 2014a, 2014b).
- Tenure track is defined in this paper as a fixed-term contract advertised with the perspective of a tenured, i.e., permanent, position at a higher level, subject to positive evaluation and without renewed advertising of and application for the next position. This contrasts with 'probation-on-the-job' or other models in which academic promotion is granted on the basis of merit but at the same level.
- In Europe's changing academic landscape, which is defined by diverse regulatory frameworks, higher educational systems have experimented with and systematically operated tenure-track models. Nonetheless, the chosen models vary not only in different European countries but also between universities. In general, universities have chosen an "up-or-out" system. The United Kingdom, France and Spain have not yet experimented with tenure-track models. While in the UK the probation-on-the-job model has been tried and tested successfully, in France strict regulations on academic job competition leave no room for the implementation of tenure track. So far there has been no attempt in Europe, even at the level of any individual country, to introduce a tenure-track academic faculty system as a direct equivalent to the North American system.
- One of the advantages of the tenure-track system is the possibility of providing an early signal to scholars who wish to stay in academia. This evolution is in line with the trend of introducing more formal autonomy (i.e. academic independence) at the earliest possible stage of an individual's research career. Projectable career paths can also be an effective tool to keep women in academia, who otherwise may seek employment outside academia when facing the need to reconcile family and career.
- This advice paper analyses the "set-up phase" of implementing tenure-track programmes at LERU universities, describes the country-specific and academic cultural barriers to the development and implementation processes and provides an account of recent developments. Having extensively consulted our members, we identify three models of implementation of the tenure-track concept in those LERU universities and countries where the system exists.
- At most LERU universities tenure-track programmes are in a relatively early trial or implementation stage. Many LERU universities are in the process of learning from the first cohorts of researchers who have gone through, or are still going through the tenure-track process. Therefore it is not yet possible to come to a comprehensive or definitive appraisal among LERU universities of tenure track as a suitable strategic tool for attracting the best young researchers and implementing professorships.

1 "Young" should be understood in terms of academic seniority, since the age at which doctoral candidates graduate and the ways in which they subsequently progress vary widely.

INTRODUCTION

- Universities, and indeed all organisations that are developing or planning to develop tenure-track programmes as a means of improving the career prospects of excellent young researchers, should carefully evaluate this model in relation to other career tracks in place. LERU thus formulates a number of recommendations to the following bodies:
 - **Universities and other research institutions** should provide guidance and support for beginning tenure-track appointees, continue with appropriate support and mentoring along the way, and pay special and timely attention to those researchers to whom tenure might be not granted.
 - **National governments** should grant universities the financial support and the autonomy to experiment with the tenure-track process and learn from their experiments. They can support universities in their efforts to bring quality, clarity and transparency to the tenure-track process.
 - **The European Commission** could support and fund the further study of tenure track at European universities. It should encourage national governments to open up traditional career paths to new possibilities such as tenure track and to remove legal barriers that prevent research institutions from providing outstanding young researchers with attractive career perspectives.
1. In the report *Harvesting Talent: strengthening research careers in Europe* (LERU, 2010) the LERU universities' key objectives for research careers policy were stated as: "to attract highly talented graduates from the international pool of talent; to support realisation of a researcher's potential for creativity; and to maximise benefit to knowledge, learning and society." Consequently, the LERU members strive to "maximise the potential for high achievement and provide an attractive career framework" (p. 3).
 2. While some papers have focused on the opportunities for early career researchers, there has been little documentation on career paths towards the higher and highest stages of the academic profession. In light of demographic and other developments in Europe and the undeniable need to keep an advantage over international competitors, LERU and other research-intensive European universities are keen to attract (or gain back) the most promising post-doctoral scientists to an academic career. To attain that goal, we need to create reliable and projectable post-PhD career paths for young academics who need to consider how to balance family and career in this phase of their lives. Although this applies to both male and female academics, there still is a great deal of inequality; women are clearly under-represented in many academic disciplines and in almost all advanced academic positions. Particular attention must therefore be paid to providing them with equal opportunities and to offsetting existing gender-based disadvantages (LERU, 2012, 2010). To this end, the concept of tenure track is seen as a key tool for attracting and keeping the brightest minds at an early career stage in Europe's universities.
 3. An attractive and open labour market for researchers is also one of the goals of the European Commission. Indeed it is one of five top priorities identified by the Commission (EC, 2012) to achieve a European Research Area (ERA), a "unified research area open to the world based on the Internal Market, in which researchers, scientific knowledge and technology circulate freely and through which the Union and its Member States strengthen their scientific and technological bases, their competitiveness and their capacity to collectively address grand challenges". LERU has been actively engaged with this agenda in Brussels and with its member universities. In 2012 LERU signed a Memorandum of Understanding on

the ERA priorities with the EC², committing itself to support and advance a number of ERA-related issues, the majority of which were directly aimed at promoting attractive research training and careers. A detailed account of LERU's initiatives in this regard can be found in LERU (2014a). In addition, in a recent LERU briefing paper for the new EU legislators taking office in 2014 (LERU, 2014b) we have reiterated the need for continued policy attention to the ERA priorities, in particular the open labour market for researchers and the gender equality and gender mainstreaming in research priorities.

4. Changes in recent years show that, with the exception of the United Kingdom and France, European higher education systems have tended towards implementing tenure-track models³. This advice paper examines the “set-up stage” in the implementation of tenure-track programmes at LERU universities. The work is based on a survey on tenure and tenure-track systems at LERU universities. The survey was created and carried out by the University of Freiburg and refined through subsequent questionnaires and discussions within the Research Careers Community. The majority of the information (including the figures in the tables) emerged in close collaboration and dialogue with the LERU universities. The wider literature on this topic was also consulted.
5. The paper is structured as follows: in the remainder of this introduction we define the term *tenure track* in contrast to *probation on the job* and we explain the terminology of two career framework models which are applied throughout the paper. The next section discusses four traditional career models in Europe and North America, describing their basic structures, similarities and differences. It is followed by a discussion of recent developments towards tenure track in Europe, identifying country-specific and academic cultural barriers related to the processes of developing and implementing tenure-track programmes, and of recent developments and challenges in the North American model. The paper closes with conclusions and recommendations.
6. In this paper we use the terms *tenure*, *tenure track* and *probation* defined as follows:
 - **Tenure:** a permanent academic position, irrespective of career stage, irrespective of type of employment (e.g. civil service).
 - **Tenure track:** a fixed-term contract advertised with the perspective of a tenured, i.e. permanent, position at a higher level, subject to positive evaluation, but without renewed advertising of and application for the next position.
 - **Probation:** a fixed-term contract with the prospect of a permanent academic position at the same level after an assessment procedure.
7. In order to improve the mobility of researchers within Europe, different frameworks have been created in recent years to classify the various academic career stages of European university systems (Konsortium Bundesbericht Wissenschaftlicher Nachwuchs, 2013). These frameworks, while showing a lot of similarities, also display some dissonances.
8. In comparing and differentiating various academic career models throughout the LERU universities and beyond, two terminologies should be considered: that of the LERU four-stage career framework (LERU, 2010), and that of the European Framework for Research Careers (EC, 2011). Both terminologies distinguish four phases or stages (see figure 1). While the LERU scheme stresses the formal independence associated with a given position in the academic sector, the European Framework for Research Careers focuses rather on the stages of the research career ladder and on researchers' competencies at each stage. Differences become evident at the R₃ and R₄ stages. A Full Professorship maps to the highest stage in both frameworks (phase 4, or R₄). A Swiss or German Assistant Professor (“Assistenzprofessor”, “Juniorprofessor”), however, would also map to phase 4 in the LERU terminology, but to stage R₃ in the European Framework.
9. This paper will use the terminology of the European Framework, as it allows for better differentiation of the stages that are relevant for the tenure-track positions in question.

² <http://www.leru.org/index.php/public/news/press-release-leru-and-era-lets-make-progress/>, accessed 13.08.2014.

³ The EuroTech Universities Alliance has examined tenure track programmes in place at three of its four members (EPFL, TUM and TU/e). See <http://www.tum.de/en/about-tum/news/press-releases/short/article/30918/>, accessed 13.08.2014.

Figure 1. LERU and EU career frameworks

LERU Four-Stage Career Framework	Phase 1 Doctoral Candidate	Phase 2 Post-doctoral Scientist	Phase 3 University Scientist	Phase 4 Professor
European Framework for Research Careers	R1 First stage Researcher	R2 Recognized Researcher	R3 Established Researcher	R4 Leading Researcher

Definitions:**LERU Four-Stage Career Framework**

Phase 1: Doctoral Candidate:	Doctoral Studies, Teaching Assistant, Research Assistant
Phase 2: Post-doctoral Scientist:	Post-doc, Junior Lecturer, Junior Academic
Phase 3: University Scientist:	Research Specialist/Research Manager, Senior Lecturer, Senior Scientist
Phase 4: Professor:	Full Professor, Research Professor, Adjunct Professor

European Framework for Research Careers

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 certain level of independence
R4: Leading Researcher:	Researchers leading their research area or field

TRADITIONAL ACADEMIC CAREER MODELS IN EUROPE AND NORTH AMERICA

10. Four co-existing basic models for an academic career up to professorship level are presented below. These are typical for European and North American higher education systems. The basic structures of these models are described: their advantages and disadvantages as well as their limitations. The variety of models currently in use within the various university systems is so great that it is impossible to present them all in great detail. However, differentiating them in this way provides a foundation for understanding current efforts to provide a sense of transparency and predictability in academic careers, according to outstanding scholarly achievements. The following basic models are presented:
- a. The probation-on-the-job model (UK)
 - b. The two-tier promotion and habilitation model (Central Europe)
 - c. The centralistic model with state approbation (France)
 - d. The North American tenure-track model
- A. **The probation-on-the-job model in the United Kingdom -- Permanent employment at an early career stage**
11. The classic tenure model involves a permanent contract at a university, which offers various employment possibilities, e.g. Lectureships and Senior Lectureships, at quite an early point of an academic's career. In order to obtain one of the tenured positions, it is usually necessary to have a PhD. Furthermore, the doctorate serves as a qualification for independent research and teaching. Between one's doctorate and a tenured position, fixed-term employment is usual (e.g. as a Temporary Lecturer or Teaching Fellow).
12. In the UK, the most commonly used academic titles are Lecturer, Senior Lecturer, Reader, and Professor. The titles of Assistant Professor or Associate Professor are increasingly being used by some institutions instead of Lecturer, Senior Lecturer and

Reader. This is evident among the Russell Group universities, which often find themselves competing internationally when recruiting academics, for example from North America. Lecturer, Senior Lecturer, Reader, and Professor titles normally reflect grades recognised as “tenured” positions as defined in this paper. Often Lecturer will be a probationary grade, although the passing of a probation period does not guarantee a change of title.

13. Researchers constitute a separate category of academics. They are usually fixed-term employees who work under titles such as Research Assistant or Research Associate. Researchers, often referred to as post-doctoral employees, are mostly funded through grants and will often carry out other duties, such as teaching, in addition to their research. For many, this level marks a stepping stone to a career in academia – by obtaining a lectureship – or a career outside academia e.g. research in the private sector. Another important group is Research Fellows – for example, Royal Society Fellows – who are technically not employees, but have chosen to carry out their work at a particular institution on the basis that they will receive the same benefits as other academics.
14. In the framework of the UK university system, the common career ladder starts with securing a position as a Lecturer (or equivalent title). In many institutions this title will also reflect the fact that the primary responsibility is teaching. In research-led institutions in the UK the expectation is for the academic to excel in teaching, research and general service roles.
15. Appointees to Lectureships will normally have a PhD. After a two- to three-year probation period (which can be up to five years at certain institutions), the individual is usually offered a permanent contract and becomes independent in scholarly terms, for example as a Principal Investigator on a grant. During the probation period the employee in question is required to meet a set of performance criteria, stipulated in advance. If the incumbent meets the requirements, he or she will be confirmed in the role. Relevant performance then dictates the trajectory of promotion to more senior roles. Promotion is merit-based and in many institutions is also subject to turnover, creating vacancies as well as growth in new research areas. The UK has seen a trend towards the average age at appointment to a Lectureship increasing, approaching 40 in universities such as the University of Cambridge.
16. The classic tenure system offers a number of advan-

tages, the foremost of which is academic freedom at a relatively early stage, often immediately after the doctoral degree. This greatly strengthens the position of junior academic staff and grants them employment security, with the prospect of steady advancement in an academic career throughout their professional life.

17. While permanent positions are only granted to promising PhD holders, and application procedures are rather rigid at some institutions, the system nonetheless makes a certain leap of faith regarding tenure candidates with early tenure. Although there is always a probationary period, it is generally very rare for contracts to be terminated within this period.
18. A more pressing challenge is the danger, in times of economic stringency, of fostering a structure involving an ageing body of tenured staff, with fewer tenured positions being created and universities tending to offer fixed-term contracts. A probation system therefore should not be entirely dependent on public funding if it is to stay balanced. In some cases the divide between part-time and fixed-term research and teaching staff on the one hand and permanently employed academic staff on the other hand is becoming large to the point of social inequity.

B. The two-tier promotion and habilitation model in Central Europe -- Permanent employment at a later career stage

19. Habilitation (a post-doctoral lecturing qualification) or habilitation-equivalent achievements are the prerequisite for eligibility for a professorship in several European countries including Germany, Austria, Switzerland, Denmark, the Czech Republic, Poland, and Hungary. In these countries' university systems, an additional scholarly qualification after the PhD is required for independent research and teaching at a professorial level. The doctorate is only the initial prerequisite for embarking on an academic career. Therefore, in countries with a habilitation system, positions for non-habilitated scientists are often seen as fixed-term qualification positions.
20. The main principles of the German academic system include habilitation, the legal requirement to appoint the best candidates at the rank of professor, the prominence of chairs, and the construct of qualification positions. While habilitation has been a prerequisite for professorial appointments until recently, it is now increasingly being replaced

by habilitation-equivalent achievements, especially in the fields of sciences and engineering. The legal requirement of selection of the best has been implemented as a formal ban on internal appointment as a professor. Thus, internal candidates can only be considered in justified exceptional cases. The prominence of chairs developed historically, as a full professor often holds a dual role as head of the institute. That is why appointment negotiations are not only important for the income and reputation of the professor in question, but also for the profile of the discipline. The perception of positions for junior academic staff as primarily fixed-term qualification positions has to be seen in this context. Not only would the desired regular turnover of heads and ideas otherwise be blocked (view of the institution), but the prospects for success in future appointment negotiations might also be limited (view of the professorial candidate, who might want to have vacant positions to fill with his or her own staff). The designation “qualification” position grants social legitimacy to fixed-term contracts.

21. A prominent feature of the German system is the relatively low percentage of professorships among full-time academic staff. Furthermore, there is an almost complete absence of independent full-time university teachers below the professorial top level. As of 2009, about 85% of career academics (whose main occupation was at a university) worked as dependent mid-level faculty below professorial level (Kreckel, 2010). This group includes virtually all third-party funded researchers and scholars, as well as a considerable portion of doctoral candidates. In total, 84% of the career academics below professorial level were on fixed-term positions in 2011 (Wissenschaftsrat, 2014), even though among the state-funded positions a substantial part is filled with permanent contracts (e.g. 35% in the State of Baden-Württemberg). However, in the present paper the focus lies on those researchers who have already completed their doctoral theses and are pursuing their way towards a professorship or other (fairly equivalent) permanent position.
22. While the habilitation system is still prevalent, other programmes have been set up in order to break through the rigid structures. In 2002 the German Junior Professorship (“WI”) was established. For the first time scholars below the level of full professor were given independent status in research

and teaching as they qualified for appointment to a full professorship. The number of independent post-doctoral or junior researchers has increased in recent years. Holding an Emmy Noether fellowship⁴ or an ERC grant, for example, is at the same level (at least) as working on a habilitation. This has broadened the qualification scope for a professorial position and has made academic careers in Germany more attractive, predictable, and more open to international mobility.

23. The performance criteria in the habilitation process guarantee that only scholars who prove high performance can attain the highest academic position, namely a professorship. This ensures that the academic system is led by recognised scientists. Since the qualification process takes a long time, however, there is a danger that many highly qualified researchers may leave the university due to compelling offers outside academia. Especially for women the time between the PhD and habilitation, often marked by a career break due to pregnancy and maternity leave, is fragile and constitutes a contributing factor to the so-called leaky pipeline, although performance assessments can and do nowadays take career breaks into account (LERU, 2012).
24. Disadvantages of the system include the fact that obtaining a professorship occurs late in an individual’s academic career. Scholars remain “early-career” researchers until reaching professorial level and face many years of uncertainty in their academic careers. In Germany, Austria and Switzerland in particular, the system is affected by the dominance of chairs and the related fact that professorships make up only a small percentage of the full-time academic positions. The critical point in an academic career is therefore the transition from habilitation to a professorship.
25. A solution for this problem could be to raise the percentage of independent full-time teaching staff appointed by strict quality criteria and to offer a clear tenure perspective. In view of the limited resources for personnel, a prerequisite would be that the dependent academic staff assigned to a professorship would have to be significantly reduced.
26. Additionally, while the evaluation criteria should continue to be very strict, the formal ban on internal appointments to professorships should be relaxed

4 See http://www.dfg.de/en/research_funding/programmes/individual/emmy_noether/, accessed 13.08.2014.

in order to motivate independent research group leaders and grant holders to pursue a career within their current institutions.

C. The centralistic state approbation model in France – A combination of tenure and habilitation models

27. France employs a unique model for academic careers, which displays elements from both systems described above (Kreckel, 2010). After earning their doctoral degree, researchers can apply for a permanent position as *Maître de Conférences*, starting at stage R2. This is generally considered a permanent position as a civil servant, with all the ensuing advantages. The position roughly corresponds to Assistant or Associate Professor at an international level, and *Maîtres de Conférences* advance within this position to the academic career stage R3. To proceed to stage R4, researchers are required to earn a *habilitation de diriger des recherches*, which corresponds to the habilitation in other higher education systems. Once they have acquired this habilitation, researchers are eligible to apply for a full professorship. Therefore, at the junior staff level a probation model is used, whereas the senior staff level applies a habilitation model.
28. The French system, which relies heavily on public funding at the university level, provides permanent positions for academics between the age of 28 and 38, thus attracting very young and motivated researchers who enjoy academic freedom relatively early in their careers. As with other tenure models it entails a risk of binding staff members for a lifetime at a relatively young age, with possible implications for efficiency and competitiveness.

D. The North American tenure-track model -- Prospects at an early career stage

29. In the North American tenure-track model, promising post-doctoral scholars are offered a permanent position at senior staff level via a fixed-term track. Tenure track starts at an early stage of an individual's academic career, corresponding to the second stage of the European Framework for Research Careers. Initially, a fixed-term contract with a tenure-track option is offered, during which the appointees are subject to various evaluations of their scientific and academic performance. The evaluation criteria are defined by an appointed committee and communicated to the candidates before they enter the

track. If evaluated positively, the appointee is then offered a tenured position corresponding to stages R3-R4. Depending on the specific model, the extent of the tenure track varies. It can consist of several consecutive fixed-term contracts, and evaluations can occur on a regular basis or at the end of each term. Different models can encompass tenure-track periods of between four and ten years. The average tenure track takes about six years.

30. The North American tenure-track model has, historically speaking, served as the prototype for tenure-track systems (Kreckel, 2010). Since the mid-twentieth century, nearly all faculty members at North American universities and colleges traditionally hold a professorial title with a relatively similar range of duties and privileges. Researchers and scholars can be appointed to a tenure-track position at the rank of Assistant Professor (stage R2) immediately after receiving their PhD or as a post-doctoral researcher. Different practices can be found in the wide variety of North American universities, depending on the university's reputation and resources. Traditionally tenure track is regarded as a probationary period for one candidate on the way to an available, albeit not guaranteed, tenured position. Some universities, however, hire several candidates to compete for only one tenured position. In either case, tenure-track candidates are expected to engage fully in teaching, research, acquiring third-party research funding, publishing, and service activities within the university and beyond. At the end of the tenure-track period, they generally face an "up or out" situation. In case of a negative evaluation they are usually asked to leave the university, while upon positive evaluation tenure is usually (though not necessarily) granted along with a promotion to Associate Professor (stage R3). After a further (usually) six or more years an Associate Professor may go forward for promotion to Full Professor (stage R4).
31. The North American tenure-track model aims to offer excellent young researchers a well-structured career path. The prospect of a tenured professorial position within the university after a fixed term allows for active planning at a crucial stage of an individual's academic career. From the candidate's perspective a tenure track provides early job security to a certain degree, as well as academic freedom, represented by stage R3. It ideally also strengthens his or her commitment and institutional bonding. Through mentoring and support the appointee has early access to a wide range of academic resources, networks and opportunities. A thorough evaluation

process ensures quality management over a prolonged period of time, during which candidates can also display their ability to develop within their field. In theory the system also prevents the further ageing of the academic staff.

32. On the other hand, the elaborate application, evaluation, and mentoring procedures make it a labour-intensive system. It can be regarded as a long-term investment with risks on both sides in the case of negative evaluations. This raises the question of how much competition a specific tenure-track position can afford, as well as the question of what happens to those who do not meet the required standards at the end. Factors such as university budgets, institutional reputation and specific conditions of the academic discipline in which the position is available will influence the attractiveness of offering or accepting tenure-track contracts. If properly applied, a tenure-track system is an effective mechanism to refresh essential academic positions with highly motivated and qualified young researchers. The strongly diversified North American university landscape offers more flexible career options for junior researchers. Not receiving tenure does not necessarily mean the end of an academic career. For example, a tenure-track candidate at a top research university who doesn't pass the final evaluation may be offered an attractive position at a college or university elsewhere and is thus given an opportunity to progress his or her academic career, whilst in Europe a negative evaluation could entail a risk of career devastating stigmatisation.

RECENT DEVELOPMENTS OF CAREER PATHS TOWARDS TENURE TRACK IN LERU UNIVERSITIES' COUNTRIES AND NORTH AMERICA

33. While the percentage of tenure-track appointments has been gradually declining in the US education system over the past 30 years, the formerly rigid traditional academic career models in Europe have opened up in the last ten years, introducing more comparable career paths to a professorship in many European countries. Although the number of professorships itself has been stable over time, promising researchers have been given the chance to enter stage R3 and get on a track to a tenured position on stage R3 or R4 of the career chart at a younger age.
34. There is a varying spectrum of possible career paths in Europe. On the one hand there is the British model, where after a probation period in relatively low-threshold permanent positions, academic independence can be attained as early as stage R2. In this model there is no formalised tenure track leading to higher academic positions. In other countries, such as the Netherlands, Belgium (Flanders), Italy or Sweden, tenure tracks are offered with an R3 target position. On the other hand, in habilitation countries such as Germany, Switzerland or Finland, tenure tracks can lead directly to R4 full professorships.
35. In the next section we review recent systemic developments in the ten countries where LERU universities are located and we discuss how the LERU universities in each of these countries are implementing tenure-track systems or are otherwise adapting career tracks. Tables 1 and 2 contain information about timeframes, numbers/titles/types of appointments, and success rates obtained through a survey of LERU universities.
36. Table 1 provides an overview of various tenure-track implementations at LERU universities and shows that twelve universities implemented a tenure-track model, mostly in the late 2000s. Those universities changed their traditional recruitment system, using the tenure-track model as a strategic tool to hire academic personnel. The LERU universities which don't use a tenure-track model pursue different

Table 1. Tenure-track (TT) implementation at LERU universities

Country	LERU-University	TT implementation			Local term for the TT position	TT Entry stage according to:		TT target stage according to the European framework
		TT	Year of implementation	Term of TT contract [years]		LERU framework	European framework	
Belgium (Flanders)	KU Leuven	Yes	2009	5	Tenure-track Docent/ Extra' tenure-track Docent	3	R ₃	R ₃
Finland	Helsinki	Yes	2010	6-10	Apulaisprofessori	3	R ₃	R ₄
France		No	-	-	-	-	-	-
Germany	Freiburg	Yes	2009	4+2	Juniorprofessor	4	R ₃	R ₄
	LMU Munich	Yes	2000	3-6	W2 Professor	4	R ₃	R ₃ or R ₄
	Heidelberg	Yes	2008	4 + 2	Juniorprofessor	4	R ₃	R ₄
Italy	Milan	Yes	2010	3	Ricercatore	3	R ₃	R ₃
The Netherlands	Amsterdam	Yes	2009	5	Universitair Hoofddocent 2	3	R ₃	R ₃
	Leiden	Yes	2009	5+1	Universitair Hoofddocent	3	R ₃	R ₃ → R ₄
	Utrecht	Yes	2009	max. 6	Universitair (Hoofd)docent	3	R ₃	R ₃ → R ₄
Sweden	Lund	Yes	2007-2011	2+4	Biträdande universitetslektor	2	R ₂	R ₃
Switzerland	Genève	Yes	2008	3+3	Assistenzprofessor	4	R ₃	R ₃ or R ₄ (Depends on the chosen candidate)
	Zurich	Yes	2001	3+3	Assistenzprofessor mit Tenure Track	4	R ₃	R ₃ or R ₄
Spain		No	-	-	-	-	-	-
UK		No	-	-	-	-	-	-

Table 2. Tenure-track (TT) specifics at LERU universities with an official tenure-track system

Country	LERU University	Number of TT scientists/scholars (2012) ^I	Number of new TT appointments (2012) ^{II}	Accumulated success rate for granted tenure subsequent to TT: percentage/cases (up until 2012)	TT Target stage 3: number of academic appointments equivalent to the TT target position (average p.a. 2008-2012) ^{III}	Appointments to Full Professor by traditional means or successful completion of a TT (average p.a. 2008-2012) ^{IV}
Belgium (Flanders)	KU Leuven	101	21	0	9.2	6
Finland	Helsinki	22	12	0	-	43
Germany	Freiburg	9	2	100% / 1	-	19
	Heidelberg	3	1	100% / 1	-	32
	LMU Munich	80	15	-	25	25
Italy	Milan	-	-	-	13	27
The Netherlands	Amsterdam	10	8	0	30	45
	Leiden	38	8	100% / 1	2	32.2
	Utrecht	0	0	0	-	34
Sweden	Lund	121	8	100% / 21	140	72
Switzerland	Genève	38	9	0	8	25
	Zurich	13	1	100% / 14	19	24

Definitions:

^I Scientists and scholars on tenure track in 2012.

^{II} Total number of scientists and scholars starting tenure track in 2012.

^{III} Applicable only if target position of the tenure track is at stage R₃; average number of scientists and scholars per year newly appointed either to a traditional stage R₃ position or the corresponding stage R₃ position granted after successful completion of the tenure track.

^{IV} These include all new appointments to Full Professor per year via successful tenure track or any other traditional means. Assistant and Associate Professorships are excluded.

ways to promote young researchers (described in the respective chapters). Table 2 “Tenure-track (TT) specifics at LERU universities with an official tenure-track system” needs to be considered as the best possible approach to define the influence, success and proportion of tenure-track models with regard to the overall appointments during a given period of time. Since data is collected in different ways and due to the different national academic systems and governments some data couldn’t be delivered.

Probation on the job and tenure at an early career stage in the United Kingdom

37. After a series of higher education acts the university system in the UK emerged in 1992 as a “unitary” system with specific statutes for academic staff that aimed to protect academic freedom by promoting indefinite employment at all academic levels after generally successful probationary periods. Employment can be terminated for reasons of serious misconduct or incapacity, which is decided by boards of internal as well as external consultants (Teichler & Höhle, 2013).
38. Universities in the UK traditionally enjoy a relatively high autonomy in financial and other matters. In response to international challenges, however, this has led to an increasing influence of local institutional management systems; these tend to increase regulatory procedures in order to make a business model compete successfully on international markets. Academic autonomy therefore varies greatly depending on the reputational and research productivity factors of the institutions in question. All in all, the UK education system remains highly attractive for international academics, who constitute about one third of the annually appointed permanent academic positions in recent years (Kim & Locke, 2010).
39. While the traditional and distinguished academic career track of Lecturer, Senior Lecturer, Reader, and Professor remains widely untouched, the development of research and teaching staff is undergoing considerable changes. Increased competition for research funding, as well as student recruitment has created a significant growth of short-term employment contracts among research-only staff. The rise of such positions bears witness to a high willingness to be mobile on the part of young researchers from abroad, who usually do not expect to consolidate their career in the UK.
40. The **University of Cambridge**, for example, features a non-tenured research career ladder in addition to the academic ladder, comprising the positions of Research Assistant, Research Associate, Senior Research Associate, and Director of Research. In an effort to hold on to the most promising of these researchers, Cambridge strives to facilitate the option of crossing over from the research to the academic career ladder, as the latter is often still perceived as more prestigious. The University offers an individualised professional mentoring programme for those seeking to acquire additional professional and teaching skills. Researchers may subsequently apply for the equivalent position on the academic career path, which offers security of employment, whereas all research positions may be subject to termination, and continuation depends on self-subsistence via third-party funding. This cross-over is a relatively new option, and it is as yet too early to judge its success.
41. Leading British universities like Cambridge, Edinburgh, ICL, Oxford, and UCL successfully rely on their resources and infrastructure to acquire financial funding as well as excellent international researchers. At the same time they have a high interest in the facilitation of academic mobility throughout Europe. There are no plans, however, to implement a formal tenure-track system. The probation-on-the-job model has so far stood the test and has not suffered any loss of attractiveness by promising researchers’ eligibility for a full professorship within one’s home institution based on merit. Regarding gender equality it would be worth finding out whether the probation-on-the-job model is equally attractive to men and women. A slight adaptation towards the strongly professorially characterised European and North American higher education systems is shown by a certain tendency to award honorary professorial titles to accordingly designated Senior Lecturers and Readers.

Tenure tracks to higher career stages in the Netherlands, Belgium (Flanders), Sweden, and Italy

The Netherlands

42. At the Dutch universities three ranks exist in terms of professorships, i.e. Assistant Professor, Associate Professor, and Full Professor, all of which include both teaching and research functions. However, since 2002 a new system has been put in place that offers the opportunity of functionally differentiating these two roles (Teichler & Höhle, 2013).

43. A traditional post-PhD career path usually starts with a position as Lecturer (*Universitair Docent*). The next step is a tenured position as University Senior Lecturer level 2 and Associate Professor (*Universitair Hoofddocent 2*), followed by University Senior Lecturer level 1 and Associate Professor (*Universitair Hoofddocent 1*), which are also tenured and end with a tenured position as Full Professor (*Hoogleraar*)⁵.
44. In addition, some tenure-track positions are offered in the Netherlands. Their purpose is on the one hand to provide attractive academic positions for talented junior scientists and on the other hand to organise employment in a more performance-oriented way. The tenure-track system is stringent and adheres strictly to the principle of “up or out”. Either candidates meet the expectations related to the tenure-track position and to the predetermined goals within five or six years, or they are asked to leave (Teichler & Höhle, 2013).
45. The **University of Leiden** started implementing tenure track in 2007. Tenure-track contracts are predominantly offered in the Faculty of Sciences. The track starts with appointment at the level of Assistant Professor (stage R3). It covers a period of six years, with a final evaluation after five years to determine whether or not the candidate will be promoted to Associate Professor upon termination of his or her contract. As a rule, this position leads to an appointment as Full Professor within three to five more years. So every tenure track potentially leads to a Full Professorship. The faculty applies strict criteria to the selection of tenure-track candidates. Only external candidates with considerable post-doctoral experience and outstanding research records are chosen. All steps in the tenure-track programme are of fixed duration and supported by a clear framework of criteria, with regular and interim evaluations. Every year, the Scientific Director conducts a performance and development interview with the candidate to specify agreements for the coming year. If it becomes clear that the candidate will not meet the requirements for a professorship within the remaining time, further arrangements can be made regarding the subsequent professional steps (e.g. career counselling). The same holds true in the case of a negative final evaluation. Despite these efforts, tenure track is regarded as an “up-or-out” career option.
46. At the **University of Utrecht** a tenure-track framework was put in place in June 2009. However, it is not practised because of financial constraints, and is currently under review. According to the framework, a tenure-track position can be offered at stage R3 equivalent to an Assistant Professor and leading to the position of *Universitair Hoofddocent* and later Full Professor. It is up to the specific faculty to devise precise evaluation criteria for tenure-track appointments. In the event of a negative evaluation, the candidate has to leave the university. In reality, though, conflicts are expected with current labour laws concerning the practice of “up or out”. Another major obstacle is the need to secure funding for a full professorship in the long-term budget right from the beginning of a tenure-track appointment. The framework provides one position for one candidate only, with a maximum duration of six years in the tenure track, leading to a fully tenured professorship. Currently, careers usually start with a fixed-term position. Promotion is not guaranteed, but is possible in the case of very good performance (= tenure model). Likewise, some Deans may agree conditions with individual high performers for promotion to the next step. This kind of track is not settled in advance but determined “step by step”.
47. At the **University of Amsterdam** a tenure track is available at the Faculty of Science, only with a fixed-term contract for a maximum of 3+2 years. A shorter term is possible, depending on the candidate’s skills and experience. After the final assessment, an “up-or-out” decision is taken. The Faculty of Science has decided that 50% of its vacancies in the period up to 2020 will be available for tenure track. The specific financial sources to be used will depend on the specific position. Candidates on the tenure track receive extensive structural personal support from a senior colleague. A formal review of the candidate’s performance is undertaken every year. Depending on this performance the candidate may obtain a first promotion after three years (*Universitair Docent 1*), and after five years may be promoted to Associate Professor (*Universitair Hoofddocent 2*). Subject to the candidate’s excellence he or she may ultimately be promoted to Full Professor.
- Belgium (Flanders)**
48. The possibility of appointing Senior Academic Staff via tenure track was created by the Flemish

5 See <http://www.rug.nl/umcg/research/researchers/career-and-funding/rosalind-franklin-fellowships/tenuretrackengels200306.pdf>, accessed 24.02.2014.

Government in 2008 (*Onderwijsdecreet XVIII*). At the same time, the Flemish Government decided to provide extra funding for tenure-track positions for five consecutive academic years (*BOF-besluit*, December 2008). However, due to budget constraints, the extra funding was eventually limited to two academic years (2009-2011).

49. The **KU Leuven** adopted tenure track in 2009 as a general model for assistant professors, considering it the most convenient way for young researchers to access Senior Academic Staff positions. The track is offered to stage R2 candidates (post-doctoral researchers) and is not limited to any particular faculty or school. To be eligible for a tenure-track position (those funded by the Flemish Government) the scientists should have obtained their PhD less than seven years before they get on the track.
50. Tenure track offers promising scholars the opportunity to prove themselves as an Assistant Professor (*Docent*) within five years. Appointment as a tenure-track *Docent* involves entry at stage R3 in the career map model. After a positive assessment based on well-defined criteria, the candidate is tenured and reaches the level of Associate Professor (*Hoofddocent*), which is also an R3 position. A tenure-track position is assigned individually, which means that the assessment is non-competitive, since there is a reserved position available. All other professorial appointments (in higher ranks) are not recruited via the tenure-track model. Candidates who receive a negative evaluation will most probably be given another research appointment for six months in order to look for other career possibilities. In the end the employee's contract is phased out.
51. The **KU Leuven** had a total of 140 cumulated tenure-track appointments in 2013, 40 of which were new appointments. So far none of the tenure-track appointments have reached their final evaluation stage.

Sweden

52. Over the past two decades a series of changes by the Swedish government has altered the legal framework of the higher education system in Sweden, bestowing more autonomy upon Swedish universities⁶. This includes wide freedom with regard to employment regulation and appointment procedures. In an effort to further align themselves with internationally established concepts beyond

the Bologna process, some of the leading universities have begun to introduce tenure-track elements into the tenure system. The traditional academic post-doctoral career stages include the positions of Lecturer (*Lektor, Universitetslektor*) and Full Professor, all of which have traditionally been tenured. Where a tenure-track system is implemented, it usually spans stages R2 and R3, starting at a tenure-track position (*Post Doc, Biträdande universitetslektor* or *Forskarassistent*) and leading to the position of Lecturer (*Lektor, Universitetslektor*). As a general rule, a candidate's doctorate should not date from more than five years before the tenure track is started.

53. At **Lund University** a tenure-track system was first implemented in 2007, revised mainly concerning evaluation standards in 2011, and reintroduced in 2013. Candidates for tenure track are offered the position of *Biträdande universitetslektor* (stage R2) with a fixed-term contract of four years. After successful mid-term and final evaluations they are tenured as *Universitetslektor* (stage R3). The motivation behind the implementation of tenure track is to recruit staff with the best possible skills and potential for the duties of the position of *Universitetslektor*. The tenure track offers a suitable observation period to evaluate the candidate's qualities. As a result, the criteria that need to be met vary depending on the faculty. More significantly the availability of tenure-track contracts varies according to the financial capacity of the faculty, due to the important role played by the acquisition of third-party funding in sustaining a tenure track. As a result, noticeably fewer tenure-track positions are offered in the humanities, social sciences, law, and economics than in science, engineering, and medicine.
54. There is a public debate in Sweden about whether or not tenure track should be widely implemented. It can generally be observed that the percentage of tenured positions outside the academic career path (Researchers) as well as at the level of Lecturer, although still high, continues to decrease. Despite the marginal scope they offer for upward mobility within academia, these positions offer social security advantages increasingly sought after nowadays. Lund University is trying to reduce these positions in an attempt to move towards a streamlined tenure-track system as advocated by the Young Academy of Sweden not only on a national but on a European scale, taking into account the growing dependency

6 Högskoleverket. Swedish Universities and University Colleges. Short version of Annual report 2012.

on mobility within the Swedish higher education system⁷. Other voices however raise concerns that being over-eager to unify evaluation and resource allocation systems may not sufficiently take into account the academic culture⁸.

Italy

55. Until 2010 the Italian university system was mostly based on the tenure model. Three ranks existed: Researcher (stage R₃), Associate Professor, and Full Professor (both stage R₄). All were permanent positions as civil servants with teaching/tutorial and research functions. In 2005 (Law 230/2005) public universities were given the possibility to employ fixed-term researchers. Following new legislation for the higher education system in 2010 (Law 240/2010) the enrolment system for researchers has changed significantly. The Researcher position is no longer permanent, and a combination of tenure track for Researchers and a habilitation model for Associate and Full Professors has been implemented.

56. At the **University of Milan**, along with the other Italian public universities, two types of fixed-term contracts are used for Researcher positions, both with public or third-party funding: Type A and Type B. Type A is a fixed-term contract for at least three years. After positive evaluation of the activities carried out by the researcher, the contract can be prolonged only once for two more years. Type B are fixed-term contracts for three years which cannot be prolonged and comprise a tenure track. Within the first two years the institution has to plan and decide how many tenured positions at the Associate Professor level will be made available for Type B researchers. The appointees therefore face an “up-or-out” situation after the termination of the contract. A Type A or B researcher typically has two to four years of post-doctoral fellowship experience. The Type A contract is not a prerequisite to obtain a Type B contract. All the steps in the tenure-track model are of fixed duration and are subject to interim and final evaluations. Associate and Full Professors both remain tenured positions, but a national habilitation has been introduced and constitutes an eligibility criterion for a professorship.

57. Although it enjoys high professional esteem, a fixed-term contract is not a prerequisite for being eligible for appointment to a professorship; the national habilitation is the only precondition (medical managers, for example, can also apply for a habilitation). European Research Council grantees form an exception to this rule: they can apply directly for a position as Associate Professor (Law 276/2011).

Tenure tracks to the higher and highest career stages in Germany, Switzerland and Finland

Germany

58. Along with the introduction of (“W₁”) junior professorships in 2002, in some of the federal states the legal preconditions were put in place to institute these positions with tenure track to a (“W₂/W₃”) full professorship. Due to the public sector regulation requiring the most qualified person to be recruited, all professorships have to be publically advertised. In the context of tenure track, however, it is not mandatory to advertise the full professorship considering that the selection of the person with the highest qualification has already taken place when the Junior Professor is appointed, and the prospect of subsequent transition to the full professorship is already announced in the advertisement of the junior professorship. Another common rule is that only candidates who have changed university after their doctorate or have been active as an academic at a different university for at least two years are generally admitted to apply for a junior professorship with tenure track.

59. The **University of Freiburg** started its tenure-track model in 2009, and in 2012 numbered nine Junior Professors with tenure track at stage R₃. Junior Professors are initially awarded a four-year contract, which can be extended to a total of six years after a positive interim evaluation. The Junior Professor is evaluated in year five to decide whether tenure will be conferred. Research performance is evaluated in an international peer-review process supervised by the Permanent Tenure Committee appointed by the Rectorate; all members of the committee are external principal investigators. Teaching activities, leader-

7 Response from the Young Academy of Sweden regarding “the Green Paper on a Common Strategic Framework for future EU Research and Innovation Funding”, 2011: http://www.sverigesungakaademi.se/download/18.4boee4ea135405c313b1918/1378682445583/remisswarforsknings-finansieringEU_YAoS_Response_EU_2011.pdf, accessed 24.02.2014.

8 For example: <http://www.su.se/english/about/organisation/senior-management/astrid-s%C3%B6derbergh-widding/inaugural-address-to-the-university-20-february-2013-1.125361>, accessed 24.02.2014.

ship skills, and involvement in university governance are evaluated by the Faculty. The Rectorate takes the final decision on whether to grant or refuse tenure on the basis of the report by the Permanent Tenure Committee and the decision of the Faculty Board. Then a shorter appointment procedure with no competing candidates takes place. In consultation with the State the duration until the decision on granting or refusing tenure could be shortened in order to counter external offers.

60. In the introduction phase of the tenure-track system all tenure-track positions are conferred initially as start-up funding, including resource allocation provided by third-party funds in the framework of the German federal Excellence Initiative. Since 2012 further tenure-track positions have also been established outside the Excellence Initiative as a systematic approach to making academic careers more attractive and using Junior Professorships to develop new profile areas across all disciplines.
61. Similar “W1” tenure-track positions have been instituted at the **University of Heidelberg**.
62. The **Ludwig-Maximilians-Universität München (LMU Munich)** started its model in the year 2000. The track starts at the level of a fixed-term (“W2”) Associate Professorship (stage R3). In a time period of three to a maximum of six years, tenure can be granted with the offer of a permanent Associate Professorship. Since 2013 it has also been possible to reach the level of a (“W3”) Full Professorship if certain criteria are met (tenure track in the sense of this paper). By 2012, 80 Associate Professors were on the track.
63. For the tenure evaluation a faculty commission evaluates a candidate’s scholarly performance on the basis of expert opinion. It makes a recommendation to the University’s executive board, which decides on granting tenure after a university commission has verified that the procedure is in accordance with the regulations. The evaluation criteria are research performance on the basis of publications, the amount of external funding raised for research projects, awards, promotion of young scientists, supervision of doctoral candidates, and teaching performance.

Switzerland

64. Several cantonal universities and the Federal Institutes of Technology have implemented Assistant Professorships (*Assistenzprofessur*) at stage R3 as a category of personnel below the level of Associate

and full Professorship. The initial fixed-term contract of generally three years can be extended once. The possibility of offering tenure track to a tenured professorship at stage R3 or R4 was introduced around 2000.

65. At the **University of Zurich** Assistant Professorships with tenure track were implemented in 2001. Positions must be publicly advertised. Researchers with a habilitation or comparable excellent research and teaching performance are eligible. Promotion to a tenured Associate or Full Professorship is planned after six years upon positive evaluation of research and teaching performance. Responsibility for the evaluation lies with the university’s faculties; they put together individual evaluation commissions. The commissions always include external experts. The final decision is made by the Executive Board and the Board of the University. Technically, a university-funded professorship has to be earmarked for the candidate to ensure that it is available at the end of the six years, as the number of stage R3 and R4 professorships is limited. The Assistant Professorships may be funded by third-party funds (roughly 65% in 2013). In 2013 about 20% of the current Assistant Professorships were tenure-track positions.
66. Among the current Assistant Professorships there is a clear concentration of positions with tenure track in the sciences. As of 2012, all Assistant Professors at the University of Zurich with tenure track have been promoted to a tenured professorship (success rate 100%).
67. Alternative career options to tenured positions (non-faculty: *Wissenschaftliche Mitarbeitende*) other than the tenure track described here do exist. However, these positions are rare.
68. The **Université de Genève** started its tenure-track programme in 2008. The positions are filled for 2x3 years. As of summer 2012, 38 positions have been filled with tenure-track appointments, each according to a scheme of 2x3 years. Depending on a candidate’s profile, a position as tenured Associate or Full Professor is guaranteed upon positive final evaluation.

Finland

69. With most of its ageing academic staff in tenured positions, Finland has traditionally faced the problem of too many young academics, in stiff competition with one another, having no satisfactory employment prospects; this also entails social security concerns.

70. A higher education policy change in 2010 granted the Finnish universities the status of independent legal entities, terminating the civil servant status of the university's employees. It also increased the autonomy of the universities to differentiate their academic profile and facilitated the acquisition of external funding. This resulted in a significant transformation process, including the merging of several universities, and led to an increase in fixed-term and part-time positions. In pursuit of more transparent, egalitarian, and predictable research career paths, all major universities have implemented a tenure-track system, referred to as the 'core academic career system'⁹.
71. While the universities in Finland are still largely dependent on public finances, the importance of third-party funding in creating tenure-track positions is expected to rise in the future, especially in light of the relatively large autonomy of the universities in adjusting their offer of courses and subjects in an effort to sharpen their profile in a transformed Finnish high education labour market.
72. At **Helsinki University**, tenure track was nominally implemented in 2010, with the first tenure-track candidates being appointed in 2012. The authority of opening a tenure-track position ultimately lies with the rector, who receives the faculty's proposal to fill vacancies by either advertising full professorships directly via appointment or by means of tenure track. In 2012, twelve out of 46 professorial appointments were made via tenure track. The Helsinki tenure track begins for post-doctoral candidates usually at stage R3, no more than ten years after they have attained PhD level. They are given a fixed-term contract of three to a maximum of five years as Assistant Professor, followed by a mid-term evaluation. After a positive assessment the appointees are given a new fixed-term contract of three to a maximum of five years as Associate Professor. In the end, a final evaluation will take place, in which a positive outcome leads to a tenured Full Professorship for the appointee. The Helsinki tenure track is therefore a two-tier tenure-track model of six to ten years' duration. Only one candidate per available professorship is positioned on the track to qualify for a specific R4-stage position. A negative evaluation is supposed to terminate the contract. Extensive mentoring and careful appointment and evaluation committees are used to ensure the quality of the process. No mid-term evaluations have yet taken place since the implemen-

tation, and the overall success of the system itself is still under assessment.

Absence of tenure-track models in France and Spain

Tenure track in France impossible due to the legal framework

73. The French academic career model is operated nationwide in all public universities. The legal framework strictly dictates unbiased competition for all positions without exception, meaning that internal applications must never be preferred to external applications. A tenure track, which by definition involves targeted internal preparation for a designated position, would be considered a violation of this principle.
74. Recently the French universities have been given the opportunity to hire academics in permanent positions who are not civil servants. As a result, these positions need to be funded by the university, as opposed to the civil servant positions financed by the state. So far, the universities have made only very limited use of this possibility. To date, tenure track is seen more as a barely beneficial temptation than as an opportunity. There seems to be a desire to preserve the present unitary system, with which tenure track is considered incompatible.

Obstacles for candidates in Spain

75. In the Spanish higher education system the national and regional governments maintain a strong influence over universities and research careers. The "Organic University Law" of 2001, and its revision in 2007, resulted in a dynamic range of post-doctoral career paths. Post-doctoral researchers can apply for three specific national fixed-term programmes; these are aimed at facilitating entry into an academic career (*Ramón y Cajal*), a research career (*Juan de la Cierva*), or a career in the private sector (*Torres Quevedo*), respectively. The *Programa Ramón y Cajal* offers five-year fixed-term contracts to post-doctoral scientists with a certain amount of research experience, preferably at the international level. During this five-year period the appointees are expected to perform outstanding research and teaching duties, with a focus on research. After five years their performance is evaluated and the appointees are ideally then given the possi-

9 For example: http://www.aalto.fi/en/about/careers/tenure_track/, accessed 24.02.2014.

bility of acquiring a permanent position as *Profesor Titular* at the university (Senior Lecturer, stage R3).

76. However, even after a positive final evaluation there are multiple obstacles for the candidates. First, a positive evaluation alone is not sufficient to be appointed *Profesor Titular*, since all academic stages in Spain are subject to state-approved accreditation; this process is completely separate from the *Ramón y Cajal* programme. Second, no guarantee is given that the desired position will be available at the end of the contract, since these positions are only created by the national or local government if sufficient funding is available. Third, even if a *Profesor Titular* position is available, it is open for competition not only between multiple *Ramón y Cajal* appointees, but in theory also to anyone else with the required accreditation. While the *Ramón y Cajal* programme bears some resemblances to tenure track, in practice it does not meet the definition of tenure track due to the lack of a guaranteed position to compete for in the end. This means that there is no tenure track in Spain to date. Control over positions, evaluation, and the accreditation of academics remains in the hands of the national and local governments. A Full Professorship (*Catedrático*) is only accessible through appointment of leading internal or external researchers with the appropriate national accreditation.

77. The **University of Barcelona** offers, besides the above-named programme, equivalent contracts from the Catalanian government. In addition, it has a lecturer position (*Lector*) on a five-year fixed-term basis, which is supposed to lead to the permanent position of *Agregat*; this corresponds to Assistant Professor and is the Catalanian equivalent of the *Profesor Titular*¹⁰. This career path is more connected with teaching duties than the *Ramón y Cajal* programme and is also regarded as slightly more promising in terms of the prospect of a permanent contract. Apart from that, it is widely subject to the same constraints.

Developments in the North American tenure-track model

78. In recent years, North American tenure-track models have been facing growing challenges, leading specialists in the higher education administration to debate the advantages and disadvantages of tenure track. In fact, the percentage of appointments on a tenure track has been gradually declining in the

US education system over the past 30 years, with a distinct drop in the course of the financial crisis of 2008. Concurrently, the number of part-time and fixed-term contracts has increased, fuelling public debate. With the rising impact of for-profit universities, tenure track bears the risk of inefficiency, both due to the required mentoring and evaluation efforts and due to the required financial coverage of a possible tenure future. Fixed-term contracts are easier to manage. The evolving social and academic inequity between tenured and non-tenured faculty staff has recently been subject to intense debate. At the same time, competition for any tenure-track positions advertised has increased, so that successful young researchers are inclined to accept further post-doctoral contracts and steadily pave their way to non-university job markets. Although the framework conditions in Europe are slightly different, partly due to the heterogeneous European educational market, this context needs to be borne in mind.

Summary of recent developments in Europe

79. On the basis of the responses given by the LERU universities, we conclude that three variations of tenure-track models are currently in use at LERU universities. These are represented in Table 3.

80. The tenure-track system has been experimented with and adopted by many universities and higher education systems in Europe. The driving force behind this development is the steadily rising worldwide competition for the brightest minds not only within, but also outside academia. The following general developments can be observed:

- In the changing academic landscape, which is mainly defined by diverse regulatory frameworks, there was for a long time no tenure-track system for academic staff as a direct equivalent of the North American system; this has only started to emerge since the beginning of the 21st century. The main difference lies in strong national educational traditions, reflected in a profound variation in the nomenclature and understanding of academic titles. In the European tradition, the professional title often comes with social, academic, and even infrastructural benefits. It is therefore used much more sparingly.
- Several measures taken by the national funding

¹⁰ http://www.aqu.cat/doc/doc_12034517_1.pdf, accessed 10.3.2014.

bodies and the European Commission do offer promising young academics good opportunities to conduct their research under competitive, largely autonomous conditions and in some cases even provide them with opportunities to gain teaching experience. Such third party-funded or project-related positions, however, do not generally lead to a professorship. Often there is also little to no leeway for using these positions as a stepping stone to tenure track, due to legal restrictions that prohibit positions from being redefined as tenure-track positions after they have been advertised.

- Mostly due to different academic traditions in the various countries there has not yet been a common and comprehensive appraisal among LERU universities of tenure track as a suitable strategic tool to attract the best young researchers and to implement professorships. It is considered useful for

ensuring or achieving excellent standards of teaching and research. For most universities the tenure tracks are still in a relatively early trial stage, with only LMU, Lund, and Zurich having implemented and continuously applied their chosen models since 2008 or earlier. In general, all universities have decided in favour of an “up-or-out” system. 2014 and the following years therefore promise to yield significant data on the success rate of tenure track and the social consequences for those who are not successful on the tenure track.

- It will be important to identify the reasons for and consequences of a tendency observed at some universities (Leiden, Lund and Zurich) to prefer tenure track only in a small number of research areas, specifically in life sciences, natural sciences, or applied sciences. It has been stated that in the sciences the assessments clearly relate to a scientific research

Table 3. Tenure-track models at LERU universities

Model I:	Tenure track from fixed-term Assistant Professor to tenured Associate Professor
Stage R3 → Stage R3; Stage R4 cannot be reached via tenure track	
KU Leuven: From Assistant Professor (<i>Docent</i>) to Associate Professor (<i>Hoofddocent</i>) (cf. Belgium (Flanders))	
Lund University: From fixed-term <i>Biträdande Universitetslektor</i> to tenured <i>Universitetslektor</i> (special case, since it starts at stage R2; cf. Sweden)	
University of Milan: From fixed-term Researcher (Type B contract) to tenured Associate Professor (stage R3; cf. Italy)	
Model II:	Two-tier tenure-track model: tenure track from fixed-term Assistant Professor to fixed-term Associate Professor to Full Professor (tenured)
Stage R3 → Stage R3 → Stage R4	
After successive fixed-term positions as Assistant and Associate Professor (subject to positive evaluations in both positions), the candidate is appointed as Full Professor. If either evaluation is negative, the contract will be terminated.	
University of Helsinki: From fixed-term Assistant Professor to fixed-term Associate Professor (3-5 years) to tenured Full Professor (cf. Finland)	
Model III:	Tenure track from fixed-term Assistant Professor to Full Professor (tenured)
Stage R3 → Stage R4	
University of Freiburg: From fixed-term Assistant Professor (<i>W1 Juniorprofessor</i>) to Full Professor (cf. Germany)	
University of Leiden: From fixed-term Assistant Professor to tenured Associate Professor. Holders of a tenured Associate Professorship are eligible for promotion to Full Professor (cf. The Netherlands)	
LMU Munich: From fixed-term Associate Professor (<i>W2 Professur</i>) to tenured Associate Professor or Full Professor (special case, since it starts with Associate Professorship; cf. Germany)	
University of Zurich: From fixed-term Assistant Professor (<i>Assistenzprofessur</i>) to Associate Professor or to Full Professor (cf. Switzerland)	

cher's success at acquiring external funding for new and innovative research projects. Furthermore, at some universities the positions of tenure-track candidates are financed with third-party funding. The fact that the third-party funding tends to be much higher in these disciplines may lead to the tendency to offer early career "rising stars" tenure-track positions. It has also been stated that specialists in the humanities, law, and most of the social sciences often require more time for academic progression and scholarly maturation, which is why the talent search starts at a more advanced level in an individual's academic career; hence there is a stronger tendency in these disciplines to offer "proven specialists" full professorships. However, no general discipline-specific bias to tenure-track offerings could be attested.

- The higher education systems in the United Kingdom, France, and Spain have not yet experimented with tenure-track models. While in the UK the probation-on-the-job model is tried and tested, the strict regulations governing academic job competition leave no room for the implementation of tenure track in France. Also in Spain, various regulations prevent a real tenure track.

CONCLUSIONS

81. There is a clear tendency towards the introduction of tenure track in nearly all of the LERU universities and countries surveyed. These relatively new types of positions do not completely replace the traditional paths to a professorship, but offer new career paths as alternatives. Strategic hiring policies also continue to allow for the appointment of experienced and senior researchers directly into tenured academic positions, e.g. as a distinguished professor. In those LERU universities that have a tenure-track programme, the appointment of professors is a mix between old and new procedures.
82. One of the advantages of the tenure-track system is the possibility of giving an early signal to scholars who wish to stay in academia. This evolution is in line with the trend towards introducing more formal autonomy (i.e. academic independence) at an earlier stage of an individual's research career, which is typical in countries that traditionally require the habilitation.
83. While gender issues were not the focus of the survey, some LERU universities pointed out that female researchers are an important target group for tenure-track programmes. Indeed, it can be assumed that the degree of stability and good career prospects associated with the tenure-track framework are particularly attractive for drawing in and retaining women researchers. Such programmes are thus a helpful tool when it comes to effectively raising the proportion of women at higher career stages and improving the situation and opportunities of women in academia in general. In most cases it remains to be seen whether these expectations will be borne out in practice.
84. Undeniably, a tenure-track programme constitutes a structured and accelerated path for those aspiring to an academic career and thereby complies with the strategic goals defined in the Charter for Researchers and Code of Conduct for Recruitment developed by the European Commission in 2005¹¹ and in the European Research Area policy priorities, in particular those relating to research careers and gender (EC, 2012). It is also in line with LERU's initiatives in this regard, notably through the commitments expressed in the Memorandum of Understanding on the ERA priorities signed between the EC and LERU in 2012¹², subsequent activities in the

11 <http://ec.europa.eu/euraxess/index.cfm/rights/europeanCharter> , accessed 13.08.2014.

12 <http://www.leru.org/index.php/public/news/press-release-leru-and-era-lets-make-progress/> , accessed 13.08.2014.

LERU network (LERU, 2014a) and in a recent LERU briefing paper for the new EU legislators taking office in 2014 (LERU, 2014b).

85. At all LERU universities where tenure track is used, such positions are granted on an “up-or-out” premise; at the majority of the LERU universities surveyed, however, a professorship is reserved for every candidate appointed to a tenure-track position. Moreover, tenure-track candidates do not compete against one other directly for a permanent position.
86. LERU universities do not as a rule employ academics in tenure-track positions who would, due to the limited total number of full professorships, have no chance of securing a subsequent permanent professorial position at the institution. In most cases the *strategic* decision to fill a full professorship is made *before* a tenure-track position is advertised. The subsequent decision to grant tenure and eventually full professorship depends solely on the candidate’s performance in pre-defined areas, mostly research, teaching, and academic service.
87. While it provides academics with the opportunity to establish themselves in a professorial position at a relatively young age, a tenure-track position does also carry a certain risk of damaging their further academic job prospects in the event of a negative evaluation. LERU universities acknowledge their share of responsibility for their tenure-track academics and provide support where needed, such as career coaching for those who do not complete the tenure-track successfully. Although failure to obtain tenure has thus far been rare at LERU universities, it is important to avoid stigmatisation that could have dire effects on a researcher’s academic career.
88. As regards the data collected for this study, we found that the total number of *completed* tenure tracks is still too low to give a reliable picture of the success rates. Another significant finding is that all completed tenure tracks at LERU universities have received a positive evaluation, and all candidates have been granted a professorship. This suggests that very high quality standards are in place to steer the preliminary tenure-track appointment procedure, and that the environment within the respective faculties is conducive to supporting the positive development of tenure-track academic staff.

RECOMMENDATIONS

89. Over the past decade many LERU universities have embraced the tenure-track model as an additional career path oriented to young and bright researchers. The new model allows universities to identify and select excellent researchers early in their careers and to offer them an attractive position and promising career prospects in academia. We believe that tenure track is a tool that can enhance the competitiveness of the European research universities in a global context and strengthen the European Research Area in general.
90. However, since a tenure-track position generally lasts four to six years, a decade is too short a period of time to start evaluating the results. Most LERU universities are still in the process of learning from the first cohorts of researchers who are going through, or have gone through, the tenure-track process. In some cases modifications have been made already on the basis of these first experiences. Although the number of tenure-track appointments is already substantial, the new model has not yet developed into a stable and established process.
91. To create a reliable and consistent system providing researchers with an ideal framework for mobile, interchangeable, and efficient career paths throughout Europe, it would be helpful to explore a Europe-wide understanding and approach to promote the tenure-track system. Competition for positions between excellent young academics is desirable, but care must be taken not to inflict irreparable damage to promising researchers’ careers and to avoid an overall loss of talent in academia, which Europe can ill afford.
92. As the implementation of the tenure-track system at most LERU universities progresses, LERU will continue to work on this topic. LERU’s aims will be to encourage universities to develop, assess, and improve their systems, and to inform policy development at the EU level, with the ultimate goal of ensuring that research careers in Europe continue to attract and support the best and brightest minds from all over the world. The following recommendations are intended to help governments, policy-makers, funding bodies, and institutions that are developing or plan to develop tenure-track programmes as a tool to improve the career perspectives of excellent young researchers.

To universities:

- Universities that already have or plan to develop a tenure-track system should carefully consider the consequences of such a system in relation to other career tracks in place at the university. This includes finding the right balance between appointing young promising researchers through tenure track and appointing more senior researchers directly to high-level academic positions.
- Universities and other research institutions should provide guidance and support for beginning tenure-track appointees, continue with appropriate support and mentoring along the way, and pay special and timely attention to those researchers to whom tenure may not be granted.
- Universities may find the tenure-track system an interesting tool to attract and retain more women in an academic career, because it is often at this phase that women, for various reasons, change career paths. Special options for maternity or parental leave could allow for better compatibility between career and family commitments (for both men and women). In order to be effective, such models and regulations should be devised at all decision-making levels.

To national/regional governments:

- National or regional governments should grant universities the autonomy and financial means to experiment with the tenure-track process and to learn from their experiences.
- National and/or regional governments can support universities in their efforts to bring clarity and transparency to the tenure-track process.

To the European Commission:

- The European Commission could support and possibly fund further study of tenure track at European universities. Further research in this area will stimulate the exchange of information, best practice and experiences; it will encourage and support universities to rigorously evaluate the impact of their HR strategies, and will help the EU to develop and refine evidence-based policy making. Ultimately, it will lead to a stronger integration of academic career paths, to a better system of open, transparent and merit-based recruitment in Europe and to an open labour market for researchers, all of which are key elements to help achieve the European Research Area (EC, 2012).
- The European Commission should encourage national governments to open up traditional career paths to new possibilities, such as tenure track, and to remove legal barriers that prevent research institutions from providing outstanding young researchers with attractive career prospects. This will make it easier for European universities and research institutions to compete successfully at the international level.

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