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How do university systems' features affect academic inbreeding? Career rules and language requirements in France, Germany, Italy, and Spain

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Abstract

Studies on academic inbreeding have mostly focused on institutional inbreeding and its negative effects, whereas little research has explored its causes. We identify current explanations of the macro, meso and micro level factors that sustain academic inbreeding as well as research gaps. We address a main research gap regarding what macro level factors contribute to academic inbreeding, by analysing systems' norms and rules regulating access to senior academic positions and teaching language requirements in France, Germany, Italy and Spain, the largest public university systems of the European Union. The analysis reveals that career rules designed to guarantee quality may have unintended effects in terms of academic inbreeding. Most importantly, the habilitation procedures pose greater challenges to international candidates and often increase barriers between disciplines as well. In some disciplines and regions, language requirements contribute substantially to academic inbreeding.

Keywords: academic inbreeding, academic career, comparative research, European Research Area, language of teaching

1. Introduction

Several studies revealed the positive effect of mobility and the detrimental effects of inbreeding on academic performance (Horta et al. 2010; Mamiseishvili and Rosser 2010; Inanc and Turcer 2011; Franzoni et al. 2014; Petersen 2018). The EU policy agenda promotes academic mobility and junior staff of European universities is increasingly internationalized (Musselin 2004; European Commission 2012; Council of Europe 2015), yet in most European public university

systems the senior staff is still predominantly hired among national and local candidates (Godechot and Louvet, 2008; Cruz, Menendez, 2010; Seeber et al. 2016; Lundgren et al. 2018).

At a closer look, research on academic inbreeding displays two notable limitations, which may prevent policymakers to effectively tackle academic inbreeding. First, research so far has mostly focused on the effects of inbreeding, while relatively few studies explored the factors that cause inbreeding. Second, the relationships between institutional inbreeding – namely a university propensity to hire from its own pool of graduates – and other forms of closure in academic hiring have been largely ignored. However, the tendency to hire from a restricted group of potential candidates have been observed in other situations as well. Scholars found instances of candidates hired from a restricted network, e.g., of elite departments (Burris 2004) and reputed academics (Jungbauer-Gans and Gross 2013), within small and closed disciplinary sub-communities (e.g., Sá 2008; Donina et al. 2017), among national candidates or candidates within the same national university system (e.g., Corley and Sabharwal 2007). These processes can be related. For example, factors that advantage national citizens will implicitly exclude a number of foreign and mobile candidate, thus increasing the chances of hiring candidates from the same institution (i.e. inbred candidates, from now onwards “inbreds”) and ultimately institutional inbreeding; in other cases, rules intended to prevent institutional inbreeding may increase the boundaries to foreign candidates or strengthen disciplinary silos (Donina et al. 2017).

The goal of this article is to contribute to this research gap by illuminating how macro-level, system features serve to limit the hiring from outside the system. More specifically, we focus on system’s career norms and requirements, which may privilege the hiring of national candidates and/or candidates within the same national university system, while making it more difficult for foreign candidates and candidates from other systems to apply and compete for open job positions. We are specifically interested in norms regulating access to senior academic positions and requirements about the language of teaching.

The article is organized as follows. In the next paragraph, we conduct a systematic review of the literature to identify macro, meso and micro level factors that sustain academic inbreeding as well as to point out gaps in our current understanding. In the third section, we explore whether academic career regulations and the languages commonly used for teaching may contribute to explain high levels of academic inbreeding. Empirically, we conduct a comparative case study of the four largest public university systems in continental Europe - France, Germany, Italy and Spain, the largest academic job markets in the European continent. The final section presents

the main results and discusses the article's main findings and their research and policy implications.

2. The nature and causes of inbreeding

2.1 What is inbreeding and how is it approached in the higher education literature?

Several kinds of academic inbreeding exist in the context of higher education such as institutional inbreeding (e.g., Sivak & Yudkevich, 2009) and network inbreeding (Burriss, 2004). However, most studies focus on institutional inbreeding, defined as a recruitment practice of hiring their own PhD graduates (Horta, Veloso & Grediaga, 2010).¹

Overall, institutional inbreeding has been approached as a negative and problematic institutional practice. From an ethical perspective, it has been linked with nepotism or in-group favoritism (e.g., Altbach, Yudkevich & Rumbley, 2015). It has even been described as a practice that can “ultimately place the university’s legitimacy and social utility in jeopardy” (Horta, Veloso & Grediaga, 2010: p. 426). From a scientific perspective, institutional inbreeding has been mainly constructed as a practice with a negative effect on productivity and innovation (e.g., Alipova & Lovakov, 2018; Arimoto, 2015; Cruz-Castro & Sanz-Menéndez, 2010; Horta, Veloso & Grediaga, 2010; Tavares, Sin & Lança, 2019). That is because inbred academics are less likely to exchange scholarly information outside local networks in their universities, which hampers the application of new theories and methods (see also Horta, 2013). However, moderate levels of institutional inbreeding may have a positive effect, given that inbred academics may fulfil teaching and outreach activities, which enables non-inbred academics to fully concentrate on research (Horta, Veloso & Grediaga, 2010).

In this line of reasoning, there have also been calls to develop policies aimed at tackling institutional inbreeding (e.g., Horta, 2013) and knowledge about the causes of institutional inbreeding is quintessential to develop effective policies.

2.2. What are the causes of institutional inbreeding?

Given that there are many indications that institutional inbreeding is a negative and problematic practice, especially when it is a systematic phenomenon, it is quite puzzling how this recruitment practice can exist at a large scale. In the last decade, some studies have explored

¹ Some authors use slightly different definitions (e.g., Smyth & Mishra, 2013).

the causes of institutional inbreeding. In this section, we summarize their main findings, along the macro, meso- and micro-level factors engendering inbreeding.

2.2.1. Macro (structural factors)

Few studies focus on structural factors causing institutional inbreeding such as legislations at the system level, the stage of development of the higher education system, national cultures, and the international attractiveness of the higher education system. More specifically, the studies on the role of legislations and regulations have mentioned that formal and informal rules may forbid or discourage institutional inbreeding and decrease the likelihood of this phenomenon (e.g., Horta, Sato & Yonezawa, 2011; Tavares et al., 2015). At the same time, universities can be highly creative in circumventing these norms.

With regards to the stage of development of the higher education system, it has been argued that institutional inbreeding is more common in relatively young systems (e.g., Horta, Sato & Yonezawa, 2011; Horta & Yudkevich, 2016; Tavares et al., 2015). In such contexts, institutional inbreeding may be functional to the development of research and teaching capacity. For instance, in relatively young systems where one institution has monopolized the PhD job market, this institution is strongly pressured to recruit from its own pool of PhD graduates.

Some studies emphasized the role of national institutionalized practices (e.g., Horta, Sato & Yonezawa, 2011) and of systems' international attractiveness (e.g., Lepori et al. 2015; Horta & Yudkevich, 2016). In some countries such as Japan, traditional learning paths are associated with education and career trajectories in a single institution and hiring their own PhD graduates is simply 'the right thing to do'. With regards to the role of international attractiveness, large differences between systems can be identified, which is reflected in global university rankings (Marginson & Van der Wende, 2007) and is also related to international differences in academic salaries (Altbach, Yudkevich & Rumbley, 2015). Obviously, in less attractive systems there may simply be no international candidates, which increases the likelihood of institutional inbreeding (Lepori et al. 2015).

2.2.2. Meso (organizational and disciplinary factors)

Most studies on the causes of institutional inbreeding focus on meso-level factors such as organizational status, organizational cultures, disciplinary cultures, geographical location of the higher education institution and recruitment practices.

Institutional inbreeding is more common in higher status institutions (e.g., Bedeian & Field, 1980), because these institutions are often the first to be established and have no choice but to rely on their own graduates (cf. 2.2.1.). Internal recruitment may persist at later stages, either because it becomes an institutionalized practice, or to defend the status quo and “reproduce the prevailing order” (Tavares et al.: p. 993). At the same time, institutional inbreeding may also become a viable option in low status universities because inbreds tend to accept lower salaries (e.g., Gorelova and Yudkevich, 2015), and low status universities may find it difficult to attract good external candidates, and therefore privilege loyalty over universalism (Blau, 1994; Long and Fox, 1995).

Institutional inbreeding is also more common in collegial organizational cultures (e.g., Horta, Sato & Yonezawa, 2011; Horta & Yudkevich, 2016; Shimbori, 1980), and in certain disciplines (e.g., Tavares et al., 2015). Furthermore, the geographical location of an institution may ease or hinder applications from other institutions and countries (Lepori et al. 2015, Tavares et al. 2017). Geographical isolation may increase the likelihood of institutional inbreeding, which is for instance the case in universities on Portuguese islands. Finally, recruitment practices without open calls for candidates, increase the likelihood of institutional inbreeding (e.g., Horta, Sato & Yonezawa, 2011). While open recruitment may facilitate the selection of non-inbreds, in some cases it is merely window-dressing (Altbach et al. 2015).

2.2.3. Micro (agentic factors)

A significant number of studies have also indicated that actors may perceive institutional inbreeding as a highly beneficial practice, which indicates that individual sensemaking may play a key role in the reproduction of institutional inbreeding. For instance, some may perceive their own PhD graduates as loyal to the institution, which sustains institutional stability and a culture of cooperation (Gokturk & Yildirim-Tasti, 2020). In the same line of reasoning, Horta and colleagues (2010) have argued that organizational actors may strategically recruit inbreds aimed at balancing between teaching and outreach missions (assigned to inbreds) and the research mission (assigned to non-inbreds). In this case, institutional inbreeding becomes a strategic (not necessarily optimal) choice. The problem is that the management of this delicate balance is quite challenging. Accordingly, the recruitment of inbreds may quickly become a systematic and dysfunctional phenomenon.

2.3. Research gap: macro factors causing institutional inbreeding

The dominant approach to academic inbreeding is quite narrow. Most studies focus on the consequences of inbreeding rather than the causes,² on one higher education system only,³ on meso- or micro-level factors and on institutional inbreeding, whereas the relationship with other instances of hiring from a restricted pool of candidates are underexplored. It is important to remark that other forms of privileged hiring may be even more problematic than institutional inbreeding in that they can discriminate disadvantaged groups e.g., according to their gender, racial or social background. For instance, network inbreeding (or hiring based on informal network ties) has been associated with the reproduction of long-lasting class and gender inequalities in the academic profession (e.g., Burris, 2004; Van den Brink and Benschop 2014; Jungbauer Gans and Gross 2013; Nielsen 2016).

A notable gap is the limited research on how specific features of a system may affect institutional inbreeding. The goal of this article is therefore to explore structural (macro-level) factors that may hinder foreign candidates and candidates from other systems and hence spur institutional inbreeding. The capability to attract and hire international candidates is importantly affected by the overall attractiveness of a country, as determined by factors like the level of investment in Higher education research and development (Lepori et al. 2015). At the same time, highly attractive systems may still display a low share of international senior staff, which suggests that other traits of these systems are hindering attractiveness and/or career progression of international scientists.

When exploring factors that can hinder the attractiveness and/or the career progression of international scientists, an important factor is arguably represented by the rules of the academic job markets. Two important traits are often used to describe the functioning of academic job markets, which strongly affect their openness of closure (Musselin 2005 and 2010; Marimon et al. 2009; Afonso, 2016). First, academic job markets can be closed or open, depending on the extent to which access to the academic profession is limited by national, formal, and informal barriers to entry for system outsiders, including bureaucratic procedures of accreditation to access permanent positions, and various forms of non-competitive endogamous recruitment. Second, career progression may predominantly happen internally within the same institution,

² Since 2010, we found in Web of Science only six publications on the causes versus 23 publications on the consequences of inbreeding.

³ e.g., US, Bedeian & Field, 1980, Japan e.g., Horta, Sato & Yonezawa, 2011; Shimbori, 1980, Mexico, Horta et al. 2010; Portugal e.g., Tavares et al., 2015; Tavares, Lança & Amaral, 2017. We only found seven international comparisons in Web of Science since 2010.

or externally, by applying and being hired in other institutions. Systems which are closed and relying on internal job markets will arguably be characterized by higher levels of inbreeding. Therefore, we examine whether the rules and procedures to access professorial positions privilege the hiring of national candidates and/or candidates within the same national university system, and/or make it more difficult for foreign candidates and candidates from other systems to apply and compete for open job positions.

An additional factor that may hinder external and foreign candidates is language requirements. Some studies have argued that language barriers may play an important role in academic careers, hindering foreign academics in all their main functions (e.g., Luxon & Peelo 2009; Pudelko & Tenzer, 2019). More importantly, while junior positions mostly entail research duties, tenured staff is expected to teach on a regular base, and this may be difficult when teaching occurs only in the national language. Thus, we explore whether legal constraints and limited opportunities to teach in English may represent a plausible factor hindering foreign and external candidates, and ultimately spurring inbreeding.

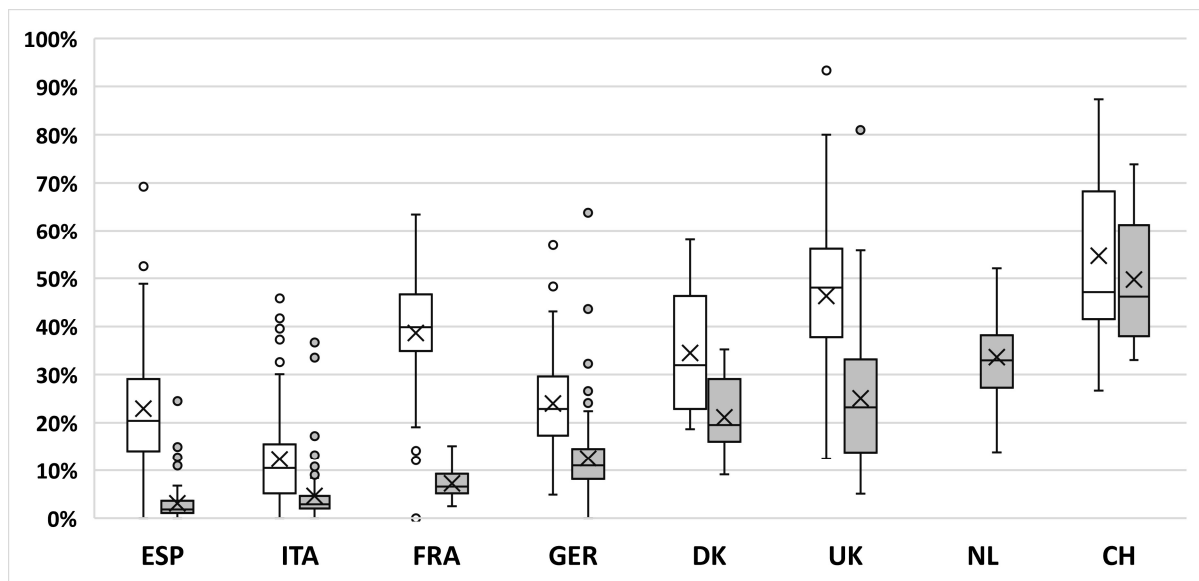
3. Method

We conduct case studies of the university systems of France, Germany, Italy, and Spain. These are the largest academic job markets in continental Europe, affecting the overall capability of the European Union (EU) to become a pole of attraction of human talent, yet present distinctive features. Afonso (2016) considers eight major western European academic job markets and classifies France, Spain and Italy as systems closed to outsiders and relying on internal job markets, while Germany is a closed system relying on external job markets. Denmark, Netherlands, and the United Kingdom are instead open systems relying on internal markets, whereas Switzerland is an open system relying on external job markets.

Figure 1 reveals that the share of foreign academic staff in Spain, Italy, France, and Germany is smaller than in the other considered countries and much smaller than the share of foreign junior staff (PhD students).

Figure 1 – Share of foreign PhD students and foreign academic staff in universities of selected western European university system. Source: European Tertiary Education Register (ETER) (Denmark 2013)

Legend: box plots represent the share of foreign PhD students (white) and academic staff (grey)



The case studies are developed via the analysis and triangulation of qualitative and quantitative sources, namely: i) scholarly sources: scientific articles describing the organization and evolution of academic career rules as well as inputs from national experts via interview or email, ii) official documents from national authorities and buffer agencies, iii) data retrieved through the European tertiary education register (ETER), national online portals of degree program offerings, university websites.

First, we examine the rules and norms to access professorial positions, to understand whether they make it more difficult for foreign candidates and candidates from other systems to apply for open job positions. Second, we examine formal requirements and opportunities regarding the language of education. Language may represent a serious hurdle for system outsiders and foreigners if it is mandatory to teach in a national language that is only spoken in that country, whereas language is a less plausible explanation of inbreeding when the national language is spoken in many countries and/or if there are many opportunities to teach in other world language. While these conditions change over time, our aim is to illustrate how recent and current practices may explain and affect openness to non-inbred academics.

4. Empirical analysis

In the following paragraphs we examine whether the rules and procedures to access professorial positions and the language requirements are likely to hinder foreign candidates and candidates from other systems.

4.1 France

Academic career

The French academic profession consists of two main levels: *Maitre de conférences* (MCF), which is equivalent to tenured assistant/associate professor, and *Professeur des universités*, equivalent to Full Professor. The first category outnumbers the second almost by a factor of two, implying that only part of the MCF will become professor (Musselin, 2019).

Holding a PhD is a necessary but not sufficient condition for an academic career. First, one must obtain a qualification for MCF from one of the 81 discipline-based national committees of the CNU, Comité National des Universités, which allows to be included on a national list of those qualified for the position. The assessment occurs once a year, and the applicant must submit a detailed application file to two 'rapporteurs' nominated by the CNU until mid-December (and eventually, concomitantly defend the PhD). The application includes the Doctoral thesis, and in given fields a translation of the thesis in French is mandatory. In humanities, it is also preferable that candidates have obtained the *agrégation du secondaire* and are hence able to teach as *Professeur agrégé* (PrAg) (EUI 2009). The decisions on the application are communicated in January and the qualification is valid for 4 years. The success in the rate varies considerably across fields, from 35% to 90% (Musselin 2019).

Qualified candidates can apply to job openings, although only a small minority obtain a MCF position in the same year (15.2 % in 2013, Musselin 2019). New positions are announced mostly by the Ministry of Education (European Commission, 2017), by general calls that do not consider the needs of a specific institution. The selection is run at university level by a disciplinary committee composed of an equal number of Assistant and Full Professors and re-elected every three years. The selection committee invites potential candidates and ranks three to five of them. The ranks are published on the Ministry portal and successful candidates can decide to accept or not, in the order of the ranking.

Applications to *Professeur des universités* - equivalent to Full Professor- require an additional *habilitation à diriger des recherches*, which is like another doctoral dissertation, and it is judged by one of the 81 disciplinary evaluation committees. This procedure is less selective than the MCF (Musselin, 2019). The exam is national and consists on the evaluation of the dissertation and publications, and after a positive evaluation, in an oral exam focused also on very idiosyncratic criteria, like the ability to master the common presentation style in the French

academia (EUI, 2009). Successful candidates are ranked by the committee and can choose, in order of ranking, a position from the list of available full professorships in their field. In Economics, Law, Management and Political Science the habilitation is required but it is of secondary importance compared to the more selective *agrégation du supérieur*, in which national selection committees of professors in the discipline interview and select the candidates through a series of tests that last about 6 months.

Several aspects of the selection and career procedures disadvantage non-national scientists. First, foreign scientists from other systems may be reluctant to embark such a demanding qualification procedure, and when they do, compared to national candidates they are less likely to know the functioning of the evaluation procedures and French academia in general, to which of the 81 disciplinary panels they should apply and what the evaluation criteria consist of. Moreover, the evaluation in certain fields requires that thesis and articles be written or translated in French and the same website of the CNU is only in French.⁴

Second, while the calls are announced centrally, the ranks for MCF are made by a local committee and, since there is no rule nor informal norm that prescribes scientists to change institutional affiliation, internal careers are very common. For example, Godechot and Louvet (2008) found that local applicants are 18 times more likely to obtain a position than external applicants. Regarding candidates from other systems, they can be exempted from the requirement to be accredited by the CNU under demonstrated qualifications,⁵ yet this implies convincing a selection committee to surpass a long list of accredited French candidates.

Language of teaching

The share of programs in English is still negligible at Bachelor level: just 280 compared to 37,000 bachelor programs in French.⁶ English as a language of education is more important at Master level, with 1,300 programs, compared to around 14 thousand in French. Fields like

⁴ <https://www.conseil-national-des-universites.fr/cnu/>

⁵ Are exempted from the MCF qualification; people working or having worked for less than 18 months as a teacher-researcher at a level equivalent to that of a lecturer, in a foreign higher education institution. Source: French Ministry of Education, Research and Innovation - <https://www.enseignementsup-recherche.gouv.fr/cid22657/maitres-de-conferences.html>

⁶ Source: Campus France: <http://cataloguelm.campusfrance.org/licence/#/catalog> and <https://www.campusfrance.org/en/resource/programs-taught-in-english>

“Business and Management”, “Engineering and Technology” and “Sciences, Environment, Health Science” display a broader range of programs in English.

In turn, the opportunities to teach in English have been growing over time, but they are still limited and can partly contribute to hinder candidates that do not speak French. At the same time, French is an official language in 29 countries, and it spoken by almost 300 million people. In sum, the language of education may not be the major factor hindering foreign and external candidates.

4.2 Germany

Academic career: competition and mobility as a double edge sword?

There are two main career tracks in the German university system. The traditional track consists – at junior level – of a 6+6 years period based on a “up-or-out” principle: 6 years doctoral period (*Wissenschaftlicher Mitarbeiter*), eventually followed by a 6 years postdoctoral period (*Wissenschaftlicher Assistent*) aimed to achieve a *Habilitation*. The *Habilitation* is a sort of second PhD and can be either a thesis (*opus magnum*) or a collection of scientific publications (*cumulative Habilitation*). A habilitation commission of the faculty decides whether to accept the habilitation, granting the academic title of Private Lecturer (*Privatdozent*), the teaching licence (*venia legendi*) and the right to apply for tenured professorial positions (so called C3 and C4).

In 2001, an alternative career track was introduced to facilitate the early independence and make careers less uncertain (Hüther and Krücken 2018). This includes a tenured Junior Professorship position (W1), which – normally after six years - is evaluated by members of the department and external evaluators according to the research, teaching and administration performance, and a positive assessment is a prerequisite to become a tenured professor (so called W2 and W3). Over time, the number of new Junior Professorship positions have grown and in 2013 they reached the number of new habilitations (Hüther and Krücken 2018).

To appoint professors, a committee of the faculty makes a shortlist of three candidates with comparative evaluations, the list is sent to the faculty and the university senate, which can modify the list before submitting to the ministry, which makes the final decision, usually according to the proposed rank. In both tracks, it is not necessary to have been, for example, C3/W2 Professor to become C4/W3 Professor.

German chairs typically recruit PhD students from graduates they have taught (Enders & Bornmann 2001; Berning & Falk 2006), and postdocs from their own pool of PhD graduates (Enders 2008). Network connections and having a highly respected mentor are also important predictors of appointment at professorial positions (Plümper & Schimmelpfennig 2007; Jungbauer-Gans & Gross, 2013). At the same time, a very important trait of the German career system is a combination of formal and informal norms - developed over the centuries to avoid patronage - which prevent internal appointments. Junior professors and academics with a habilitation must therefore apply for a professorial position at a different institution, which eliminates institutional inbreeding.

The sheer number of yearly PhD graduates (around 30 thousand) compared to the number of total professorial positions (around 47 thousand) (Die Zeit, 2019), as well as the 'up-or-out', 'double-countdown' 6+6 years system, make the academic career in Germany very competitive and impinges a constant pressure to achieve on junior academics. While these traits are virtuous in keeping high standards of quality through deadlines, pressure, and mobility, they may have unintended consequences for attracting candidates from other systems. Tenured positions are in fact obtained at a relatively late age (in 2010, on average at 41.4 years for WP2 positions - Hüther and Krücken 2018). At that age, most scientists in other systems have either left the academia, obtained a tenured position or they might be reluctant to move into a new country. Hence, while the habilitation is not required for candidates from other systems, those willing to apply will often be younger than the national competitors and, similarly to the French system, they will need to outcompete national candidates that have been formally habilitated for the job and that can rely on the networks of their mentors.

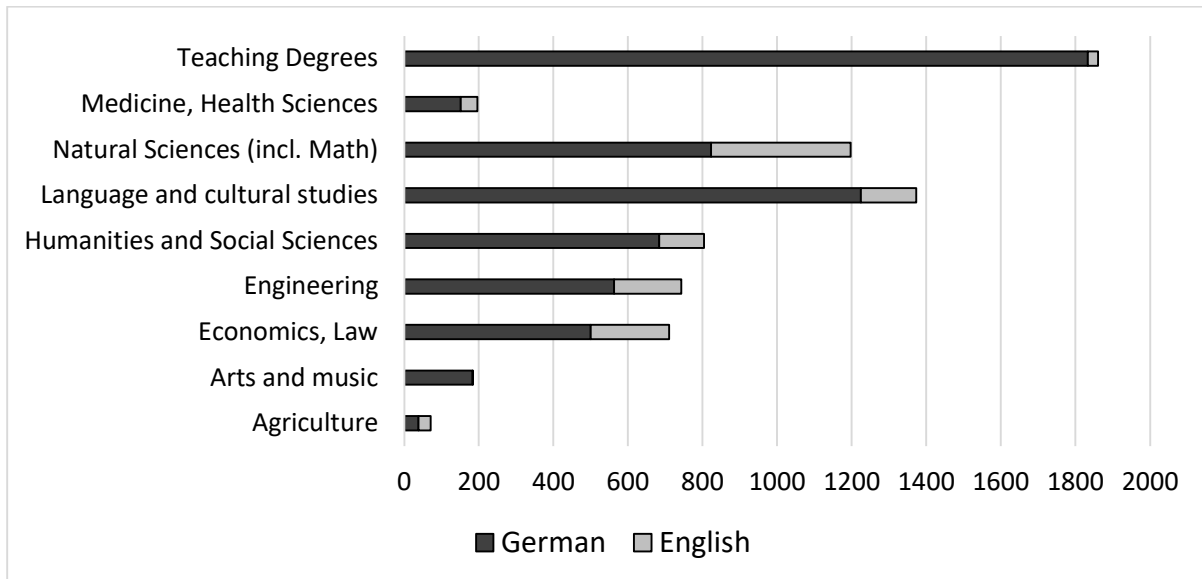
Finally, only citizens from EU, Iceland, Norway, Liechtenstein, and Switzerland can become a civil servant (*Beamter*). Civil servants have considerable benefits: they do not pay 19% of their salary for social security contributions, they may have the right to some performance benefits according to the Federal Civil Service Remuneration (*Bundesbesoldungsgesetz*), and appointment is for life (but they cannot strike). Citizens from other countries can only be hired as non-civil servant professors (*Angestellter*), positions which are clearly less attractive.

Language of teaching

The lack of knowledge of the German language can represent a barrier to foreign candidates in certain disciplines. At Bachelor level only 2% of the programs are taught in English. At Master level the programs in English are much more common (16%), but with large variations across

fields: Agriculture (46%), Natural Sciences (31%), Economics and Law (30%), Engineering (24%), Medicine (22%), Humanities & Social Sciences (15%), Language & Cultural studies (11%) and almost absent elsewhere (Figure 2).

Figure 2 – Number of Master Programs in German universities with German and English as primary language – source: DAAD; year 2020



4.3 Italy

Academic career: fragmentation and insulation

Academic careers and recruitment rules have been reformed several times over the last decades, the more recent major changes having occurred with law 240 in 2010. Currently, there are four senior career steps. A non-tenured researcher position of three years that can be renewed for two years (*Researcher type A* or “RtdA”), followed by a non-tenured position of three years (*Researcher type B* or “RtdB”). After this period and if the national habilitation for associate professorship has been obtained, a commission evaluates the scientist and can grant a tenured position of Associate Professorship. De facto, Researcher type B positions almost always lead to an Associate Professorship position. The last stage of the career is *Professore Ordinario* (Full Professor), which is required to obtain a national habilitation as full professor and to the availability of resources at the Department level.

The recruitment procedure foresees that the department proposes a call for new tenured or non-tenured positions to the university’s central decision-making bodies and the institution puts out a job offer, which must specify the disciplinary recruitment sector (out of a list of 190 sectors)

for the new hire. An on-purpose evaluation committee composed of minimum three academics in the sector and with most members external to the institution evaluates the applications. Finally, the university can hire the winner.

The law 240 tried to address criticisms to the alleged lack of meritocracy⁷ and nepotism in academic recruitment (e.g., Morano Foadi, 2006; Durante et al., 2011; Pezzoni et al. 2012), primarily through two mechanisms. First, the law included a norm (article 18) preventing departments from hiring relatives of their faculty. This norm has been effective in curbing nepotism (Grilli and Allesina 2017). Second, the law established a national habilitation procedure (Abilitazione Scientifica Nazionale), which was intended to add an additional quality control.

At the same time, the selection and career system disadvantages scientists from other systems and/or institutions in several ways. First, there are very few tenured professorial positions that can be accessed by outsiders from other institutions or countries because almost all new (permanent) associate professor positions result from positive evaluations of Researchers type B from the same institution. Also, most Researchers type B results from ‘upgrading’ of Researchers type A positions and possessing a habilitation is an important informal factor for obtaining a Researchers type B position.⁸

Second, while the habilitation was introduced to avoid non-meritocratic local recruitment, at the same time it is a much greater hurdle for scientists from other systems. In fact, a candidate aspiring to a permanent professorship should possess a habilitation at the national level, precisely in the scientific sector of the position (or an equivalent position abroad). Since there is a very large number of scientific sectors (190), each habilitation gives access to few positions, and each habilitation requires a very specific profile (Donina et al. 2017). Scientists nurtured within the Italian system tend to grow within a disciplinary sector, meaning that they will fit well in one sector while they rarely must waste their time into multiple habilitation attempts. On the contrary, potential candidates from other systems will rarely fit one specific sector and could be more reluctant to invest time to obtain a habilitation that grants the right to apply to

⁷ For example, a survey of 4,700 assistant professors revealed that only 0.8% of the respondents perceived career progression as solely based on merit (Monteleone and Torrisi 2012).

⁸ If a researcher does not obtain the habilitation and the associate professorship position, the department loses the corresponding share of university funds.

few positions. On top of that, the information guiding candidates to the habilitation procedures are much more detailed in the Italian version than in the English one.⁹

Language of teaching

In 2012 the Academic Senate of the Polytechnic of Milan approved the activation, starting from 2014, of some MSc and PhD programs only in English. This option was first granted by law 240/2010, to favour the internationalization of Italian universities. The decision was appealed by some professors, arguing that the exclusive use of a language other than Italian conflicted with the constitutional principles, hindered access to students, and marginalized teachers who were not proficient or wanted to teach in English. In 2017, the Constitutional Court clarified that universities do not have the right to provide a study program only in a foreign language but left room for teaching a reasonable number of individual courses in a foreign language and to provide a program only in English if there is an equivalent program in Italian. Despite such legal constraints, the number of programs partly or fully taught in English has continued to grow in recent years. In the academic year 2019/2020, almost one in five programs had at least some individual courses taught in English, and one in ten fully taught in English.¹⁰ The number of enrolled students to programs taught in English more than tripled between 2013/14 and 2018/19, from 16,385 to 52,438. There are however strong differences between regions and disciplines: the share of English programs is above 20% in North and Central Italy, and below 10% in South Italy, and above 20% in the Natural Science and below 10% in the Social Sciences and Humanities.

In sum, despite a steady growth of teaching opportunities in English, the language of teaching still represents a major obstacle for foreign candidates in some disciplines and regions.

4.4 Spain

Academic career

The current norms regulating the academic career in public universities in Spain represent a compromise between centralization and decentralization (Mora and Vidal 2005; Sanz

⁹ <https://abilitazione.miur.it/public/index.php>

¹⁰ Sources: <https://www.ilsole24ore.com/art/universita-laurea-10-parla-solo-inglese-ACL4vBT> and <https://lab24.ilsole24ore.com/guida-universita/>.

Menendez and Cruz-Castro 2019). Until 1983, hiring and promotion were centralized processes managed by the Ministry of Education and based on a national exam-based competition. Criticism to excessive centralization led, between 1983 and 2001, to a new decentralized system managed by universities and departments (Cruz-Castro and Sanz-Menéndez 2010). Decentralization led to high levels of inbreeding and a reduction of academic mobility (Navarro and Rivero 2001), eventually spurring a new reform (LOU 2001 and 2007). The current system envisages two non-civil servant positions - namely i) *Profesor Ayudante Doctor* a non-tenured, full time position for one to five years, and ii) *Profesor Contratado Doctor*, the first tenured position and equivalent to associate professor – and two, highest level, civil servant positions – namely: iii) *Profesor Titular de Universidad*, i.e., associate professor, and *Catedrático de Universidad*, i.e., full professor. For non-civil servant positions the accreditation is granted by regional authorities, whereas for the top, civil servant positions it is granted by the national accreditation agency (ANECA - Agencia Nacional de Evaluación de la Calidad y Acreditación).

For each of the four professorial levels, the accreditation is based on specific standards of academic, professional, teaching, research, and managerial merits. The accreditation is managed and decided by eight disciplinary committees based on reports from two experts - selected like in a peer review process, who score research, teaching, and management performance. The accreditation aims to guarantee a minimum level of quality and the success rate is rather high. Between 2008 and 2016, it was 65% for associate and 67% for full professors (Sanz Menendez and Cruz-Castro 2019). Accredited candidates can apply for posts, whose competitive selection is managed by departments, which set the evaluation criteria and appoint committee members (Cruz-Castro and Sanz-Menéndez 2010). Accreditation is needed also for candidates from foreign higher education systems.

Both stages of the hiring process hinder candidates from other systems. The accreditation phase is more challenging for foreigners as information on accreditation procedures are almost exclusively in Spanish, and national candidates can also have better knowledge of the evaluation criteria and the documentation required. The selection phase gives much discretion to the departments and, in practice, lead in the majority of cases to an internal promotion of individuals already employed in the university, often since their PhD diploma (Cruz and Menendez, 2010; Zinovyeva and Bagues 2012).

Moreover, non-EU citizens cannot hold professorial position with civil servants' status. Civil servants (known as *funcionario* career track) pay 30% less taxes and cannot be fired. Non-EU citizens can only have private sector contracts (track *laboral*) for example as *Contratado doctor*

senior. These positions can still have salaries as high or even higher than e.g., *Catedrático* professors, yet they are more expensive for the university, they cannot become Rectors, and they can be fired.

Language of teaching

While non-Spanish speakers may find little opportunities to teach in peripheral universities, several large universities do provide programs taught in English or bilingual both at Bachelor and Master level.¹¹ Moreover, Spanish is a global language, spoken fluently by half a billion people, and the autonomous communities that also employ the local language in teaching, e.g., Basque country, Catalonia and Valencia, they also use Spanish extensively .

In turn, language teaching requirements represent a mild barrier to foreign candidates.

5. Discussion and conclusion

This article aimed at exploring whether and how systems' norms regulating access to senior academic positions and requirements about the language of teaching privilege the hiring of national candidates and/or candidates within the same national university system, while making it more difficult for foreign candidates and candidates from other systems to apply and compete for open positions. So far, scant attention has been devoted to the system-level factors that directly or indirectly constrain hiring committees by curbing the capability to attract and hire international talent.

We focused on the four largest academic job markets in the EU. Despite being very attractive to international talent (Lepori et al. 2015), these systems are much less internationalized at the level of their senior academic staff, compared to other European systems with similar levels of attractiveness (e.g., UK, Netherlands). The analysis highlights that the academic career rules and the language of education requirements and opportunities contribute to academic inbreeding in several ways

National habilitation procedures may be a major factor in this respect. It should also be noted that, while on the one hand Germany is phasing out the habilitation, on the other hand, France does not have a similar plan, and Italy and Spain introduced it just 10-15 years ago. The

¹¹ For example, see: University Carlos III in Madrid <https://www.uc3m.es/bachelor-degree/uc3m-plus/study-in-english>

habilitation aims to reduce the chances of low-quality hiring and institutional inbreeding, yet there is no evidence about its effectiveness in increasing the quality of hiring nor in decreasing localism. Moreover, the habilitation process discourages and hinders candidates from other systems by impinging burdensome bureaucratic requirements and hardly providing instructions in English. Even in those cases when scientists from other systems are exempted from the habilitation (namely in Germany, and in some cases in France and Spain), their applications are implicitly disadvantaged, because they must compete with national candidates with an official recognition. In addition, the French and Italian habilitation is organized in 81 and 190 disciplinary panels respectively, which further discourages candidates from other systems and contributes to disciplinary inbreeding by strengthening demarcations between fields. In the German system, networks and patronage are still very important for junior career steps and careers in the external job markets. At the same time, there are norms preventing an internal career, which seems a simpler and effective solution than habilitations in tackling institutional inbreeding, and with less negative effects in terms of disciplinary inbreeding.

In Germany, France and Spain, senior academic positions hold a Civil servant status, with privileged contractual conditions in terms of taxes, bonuses, and job security. The civil servant status of senior academic positions is due to the peculiar *Rechtsstaat* administrative tradition of these systems (Bleiklie and Michelsen, 2013). However, non-EU citizens cannot hold such positions, meaning they will be less keen to apply and remain in the system.

The growth in the offer of programs taught in English and in the number of students enrolled suggests that teaching language requirements are becoming less of an issue in practical terms. At the same time, there are strong variations across disciplines and universities, which hinder candidates particularly in the Social Sciences and Humanities and in peripheral institutions.

Our study was mostly qualitative in nature, focused on four university systems and two possible causes hindering foreign and external candidates. There are several opportunities for future research. First, to explore other macro-level factors potentially spurring academic inbreeding. For example, job calls may be only advertised locally or through national channels, evaluation criteria often vary across systems so that candidates from other systems will hardly match another system's idiosyncratic criteria (e.g., privileging monographs versus articles, attracting funds). Second, in many countries the functioning of the academic job markets is a heritage of a past in which careers were hardly international, universities' mission was predominantly to *serve the state* (see Scott 2006) and they had little autonomy from the public administration. Research could focus on how to modernize and harmonize academic careers in Europe, taking

into consideration how the context has changed in terms of more interdisciplinary research, more internationalization, urgency to attract talent, and to avoid that nationals are advantaged in some systems and not in others. Future quantitative analysis can also explore the likelihoods of applicants from other systems to acquire a position under different regulatory settings, and the magnitude of the impact of habilitation procedures on the quality of new hires and on academic inbreeding.

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