Technological Forecasting & Social Change 113 (2016) 363–372

Contents lists available at ScienceDirect

Technological Forecasting & Social Change

The role of academic inbreeding in developing higher education systems: Challenges and possible solutions

Hugo Horta [a,b,*], Maria Yudkevich [c]

[a] Division of Policy, Administration & Social Sciences Education, Faculty of Education, The University of Hong Kong, Hong Kong, China
[b] Center for Technology, Innovation and Policy Research IN+, Instituto Superior Técnico, Avenida Rovisco Pais, 1049-001 Lisbon, Portugal
[c] National Research University Higher School of Economics, Moscow, Russia

ARTICLE INFO

Article history:
Received 29 November 2014
Received in revised form 23 June 2015
Accepted 27 June 2015
Available online 15 July 2015

Keywords:
Academic inbreeding
Institutional inbreeding
Development of higher education systems
Portugal
Russia

ABSTRACT

This article contributes to the literature on academic inbreeding by analyzing its rational, origins, resilience, and options to limit it in two higher education systems (Russia and Portugal) chosen purposively for having more differences than similarities, while sharing high levels of academic inbreeding. Findings show more homogeneity than heterogeneity with regard to the understanding of academic inbreeding as a social phenomenon, its roots, dynamics and role in developing higher education systems. Academic inbreeding is not defined as completely negative but rather fulfills a developmental role, particularly in the early development of these higher education systems, assuming a more detrimental effect later on. Positive and negative impacts of academic inbreeding are discussed, including factors and motivations that contribute for this practice to persist. Finally, three suggestions to curtail academic inbreeding are forwarded: not ending it by decree, fostering internationalization (especially mobility) and implementing transparent recruitment practices.

1. Introduction

Academic inbreeding has long been seen as detrimental to scholarly activity, scientific output and the fostering of networks (Pelz and Andrews, 1966). It has a negative connotation since the beginning of the last century, and it remains the same today (Elliot, 1908; Inanc and Tuncer, 2011). Nevertheless, high rates of academic inbreeding are found in developing higher education systems (e.g., Malaysia) and in mature higher education systems, particularly in the most research-intensive universities (e.g., Japan) (Horta et al., 2011). The practice is present in distinct geographical regions across the world and in systems with widely different development paths (Tavares et al., 2015; Sanz-Menéndez et al., 2013; Padilla, 2008; Yamanoi, 2005; Bleiklie and Hostaker, 2004; Smolentseva, 2003). The fact that academic inbreeding is present in such a variety of higher education systems with apparently independent systemic characteristics, development stages, paths and other features is of interest to researchers and policymakers alike. It raises the question: what explains the emergence and prevalence of academic inbreeding in higher education systems?

Two issues are inherently associated with this question. The first issue relates to the conceptual dialectic found in the research literature regarding what should be considered as academic inbreeding and what should not (Horta, 2013; Berelson, 1960; Caplow and McGee, 1958). Several definitions of academic inbreeding found in the literature (e.g., Goudechot and Louvet, 2008) offer different meanings leading to altered understandings of the same phenomena and resulting in mixed results when the practice is empirically analyzed (see Horta et al., 2010). The understanding of academic inbreeding as a concept and phenomena is important for higher education researchers,

* Corresponding author at: Division of Policy, Administration & Social Sciences Education, Faculty of Education, The University of Hong Kong, Hong Kong, China.
E-mail addresses: hugo.horta@ist.utl.pt, horta@hku.hk (H. Horta), yudkevich@hse.ru (M. Yudkevich).

http://dx.doi.org/10.1016/j.techfore.2015.06.039
0040-1625/

policymakers, and academics to minimize the "dance in the dark" between researchers themselves, and between the research and policymaking spheres (see Klemperer et al., 2001).

The second issue relates to the benefits and problems raised by academic inbreeding. The empirical literature has been mostly seen academic inbreeding as damaging to academia (Horta et al., 2010; Inanc and Tuncer, 2011), but what are the possible ways to constrain this practice or to limit it to the level where most of what it is drawn from it is beneficial? These are the questions that this article focuses on. Its findings add to the literature on academic inbreeding and aid further reflection on the issue by researchers and policymakers.

The analysis is focused on the higher education systems of two countries: Russia and Portugal. Both have high rates of academic inbreeding (see Tavares et al., 2015; Smolentseva, 2003), but substantial differences in size, structure and development path. The similarity in the incidence of academic inbreeding together with the dissimilarity of the other characteristics offers a methodological sound base to discern the rationale behind academic inbreeding in both higher education systems (see Maxwell, 2004). The different size is particularly important since a recent study associates shifts in academic inbreeding rates to national academic market size and its dynamics (RIHE, 2009).

In both countries, our analysis is informed by semi-structured interviews in person with rectors, vice-rectors, deans and department chairs of several universities. Nationally renowned senior experts in higher education studies and science and technology, current and former high level policymakers, academics and university managers, and accreditation and funding agency directors were also interviewed. The choice for interviewing this group of experts in both countries is based on their experience as academics (all of them were at some time in their careers or are currently academics), knowledge about higher education and science and technology and its evolution, and role as policymakers or with the ability to influence policymaking. The interview procedures followed the guidelines suggested by McCracken (1998) when experts are the focus of the interview.

Interviews were performed until "saturation of knowledge" was achieved (see Bertaux, 1981: 37), that is, when the information provided by the interviews had a recognized pattern derived from ongoing interviews concerning the phenomena being researched. This resulted in 36 interviews taking place in Portugal, and 21 in Russia, a number above the threshold number of 12 interviews recognized as sufficient to reach knowledge saturation (Guest et al., 2006). The saturation of knowledge of the interview results in both country cases also provided a solid indicator relative to the trustworthiness, reliability, and validity of the data (see Elo et al., 2014).

This article is organized as follows: the next section presents a literature review on academic inbreeding. A brief report on the evolution and characteristics of the Russian and Portuguese higher education system precedes the analytical section. In the analytical section, the main findings are presented, discussed and supported by key verbatim quotes from the interviews (see Corden and Sainsbury, 2006). The analysis highlights three analytical focuses: the concept and origins of academic inbreeding in the two systems, the reasons for its prevalence, and the potential solutions to cope with it. The final section draws the conclusions and offers some policy implications.

2. On academic inbreeding

It is not known by whom or when the term academic inbreeding was coined. The etymology of the word inbreeding suggests that it was adapted from biology where it means "to breed from unions between closely related individuals" and "to develop within" (Collins Dictionary).[1] Biology studies mainly indicate inbreeding as harmful to the evolution of species (Futuyma, 1998). The corresponding practice of academic inbreeding has also been denounced as detrimental to scholarship and academia as early as the 1900s (Elliot, 1908). Its roots in biological mating practices make academic inbreeding a socially charged concept; however, it is widely used in academia and policymaking circles to discuss the recruitment practice where universities hire their own graduates to fill academic staff positions (Pezzoni et al., 2009).

However, unlike the biological concept of inbreeding, the concept of academic inbreeding (also known as institutional inbreeding) has often been interpreted in different ways by different scholars. This has led to mixed findings with regard to its effects on academic endeavors (for a detailed discussion, see Horta et al., 2010), making comparative studies on academic inbreeding problematic (Hargens and Farr, 1973; Eells and Cleveland, 1935).

The concept of academic inbreeding ranges from broader to narrower definitions of the concept. In some studies, academic inbreeding is defined as "the practice of hiring former students of an institution as faculty members immediately following graduation" (Smyth and Mishra, 2013: 1). According to this definition, the educational level of the hired academic is not seen as relevant. An undergraduate hired as an academic in the university following his or her graduation is undifferentiated from those that have concluded a master's degree or a doctorate. The use of this broader concept of academic inbreeding is useful in studies focusing on disciplinary fields such as law, where the hiring of academics is not restricted to PhD holders (Smyth and Mishra, 2013) and to higher education systems where the hiring of individuals without PhDs to academic positions is still an ongoing practice. This usually occurs in higher education systems at an early stage of development (Heitor et al., 2014).

In other studies, a narrower definition of academic inbreeding is used. In Europe and North America academic inbreeding has the Alma mater of the PhD degree as the analytical reference while in Asia, the same reference is often the Alma mater of the bachelor degree (e.g., Shin et al, 2014). Although these differences are associated with cultural factors, it is important to consider that the PhD marks the beginning of an academic career and is the most influential socialization period guiding the behaviors of academics (Austin and McDaniels, 2006). This makes the PhD the most appropriate educational level to be considered when analyzing academic inbreeding. This definition of academic inbreeding considers only those academics who become faculty members at the university responsible for awarding their doctorate (Berelson, 1960).

Both broad and narrow definitions of academic inbreeding are acceptable for analytical application with regard to the development stage of higher education systems as long as the idea of academic inbreeding remains grounded on institutional

[1] Collins dictionary: http://www.collinsdictionary.com/dictionary/english/inbreed.