RISIS

RESEARCH INFRASTRUCTURE FOR SCIENCE AND INNOVATION POLICY STUDIES

ACADEMIC PERSONNEL AT EUROPEAN UNIVERSITIES

FIRST PART
ISSUES OF CAREER STRUCTURE

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CONTENTS

01 Introduction

02 Methodology and data

03 Findings

04 Implications

Being based on microdata at the level of individual Higher Education Institutions (HEIs), the European Tertiary Education Register (ETER) allows the fine-grained analysis of the composition of academic personnel by gender and by seniority.

ETER includes data on academic personnel from **828 universities in 21 countries** with a breakdown by level of seniority in the career structure.

Junior positions (including postdoc) are **44.7% of total academic personnel**, intermediate positions 21.7%, senior positions 12.9%. A significant share is represented by Other academic positions, including mainly part time teachers or researchers (20.7%).

Considering only the distribution of full-time positions, it seems that **academic careers follow a pyramid structure:** senior positions (12.9% of total academic personnel) are roughly 50% of intermediate positions (21.7%), intermediate positions are roughly 50% of senior positions (44.7%).

This ETER Brief is a first, preliminary effort to address this issue. In the following analysis we only consider universities, that is, Higher Education Institutions offering the highest degree, or the PhD (Institutional level=1 in the ETER terminology, offering ISCED 8 degrees). We leave for future analysis the coverage of non-university institutions, such as college, University of Applied Sciences (UAS), Fachhochschule or similar institutions, not offering the PhD (Institutional level=2 in ETER).

Disaggregated data on academic personnel by level of career is available for 21 countries.

The dataset includes Austria, Belgium, Bulgaria, Switzerland, Cyprus, Germany, Spain, Finland, France, Greece, Lichtenstein, Lithuania, Luxembourg, Latvia, Netherlands, Norway, Poland, Portugal, Sweden, Slovakia, Turkey.

1. INTRODUCTION

The European Union is committed to improve the fairness and inclusiveness of academic careers with respect to gender issues and young researchers.

With respect to junior researchers the main issue is whether the **funding and the career structure of universities is flexible and adaptable** enough to offer reasonable prospects of tenured positions to the brightest and more motivated, or whether a high share of non-tenured positions is taking a structural and lasting role.

The availability of microdata is an important contribution to the debate. It will allow a better understanding of the situation, by showing in great detail differences across individual universities. Which universities do exhibit a balanced career structure of **academic personnel**? Where are they located? Are they large or small, generalist or specialist? Do we see disciplinary differences?

2. METHODOLOGY AND DATA

A few countries (in particular, **Italy and United Kingdom** among the largest countries) are missing. ETER has adopted the classification of academic personnel by level of career proposed by the **OECD** after extensive consultation. National Statistical Authorities are invited to classify all academic personnel in four categories:

a) Senior academic personnel

b) Intermediate academic personnel

c) Junior academic personnel

d) Other academic personnel

The first three categories roughly correspond to the largely adopted three-tier career structure of Full professor, Associate professor, Assistant professor, or equivalent categories. The fourth category includes all types of non-tenured positions.

Our dataset includes **828 universities.**

3. FINDINGS

These universities employ slightly less than **one million academic personnel** (Table 1). Junior personnel are 440.189, intermediate personnel are 214,316, while people in senior academic positions number 127,488.

Approximately **20% of academic personnel is classified in the Other category**. This category includes mainy part time researchers and teachers.

If we focus on full time positions, the structure of careers follows approximately a 50% rule: intermediate personnel are half the junior personnel (21.7% against 44.7%), senior personnel is half the intermediate personnel (12.9% against 21.7%).

Table1. Distribution of academic personnel by career level. Year 2020

	Senior academic personnel	Inter mediate academic personnel	Junior academic personnel	Other academic personnel	Total academic personnel
Number of academic personnel	127,488	214,316	440,189	203,822	985,815
%	12.9	21.7	44.7	20.7	100,0

Overall, the structure of careers follows a relatively traditional **pyramidal pattern.** It is not easy to comment the average share of part time positions, at 20.7%, which are registered as such in a subset of countries.

An interesting perspective might be to **classify positions between tenured and non-tenured**. It may be assumed (although this assumption should be verified country by country) that senior and intermediate positions are tenured, while junior positions include post-doc, which in most countries do not give automatically access to a tenured position. By considering together part time positions and post doc positions, we might open a debate on the overall structure of the **academic career in European universities.**

On the one hand, it does not seem to follow the dynamics observed in the US system, in which the growth of funding of research has led to the massive opening of post-doc positions and subsequently of non-tenured teaching or research positions, inflating non-permanent employment and part time positions (mainly in teaching roles). On the other hand, a share exceedingly 20% of part time positions should be monitored carefully. It would be important to understand whether part time positions correspond to self-selected career paths, combining several professional experiences, or rather constitute a lower-tier solution for young people not finding their way into tenured positions. A similar reflection should be opened for **post-doc positions that are classified into junior positions.**

It is not clear whether the structure of careers will be able to absorb into tenured positions a large portion of talented young researchers. If by equity we mean also an academic system which does not discriminate against young researchers, this will be a major concern in future years.

It is useful to explore the range of variation of the shares of academic personnel, in order to identify patterns of evolution. We focus on the two extremes of the career- senior positions and non-tenured or Other academic personnel.

Figure 1. Share of senior academic personnel by university. Year 2020

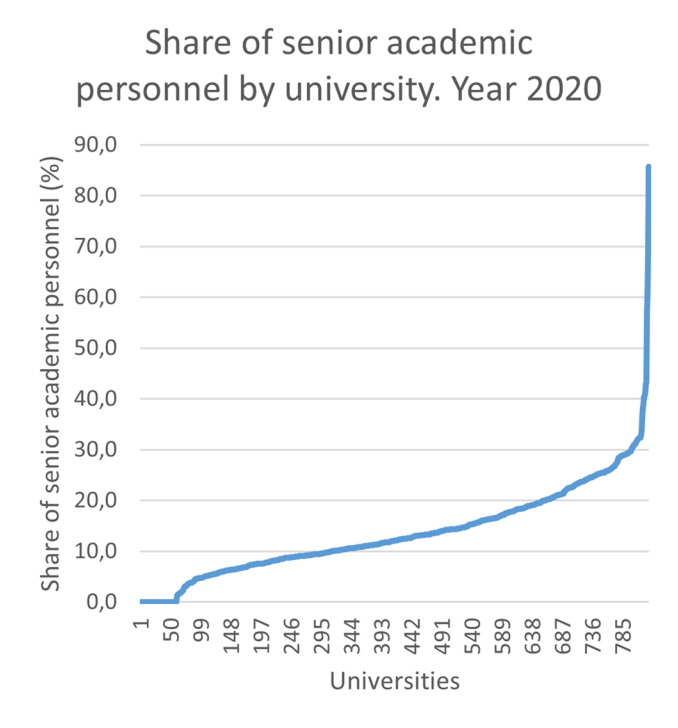

Figure 1 shows the distribution of the share of senior positions. As many as **59 universities** in our dataset do not have senior positions. More than half of the population (n= 443) have a share of senior positions below the average (12.9%). The largest part of the population (n=656) has a share below 20%. Only 28 universities exceed 30%. Four outliers exceed 50%. It may be said that a typical European university has a small minority of senior personnel.

Figure 2. Share of Other academic personnel by university. Year 2020

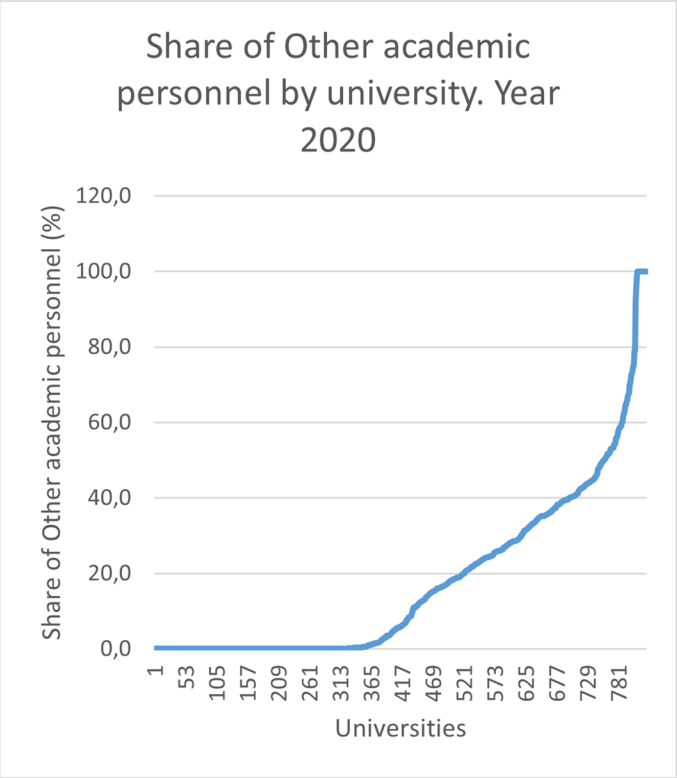

Figure 2 shows the share of Other academic personnel. The graph raises a serious concern about the interpretation of data. As many as 319 universities declare zero Other academic personnel. They are mainly located in **Spain, Bulgaria or Turkey**. It is unlikely that non-tenured positions do not appear in these countries. At the same time 16 universities from Austria declare 100% Other academic personnel. Some harmonization of classification is clearly needed.

Taking the data as they stand, it seems that the share of Other academic personnel is larger than 20%. This (highly preliminary) finding raises the need for further investigation about the future prospect of non-tenured population in European universities.

4. IMPLICATIONS

This Brief has shown the potential of microdata based on official statistics provided by National Statistical Authorities in addressing some hot policy issues in the European higher education landscape.

The use of microdata allows institutions to self-reflect on their own strategy and positioning with respect to peer institutions and against average values at national or European level. It allows **governments and policy officials to evaluate their state of the art,** implement policies, monitor progress, gain a deeper learning on the dynamics of the system.

The issues of career structures are at the core of policy debate and deserve reflection and action.

ETER is committed to support the overall data infrastructure with reliable, updated and interpretable data, for the benefit of the entire European institutional landscape.

RISIS Policy Brief Series *aim at disseminating key results coming from RISIS2 to improve the use of data for evidence-based policy making. The outcomes are presented through short documents pointing out the main policy issues at stake, demonstrating the contribution provided by RISIS, and what new avenues for research are now open.*

RISIS2 - European Research Infrastructure for Science, technology and Innovation policy Studies aims at building a data and services infrastructure supporting the development of a new generation of analyses and indicators on STI fields.

To develop a deeper understanding of knowledge dynamics and policy relevant evidence, RISIS goes beyond established quantitative indicators, developing positioning indicators, in order to reduce asymmetries in actors producing new knowledge, in places where knowledge is generated, and in themes addressed.

RISIS community is dealing with sensitive issues as social innovation, non-technological innovation, the role of PhDs in society, and portfolios of public funding instruments, studying both universities and firms.

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