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"From Global Indicators to Local Applications"

#STI2022GRX

Poster

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26th International Conference on Science and Technology Indicators | STI 2022

“From Global Indicators to Local Applications”

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#STI22GRX

Structural properties and epistemic effects of scientific careers in transition to tenured professorships

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Introduction

Research Questions

What differentiates tenured/permanent professors from researchers who are aiming for tenured/permanent professorship positions and are on the border to said position? This poster is based on a dissertational project from 2022-2024 and aims to answer the questions, concerning structural and epistemic differences between these two groups in Germany. There are 3 key aspects, which are looked into and which are not yet deeply explored in such a context: the researcher independence, the quantity and quality of research funding and the risk aversion. Based on these aspects, originated the following research questions:

1. What are major structural and epistemic properties of tenured professors and how do researchers on their way to and bordering on a tenured professorship perform in this regard?
2. Researcher independence: are there differences between tenured professors and researchers close to a tenured professorship position, concerning their independence? What differentiates the two groups on a structural level (amount of time for research, teaching responsibilities etc.) and on an epistemic level (differences to (former) supervisors, development of an independent research network etc.)?
3. Risk aversion: do researchers close to a tenured professorship avoid risk intensive research projects? Are researchers planning their research in hopes of breakthrough research results or in hopes of a better evaluation and as a pathway to a tenured professorship?
4. Research funding: On a quantitative level the question arises, if tenured professors and researchers close to a tenured professorship get the same amount of opportunities and support to acquire research funding. While on a qualitative level the impact of the funding is interesting: do both groups experience the same kind of career boost from research funding or are there major differences?

Research subjects

Two groups of people are researched on, the tenured/permanent professors and the people that are on their way to a tenured/permanent professorship and are just below said position. Following the European framework for research careers, we want to analyse and compare the most experienced researcher group, the “Leading Researchers”, with the ones right below them, the “Established Researchers” (European Commission, 2011). The following table shows the corresponding positions in Germany. Of special interest is the relatively new path

leading to a tenured professorship, the “Tenure-Track-Professorship”. The 2016 introduced new career path aims at securing long time careers in the scientific community, significantly raise the total number of professors in Germany, as well as change the culture and the way the scientific personal is handled in universities (Gemeinsame Wissenschaftskonferenz, 2016). Typically, a tenure-track in Germany is defined as the career path to transition into a tenured/permanent Professorship (Böhmer & Hornbostel, 2009. P.58). Special care is also necessary when it comes to the German academic career system. Unlike for example the US system of assistant-, associate- and full professor, the German W1-W2-W3 professorships are not strictly linear and especially W2 and W3 professorships can be considered as equal in their seniority and academic position (Reydon, 2021).

Table 1. Research subjects

Tenured professors	Researchers bordering a tenured professorship
<ul style="list-style-type: none"> • W2 tenured professors • W3 tenured professors 	<ul style="list-style-type: none"> • W1 professors/junior professors (with tenure-track) • W2 temporary professors (with tenure-track) • W3 temporary professors (with tenure-track) • Habilitated researchers • Junior research group leaders (with tenure-track)

Methods & Data

- Main source of data is the Scientists Survey (“Wissenschaftsbefragung”) of the German Centre for Higher Education Research and Science Studies (cross-sectional data of researchers in German universities).
 - Data from 2019 and from 2022/23 will be analysed.
- Bibliometric analysis and comparison with the Scientists Survey.
- Time-to-event analysis for the careers of the tenured professors.

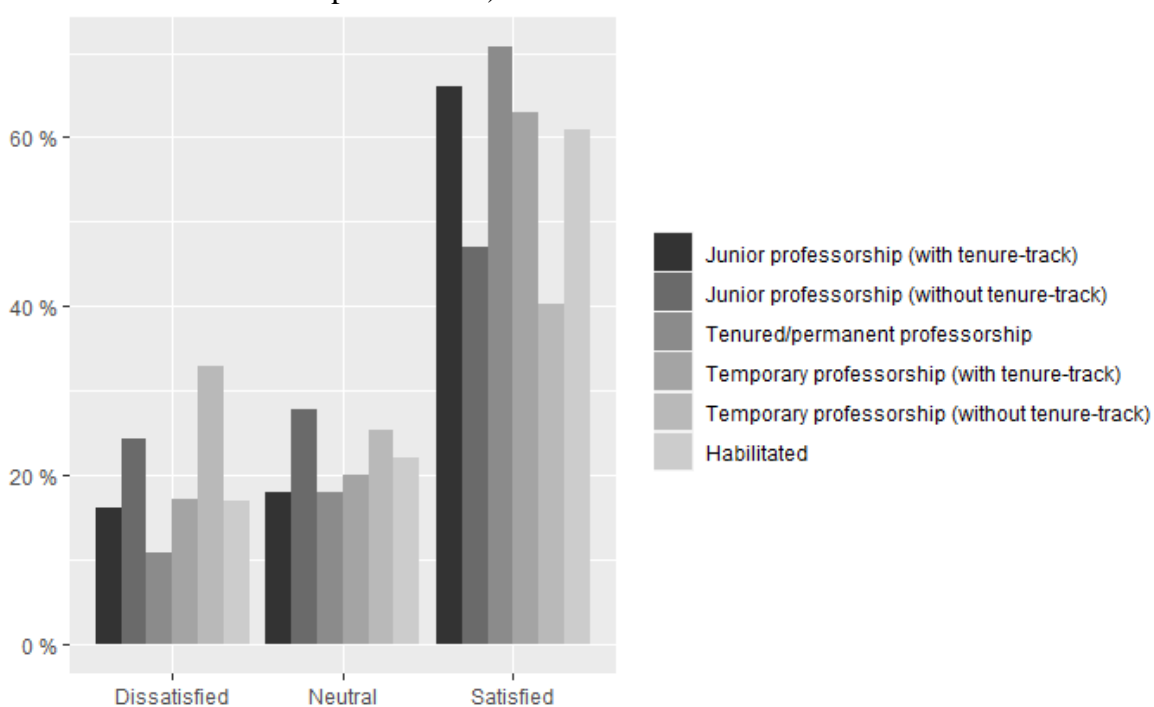
Preliminary Results

- Every position shows a noticeably high average of working time per week.
- The people in positions with a tenure-track work longer than their corresponding people in positions without tenure-track, especially the temporary professors.
- People in tenure-track spent less of their working time doing research.
- Temporary professors without tenure-track spent substantially more of their working time with teaching/examinations than temporary professors with tenure-track.
- ➔ Tenure-tracks increase the working time, but decrease the percentage on research.
- ➔ People bordering on a tenured professorship differentiate themselves from tenured professors especially in self-government tasks.

Table 2. Working time and working time proportions (Scientists Survey 2019. Own calculations and presentation)

	Average working time (in h/week)	Research	Teaching/ examinations	Institutional committees/self-government
		(in % of annual working time)		
Junior professors with tenure-track (n = 50)	53.06	25.59	24.43	6.00
Junior professors without tenure-track (n = 115)	50.88	30.86	23.57	5.51
Tenured professors (n = 1383)	54.19	21.51	24.35	10.46
Temporary professors with tenure-track (n = 35)	56.49	25.60	20.89	5.74
Temporary professors without tenure-track (n = 67)	51.40	26.73	28.96	5.84
Habilitated (n = 1477)	52.07	26.19	23.40	8.15

Figure 1. "How satisfied are you with your professional situation overall?" (Scientists Survey 2019. Own calculations and presentation)



- People are more satisfied than dissatisfied with their overall situation.
- Positions with tenure-track are severely more satisfied than their corresponding positions without tenure-track.
- Tenured / permanent professors are the most satisfied
- ➔ Indicator that (the outlook of) being tenured increases satisfaction with overall professional situation. (Possibly based on: job security; knowledge of requirements to become tenured; more support by supervisors; etc.)

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