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STI 2022 Conference Proceedings

Proceedings of the 26th International Conference on Science and Technology Indicators

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Citation: Reymert, I. (2022). The importance of grant success in professorial recruitment. In N. Robinson-Garcia, D. Torres-Salinas, & W. Arroyo-Machado (Eds.), *26th International Conference on Science and Technology Indicators*, STI 2022 (sti2235). https://doi.org/10.5281/zenodo.6960194

Collection: https://zenodo.org/communities/sti2022grx/

The importance of grant success in professorial recruitment

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Abstract: External funding is becoming increasingly important in science. Researchers' experience and success with grant applications is also an important evaluation criterion when researchers apply for academic positions. However, few studies investigate how experience with attracting external funding and prior grant success are evaluated in academic recruitment processes. The literature also scarcely covers how the importance of prior grant success in academic recruitment varies over time and fields. Part of the reason for this literature gap is because what happens within academic recruitment is kept confidential and seldom open for systematic investigations. With access to confidential recruitment documents from four fields (economics, sociology, physics and informatics) at one Norwegian university between 2000 and 2017 combined with interviews with evaluators who have participated in these recruitments we have however been able to document how experience with attracting external funding has been evaluated in professorial recruitment. The analysis showed that the ability to attract external research funding was more salient in the STEM field than the social sciences, but that the importance of attracting external funding had increased in all fields over the last years. The importance of attracting external funding and prior grant success were, however, not all about money, but also importance because of the academic prestige that follows grants. Finally, we showed that the increased importance of grant success over the last years was not only stirred by department leaders who encourage the researchers to apply for fund, but also driven by the academic themselves that saw grants as means to accomplish their research ambitions.

Introduction

External funding is becoming more important in science, and the number of research proposals sent to funding agencies are escalating (Serrano, 2018). Attracting grant from funding agencies are thus not only becoming increasingly important, but also becoming increasingly difficult as the competition for fund has sharpened. At the same time success in grant proposals are not only important because of the money that follows, but also because of the academic prestige of grants which are crucial for both scholars and their affiliated research institution (Lamont, 2009).

Recent studies have also uncovered how success in grant proposals also increases the likelihood of success in future proposals (Madsen & Aagaard, 2020). The outcome in one process would thus have consequences for the researchers' future applications. At the same time studies also propose that researchers grant success is an important asset in professorial recruitment, where candidates with success with grant applications are evaluated as more qualified than other candidates (Van den Brink & Benschop, 2011). How grants foster grants

and also pave ways for future career opportunities illustrate a Matthew effect in Science (Merton, 1968) where capital and credits in the academe are interlinked in a circle of credit (Latour and Woolgar, 1986), or how power fosters power (Pfeffer and Salancik, 1974).

Recruitment are critical junctures in academic career, deciding on whether and how candidates can pursue their academic career or must continue in temporary positions or no positions at all. To understand how grant success influences recruitment processes is thus important not only for understanding how these scarce positions are distributed, but also for understanding how the crucial resources in science; funding and academic positions are interlinked.

However, there are few studies on the importance of grant success as an evaluation criterion in recruitment processes, nor explain exactly why this is important. Is it to the money that follow the grants or the prestige? The literature does neither fully account for how this differ between fields, nor explain why there are field differences.

A reason for the lack of studies could be confidential recruitment processes were data of what occurs within these black boxes are kept apart from scientists. However, with unique access to confidential recruitment reports from academic recruitment processes in four fields at a Norwegian university between 2000 and 2017 we were able to evaluate how grant success are used as an evaluation criterion. We also combine this unique data with interviews with actors involved in these processes from the four fields and ask:
How are grant success valued in recruitment processes, and how can we explain their importance and disciplinary differences?

To understand to what extent grant success are important of economic reasons or represent a token of academic prestige we develop a framework based on the work of Latour and Woolgard (1986), Merton (1968) and Pfeffer and Salancik's work (1974) on how capital in academe are interlinked, and combine this understanding with the literature of how grant success represent academic prestige and are token of academic quality (Lamont, 2009; Langfeldt et al., 2019).

Method

Document analysis

In the paper we have analyzed confidential recruitment documents (announcement text, report from selection committee, expert committee and interview committee) from four fields at one major Norwegian university in four fields (economics, sociology, infomratics and physics). The recruitment documented have been sorted by field, years and type of document, and analyzed with a content analysis (Krippendorff, 2018) in Nvivo. In the content analysis we have evaluated which evaluation criteria has been mentioned by the evaluation committees in the description of the candidates, the ranking of them and which have constituted the most important criteria in the ranking. In this manner we were been able to investigate the relative importance of grant success compared to other criteria in the four different fields in the three periods of time.

Interviews

Additionally, we have conducted 16 interviews with actors participated in these processes from sociology and physics and their respective faculties, the faculty of social sciences and the faculty of natural sciences.

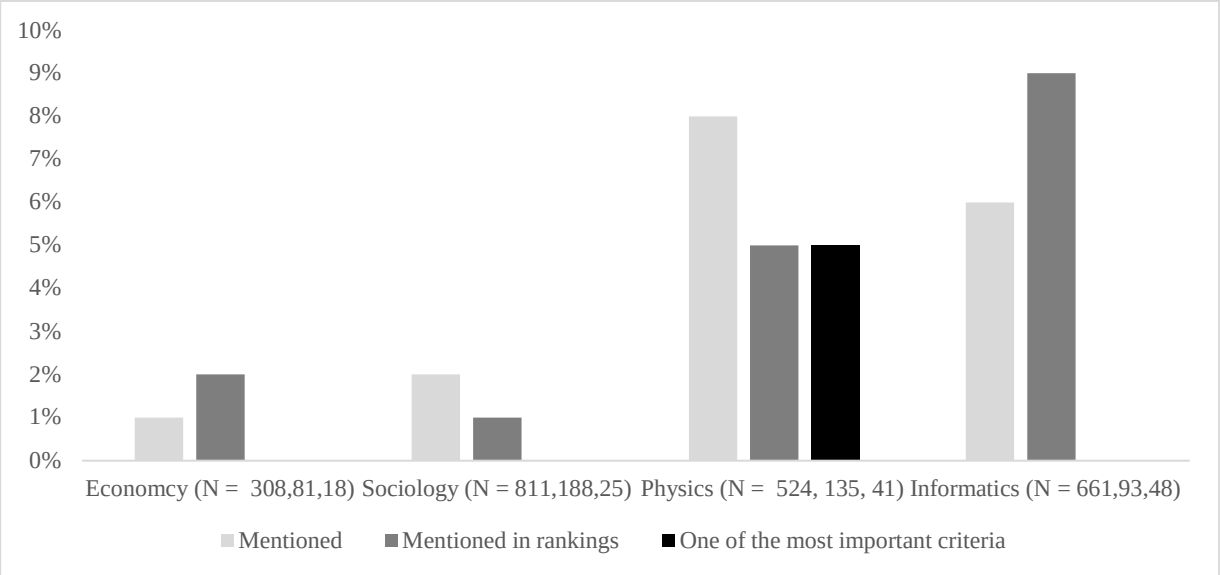
Literature review and Theory [TBA]

Results

Field differences – Attracting external funding is more important in the STEM-fields than social sciences

When analyzing the expert committee's use of evaluation criteria, we discovered that attracting external funding and success with grant proposals had minimal importance when evaluating candidates in the social sciences. Of the criteria that the expert committees used to describe the candidates attracting external funding and prior grant success only constituted one percent of the criteria used by these committees in economics and two percent of the criteria in sociology. External funding similarly constituted one to two percent of the criteria used by the expert committees to rank the candidates and were never among the most important criteria in none of these recruitment. Figure 1 displays this result showing how often attracting external funding or grants a) were mentioned by the expert committee when describing the candidates (light grey bars), b) constituted one of the criteria in the ranking of the candidates (dark grey bars), and c) how often they constituted one of the most important criteria (black bars). In the figure external funding as an evaluation criteria are displayed in percentage, where the total numbers are a) the number of evaluation criteria mentioned, b) the number of criteria mentioned in the ranking of the candidates and c) the number of most important criteria.

Figure 1. Attracting external funding and grants as evaluation criteria in



Instead, the number of publications in top journals was the most important criteria for the expert committee in economics when evaluating candidates for a professor position, while the evaluators own reading of the candidates' research (the quantitative evaluation of the candidates work) was the most important criteria for the expert committees in sociology. Publication in top journals reflected 56 percent of the most important evaluation criteria used by the expert committee in economics and the qualitative evaluation of research reflected 36 percent of the most important evaluation criteria used by the expert committees in sociology (see appendix table 1).

In conclusion, for the expert committee in these fields the candidates track record of attracting grants and external funding was of minimal importance when evaluating the candidates for a

professorial position. Yet, the candidates' experience with applying for funding were mentioned by the committee, as in the description of a candidate from 2014 in economics as in the citation below from the candidate evaluation report.

"For this research agenda she has been awarded a 3-year NSF" (E- 1007)

Or how the track record of attracting external funding was mentioned by the expert committee when describing several candidates for a professor position in sociology in 2015:

"X has received several grants from the Norwegian Research Council, he is currents director for the project "XX". (S-1108)
"She has received several grants from major research bodies such at the ESRC. (S 1108)
"X has received a large number of research grants throughout his career, including in his most current position, in which he recently has managed to fund a large research program including three post-doctoral researchers." (S-1108)
"X has received several grants from the Norwegian research council and has been coordinator of several projects." (S-1108)
"She has received several grants and is leader of a major research projects and there is convincing increase in her international publications which shows that she has a strong research potential" (S-1108)
"She has received several grants, and is currently PI for three large-scale projects." (S-1108)
"She has received grants from various research bodies." (S-1108)

In contrast to how the expert committees in the social sciences barely relied on the candidates track record of attracting external funding, this quality was more strongly emphasized by the expert committee in the STEM-fields. In these recruitment grant and external funding constituted 6-8 percent of the criteria used by the expert committee to evaluate the candidates, and 5-9 percent of the criteria used to the rank the candidates (See figure 1). In physics, grants and external funding were also among the most important criteria when evaluating the candidates.

The expert committee in the STEM-filed often evaluated all candidates by their track record and experience with attracting external funding and grants. Such systematic evaluation of the candidates' grant performance is demonstrated in this case from physics 2012 where the different candidates track record of attracting external funding were systematically evaluated (Recruitment P-1203):

"X lists no teaching experience in his application, but has some experience in grant applications, winning a JSPS Grant-in-Aid for Young Scientists"
"He also has experience with successful research funding applications, winning multiple minor grants, and recently some larger ESA grants connected to his work at ESRTC"
"Winning a prestigious Emmy Noether fellowship and as a PI on an international graduate program in collaboration with Paris and Oxford, he has also shown the ability to acquire research funding in strong competition."
"With respect to research funding X has had success with multiple personal grants." "X has won some personal grants."
"X has demonstrated some ability to attract research funding through winning two personal fellowships"

"If hired he would be a significant strengthening of future grant applications to the RCN in the field of dark matter physics, e.g. for a Norwegian Centre-of-Excellence."
"With respect to research funding X has already won four prestigious personal fellowships with significant funding: [mentioning of grants]."
"X has received one smaller research grant."

In this case from physics the candidates' track record and potential for attracting external funding was also one of the most important criteria in the final evaluation as one of the most important criteria when ranking the candidates as demonstrated in the citation from the expert committees' ranking of the candidates below:

"X and Y research shows greater promise for collaboration within the XX group on research and research funding than Z's."

The emphasis on external funding was also mentioned in the announcement texts for physics and informatics as shown in the citation below. The ability to attract external research funding was not mentioned in the announcement texts in social sciences.

"Collaborative and social skills, as well as documented ability to attract external research funding will be emphasized." (1202)

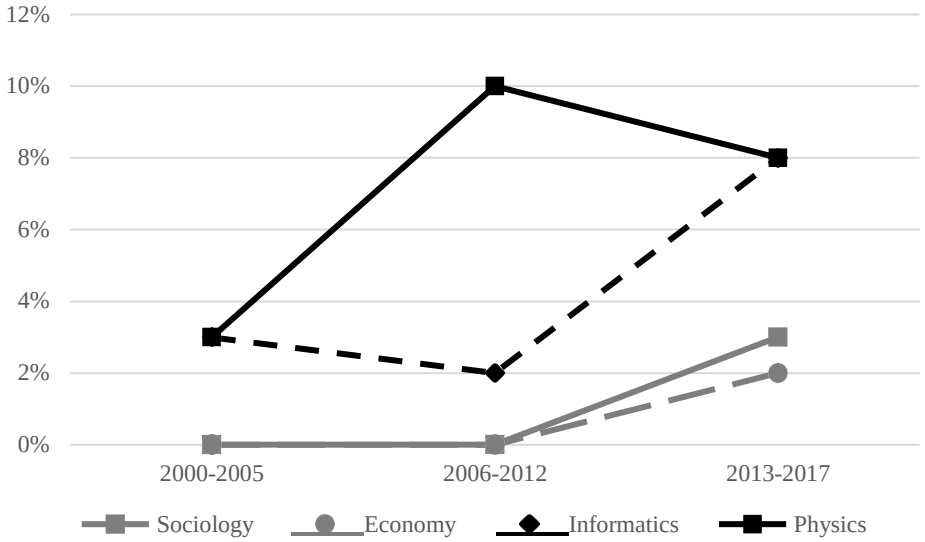
Additionally, the ability to attrac external research funding was also something the interview committee in the STEM-field emphasized, as for example by the interview committee of a recruitment processes in 2015.

"In our search for a person who could apply for NFR or EU projects, he also said that he was willing to do so. He commented that he would be more selective in choosing the subject of such projects, than what currently is the case at [Current work place] where everybody has to apply EU and NFR for projects on the topics most likely to achieve money. X had participated in a number of EU projects and had also recently headed and written an EU proposal that did not receive funding. (I-1308)"

Yet, the candidate's performance of attracting external funding were not the most important criteria when evaluating the candidates neither in the STEM-recruitment. Instead, the research profile and research output were more important (see appendix table 1).

Over the years the importance of grants increased
In the analysis we also saw that the expert committee more frequently mentioned the candidates track record of grant success and external funding in their evaluation. Figure 1 display the expert committees' mentioning of the candidates' grant success and ability to attract external research funding in the three time periods. There is a rise of the mentioning of these criteria over time in all fields.

Figure 2. Mentioning of external funding and grants and evaluation criteria by the expert committees over time



In sociology the ability of attracting external research funding was not mentioned before 2014, and the expert committee that first mentioned the candidates ability to attract external funding wrote small comments about two candidates:

"She has a very good record for attracting funding and teaching and her work fits well with the focus of the job call" (S-1107)
"He has experience in leading or playing a leading role in large projects and in generating research funding" (S-1107)

That the importance of grant success increased over time aligned with the findings from the interviews, where several actors mentioned that this was increasingly emphasized both in the interviews. Departmental leaders also commented that the university now expected all academics to apply for grants, and preferably head for ERC grants.

Grant success was not only about money
In the interviews the respondents answered that the reason for the increased focus on attracting external funding was due to the need for more external funding. This was especially the case in physics, that clearly described the need for the institute to attract more funding [citations from interviews will be translated from Norwegian to English].

However, even though the need for more external money had intensified the focus on money, this was not the main focus in all fields. In sociology they often referred to the new focus on grant success when evaluating candidates for professorial positions was more due to the academic prestige that followed grants. Winning a grant signaled that the candidates were able to formulate their own research ideas and be a scientific leader at an international level. Similarly, also in the physics who were more focused on the money that followed external funding also mentioned that recruiting someone with an ERC-grants was an enormous prestige for the department, which thumped all other arguments [citations from interviews will be translated from Norwegian to English].

The drive for grant is also driven by the researchers themselves
Department leaders mentioned that applying for grant was something they expected and encourage from their academic employees, yet departmental leaders also referred to that the

increased focus was not caused by them but more from the academic themselves that were eager to apply for grants to realize their research ideas, build research groups/community but also intrigued by the academic prestige following succeeding in winning such a grant [citations from interviews will be translated from Norwegian to English].

Discussion and Conclusion [TBA]

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Appendix

Appendix Table 1. The use of evaluation criteria by the expert committee by the four fields

	Economics			**Sociology**			**Physics**			**Informatics**		
	Ref	Ranking	Important	Ref	Ranking	Important	Ref	Ranking	Important	Ref	Ranking	Important
Bibliometrics	49 %	52 %	56 %	31 %	27 %	36 %	18 %	17 %	22 %	27 %	29 %	25 %
Matching Field	11 %	11 %	17 %	9 %	14 %	20 %	20 %	28 %	38 %	19 %	20 %	38 %
Quantiative research evaluation	18 %	11 %		19 %	22 %	40 %	11 %	10 %	2 %	10 %	4 %	8 %
Future potential	12 %	22 %	27 %	3 %	3 %		2 %	7 %	5 %	1 %	3 %	
Teaching experience	7 %			19 %	18 %	4 %	23 %	12 %	12 %	17 %	14 %	15 %
Administrative skills	1 %			9 %	9 %		7 %	9 %	7 %	7 %	9 %	2 %
International experience				2 %	2 %		6 %	5 %	5 %	4 %	4 %	4 %
Third Mission	1 %	1 %		5 %	4 %		4 %	4 %		8 %	8 %	8 %
Grants	1 %	2 %		2 %	1 %		8 %	5 %	5 %	6 %	9 %	
Personality							1 %	2 %	2 %			
Personal Background	1 %							1 %	2 %	2 %		
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Number of most important criteria	*308*	*81*	*18*	*811*	188	25	*524*	135	41	*661*	93	48
Number of recruitment processes	*11*			*11*			*16*			*21*		
Average number of candidates	*9,1*			*12,4*			*8,2*			*6,4*		
Average number of pages	*13,2*			*34,6*			*7,8*			*8,2*		
Pages per candidates	*1,5*			*2,8*			*1*			*1,3*		