

Third-party funding - restraints and stimulation by organisational factors

4th EUA Funding Forum,
18.-19. October 2018
Ramon Llull University, Barcelona/Spain

Dr. Axel Oberschelp

Third-party funding in German HE-System

- Great importance for research funding
- Amount of third-party income (or expenditure) is a commonly used indicator to map research activities and achievements
- Use in the context of financial instruments (performance-related pay, target agreements, performance-related funding)
- Special role of DFG-Funds (Germany's central national funding organisation):
 - largest funding organisation in Germany (approx. 1/3 of all funds)
 - qualitatively demanding assessment procedure
 - important for reputation/ visibility of researchers

Research on Third-party funding

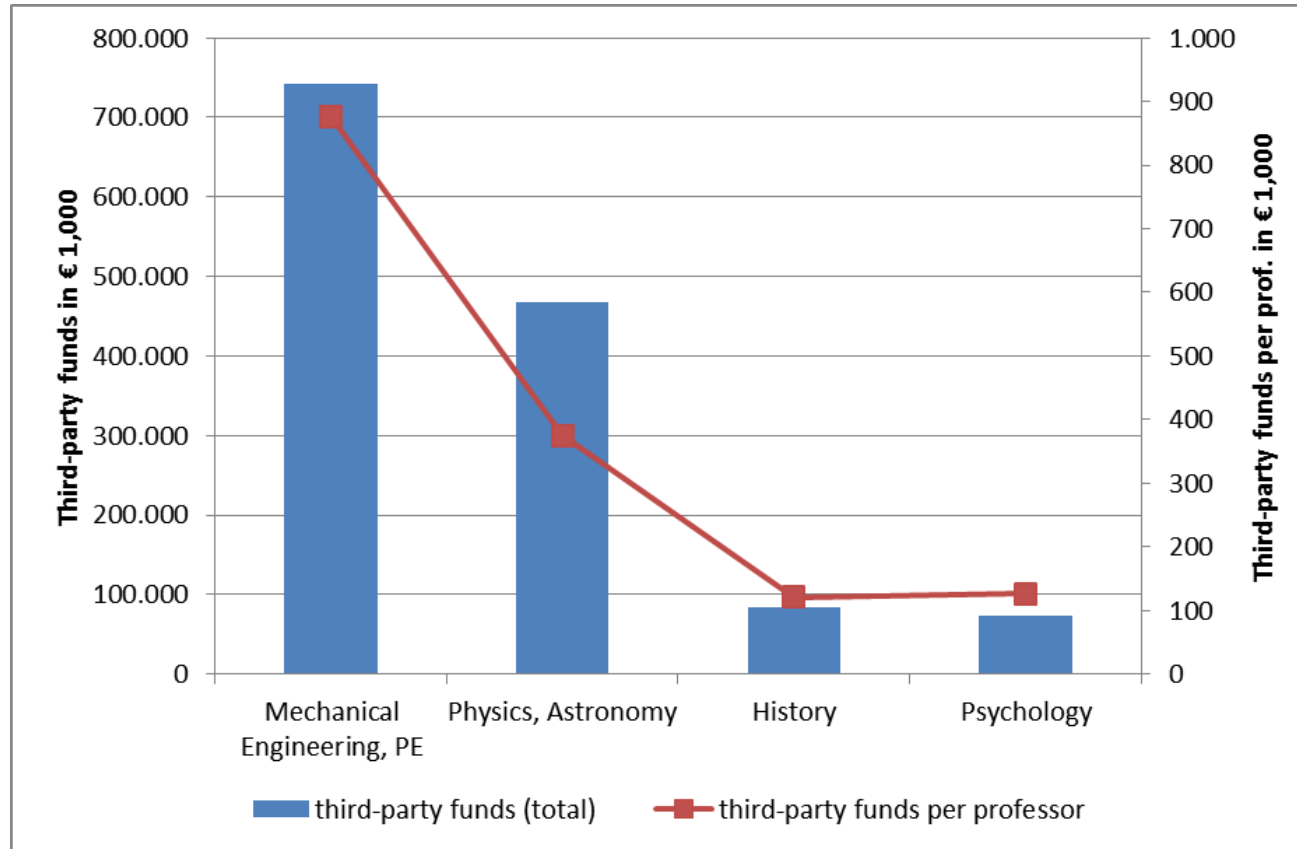
- Third-party funds: indicator for what?
- Relationship between fundraising and research output (publications)
 - no clear findings, but evidence that there is no direct relationship, but decreasing marginal utility (Jansen et al. 2007, Gerhards 2013)
 - Subject-specific differences
- Effects of funding: concentration (Matthew effect) and stratification (Münch 2010)
- International studies focussing context variables for research performance of universities or other organisational units, (Carayol, Matt 2004; Edgar, Geare 2013)
- Studies on factors that lead to success in the acquisition of funds
 - award procedure, biases (Hornbostel, Olbrecht 2007)

Study Design

- Examining factors (resources, employment profiles, teaching duties) that promote or hinder the success of subject units of universities in raising quality-rated third-party funding (DFG-funds)
- Analysis of four subjects (History, Psychology, Physics/Astronomy, Mechanical Engineering/Process Engineering)
- Data with organisational link from
 - the German Research Foundation (DFG)
 - the Federal Statistical Office (staff, students)
 - a scientists survey (DZHW)
- Work in progress:
 - first findings
 - not yet: modelling a multivariate analysis of relationships between third-party success and context variables

First findings

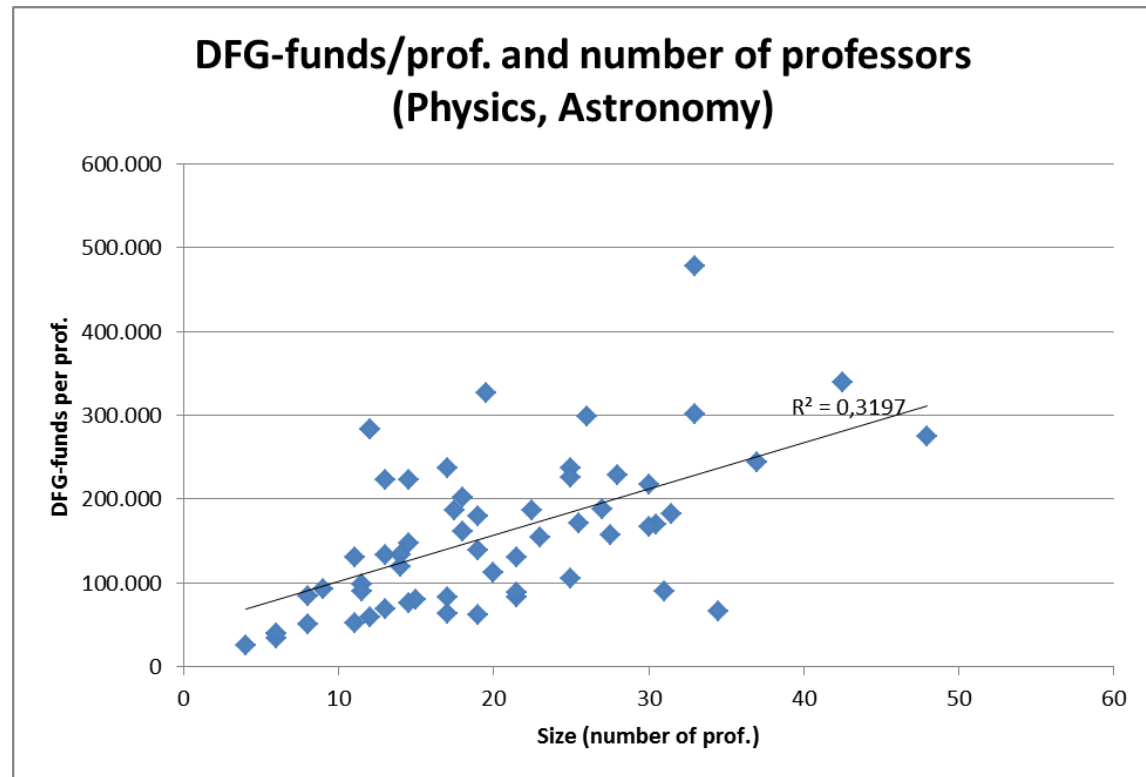
- differences between subjects



Quelle: destatis, 2015

First findings

- influence of size

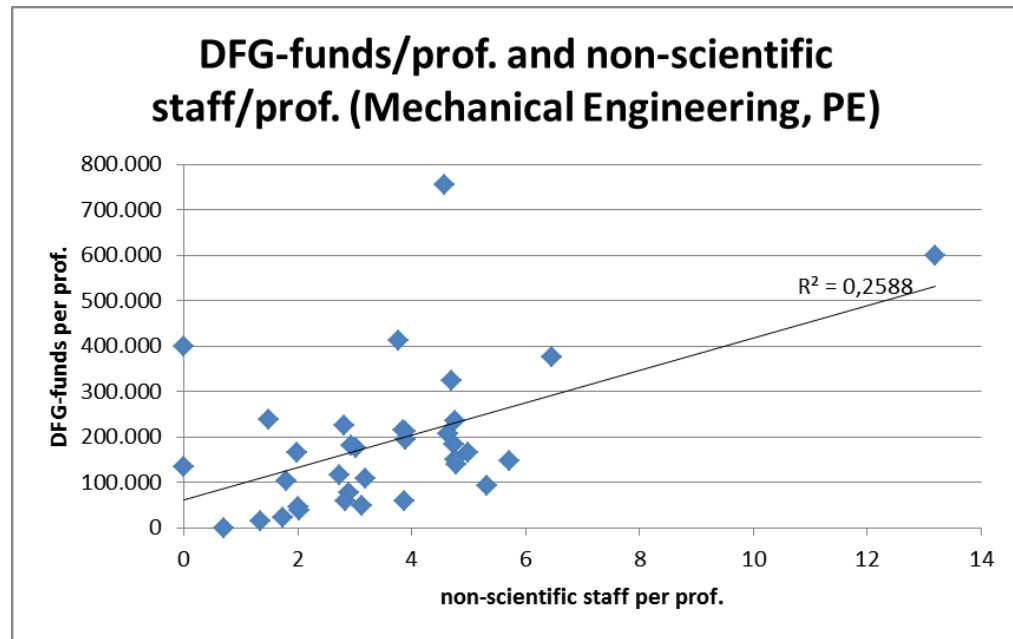


Coefficient of correlation (Pearson). Dependent variable: DFG-funds per professor.				
	History	Psychology	Physics, Astronomy	Mechanical Engineering, PE
number of professors				
number of scientific staff (incl. professors)	0.4256	0.2093	0.5654	0.3073
observations	72	59	58	35

Sources: DFG-Förderatlas 2018 (data for 2014-2016), Destatis (data for 2016)

First findings

- influence of staff resources



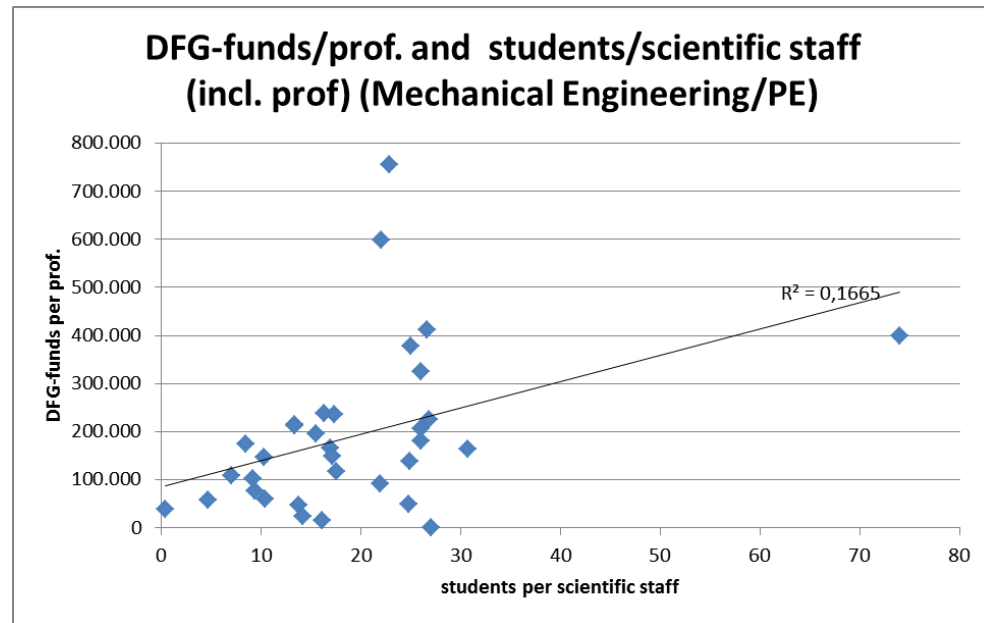
Coefficient of correlation (Pearson). Dependent variable: DFG-funds per professor.

	History	Psychology	Physics, Astronomy	Mechanical Engineering, PE
scientific staff per professor	0.0559	0.1377	0.0511	0.5300
scientific staff involved in research per professor	0.0421	0.1982	0.0325	0.5345
non-scientific staff per professor	0.3683	0.4154	0.2497	0.5087
observations	72	59	58	35

Sources: DFG-Förderatlas 2018 (data for 2014-2016), Destatis (data for 2016)

First findings

- influence of teaching activities



Coefficient of correlation (Pearson). Dependent variable: DFG-funds per professor.				
	History	Psychology	Physics, Astronomy	Mechanical Engineering, PE
students per scientific staff (incl. professors)	0.1787	-0.0715	0.0332	0.4081
teaching degree students ratio	-0.0358	-0.0248	0.0085	0.1222
master degree students ratio*	-0.0757	-0.0795	0.0019	0.1396
observations	61	56	57	33

Sources: DFG-Förderatlas 2018 (data for 2014-2016), Destatis (data for 2016, 2015)

* = divergent number of observations

Thank you very much for your attention

References:

Carayol, Nicolas; Matt, Mireille (2004): Does research organization influence academic production? Laboratory level evidence from a large european university. In: *Research Policy* 33, S. 1081–1102.

Edgar, Fiona; Geare, Alan (2013): Factors influencing university research performance. In: *Studies in Higher Education* 38 (5), S. 774–792.

Gerhards, Jürgen (2013): Der deutsche Sonderweg in der Messung von Forschungsleistungen. Berlin: Berlin-Brandenburgische Akademie der Wissenschaften (Wissenschaftspolitik im Dialog, 7).

Hornbostel, Stefan; Olbrecht, Meike (2007): Peer review in der DFG: Die Fachkollegiaten. Institut für Forschungsinformation und Qualitätssicherung (IFQ). Bonn (iFQ-Working Paper, 2).

Jansen, Dorothea; Wald, Andreas; Franke, Karola; Schmoch, Ulrich; Schubert, Torben (2007): Drittmittel als Performanzindikator der wissenschaftlichen Forschung. Zum Einfluss von Rahmenbedingungen auf Forschungsleistung. In: *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 59 (1), S. 125–149.

Münch, Richard (2010): Der Monopolmechanismus in der Wissenschaft. Auf den Schultern von Robert K. Merton. In: *Berliner Journal für Soziologie* (20), S. 341–370.

Mission Statement

We...

- carry out application-oriented **empirical research** in the field of higher education and science studies.
- are partner and **service-provider** in the area of science and scientific policy.
- provide **research-based services** and **consulting**.
- are establishing a **research data centre** to provide **primary data** for the scientific community.



First findings

concentration – DFG-funds per prof.

	History	Psychology	Physics, Astronomy	Mechanical Engineering, PE
n (number of organisational units)	80	66	61	63
median	150.000	400.000	2.633.333	400.000
1st quintile ratio on DFG-funding	71%	56%	51%	76%
2nd quintile ratio on DFG-funding	21%	25%	24%	19%
3rd quintile ratio on DFG-funding	6%	12%	15%	4%
4th quintile ratio on DFG-funding	2%	5%	8%	1%
5th quintile ratio on DFG-funding	0%	1%	3%	0%

	1st quintile ratio on DFG-funding	
	2011-2013	2014-2016
History	70%	71%
Psychology	53%	56%
Physics, Astronomy	50%	51%
Mechanical Engineering, PE	77%	76%