

# Third-party funding - restraints and stimulation by organisational factors

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# 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

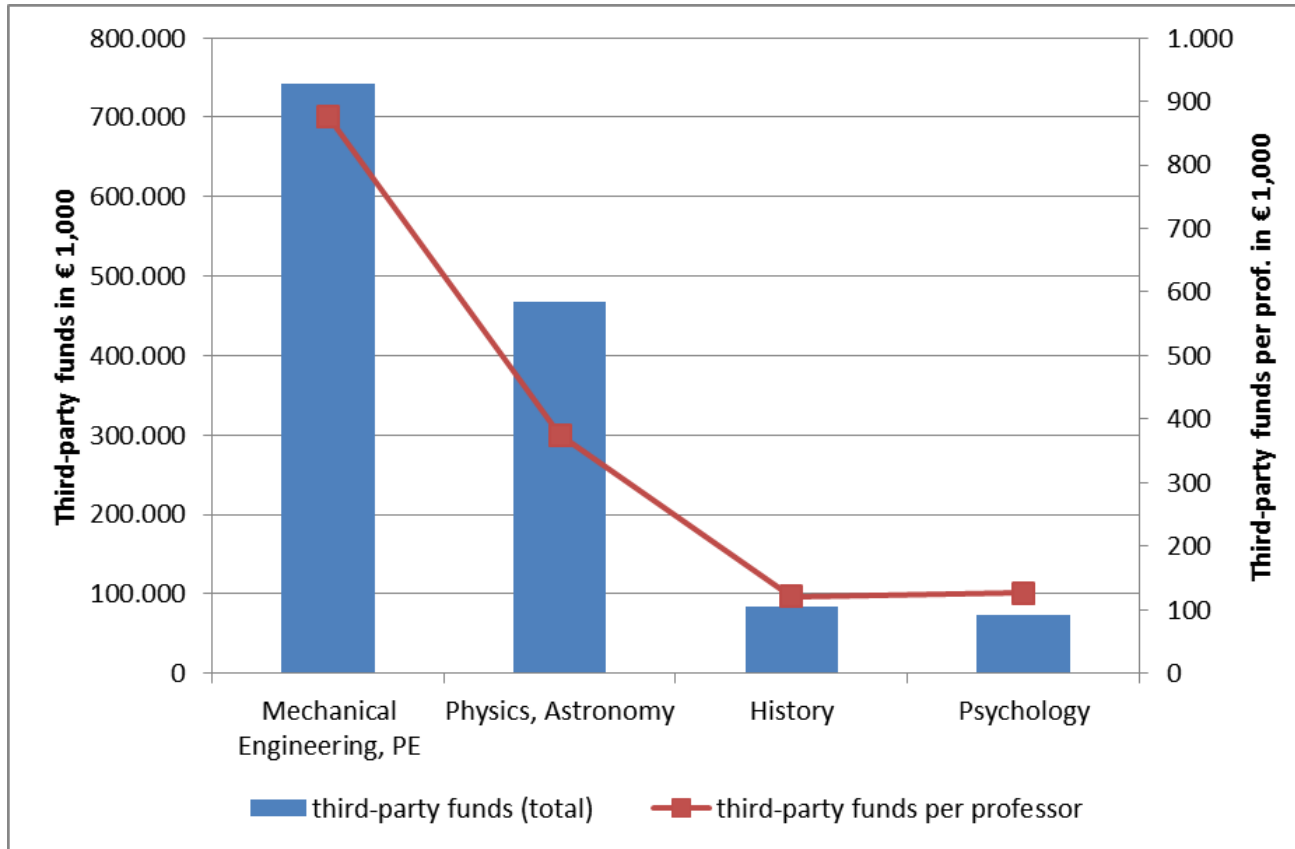
- Third-party funds: indicator for what?
- Relationship between fundraising and research output (publications)
  - no clear findings, but evidence that there is no direct relationship, but decreasing marginal utility (Jansen et al. 2007, Gerhards 2013)
  - Subject-specific differences
- Effects of funding: 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

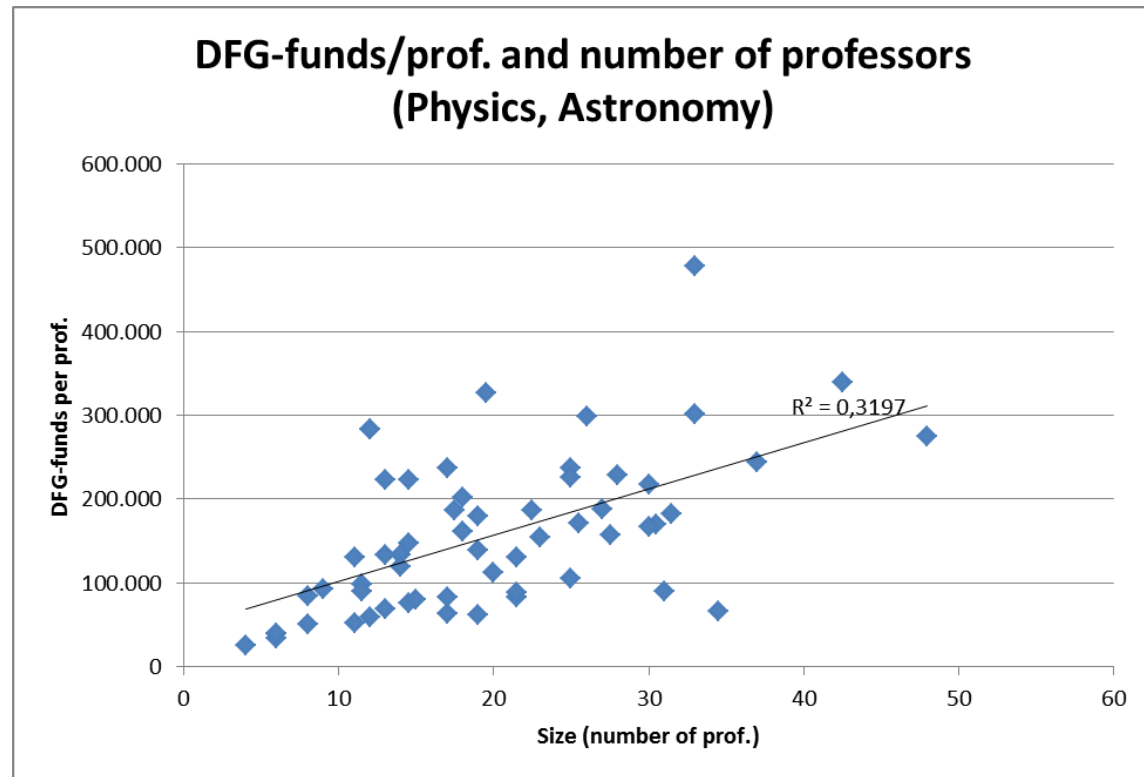
- differences between subjects



Quelle: destatis, 2015

# First findings

- influence of size

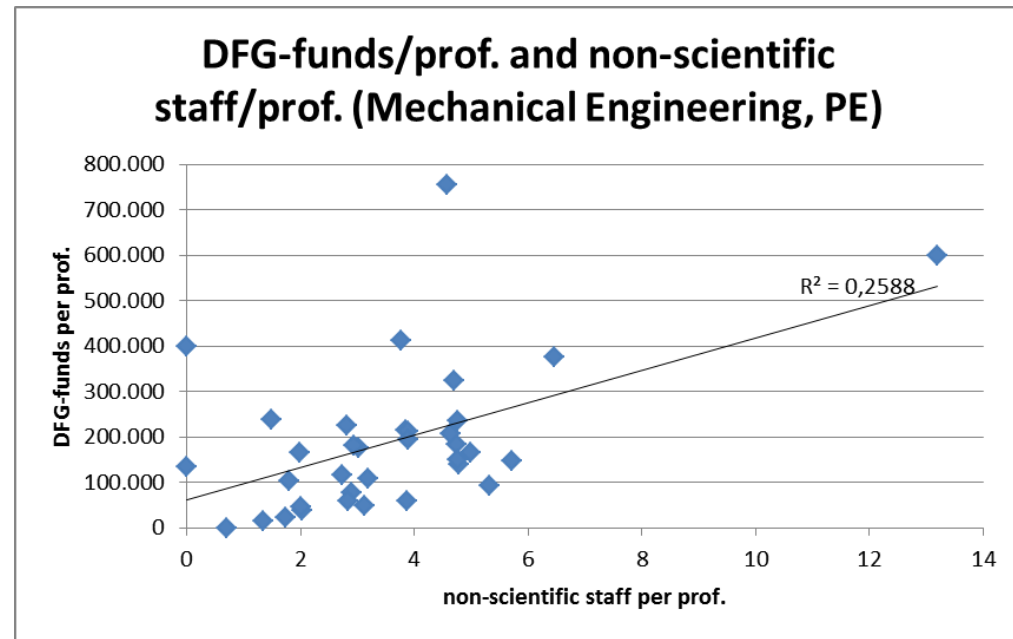


Coefficient of correlation (Pearson). Dependent variable: DFG-funds per professor.				
	History	Psychology	Physics, Astronomy	Mechanical Engineering, PE
number of professors				
	0.4256	0.2093	0.5654	0.3073
number of scientific staff (incl. professors)				
	0.3900	0.2767	0.5580	0.5345
observations				
	72	59	58	35

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

# First findings

- influence of staff resources

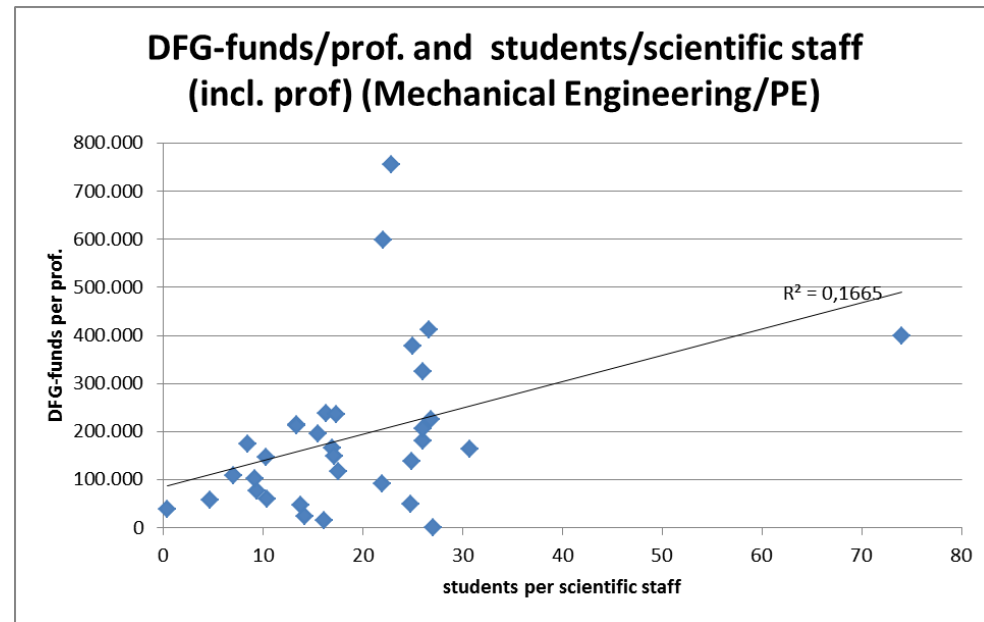


Coefficient of correlation (Pearson). Dependent variable: DFG-funds per professor.				
	History	Psychology	Physics, Astronomy	Mechanical Engineering, PE
scientific staff per professor	0.0559	0.1377	0.0511	0.5300
scientific staff involved in research per professor	0.0421	0.1982	0.0325	0.5345
non-scientific 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:

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# Mission Statement

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- 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%