

Performance Based Funding as a Tool for Strategic Planning? The German Medical Faculties

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Dr. René Krempkow

In cooperation with Patricia Schulz and Jörg Neufeld
iFQ Institute for Research Information and Quality Assurance
D-53175 Bonn
www.forschungsinfo.de



Outline

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6. Conclusion
7. Prospects

1. Our Questions

Our project will analyse the **effects of scientific-political guidance and control systems for behavior of scientists** - using the example of medical faculties in Germany. GOMED is an acronym for the project name „Governance of University Medicine“ funded by the German Federal Ministry of Education and Research. My presentation is a part of a bigger project.

Focus: Performance based funding (**PBF**) for research

Questions:

- Did PBF achieve its expected targets? (increase of efficiency and quality, transparency)
- Which effects can the used PBF-systems and indicators have? (also unintended effects)
- Is PBF a tool for strategic planning in the medical faculties in Germany?

2. Theoretical / analytical frame (1)

2.1 Theoretical frame

- The spectrum of a wide governance term constitutes the frame of the ***governance of instruments*** from hierarchical guidance to the negotiation for contracts „at eye level“ (see Benz et al 2007, Göhler 2007, Mayntz 2005).
- Differentiation between „***governance instruments***“ and „***governance of instruments***“ (*processes or rather structures*, which decide on which instruments are used)
- ***Governance instruments are incentives (e.g. PBF-system),***
- ***Discourses*** take place in the context of the ***governance of instruments***:
 - What is quality in medical research and how can be it measured?
 - Which forms of instruments and indicators are adequate?
 - Justice of chances, distributive and procedural justice

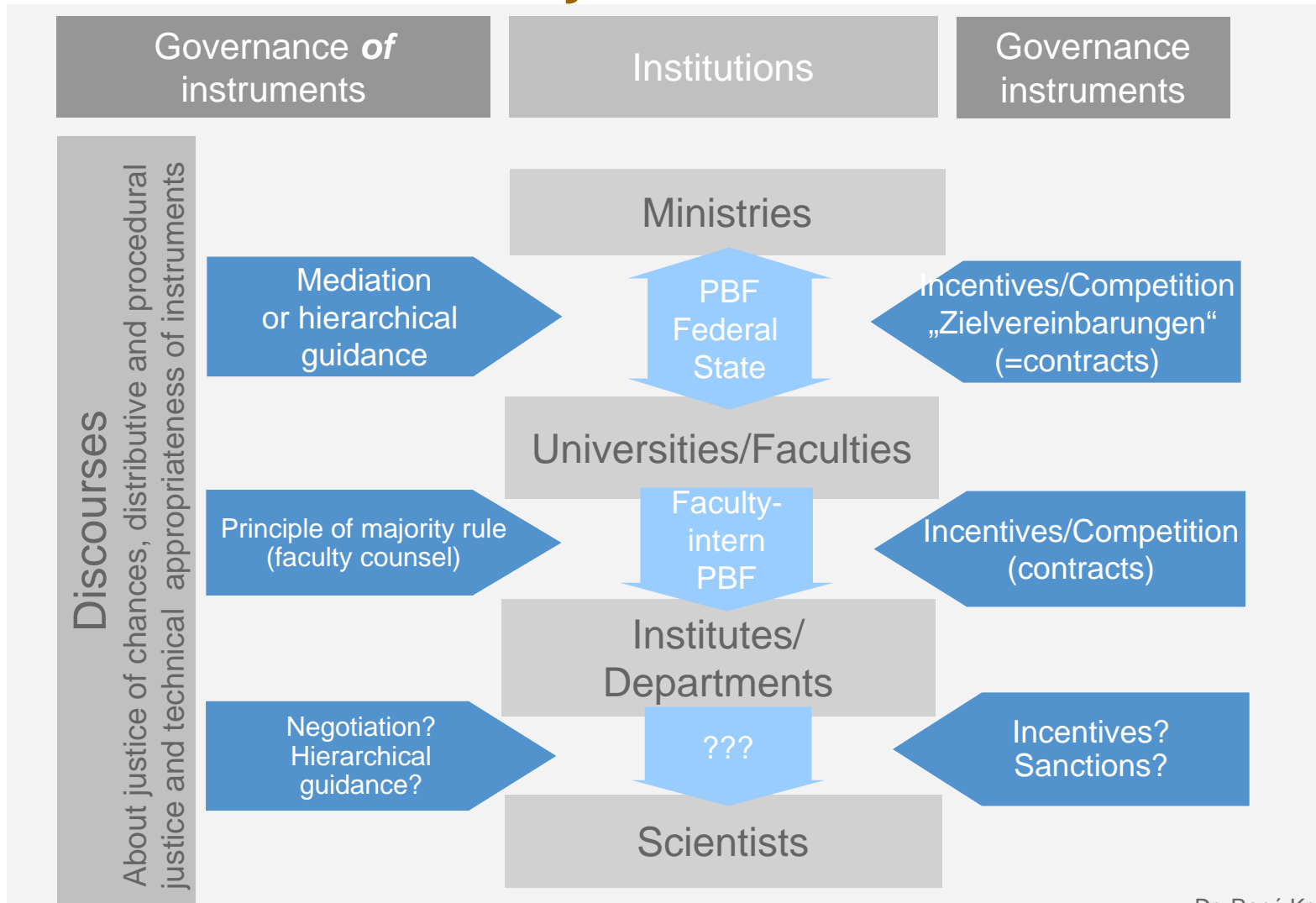
2. Theoretical and analytical frame (2)

2.2 Analytical frame

- Levels of analysis:
 - Ministries of federal states
 - Universities / faculties
 - Institutes / establishments
 - Scientists
- Structural and institutional context:
Institutes, clinics, professional and scientific associations, other organisations
- Task of the establishments: Research, teaching, patient care

2. Theoretical and analytical frame (3)

Governance of PBF-systems



3. Methods

Four different methods are used:

- a) **Analysis of documents:** Assessment of PBF-systems, legal regulations, processes of implementation
- b) **Guided interviews** with representatives of faculty management
- c) **Online survey** of scientific staff of medical faculties on perception and effects of PBF → *scheduled for 2011*
- d) **Bibliometric analysis** is supposed to examine the changes of quantity and feedback of the publication activity of faculties and their institutes over time. → *scheduled for 2012*

4. First results of the Document analysis

4.1 Three examples for an inner-faculty PBF in medicine

	Example Freiburg	Example Münster	Example Göttingen
Proportion of PBF of federal state subvention	Ca. 12 %	Ca. 25 %	Ca. 10 %
Balance of functions (weight of the functions in PBF): used criterias/ indicators	<p>Research (weight in PBF: 60%): third-party funds and publications</p> <p>Teaching (weight in PBF: 40%): IMPP factor (final grades), load of teaching, evaluation of teaching</p>	<p>Research (66%): third-party funds and publications</p> <p>Teaching (33%): IMPP- factor (final grades), load of teaching, satisfaction of students</p>	<p>Only Research (100%): third-party funds and publications</p> <p>Teaching (0%): (but planned)</p>
Assessment period	Past 3 years	Past 5 years	Past 3 years

Data: own analysis of documents (2010); Brähler (2009); table: own illustration.

4.2 Criteria and weighting in the performance budget of the PBF of the states: medicine on the basis of the examples BW, NRW vs. other subjects

State	Baden-Württemberg	North Rhine-Westphalia	Berlin
Medi- cin (where state-wide models exist)	<ul style="list-style-type: none"> - Research: 60%, - young academics: Med. none (faculty scholarship / MOBILMED- participation as criteria under consideration), - teaching: 40%, - equation: with contracts 	<ul style="list-style-type: none"> - Research: 75%, - young academics : none, - teaching: 25% , - equation: non. 	<ul style="list-style-type: none"> - Research: ~13 %, - young academics : (application-based, any sum quoted), - teaching: ~63% - equation: none. - furthermore application based funding „Stellenpool“: ~23 %

Sources: BW: Medizin: MWK 2009, Land: König 2009 (nur Volumenteil); NRW: MIWFT 2009, Land: MIWFT 2009, Schwarzenberger 2009b, RWI 2008: 94; BE: SenBWF 2009, Charité 2009, Land: Schwarzenberger 2009a.

5. First results of the semi-structured interviews

- 24 interviews conducted (in 12 faculties) with...
 - ...Deans
 - ...Deans of research
 - ...Faculty referents of research (Dean Assistents)
- Semi-structured interviews by representatives of iFQ
- All interviews were recorded and transcribed
- Protocols about the interviews written immediately after interviews were conducted (to memorize the context of the interview)

5.1 Effects on publication activities

- strategic cooperations between clinical researchers and basic researchers in order to produce publications with high Journal-Impact-Factor increase
- especially surgical and smaller subjects feel disadvantaged because they do not believe that they can publish in journals with high impact factors (because of the different size of subfield specific JIF)

5.2 Effects on third-party funding

- funds from the German Research Foundation (DFG) are preferred by PBF, since they correspond to the „rating“ at acquisition.
- generally the PBF assesses industrial means less highly, which leads to resistance against PBF from research groups especially close to economy

=> Thesis development, e.g.: Stronger specialization on third-party funds, in order to optimize prospects (either with the DFG or with the third-party funds)?

Further results (extracts)

- Relation to PBF of federal states: where there is a PBF-system in federal states, the PBF of faculties will generally use similar indicators
- Generally, there are governance instruments different from PBS which can be applied for by researchers to avoid a PBF-downward spiral or to develop new research focuses

6. Conclusion

PBF from the viewpoint of faculty management:

- Publication activity and quality as well as third-party funds increased noticeably with the introduction of PBF. (But causality?)
- PBF leads to more transparency but usually rated not relevant for strategic planning
- only some faculties use their internal PBF to prioritize institutes with high performance to maximize the performance budget from the state (first of all by defining and weighting of the indicators)

But: this are first results. PBF from the viewpoint of the scientific staff is scheduled by an online survey in 2011.

=> In 2012 planned: put together the results of the four methods (multi level analysis)

7. Prospects

- By increasing PBF sums (percentage) we suppose a different development of faculties: Some will maximize their graduate counts (or other teaching indicators), others will maximize their research indicators to maximize the performance budget from the state ?
- In cases where there is no strategic planning, self-selection of (young) researchers might over time do the same, because now already existing differences in the performance (dimensions) of faculties (see German Map University Medicine) and researchers (see Schmoch u.a. 2010) ?

=> faculties reflecting their strengths and weaknesses and make a strategic plan for their future development will be placed better in the competition among faculties (?)

Thank you for your attention!

contact:

krempkow@forschungsinfo.de

Following sheets: Reserve (for discussion)

4. First results

Choice of faculties

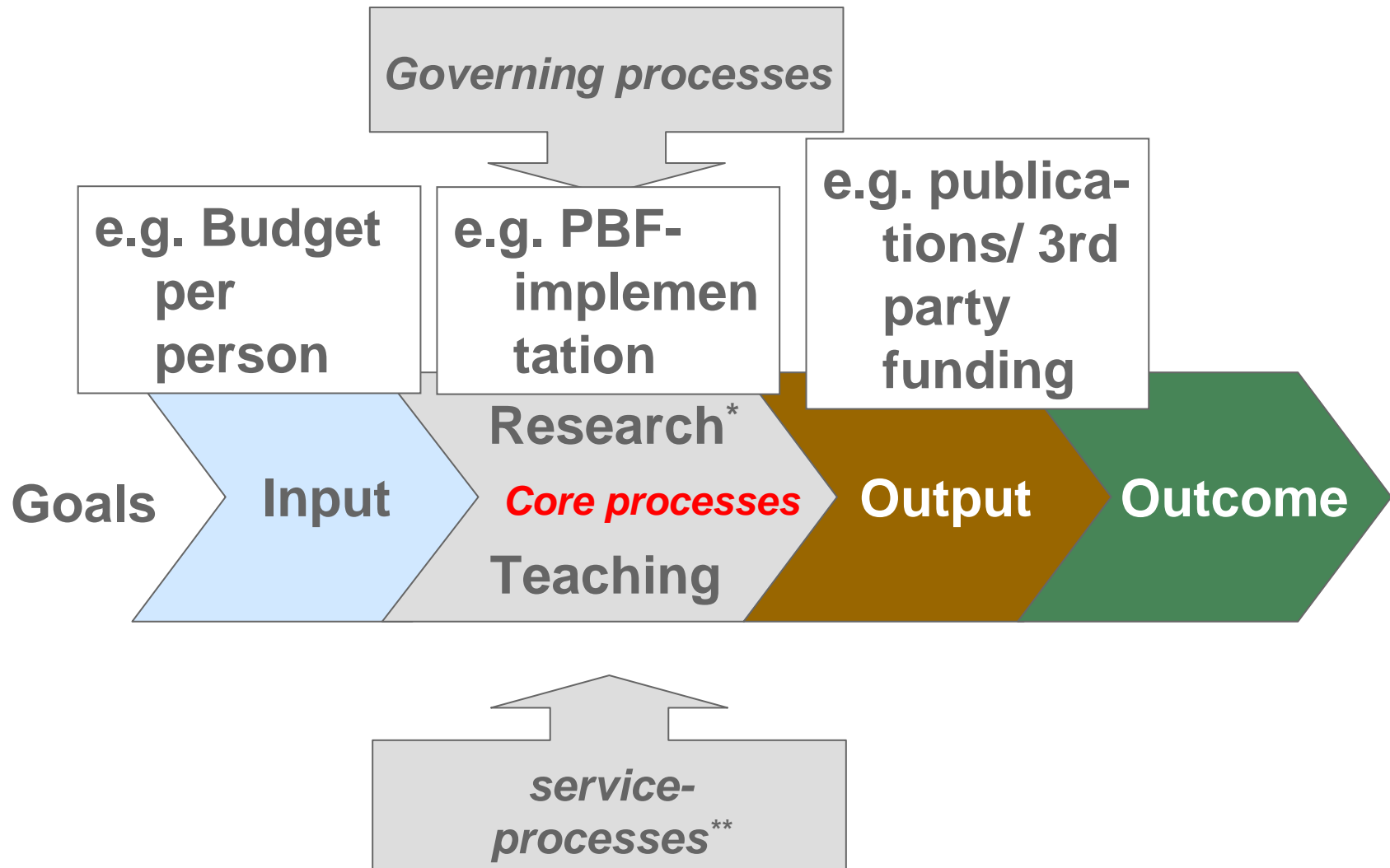
The faculties for the guided interviews were chosen by theoretical criteria, supported by an cluster analysis on the base of the map of university medicine*.

Cluster analysis: Input- und outputvariables (state basic funding per person, staff, publications, third-party funding, ...)

Other criteria: Organisational structure, federal state, characteristics of the PBF-system

*Medizinischer Fakultätentag, MFT, (Hrsg.): Landkarte Hochschulmedizin. <http://www.landkarte-hochschulmedizin.de/home.aspx> [Stand: September 2008].

Process model for analyses at State level



* incl. Young researchers

4.2 First results for federal states: medicine vs. other subjects

Performance budget and shares in overall budget for three examples: Baden-Württemberg (BW), NRW und Berlin (BE) – as most experienced states with PBF*

- **BW-Medicine:** ~ 300 Mio € for 5x medicin; since ´98 criteria were changed repeatedly.; current **75%** perf. budget; capping: 1 Mio. € per Fac.

- **NRW-Medicine:** 75 Mio € per 7x medicin; current **15%** of budget funds in PBF included; is supposed to be raised up to **20%** (~120 Mio €) until 2011.

- **BE-Medicine** (since the fusion of the medical faculties to Charité Berlin) it´s the same as in the state Berlin at all

4.2 First results for federal states: medicine vs. other subjects

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- **State BW (other subjects without medicin): 20%, i.e. ~1/2 Billion €** of adjusted subvention by performance parameters; separated in half in so called „Belastungsmodell“ (e.g. number of alumni) and „Anreizmodell“ (Changes in relation to past yaer); capping **for gains and losses:** 1% of the unadjusted subvention.

- **NRW-Medicine:** 75 Mio € per 7x medicin; current **15%** of budget funds in PBF included; is supposed to be raised up to **20% (~120 Mio €)** until 2011.

- **State NRW (other subjects without medicin):** currently about 1/2 **Billion €** performance-related distributed on all universities. Since 1994 raised stepwise from 8,4% for universities (o. medicin) up to **20%** indicator-based proportion of budget of the adjusted subvention of states (2006). Capping: max. loss 1,5% of the overall subvention per annum, **Gain uncapped.**

- **BE-Medicine** (since the fusion of the medical faculties to Charité Berlin) it´s the same as in the state Berlin

- **State BE:** since 2001 increase from 6% to **30% (currently), i.e. ~1/3 Billion €** proportion of performance of overall subvention, criteria hardly changed, „since performance is basically illustrated adequate. Low achievements in one field of activity (...) can be compensated by others that are above-average “ (HIS 2004); from 2006: **no limit for capping.**

To 5.3 Criteria and weighting in the performance budget of the PBF of the states: medicine vs. other subjects on the basis of the examples BW, NRW

State	Baden-Württemberg	North Rhine-Westphalia	Berlin
Medi-cin (state-wide models) Research	<ul style="list-style-type: none"> - 30% third-party funds (past 2 years, third-party funds with external review double weighted) - 30% publications (Impact-Factors past two years, not weighted according to subjects; location of Co-author(s) counts only once) 	<ul style="list-style-type: none"> - 30% third-party funds (3 years, weighted according to topicality) - 45% publications (subject-specific weighted, 5 years, number x citation, main research specific need of equipment is considered, say ministry) 	<ul style="list-style-type: none"> - 50% third-party funds (3 years; DFG 3x, Industrie 1x, others 2x weighted) - 50% publications SCI-Impact-Factors, total proportion Charité of subject group (only 1 Faculty, hence state model=faculty model,)
Other subjects (state without medi-cin): Research, young academ.	<ul style="list-style-type: none"> - third-party funds Uni: 35%, FH 20%, - 10% Graduations 	<ul style="list-style-type: none"> - third-party funds Uni: 40%, FH: 15% - 10% Quote of graduation 	<ul style="list-style-type: none"> - third-party funds (proportion of third-party funds of a faculty/subject group in relation to third-party funds of the subject group in total in the state), for FH third-party funds und quote of publications in relation to manned jobs for profs - Quote of graduation - Quote of internationality

To 5.3: Criteria and weighting in performance budget: OECD-countries

Country/ Function	AU	CZ	DK	ES	FI	FR	GB	HU	IE	NL	NO	SE
Concerning research	17	7	-	-	-	-	19	1	-	10	8	-
Concerning teaching	77	51	26	84	68	60	64	49	30	25	25	62
state basic funding	-	12	57	4	12	30	-	47	63	63	60	
application based funding	6	30	17	12	20	10	17	4 (Research)	7	2 (R.)	7 (R.)	38 (R.)

Data: Leszcensky u.a. 2004: 188f., Table: own illustration

(R.) = only Research

In big OECD-states like Australia, Spain, Finland, France and GB:

Weighting for teaching indicators $\geq 60\%$. (But: Is this actual?)

Weighting for teaching indicators in this states is higher as in BW, NRW, BE. (for Germany at all not possible because of federal differences)

To 4. Results to mediation:

Acceptance/ opposition as one of the most important topics

- „I was asked if I can still cross the street at night without bodyguards but [...] we spread the [PBF-system] continuously, slowly but surely, until we finally decided it in the faculty council and established it“
- Opposition is reported everywhere namely – unsurprising – from institutes which had to predict or accept losses
- Attempts to build up acceptance through so called „Sockelfinanzierung“ (=„plateau financing“): established directors of institutes do not have their financing cut below a certain „plateau“ so they do not fear losses – PBF will hit only newly appointed professors hard

=> Online survey is supposed to give information about acceptance and perception of the PBF on the level of individual researchers

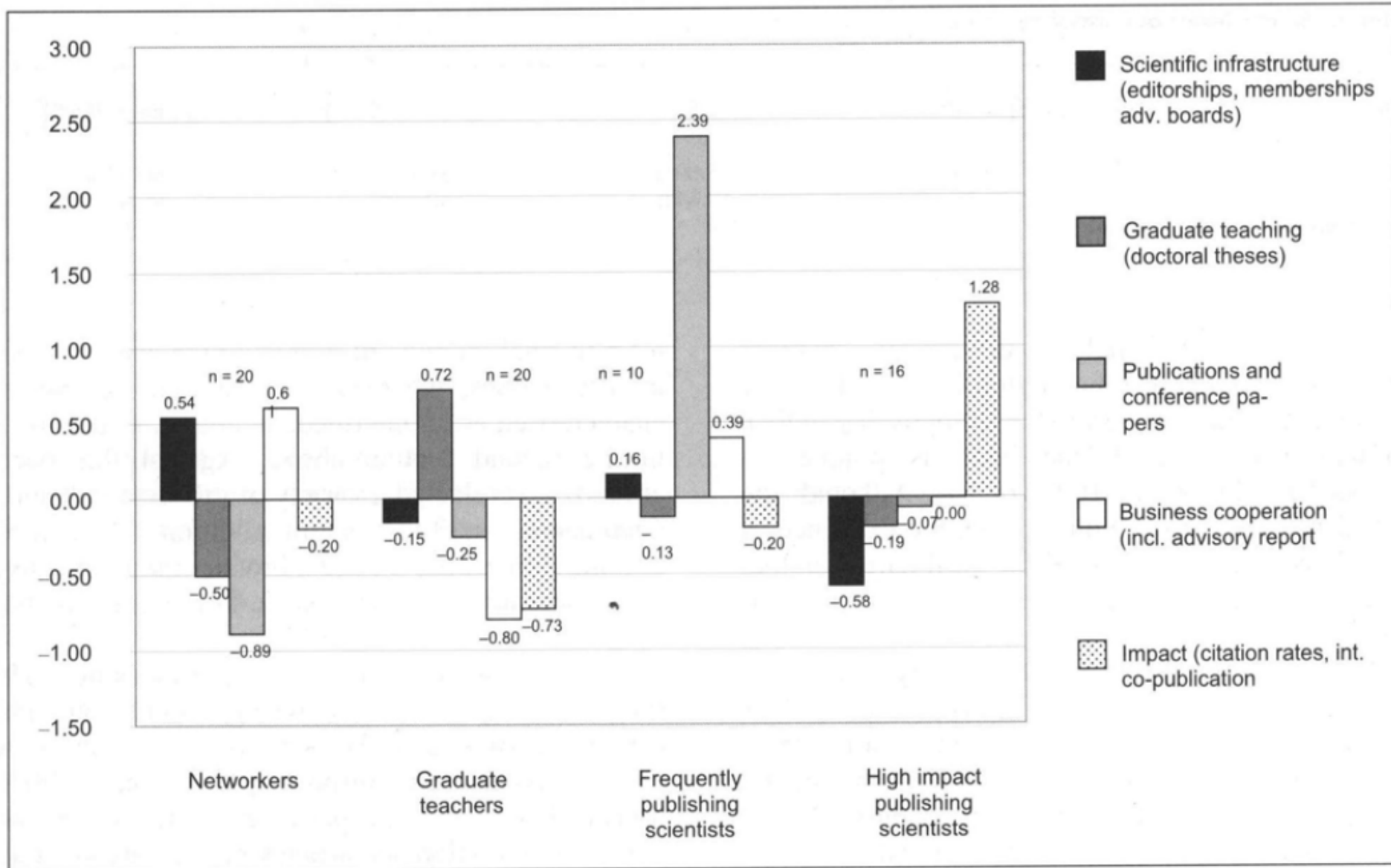


Figure 1. Activity profiles of research groups

Graphic: Schmoch et al (2010)