Deutsches Zentrum für
Hochschul- und Wissenschaftsforschung

University-internal Control Instruments at German Universities

Empirical Findings

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German Higher Education System

- NPM: change in university governance in the mid-1990s
- ongoing marketization of universities
- introduction of financing and management tools
  - agreements on objectives (AO)
  - performance-based models of funding (PBF)

Research Questions

- How are AO and PBF constructed?
- How are internal AO and PBF disseminated at German universities?
- What are the challenges of instrument-based internal university funding?

Methodology (1)

- Online Questionnaire
  - use of quantitative information and management tools
  - invited: 518 members of rectorate of 115 public universities with doctoral rights
  - participated: 158 members of rectorate (30%) of 85 universities (75%)
- Interviews
  - use of information, the tools used and the related challenges
  - 18 interviews with deans and representatives of reporting and information systems

Methodology (2)

- Screening of instruments and indicators
  - analysis of selected documents (AO and other contracts) on the level university-federal state
  - selection based on federal structure of governance (Hüther 2010)
    - 3 universities in Berlin, 3 universities in Rhineland-Palatinate, 3 universities in North Rhine-Westphalia, 3 universities in Bavaria
    - dimension of research, teaching, transfer and young scholars

Empirical Findings

Construction of internal AO within the area of research

research indicators (AO)	total
amount of third-party funding (total)	52.3%
no. of PhDs	44.6%
amount of competitive third-party funding	30.8%
no. of publications in top journals	27.7%
no. of granted applications for third-party funding	26.2%
no. of publications (total)	23.1%
no. of habilitations	21.5%
no. of highly-cited publications	16.9%
no. of ERC-grants	15.4%
no. of Humboldt scholarships & awards	13.8%
no. of science awards (total)	9.2%
other (within research)*	9.2%

Source: LeimU Online-Questionnaire

→ broad range of indicators in use

→ amount of third-party funding and number of PhDs is used in every second internal AO

Empirical Findings

Construction of internal AO within the area of teaching

teaching indicators (AO)	total
no. of new students	47.7%
utilization of study programs	44.6%
no. of students within standard period of study	30.8%
no. of students	27.7%
no. of graduates	27.7%
no. of graduates within standard period of study	18.5%
no. of student dropout	18.5%
faculty-student ratio	15.4%
other (within teaching)	6.2%
teaching awards	4.6%

Source: LeimU Online-Questionnaire

- → broad range of indicators in use
- → concentration on indicators related to number of students
- → number of new students and utilisation of study programs are the most used indicators

Empirical Findings

Construction of internal PBF within the area of research

research indicators (PBF)	total
amount of third-party funding (total)	68.2%
no. of PhDs	58.9%
amount of competitive third-party funding	42.1%
no. of publications (total)	40.2%
no. of habilitations	39.3%
no. of journals in top journals	26.2%
no. of ERC-grants	25.2%
no. of Humboldt scholarships & awards	24.3%
no. of highly cited publications	21.5%
no. of granted applications of third-party funding	21.5%
no. of science awards (total)	18.7%
other (within research)	9.3%

Source: LeimU Online-Questionnaire

→ PBF containing a large number of indicators

→ concentration on few indicators: amount of third-party funding and number of PhDs

Empirical Findings

Construction of internal PBF within the area of teaching

teaching indicators (PBF)	total
no. of graduates	43.4%
no. of new students	39.6%
no. of students within standard period of study	37.7%
no. of students	35.8%
utilisation of study programmes	29.2%
no. of graduates within standard period of study	23.6%
faculty-student ratio	18.9%
other (within teaching)	12.3%
teaching awards	9.4%
no. of student dropout	7.5%

Source: LeimU Online-Questionnaire

→ PBF containing a lower number of indicators

→ concentration on indicators related to number of students

→ (new) students and graduates are the most used indicators

Empirical Findings

Consideration of subject cultures within internal PBF

subject cultures (PBF)	small U	medium-sized U	big U	total
agricultural sciences, forestry & nutritional sciences, veterinary medicine	100.0%	90.0%	51.9%	72.0%
medicine, health sciences	85.7%	83.3%	48.6%	63.9%
engineering	75.0%	57.1%	60.7%	63.8%
mathematics, natural sciences	59.1%	57.9%	50.0%	54.5%
sport	64.3%	46.2%	23.5%	37.7%
law sciences, economics, social sciences	38.1%	15.8%	16.7%	22.4%
humanities	47.4%	10.5%	13.9%	21.6%

Source: LeimU Online-Questionnaire

→ high consideration of hard sciences within internal PBF

→ low consideration within law, economics, social sciences and humanities

→ the smaller the university the higher is the consideration of subject cultures

Empirical Findings

Share of budget which is allocated by internal PBF

	small U	medium-sized U	big U	total
< 10%	73.9%	64.7%	58.1%	64.8%
10% to 20%	8.7%	23.5%	22.6%	18.3%
20% to 30%	4.3%	5.9%	0.0%	2.8%
> 30%	13.0%	5.9%	19.4%	14.1%
total	100.0%	100.0%	100.0%	100.0%

Source: LeimU Online-Questionnaire

→ low share of budget allocated by internal PBF

→ almost 65% reported from a less than 10% share. 14% from a more than 30% share

→ smaller universities have a lower share of budget which is allocated by PBF

Empirical Findings

Share of teaching and research related indicators within internal PBF

teaching	small U	medium-sized U	big U	total
< 25%	21%	21%	7%	15%
25% to 50%	47%	50%	59%	53%
50% to 75%	26%	7%	21%	19%
> 75%	5%	21%	14%	13%
total	100%	100%	100%	100%

→ at most universities the share of teaching related indicators are between 25% and 50%

research	small U	medium-sized U	big U	total
< 25%	15%	21%	17%	18%
25% to 50%	45%	50%	52%	49%
50% to 75%	30%	7%	24%	22%
> 75%	10%	21%	7%	11%
total	100%	100.0%	100.0%	100.0%

→ at most universities the share of research related indicators are between 25% and 50%

Source: LeimU Online-Questionnaire

Empirical Findings

Dissemination of internal AO and PBF

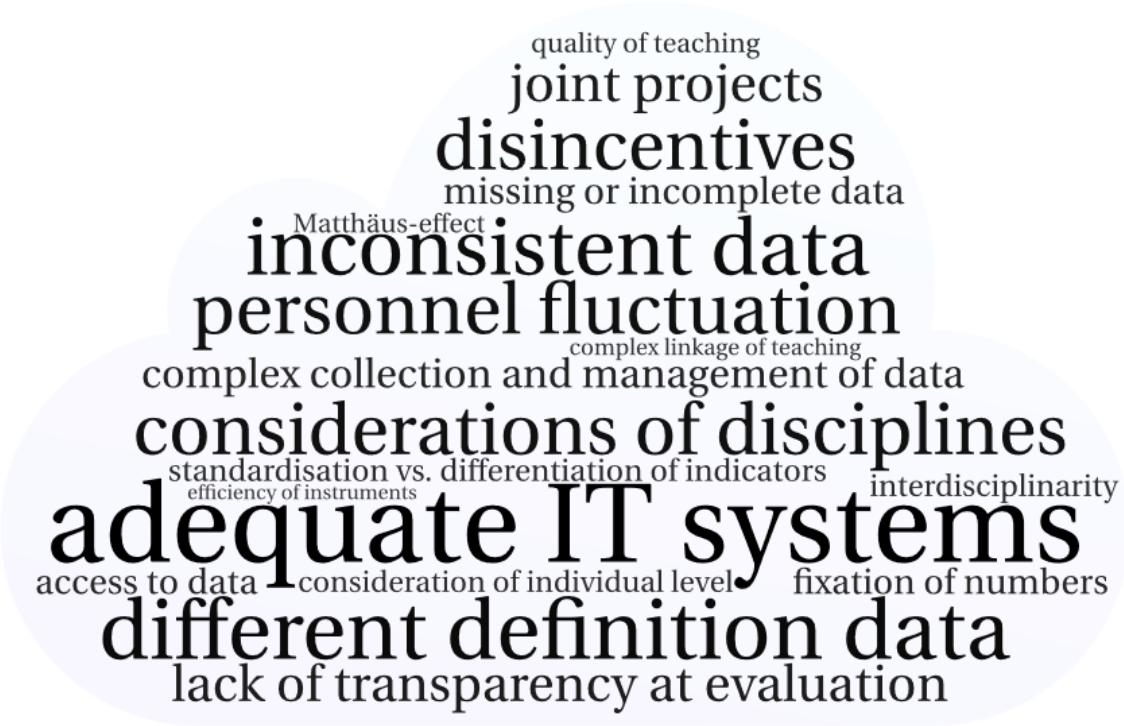
	Survey 2010 Bogumil (2015)	Survey 2014 Bogumil (2015)	Survey 2017 LeimU
internal AO	75.0%	68.4%	57.7%
internal PBF	96.3%	84.2%	81.8%

Source: LeimU Online-Questionnaire

→ dissemination of internal AO and internal PBF have been declining for years

Empirical Findings

Challenges of internal AO, PBF, evaluation, and performance measurement



Source: LeimU Interviews

Thank you very much
for your attention!

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