
UNIVERSITÄT DUISBURG ESSEN

Bundesministerium für Bildung und Forschung

PIM

HELENA

Higher Education Global Efficiency Analysis

# The Effects of a Multi-Campus Organization on the Efficiency of Higher Education Institutions

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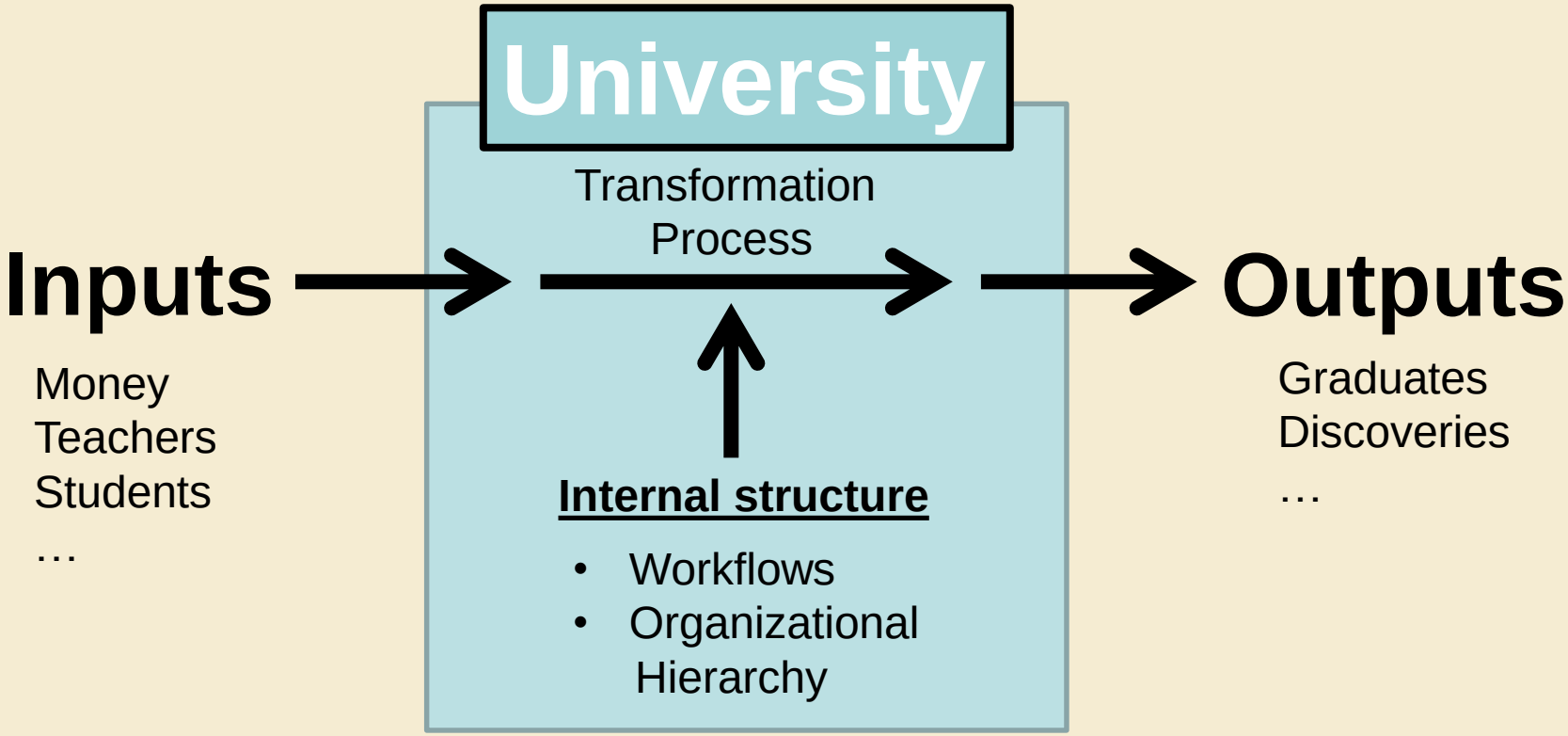
# Agenda

1. Efficiency in Higher Education Institutions
2. Defining “Campus”
3. Efficiency Analysis: Mono- vs. Multi-Campus
4. Results
5. Conclusions

## 1. Efficiency in Higher Education Institutions

**Efficiency** : The most preferrable relation between the outputs or outcomes of a production process and the inputs that were spent or transformed in this process


University
Transformation Process
Inputs
Money
Teachers
Students
…
Outputs
Graduates
Discoveries
…
Internal structure
• Workflows
• Organizational Hierarchy

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# „Campus“

*Den Heijer*

The campus as the sum of rooms and buildings utilized for university activities, that are either owned or rented by the university.

*US Department of Veteran Affairs*

Geographically clustered and operationally autonomous group of higher education facilities under the same top level administration.

Geographical Proximity?

Operational Autonomy?

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# Geographical Proximity

*What constitutes as „nearby“?*

*At what distance shall we draw the line?*

**Simplistic Solution:**

An efficiently organized university would not allow for students to miss a learning session due to distance between facilities.

- The common break time between two lectures in Germany is 30 minutes
- The average walking speed of an adult is around 5 km/h

Working Definition: All facilities of the same location have to be within a 2.5km radius.

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# Operational Autonomy

*Which offices are required for operational autonomy?*

- Libraries
- Computing Centers
- Auxiliary and Public Utility Service Centers (such as Cafeterias)
- Economical used Properties and Installations
- Central Workshops

- Registrar's Office
- Examination Office
- International Office

Working Definition: 4 / 6 offices on site constitute a Campus.

# 3. Efficiency Analysis: Mono-Campus vs. Multi-Campus

| Name of HEI | Location Count | Campus Count |
|---|---|---|
| | | |
| Aachen UAS | 2 | 2 |
| Cologne UAS | 4 | 3 |
| Münster UAS | 2 | 2 |
| Düsseldorf UAS | 2 | 2 |
| Dortmund UAS | 2 | 2 |
| Heilbronn UAS | 4 | 3 |
| Reutlingen UAS | 1 | 1 |
| Munich UAS | 2 | 1 |
| Fulda UAS | 1 | 1 |
| RheinMain UAS | 2 | 1 |
| Wismar UAS | 3 | 1 |
| Magdeburg Stendal UAS | 2 | 2 |

**Input-Indicators used:**

- Student Count,
- Scientific Employee Count,
- Administration Employee Count,
- Budget

**Output-Indicators used:**

- Graduate Count
- Publication Count

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## Case 1: The effects of Location and Campus Count on Education

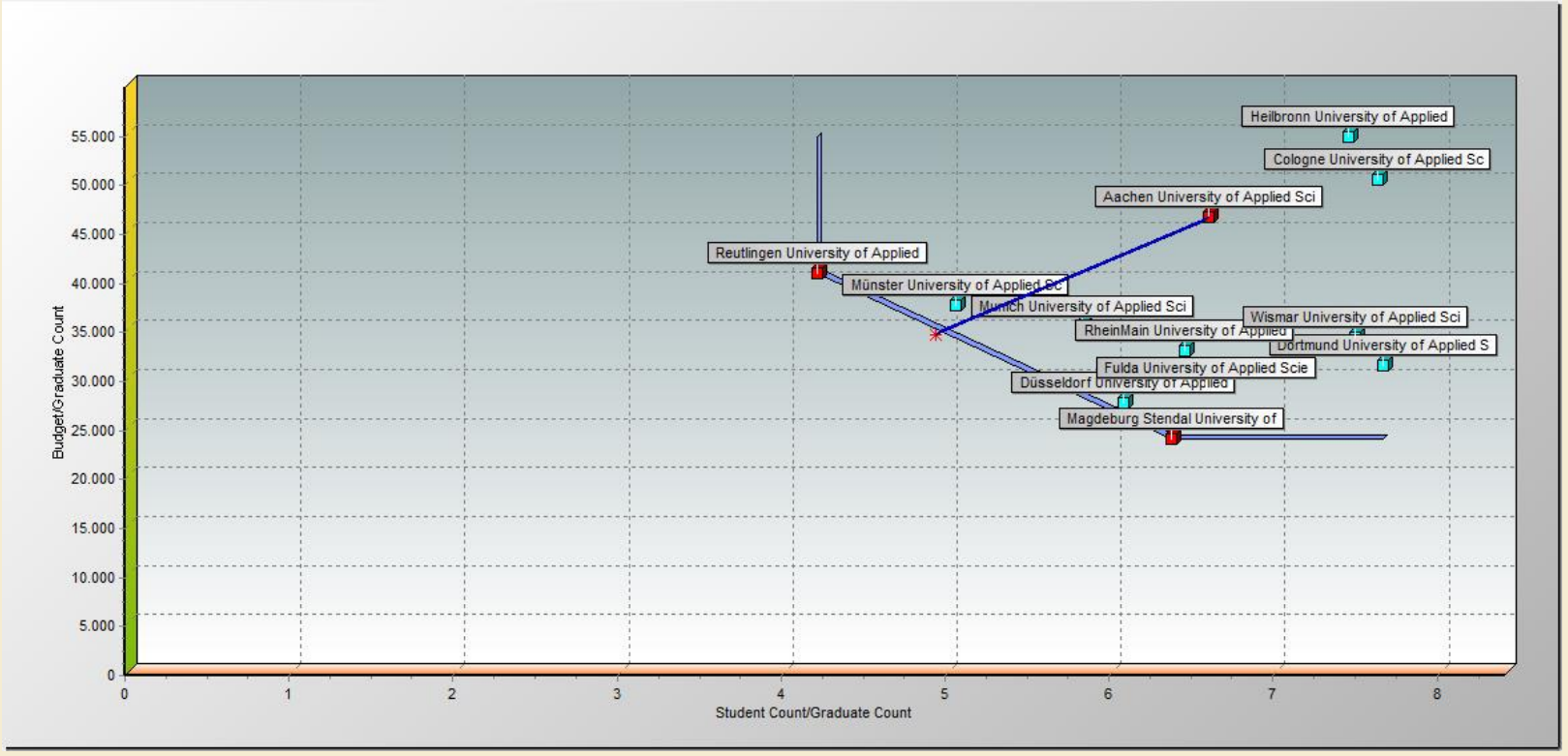
Inputs: Student Count, Budget
Output: Graduate Count

| Unit name | Score | Efficient |
|---|---|---|
| Aachen UAS | 75,1% | False |
| Cologne UAS | 66,9% | False |
| Dortmund UAS | 80,7% | False |
| Düsseldorf UAS | 98,1% | False |
| Fulda UAS | 91,5% | False |
| Heilbronn UAS | 65,2% | False |
| Magdeburg Stendal UAS | 100,0% | True |
| Munich UAS | 91,2% | False |
| Münster UAS | 95,7% | False |
| Reutlingen UAS | 100,0% | True |
| RheinMain UAS | 88,4% | False |
| Wismar UAS | 79,4% | False |

# 3. Efficiency Analysis: Mono-Campus vs. Multi-Campus

## Case 1: The effects of Location and Campus Count on Education

Inputs: Student Count, Budget
Output: Graduate Count



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## Case 2: The effects of Location and Campus Count on Research

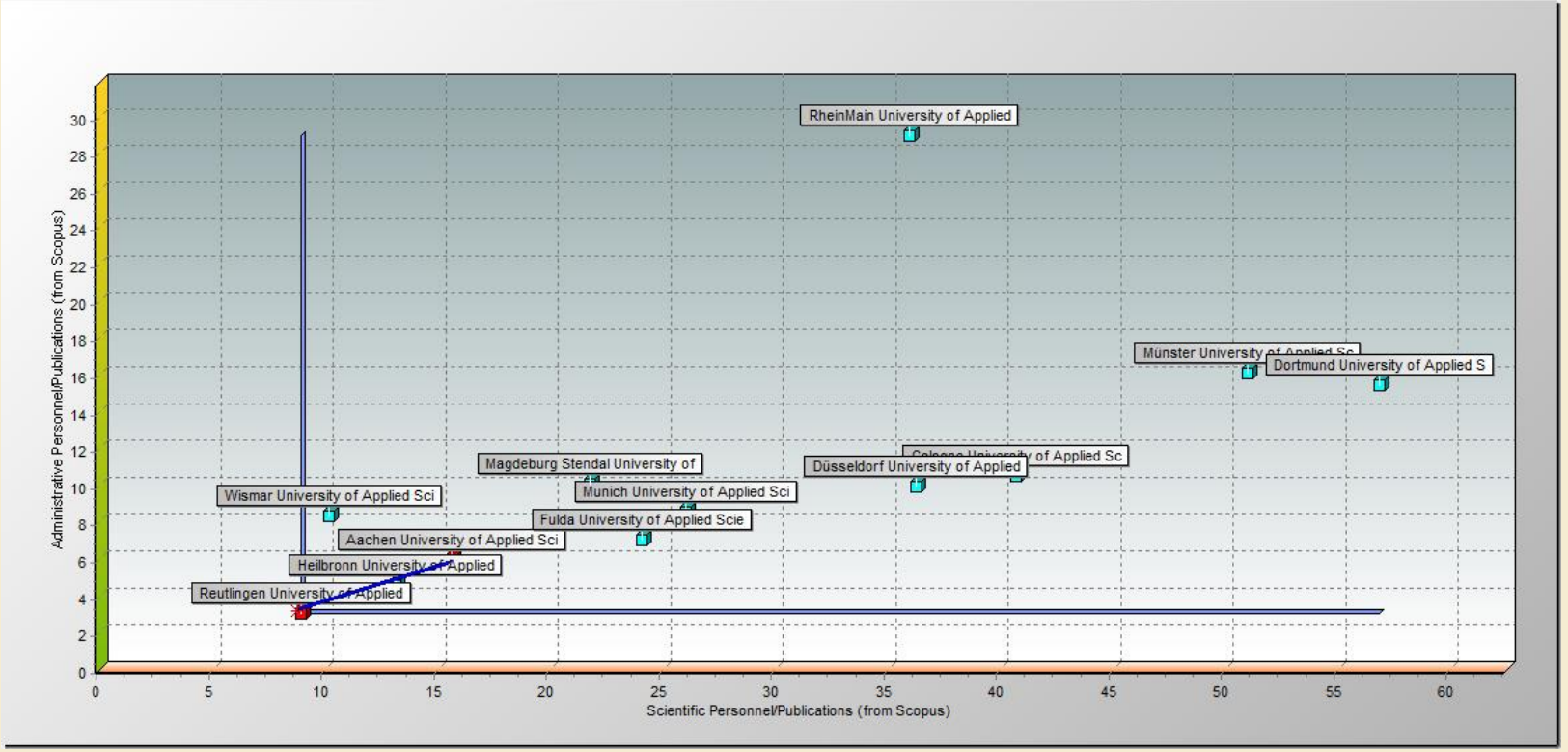
Inputs: Scientific Employee Count, Administration Employee Count
Output: Publications

| Unit name | Score | Efficient |
|---|---|---|
| Aachen UAS | 57,0% | False |
| Cologne UAS | 29,1% | False |
| Dortmund UAS | 19,8% | False |
| Düsseldorf UAS | 30,7% | False |
| Fulda UAS | 43,3% | False |
| Heilbronn UAS | 67,9% | False |
| Magdeburg Stendal UAS | 41,0% | False |
| Munich UAS | 35,7% | False |
| Münster UAS | 19,0% | False |
| Reutlingen UAS | 100,0% | True |
| RheinMain UAS | 24,8% | False |
| Wismar UAS | 87,8% | False |

# 3. Efficiency Analysis: Mono-Campus vs. Multi-Campus

## Case 2: The effects of Location and Campus Count on Research

Inputs: Scientific Employee Count, Administration Employee Count
Output: Publications



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## Case 1: Education

- A tendency for HEIs with high Location- and Campus count to be inefficient can be noticed
- Tendency weaker for campus count
- The two UAS with the lowest efficiency score (Heilbronn & Cologne) also have the highest location and campus count

## Case 2: Research

- High Location-/Campus-Count HEIs most inefficient
- The 2 most efficient HEIs only have one campus, one of which has 3 locations (UAS Wismar)
- The 5 most inefficient HEIs have an above average employee count

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# Conclusions

- HEIs with a high Location- and Campus-Count show a weak tendency to be inefficient in Education and Research
- In Research, Mono-Campus HEIs most efficient => Centralized Administration and Organizational Units?

***However…***

Tendencies weak!

**More data required!**

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# Thank you for your attention!

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