

HELENA



**Higher Education Global
Efficiency Analysis**

Analyzing the Efficiency of Funding and Spending Strategies in Higher Education

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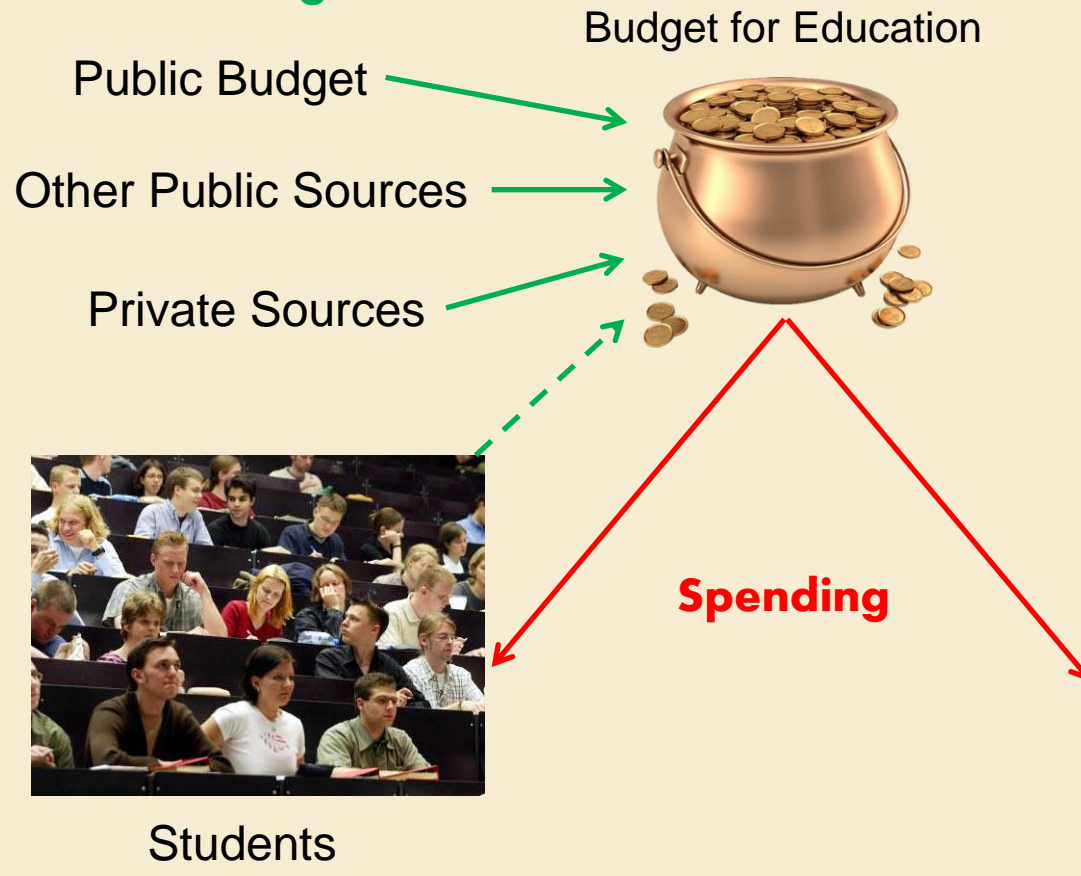
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Agenda

- 1. Funding and Spending in Higher Education**
- 2. Measuring Efficiency with the DEA**
- 3. Analysis Results**
- 4. Conclusions**

1. Funding and Spending in Higher Education

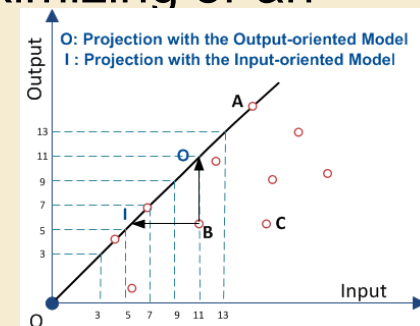
Funding



2. Measuring Efficiency with the DEA

Data Envelopment Analysis

- Family of non-parametric methods for relative efficiency measuring between Decision Making Units (DMUs)
- No exogeneous weighting for input- or output-indicators
- Models can be designed with an output-maximizing or an input-minimizing understand of efficiency



2. Measuring Efficiency with the DEA

Indicators used for Efficiency Measuring

Input indicators:

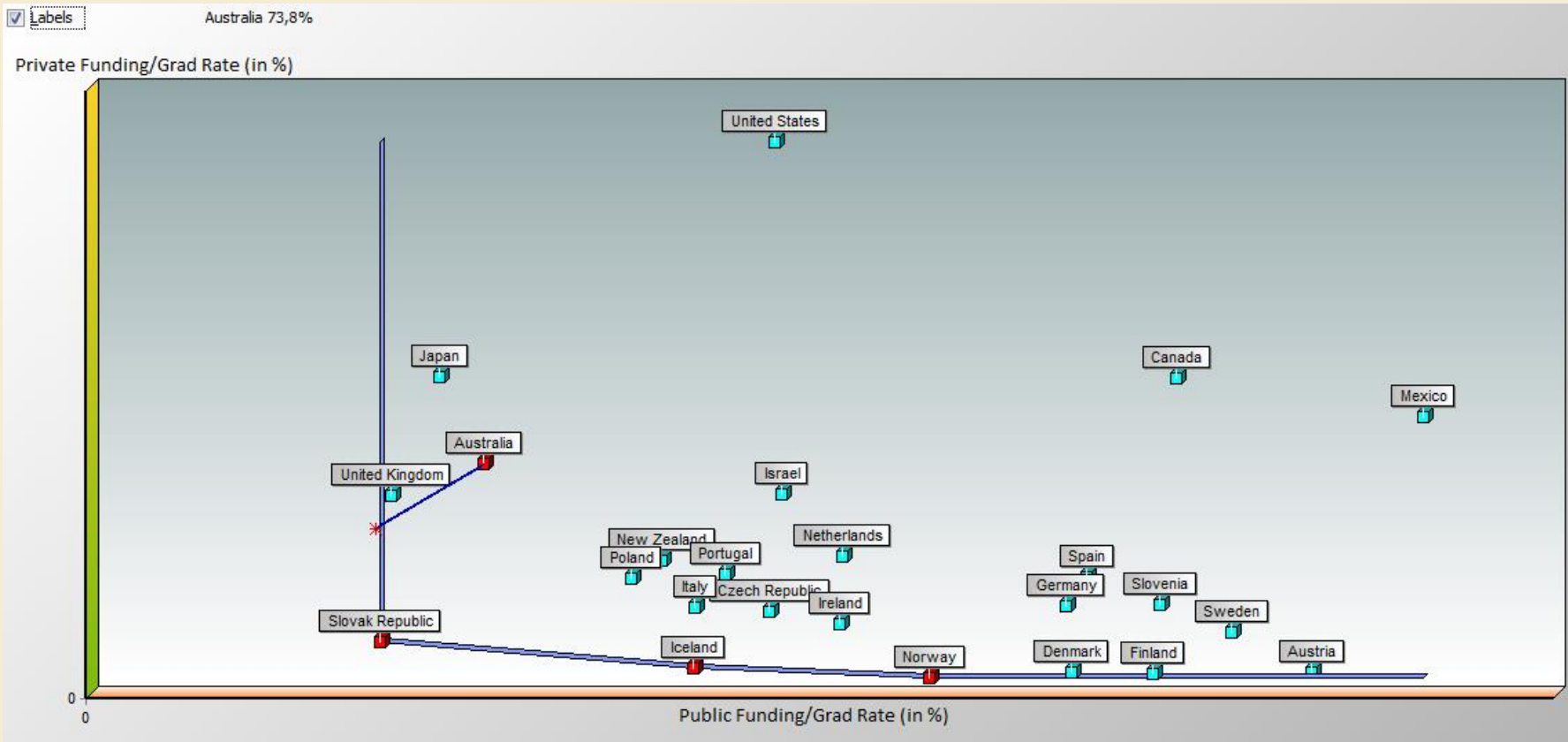
- Public funding for Higher Education (in % of GDP)
- Private funding for Higher Education (in % of GDP)
- Spending on Private households and persons (in % of GDP)

Output indicators:

- Net Entry Rate into Higher Education (in % of the relevant age cohort)
- Yearly graduation rate
- Employment rate of graduates from Higher Education Institutions
- Political participation rate of graduates from Higher Education Institutions

3. Analysis Results

1. Efficiency of funding strategies



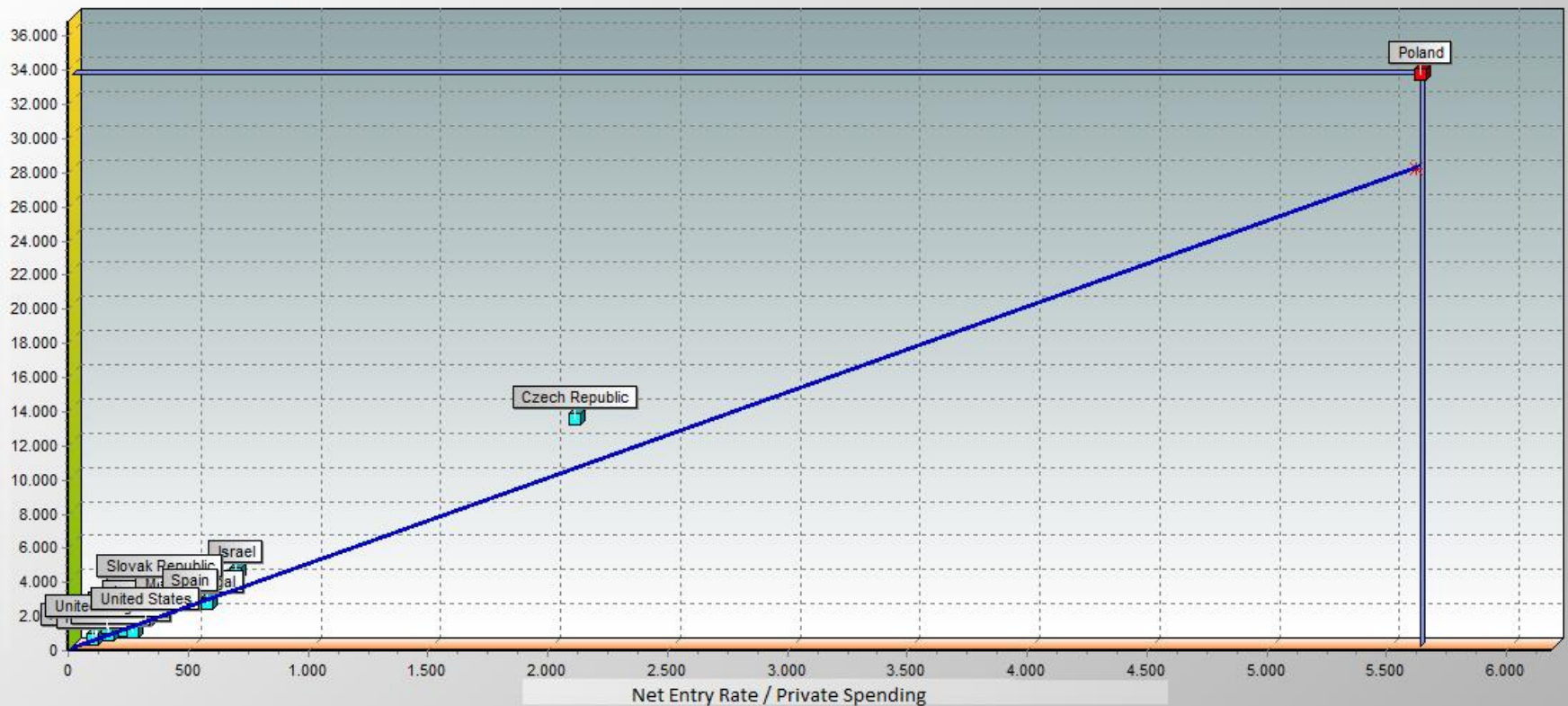
Inputs: HE funding from public, HE funding from private

Output: Graduation Rate

3. Analysis Results

2. Efficiency of spending strategies

Graduation Rate / Private Spending



Input: Spending on private households / persons

Outputs: Net Entry Rate, Graduation Rate

3. Analysis Results

Findings

- Countries with little private funding and moderate public funding prove to be most efficient (Slovakia, Austria and the Nordics)
- Adding employment rate and political participation rate as quality indicators does not change these results by much

- Countries with little spending on private households or persons (student loans, grants...) prove to be most efficient (Poland and the Czech Republic)
- Diminished spending on private households does not lead to a significantly decreased employment or political participation rate

4. Conclusions

Conclusions

- Moderate public funding (0.7 – 1.4% of GDP) and little private funding (0.1 – 0.3 % of GDP) prove to be most efficient.
- Negative effects on the quality of education due to a lack of private funding cannot be verified.
- From an economic point of view, public spending on private households/persons is inefficient.

4. Conclusions

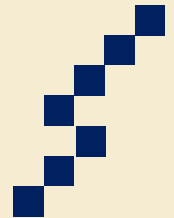
However...

Other paradigms than economic efficiency are relevant, too, such as social equity.

- ➔ Expenditures on student grants and loans in the U.S. have risen by 6% in 2012.
- ➔ 50% rise on student grants and loans in the past 10 years.

High expenditures on private households and persons tend to lead to a slightly above average net participation rate, graduate employment rate and graduate political participation rate.

Thank you for your attention!



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