



# The Local Economic Impact of the University of Szeged: a case in a less favoured region

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# The Goal of the Study

To unravel the effects and impact of the University of Szeged regarding its local economy.



# The Structure of the Presentation

1. Theoretic background
2. Methodology
3. The case of the University of Szeged



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# General background

Wide-range number of literature regarding the topic (Beck et al (1995), Dusek (2003), Bridge (2005), Kotosz (2013))

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*„The difference between existing economic activity in a region given the presence of the institution and the level that would have been present if the institution did not exist.”*





# Why the University of Szeged?

Extreme Light Infrastructure project

It is a case in a less developed region



# Classification of the impact of universities

Economy

Politics

Demography

Infrastructure

Social aspects

Culture

Education

Attractiveness

*Source: Florax (1992) and  
Garrido-Iserte – Galoo-Rivera  
(1995)*



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# Economic impacts of universities

Employment at the university  
University income  
University expenditure  
Effects on the job market  
Generation of business

*Source: Pallenborg (2005)*



# Regional/local impacts of universities on the input side

Actor	Changes
Households	+ income + employment + consumption
Local authority	+ tax base + services
Business	+ volume of business

Source: Dusek (2003)

# Regional/local impacts of universities on the output side

Factor	Changes
Human capital	+ qualification + new firms + migration
Knowledge	+ university-business relations + extensive use of resources
Attractiveness	+ location choice of households and firms + cultural and social possibilities
Business	+ R&D, exhibitions

Source: Dusek (2003)

# Methodology

The formula of the regional multiplier

$$\frac{1}{1 - e \cdot c \cdot (1 - t) \cdot (1 - n)}$$

- Personal income tax rate (average rate) [t]
- Value added tax (average rate) [n]
- Marginal propensity to consume [c]
- Local consumption proportion of students [d]
- Local consumption proportion of employees [e]
- Local consumption proportion of the university [b]

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# Basic Facts

Population of Szeged: 170 000

University founded in 1872

12 Faculties

30 000 students overall

Largest employer in the region

# Collection of Data

## Questionnaire

*approx. 2400 students*

*Stratified sample*

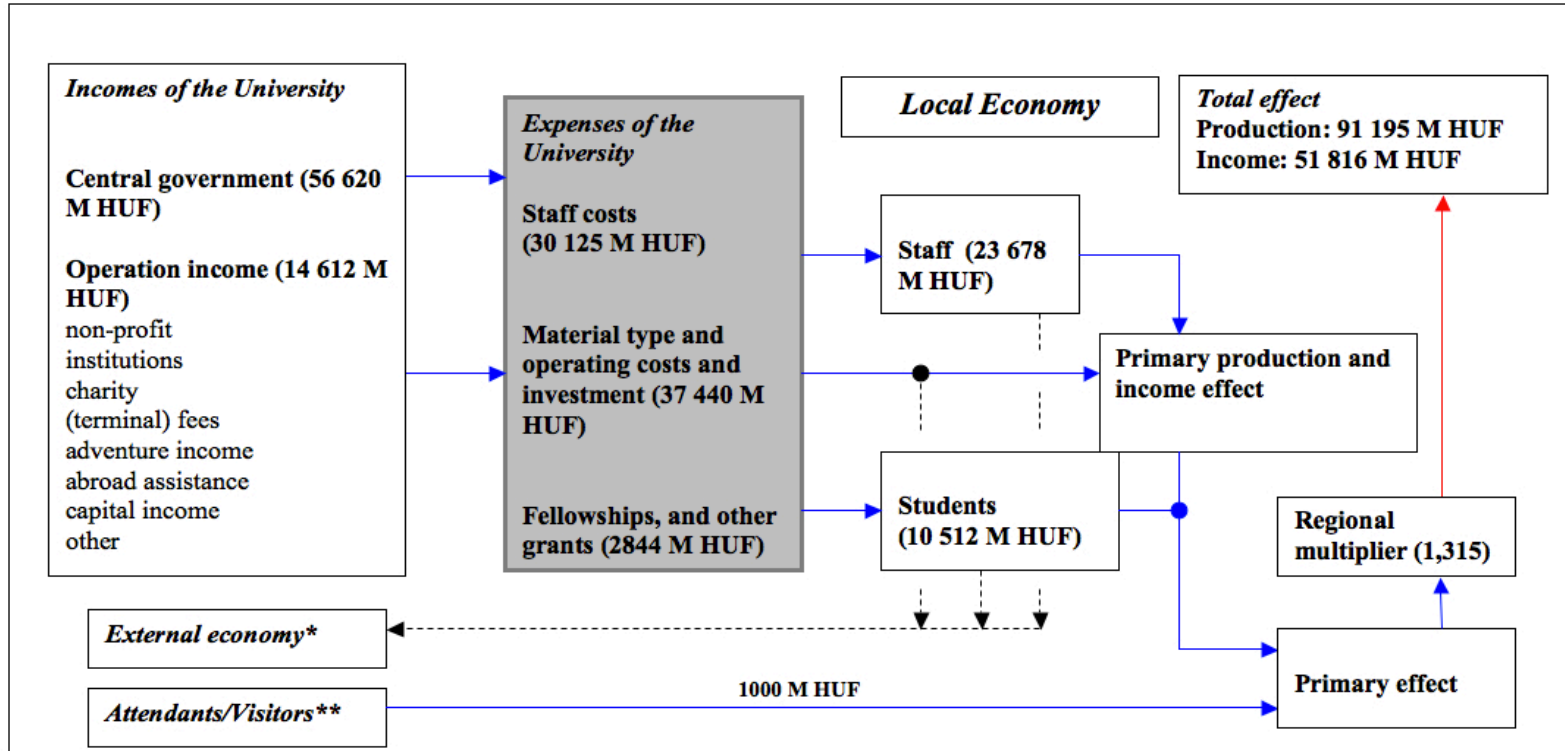
*10% of all USZ students*

## Institutional data

*Profit and loss statements*

*Reports*

# Cash flow of USZ



————> Cash-flow in local economy  
 - - - - -> Money outflow

\* Non-local economy  
 \*\* Expenses of attendants



# Concluding remarks I.

The local economic impact of USZ is approximately (from data regarding 1. and 2. mission of the university)

**91 000 M Fts**



# Concluding remarks II.

Some calculations are based on estimations

Survey can be used to analyse consumption behavior of students



# Thank you for your attention!

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# Calculations

Step	Label	Formula	Result (M HUF)
1.	Effect of primary production	$O_1 = P + A + b \cdot V$	62 358
2.	Effect of primary income	$I_1 = (1 - t) \cdot (O_1 - b \cdot n \cdot V)$	33 384
3.	Effect of secondary production	$O_2 = d \cdot S + e \cdot c \cdot I_1 + M$	21 929
4.	Effect of secondary income	$I_2 = (1 - t) \cdot (1 - n) \cdot O_2$	14 017
5.	Effect of tertiary production	$O_3 = e \cdot c \cdot (1 - t) \cdot (1 - n) \cdot O_2$	5 526
6.	Effect of tertiary income	$I_3 = (1 - t) \cdot (1 - n) \cdot O_3$	3 360

# Parameters

P	Staff costs	b	Local consumption proportion of the university
V	Material types and operating costs and investment	c	Marginal propensity to consume
A	Other income	n	Value added tax (average rate)
S	Consumption of students	d	Local consumption proportion of students
M	Consumption of visitors	e	Local consumption proportion of employees
		t	Personal income tax rate (average rate)