



„The regionally engaged service university”

Shape your future!



**THE ROLE OF UNIVERSITIES IN REGIONAL
DEVELOPMENT & GOVERNANCE**

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Research Centre for Economic and
Regional Studies
University of Kaposvár,

Complementary and diversified missions of universities

(„Academic revolutions”)

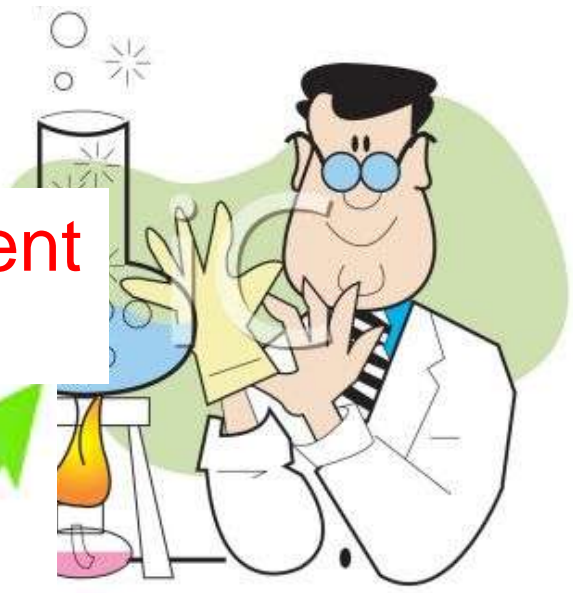
Teaching

Educating university



Research

Research university



Regional development

Service university





Theories of university's functions: conceptual framework of the „fourth academic revolution“

Direct involvement of universities in social & economic development is a relatively new phenomenon

- Triple helix model for research & entrepreneurial universities – **entrepreneurial & generative role** (Etzkowitz, 1983,2002, Clark, 1998) – based on US traditions
- **Engaged university model for universities – developmental role** (Goddard, 1999) – based on EU traditions
 - **Strong territorial scope** for regional universities – **regional engagement**,
 - „**Community engagement – service**“ perspectives (Holland, 2001),
 - „**Learning regions**“, (Lundvall, 1992, Gál-Ptacek, 2010)
- **“Universities can significantly contribute to local development** (Varga, 2009). Varga (2009) build on the notion that **knowledge generation becomes localized** and agglomeration effects are crucial for the spillover effects to work.
- **„Welfare of regions can be enhanced through universities' engagement“** (Huggins-Kitagawa, 2009); “regionalization of economy” (Gunasekara, 2004).
- **University's economic impact is highly dependent on the region's absorption capacity** techno-economic characteristics and economic specialization (Goldstein and Renault, 2004, Gál-Csonka, 2007)



Model of regional/local impacts of universities

INPUTS

Changes:

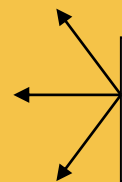
- Business volumes (+-)
- Tax base (+-)
- Services (+-)
- **Incomes (+)**
- **Employment(+)**
- **Consumption (+)**

Regional & local business sectors

Local governments

Local households

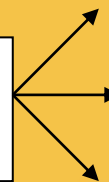
Backward linkages



Spending effects

**UNIVERSITY
College**

Forward linkages



Knowledge effects

OUTPUTS

Changes:

- Skills (+-)
- New firms
- Migration (+-)
- **University-industry links (+)**
- Source utilization (+)
- Location decision of firms, households (+)
- **Cultural and social opportunities (+)**

Intellectual & Social capital

Knowledge

Attraction force

(+-) positive and negative effects



Limited economic impact of universities in non-metropolitan CEE regions ERAWATCH research

- **University-based local economic development programmes can only be successful if the endogenous development of industries is built upon the local knowledge-producing capacity**
- Economic specialization of regions and their knowledge specialization match only in few European regions (33 by Capello)
- General economic effects of universities and R&D investments are hardly visible in transition economies – lack of critical mass
- **The same amount of R&D investment can be generate quite different performance in different environment**
 - Universities are more productive in advanced regions
 - Traditional universities tend to be more productive than new ones
 - Universities in weaker regions usually underperform (self-reinforcing paradox)



Research QUESTIONS

1. Do mid-range universities have equal conditions in knowledge transfer and regional engagement with top universities?
2. Do mid-range universities in Central and Eastern Europe face additional constraints due to their different (post-communist) legacies?

Papers:

- Gál, Z-Ptacek, P (2011) The Role of Mid-Range Universities in Knowledge Transfer in Non-Metropolitan Regions in Central Eastern Europe, *European Planning Studies*, Vol. 19. No. 9. September 2011
- Gál, Z. and Zsibók Zs. (2012) Regional engagement of mid-range universities: Adopting European models and best practices in Hungary. *AUDEM: The International Journal Of Higher Education And Democracy* 2:(1) pp. 94-120.



Mid-range universities and peripheral regions

- Mid-range universities are very often located outside of metropolitan regions (secondary city-regions) (Wright et al. 2008)
 - Remote regions can be too “institutionally thin”
- Peripheral regions which are functionally distant from core economic activities in the knowledge economy
 - limited critical mass of researches
 - failure in regional governance, networking deficiencies.
- Weaker regions tend to be more dependent on their universities for income and innovation, but often these universities underperform in comparison with similar institutions in more competitive regions (Huggins and Johnston, 2009) .
- **Path-dependent situation of universities in the CEE regions**
 - Much stronger tradition in education and less in innovation
 - Slow “marketization” of the university sector after 2000
 - Weak regional innovations systems in CEE regions.
 - Stronger polarization of R&D spending of Universities in metropolitan and non-metropolitan regions



Top universities vs. mid-range universities

	Top universities	Mid-range universities
Location	Large agglomerations or smaller towns	Secondary cities/peripheral regions (non-metropolitan)
N students	30-100 thousands	8 and 33 thousands
N researchers	3000-15000	700-2500
Regional/global demand for innovation	High	Moderate
Critical mass in world-class research	High	Low
University-industry links	Higher frequency	Lower frequency
Critical mass in R&D	High	Low/very low
Match between regional economy and university's profile	High	Low



Mid-range universities in Western Europe and in CEE

	University of Pécs (Hu)	Palacký University Olomouc (Cz)	Nottingham University	University of Karlsruhe	University of Ghent	University of Antwerp
N students	28,000	22,000	33,000	15,686	21,160	8,029
N FTE researchers	1051	1158		2500	1401	846
N FTE technology transfer	6	7	4	1	3	4
HERD Mill. Eur	14	19.4	150	83	122	45
N spin-offs	5	7	27	unknown	12	2
Total RSBO	n.a		n.a.		23	4
Regional GDP (Bn Eur)	6.7	11.2	103.8	316.9	157.3	157.3
GRP per capita (Eur)	6,900	9,600	24,145	29,694	26,194	26,194

note: for Palacký Univ. N FTE, HERD in 2008, N spin-offs and FTE TT in 2011



Barriers of university and industry links

„Nobel-prize...”

„Autonomy of science...”

„Scientific Excellence...”

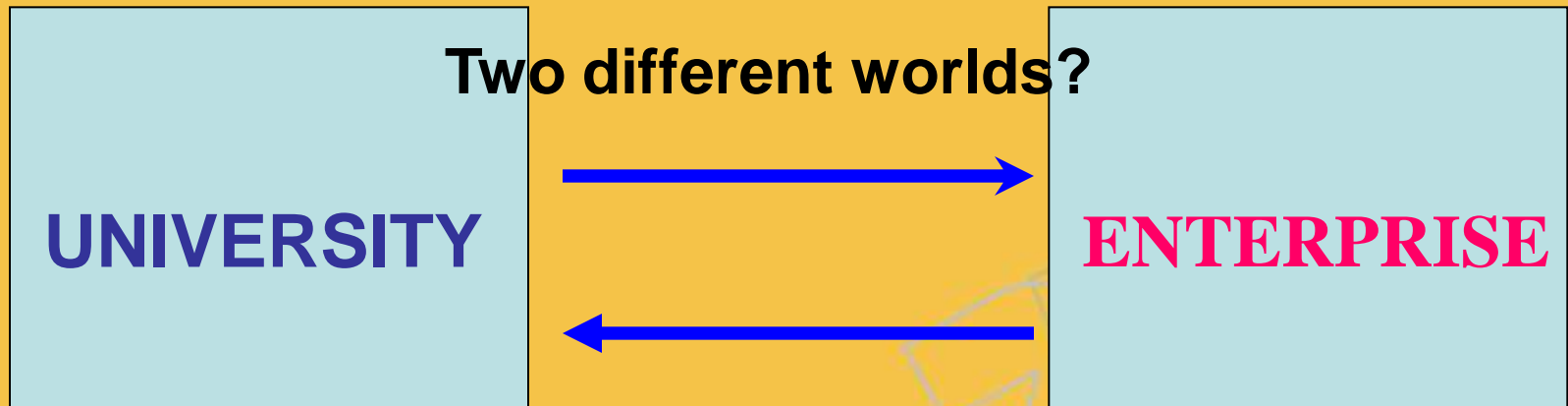
„Aim: publications, citations”

„Economic progress

„Researchers are undisciplined...”

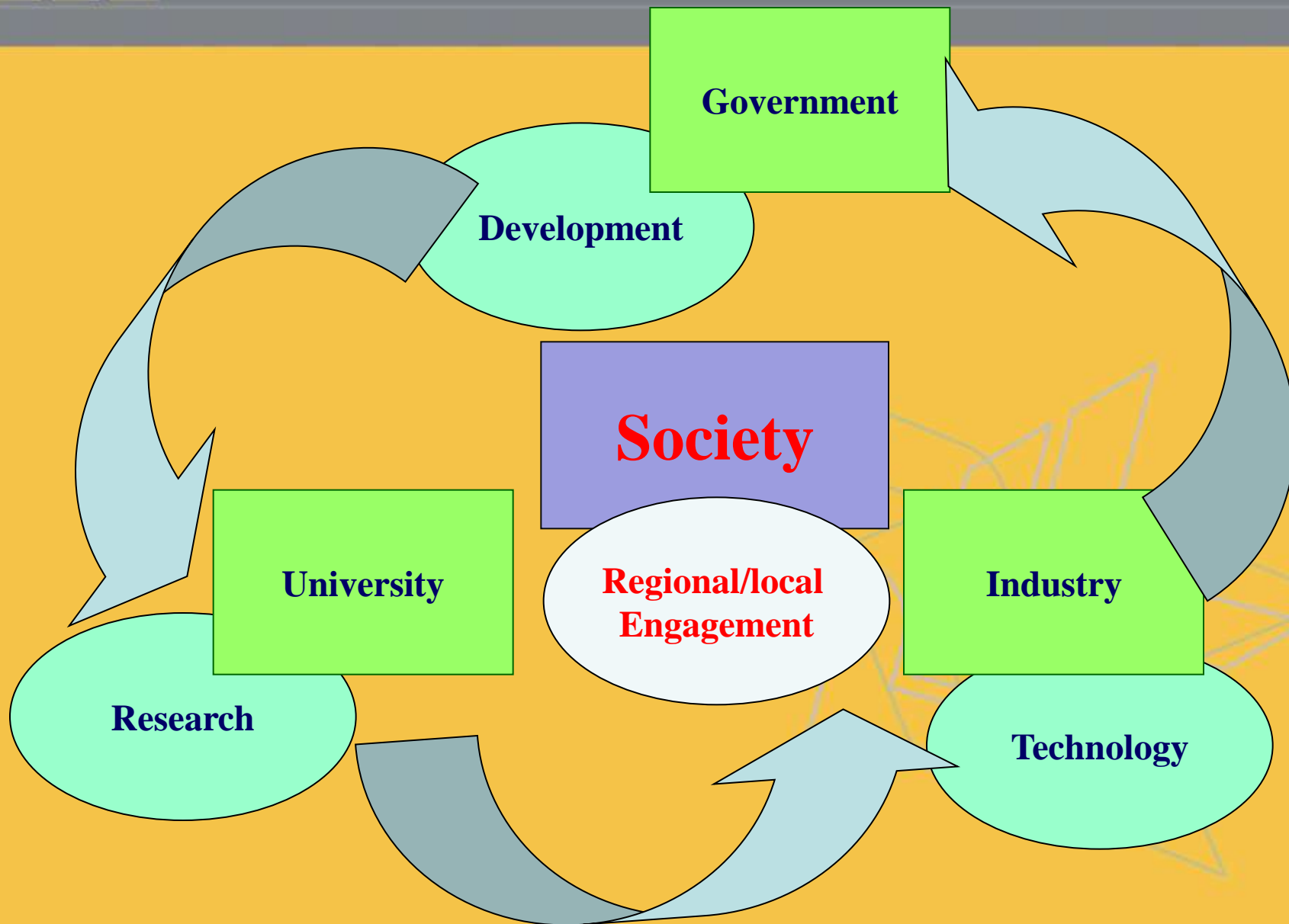
„Fast intrusion into markets....”

„Aim: income and profit”



Non-embedded university researches just like "*cathedrals in the desert*" are unlikely to be able to develop knowledge transfer and spillovers with local economic actors

From Triple Helix to quadruple helix model





Theories of the universities' developmental role

1. **Triple helix** (Etzkowitz & Leydesdorff, 1997)
2. **The quadruple helix model** Carayannis and Campbell (2009) extends TH with the civil sector or society.
3. **Regional engagement model (from Third to Fourth mission)**
 - Universities are relatively permanent institutions and “safer” for development policy measures.
 - Universities as important regional actors, are part of these governance networks (see Arbo & Benneworth, 2007).
 - External pressures: The rising relative costs of education, in conjunction with fiscal and demographic pressures, public policies to push for closer and multi-stranded university industry linkages.



The regionally engaged university model

1 Regionally engaged university model (Third or fourth mission)

- institution serving the needs of the local area or region
- Stronger regional focus in teaching and research
- More engagement with regional stakeholders and institutions (Learning region)

2 Stronger Community engagement –service functions

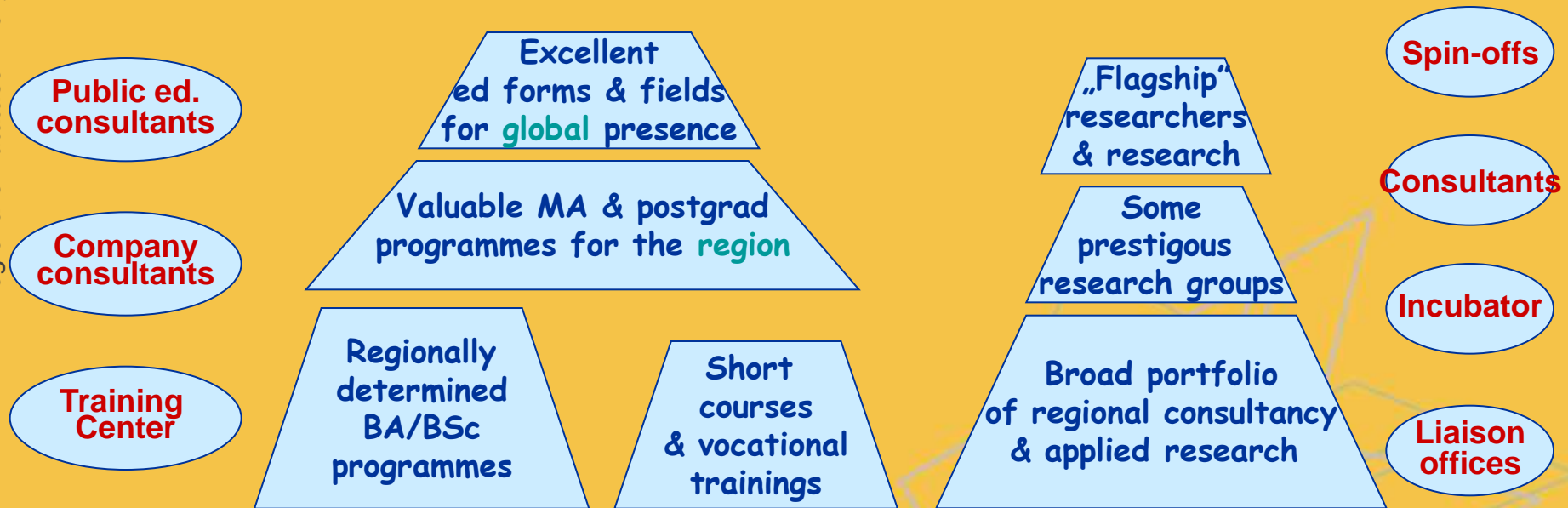
- Regionally-focused HE has a stronger focus on regional student recruitment and graduate retention,
- Development of programs (consultancy) that address skills required by regional industries and the localisation of learning processes (LLL for regional needs)
- Stronger regional engagement in medium-tech innovations and in **social and organizational innovation**

3 Universities act as regional animators (participation in local governance networks)

- Universities are part of the regional governance system (governance & advisory bodies)
- Universities participate in the regional innovation networks (RIS, Knowledge centres)
- Individuals in the academic sphere take active role in the civil society: act as **regional animators** through representation on outside bodies

A proposal for a „Regional strategy with global focus”

Allocation of resources for a university portfolio:
a double pyramid model with satellites



Differentiate expertise and competencies in terms of international and regional scopes
(Dobay, (2009))

REGIONAL UNIVERSITIES AS GENERATORS OF TRANSNATIONAL KNOWLEDGE REGION (UNIREG IMPULSE PROJECT)

To develop a cross-border knowledge region based on the universities' active regional engagement facilitating organizational & social innovation and networks in various fields between universities and regional actors.

Kaposvár University



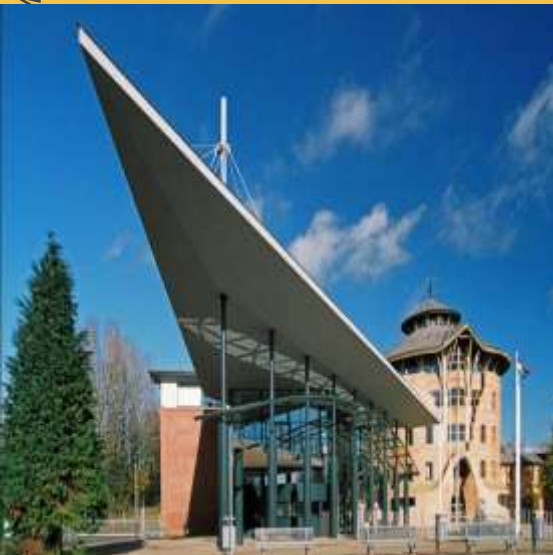
Strossmayer University (Osijek-Croatia)



Centre for Regional Studies-



MTA Regionális Kutatások Központja





University – City relations

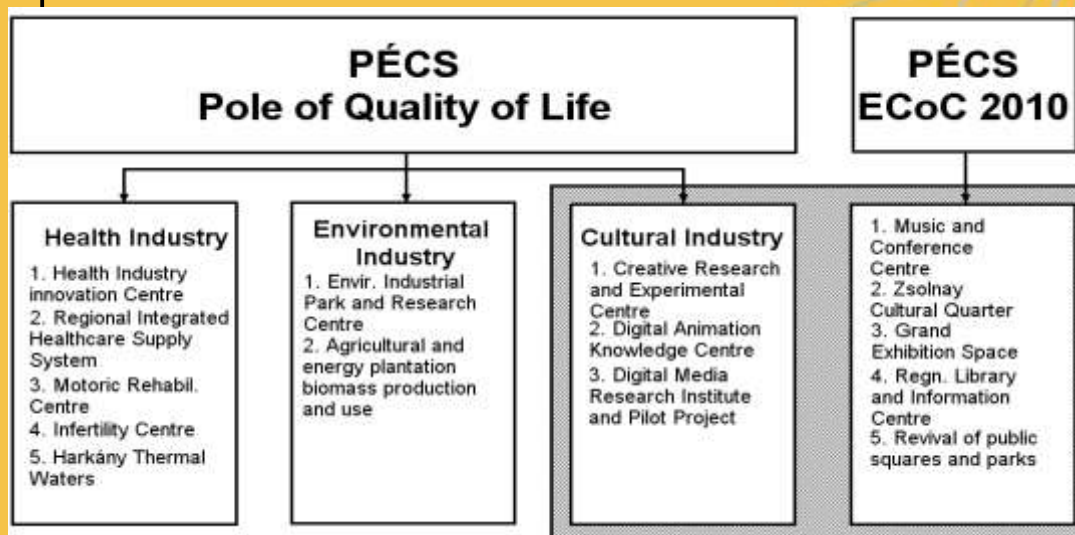
Campus-Community development

- **University supporting urban development and regeneration**

- Creation of knowledge spaces
- Contribution to the quality of urban governance
- Contribution to place branding

Being a university city it has contributed to the urban ambience and real estate site development of Pécs

University of Pécs has played a principal role in organizing of the European Cultural Capital project: development of the new cultural, community and educational functions of the city's newly built cultural quarter



The „European Capital of Culture 2010” project

• The Key role of Pécs University in the ECC project:

- Significant weight of the university in local labour market and in public finance
- New investments into the creation of a new cultural and university quarter
- New public places with new functions

The key role of university in urban planning and development

- Knowledge space creation (Knowledge centre, Library, Zsolnay-quarter)
- Contribution to the improvement of urban governance (partnership)
- Contribution of university to city-marketing (place branding)

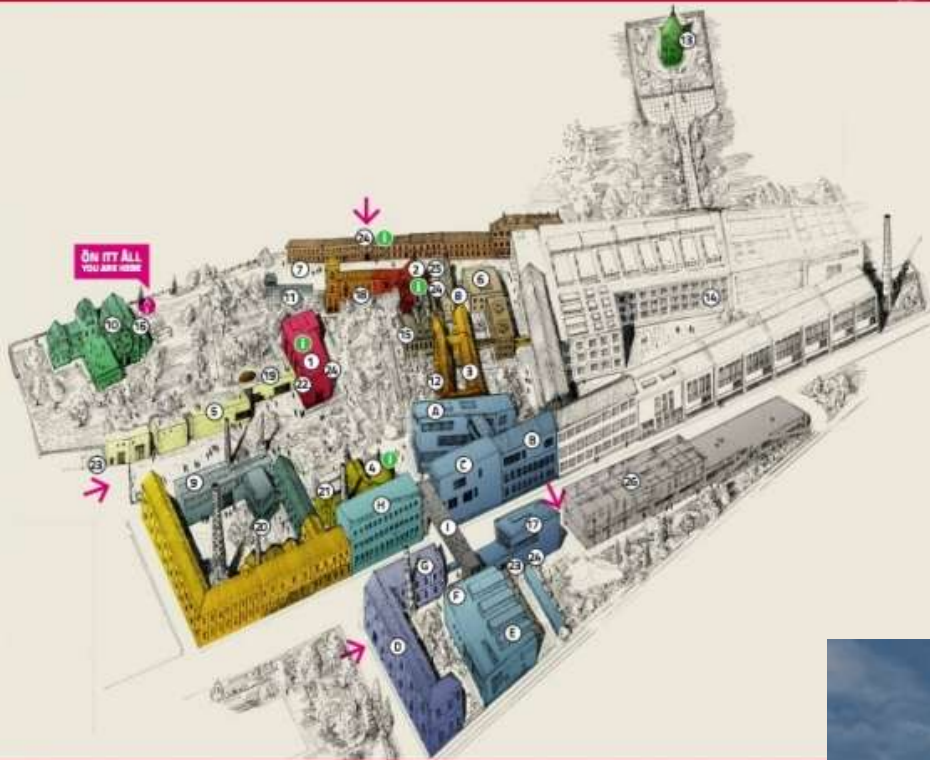
• Contribution of university to the development of built environment, real estate development and urban planning.





ZSOLNAY KULTURÁLIS NEGYED

ZSOLNAY CULTURAL QUARTER



ZSOLNAY
KULTURÁLIS
NEGYED



Knowledge & conference centres





Conclusions

- Knowledge transfer at mid-range universities in CEE face several extra constraints
 - Different development path of innovation systems (weaker role of university-based experimental research)
 - Mismatch between economic and knowledge sectors
 - Weak regional innovation systems, Smaller importance of business-led networks
- Stronger engagement in social & organizational innovation at regional level (Are these feasible in indebted countries with weakening regions?)
 - Localisation of learning processes and development programmes (consultancy)
 - Fostering 'new combinations' of partnership-based, innovation-centred approaches: HR development, networking, collective learning and building trust
 - Constructing regional advantage with the stronger developmental role universities



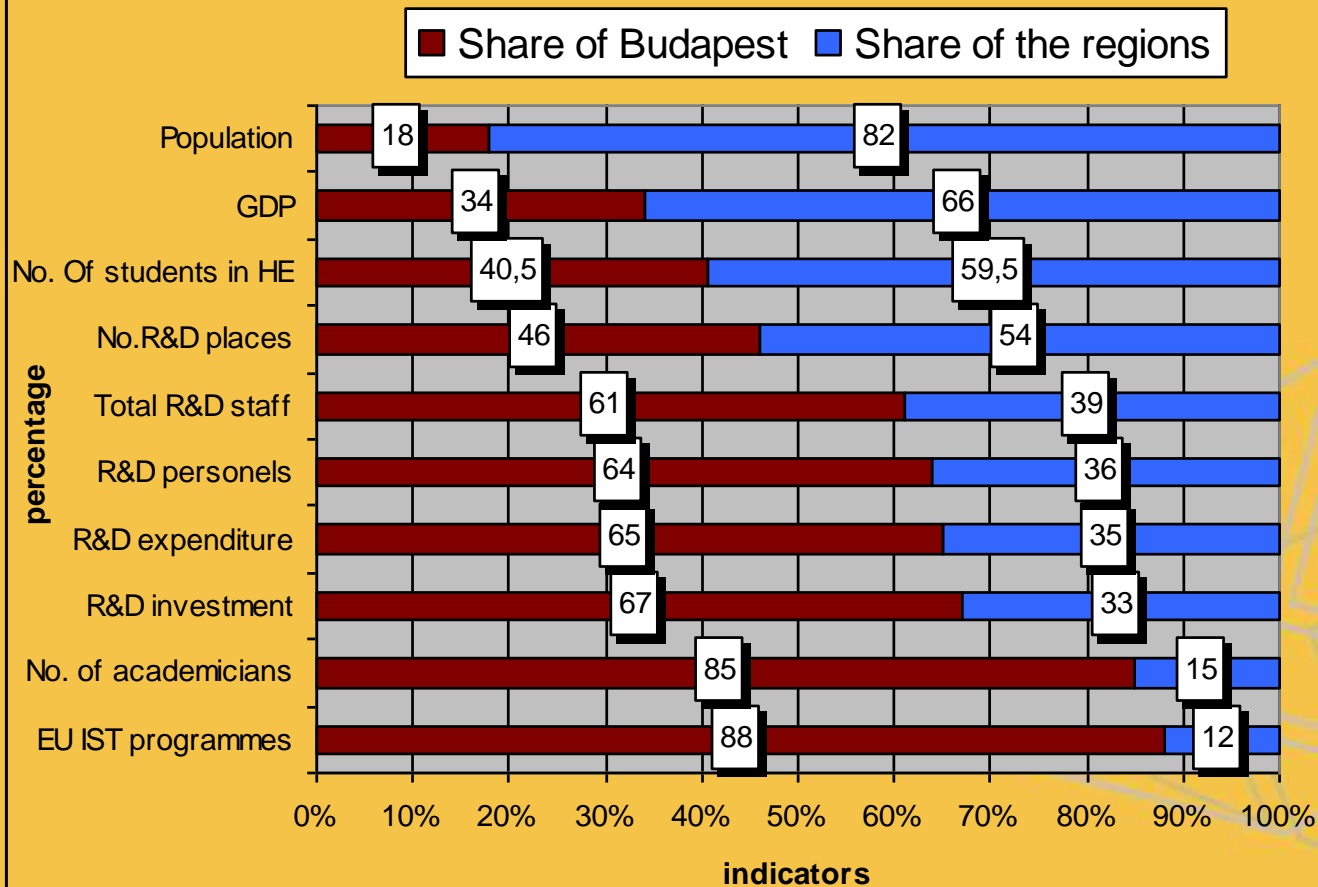
HVALA LEPO!

Thank you!



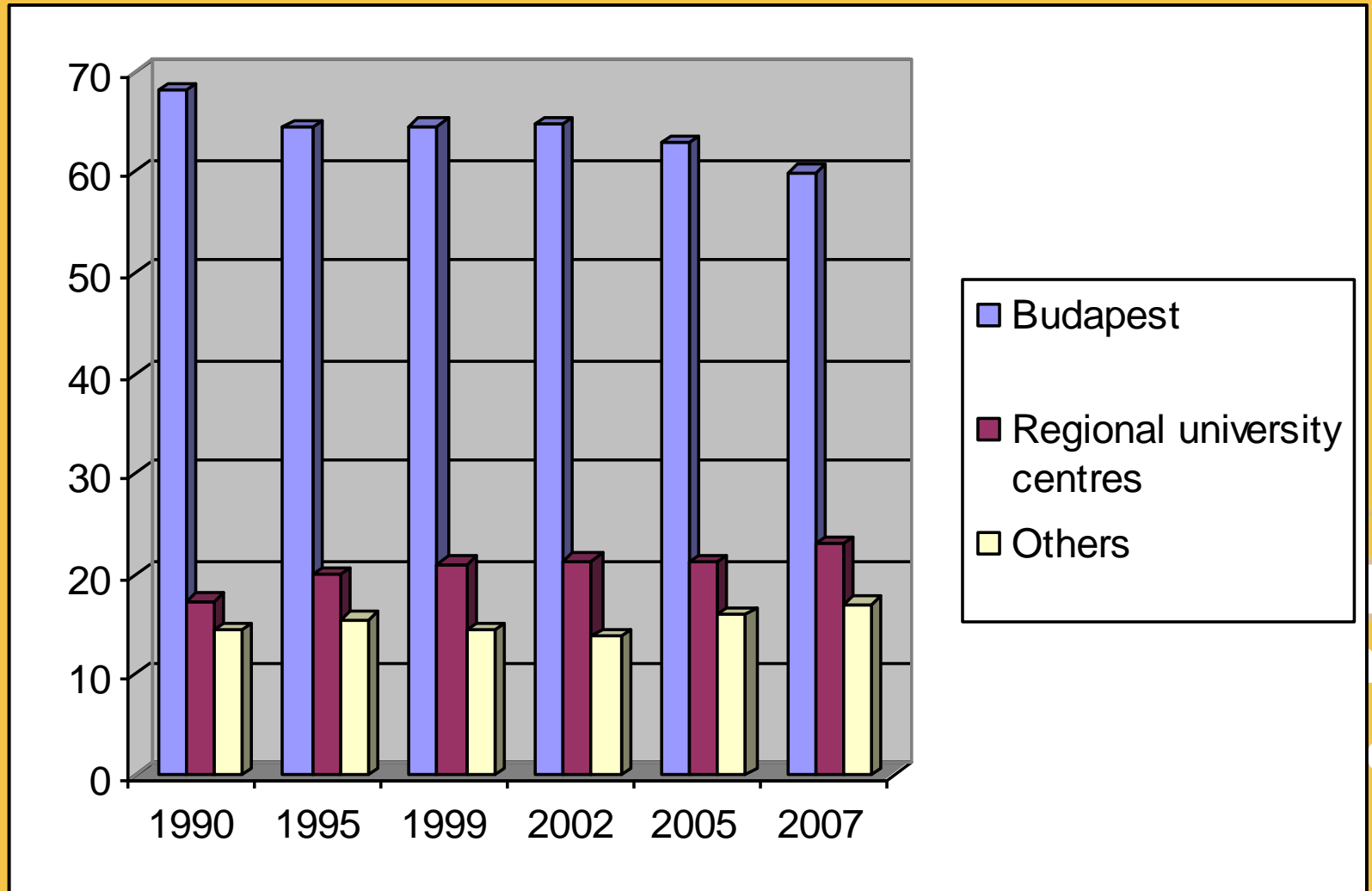
Innovation gap: capital cities and regions

Share of Budapest in the innovation related indicators, 2000





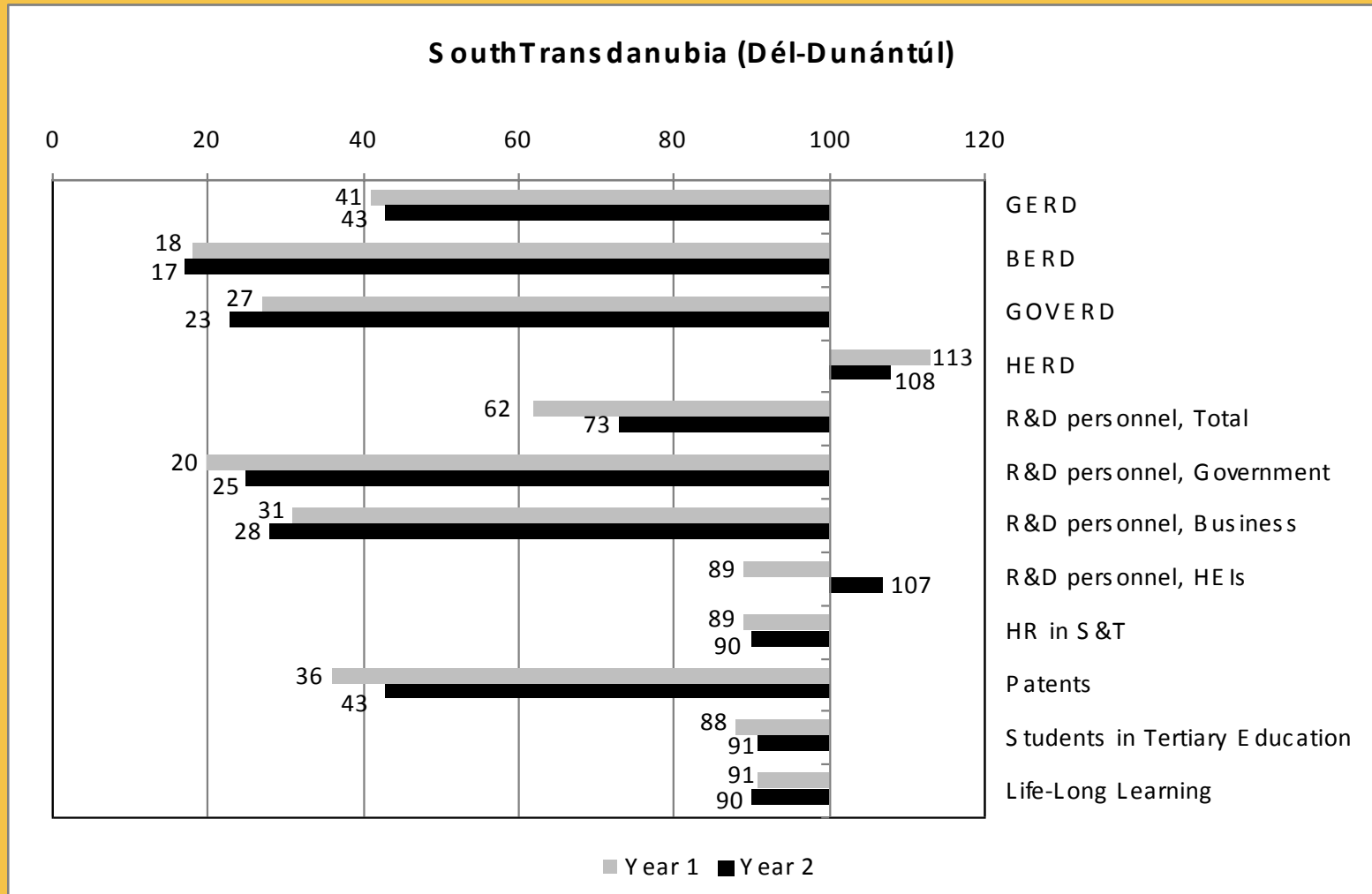
Territorial distribution of R&D funds between metropolitan and regional mid-range universities in Hungary, %



S
I
%

Key indicators on South Transdanubia's knowledge base in comparison to the national average 1997/1999-2003

- RTD creation of the business sector in South Transdanubia is limited (17%)
- HEI sector accounts for 78% of total RTD expenditures in ST





Examples/frames for possible local and regional partnerships/engagements in South Transdanubia, Hungary to involve HEIs

- **Pole-development programme** (effective participation in economic cluster-development);
- **European Capital of Culture project**
- **Transnational collaboration and networking**
- **Establishing learning regions** in order to support partnership-based programmes of co-operation in LLL
- **Adopting global benchmarking tools:** participation into international networks of engaged universities (PURE)