UNIVERSITY - INDUSTRY COOPERATION AND REGIONAL DEVELOPMENT, RELEVANCE AND CHANGES

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THE CO-OPERATION of SCIENCE and BUSINESS
as a Factor Enhancing Innovativeness of the Lodz Region

Project with transnational component
“The Co-operation of Science and Business as a Factor Enhancing Innovativeness of the Lodz Region”
cofinanced from European Union under European Social Fund
Human Capital National Cohesion Strategy
Science and Business Co-operation - The growing expectations of the Impact of the university – multiple expectations and roles; multi-level governance

Literature review - models of the university’s contribution in regional development

Policy evolution in the UK – 1990s ~2010s

UK data on knowledge exchange income and activities

Resilience of the University at the time of austerity?

Conclusion
INTRODUCTION

- Universities have long been recognized as a key source of knowledge and innovation in national and regional economies.
- Governments and universities across the EU have developed policies and strategies for third mission activities.
- Policy expectations at multiple levels (local-regional, national and global) and evolving over time
- Recently universities are facing a number of interrelated challenges and pressures
  - Driven by global financial and economic crisis in 2008-2009
  - HE and other policy changes
Growing interest in the impact of universities and other HEIs on the regions (Boucher et al, 2003).

- as *economic contributors* (employer, payer of wages and salaries, buyer of products and services)
- *commodification of knowledge* produced in the university through intellectual property rights, technology transfer, science parks and spin-off firms
- role of universities as an *attractor, educator and retainer of students*, shaping them into knowledge based graduates for firms in the region.
- formal and informal participation as an *institutional actor* with other regional actors in linkages and networks of learning, innovation and governance

Universities are expected to play an *increasing* number of roles
Contributions of Universities to Regional Economic Development

**Inputs**
- Labour
- Supplies, equipment
- Services
- Students
- R&D institutions
- Regional milieu

**Outputs**
- Knowledge creation
- Human capital creation
- Transfer of existing know-how
- Technological innovation
- Capital investment
- Provision of leadership
- Knowledge infrastructure
- Regional milieu

**Impacts**
- Productivity gains
- Business innovation
- New business start-ups
- Increase regional capacity for sustained development
- Regional creativity
- Direct and indirect spending impacts

*Fig. 1. University outputs and expected economic impacts.*
*Source: Goldstein et al. (1995)*

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**U-I Cooperation is Influenced by Multiple Factors**

**Source:** European Commission (2001)
POLICIES IN UK: 1990s - 2010s

- 1993 Realising Our Potential
- 1997 Dearing Report
- 2003 the Future of Higher Education (DfES)
- 2003 Lambert Review
- 2012 Wilson Review
In 1999, the Higher Education Funding Council for England (HEFCE), initiated a new 'third-stream' of funding, complementing teaching and research funding stream.

At first third stream funding was made through the HE Reach Out to Business and Community (HEROBC) initiative.

Later on by Higher Education Innovation Fund (HEIF) (from 2002 to the present)
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Third Stream Funding in England

Knowledge exchange funding
(£ millions, constant 2009/10 prices)

HEIF 5 - Maintained £150 million in cash terms

Source: HEFCE/PACEC
INSTITUTIONAL SUPPORT STRUCTURES FOR KE

- These incentives have translated into a range of activities and structures for knowledge exchange in UK universities (PACEC/CBR, 2009)
  - Increase in KE staff expansion and professionalisation of technology transfer and business development offices
    - Most universities had a core knowledge exchange, industry and enterprise support service (equivalent but not always to Technology Transfer Offices; TTOs)
  - Organisational strategies and mission statements at HEI level related to third stream activities
  - Incentives: financial rewards for intellectual property and promotions
  - Offices of corporate relations to support strategic partnerships with large firms
  - Science parks and incubation facilities providing a range of services

- However, barriers remain for academics such as lack of time, excessive bureaucracy and insufficient rewards (Abreu et al, 2011)
BROAD PORTFOLIO OF KNOWLEDGE EXCHANGE ACTIVITIES

Public space / people-based activities

External lectures

External visits

Curriculum development

Enterprise education

Attending conferences

Enterprise education

Organising conferences

Post-course placements

CPD/Courses

Advisory boards

19

10

10

4

56

22

21

34

20

10

14

Public space / people-based activities

Student projects / placements / KTPs

Networks

Not just tech transfer!

Commercialisation activities

Licensed Research

Informal advice

Joint research

Prototyping / testing

Joint publications

Contract research

Problem-solving activities

Public lectures

Performing arts

Patenting

Spin-out company

Formed/run consultancy

Creation of physical facilities

Consultancy

External Secondments

Consortia

15

10

12

7

18

26

17

17

17

15

12

10

5

4

1

Number in bubbles is the % of academics engaging at least three times over the past three years in that mechanism, or at least once in the past three years for commercialisation activities.

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PACEC/CBR 2009
KE income by activity (£000s)

- Contract research
- Collaborative research
- Courses for business and the community
- Consultancy
- Regeneration and development programmes
- Facilities and equipment related services
- Intellectual property

Source: HE-BIS

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RECENT CHALLENGES: GLOBAL CRISIS AND UK SPECIFIC PRESSURES

- Global financial crisis (2008- )
- Increased demand for universities to engage in knowledge exchange activities during periods of economic turbulence (e.g. ECIF – HEIs supporting employers and employees)
- Changes in sub-national governance, with abolition of RDAs in England, move to localism, shift in incentives to engage in regional economic development (2010 - )
- Higher tuition fees (and reduced teaching grants) in England & student employability agenda (2012 - )
- Increased focus on research impacts– Pathways to impact, REF impact (2000s - )
Universities are adapting differently to pressures by pursuing different strategies:

- Search for new sources of income, some looking to increase activity overseas
- More strategic approach to building relationships with large firms
- Increase impact of research. Greater integration of research and knowledge exchange support offices
- Reorganisation / increase of resources dedicated to third mission
- Strengthen student enterprise, entrepreneurship and employability
- Increase links with local bodies
- Strengthening innovation infrastructure provision
- Increased collaboration / shared services

See Case study evidence within the City-regions (Charles et al, forthcoming) and evidence from the analysis of HEIF2011-15 knowledge exchange strategies (Coates Ulrichsen, 2013, Charles et al, forthcoming)
Growth in KE income by region (England only)

- **Yorkshire and the Humber**:
  - 2010-2011: -3.5
  - 2009-2011: -1.2
  - 2003-2008: 7.5

- **West Midlands**: 0.0

- **South West**:
  - 2010-2011: -1.5
  - 2009-2011: 2.1
  - 2003-2008: 4.0

- **South East**: 1.8

- **North West**:
  - 2010-2011: -4.5
  - 2009-2011: -1.4
  - 2003-2008: 4.7

- **North East**: 1.2

- **London**:
  - 2010-2011: -6.0
  - 2009-2011: -2.1
  - 2003-2008: 1.2

- **East of England**:
  - 2010-2011: 0.0
  - 2009-2011: 1.8
  - 2003-2008: 7.8

- **East Midlands**:
  - 2010-2011: 17.8
  - 2009-2011: 12.9
  - 2003-2008: 4.7

Annualised growth rate (% p.a.) Excludes regen income from RDA.
Growth in KE income by research intensity*

Source: HE-BCI

Annualised growth rate (%p.a.). Excludes regen income from RDA.
* Res intensity is calculated as the % of academic staff in 4* and 5* dept in the RAE 2008 exercise
RESILIENCE OF THE UNIVERSITY?

Universities in England are affected by multiple challenges:

- pressure for the demonstration of the impact of higher education, both through research, teaching and engagement,
- new emerging sub-national governance mechanisms;
- changes in the financial models of higher education cost sharing; and
- additional effects of the crisis.

Their response would be shaped by external environments (e.g. regional economic activities, business partners) as well as internal resources (research funding, infrastructure)
Some universities seem well placed to respond to external pressures. They can use their research strengths and particular specialisations and built on previous experience. They can align the multiple missions by linking research impact and employability issues to third mission strategies.

By contrast, other universities, mainly former polytechnics, are particularly badly affected by the economic climate (lower economic activity and government cuts reducing their activity with local SMEs and public sector), third mission funding (HEIF) and new funding regime for education (student fees). They face greater challenges to refocus their activities and find new funding sources.
CONCLUDING REMARKS

- The Third Mission/KE is getting more recognized in the HE policy; and regional roles of universities more embedded – both European, rational and regional policy and institutional practices

- The new economic and institutional context, and an ensuing greater competition between universities, is heightening existing differences across HEIs in their approach to KE activities.

- Implication for the Governance and Management of the Co-operation of Science and Business – Multi-level and Divergence
Universities have diverse portfolio of activities that have regional impact
- Tech/knowledge transfer and commercialisation are comparatively minor activities

Universities play key role in economic development at a range of geographical scales, particularly at the regional level, but,
- All universities are not equivalent thus…
- policy must be context-specific
- Policy should take advantage of universities’ strengths, complementarities between HEIs and the regional economy, and regional private demand

Governance for S-I cooperation should reflect this diversity of activities, strategies and complementarities
DZIEKUJE BARDZO
THANK YOU!

The University of Manchester
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