



The Role of Universities in Innovation and Regional Development

Characterising universities' role in the implementation of Structural Funds OP

Reflections from three European case universities

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Foreword

- Key findings from Dr. Maria Salomaa's PhD thesis entitled University third mission in rural regions; comparative analysis on university engagement through the Structural Funds programmes in the UK, Finland and Portugal:

THREE QUALITATIVE CASE STUDIES 2017–2020



THREE EUROPEAN
COUNTRIES



40+ STRUCTURAL
FUNDS PROJECTS



86 RESEARCH
INTERVIEWS



TYPOLOGY OF
UNIVERSITY-LED
STRUCTURAL FUNDS
PROJECTS

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A brief introduction

- 2008 MA in Theatre and Drama Research, Tampere University, Finland
- 2008-2017 RDI specialist and project manager at Tampere University and (former) Tampere University of Technology
- 2017 MA in Higher Education Studies Administration and Management, University of Tampere, Finland
- 2020 PhD in Management, University of Lincoln, UK
- 2020 RDI specialist in Tampere University of Applied Sciences, Finland



Overview

1) Background

2) Research question, methods and data

3) Flow of analysis

4) Key concepts and frameworks

5) Key findings

6) Typology of university-led SF projects

7) Recommendations and future research

Background 1: High expectations towards university engagement



- **Universities** are expected to facilitate entrepreneurship and technology transfer, thus binding the third mission to interaction with regional industry and society (Arbo & Benneworth, 2007).
- **EU policies** urge universities to commercialise research and take a more active role in contributing to economic and regional development (Roper & Hirth, 2005; Vorley & Nelles 2009; Zomer & Benneworth, 2012), especially regional RIS3 guiding access to Structural Funds (SF) programmes supporting local level innovation.
- **National policies** have a major role in creating the context and conditions that enable universities to transform strategically towards entrepreneurial organisations (Stensaker & Benner, 2013) and define the conditions of funding for universities' regional engagement activities (Trippi et al., 2015).

Background 2: Structural Funds I

- The Cohesion Policy transformed into national Structural Funds Operational Programmes one of the key instrument in supporting local level innovation e.g. through collaboration between higher education, businesses and other local stakeholders.
- **HITHERTO** the overall impact of SF to sustainable economic growth and convergence of lagging regions remains questionable and difficult to assess (Percoco, 2017), partly due to insufficient territorial approach tailored for different areas (Gagliardi and Percoco, 2017), e.g. rural regions.

Background 3: Structural Funds II

- Previous studies emphasise the role SF in creating foundations of regional systems of innovations, reinforcing universities' regional engagement and R&D activities (e.g. Charles and Michie, 2013) **BUT** they do not take into account single beneficiary's point of view
 - Operational programme level evaluations have more potential to contribute to national and subnational policy formulation processes (Fratesi and Wishlade, 2017)
 - **A NEED** for further programme and project level studies to "gain more insight into the effectiveness of interventions and delivery mechanisms" (Bachtler and Wren 2006, p. 151)

Background 4: Exploring the unknown?

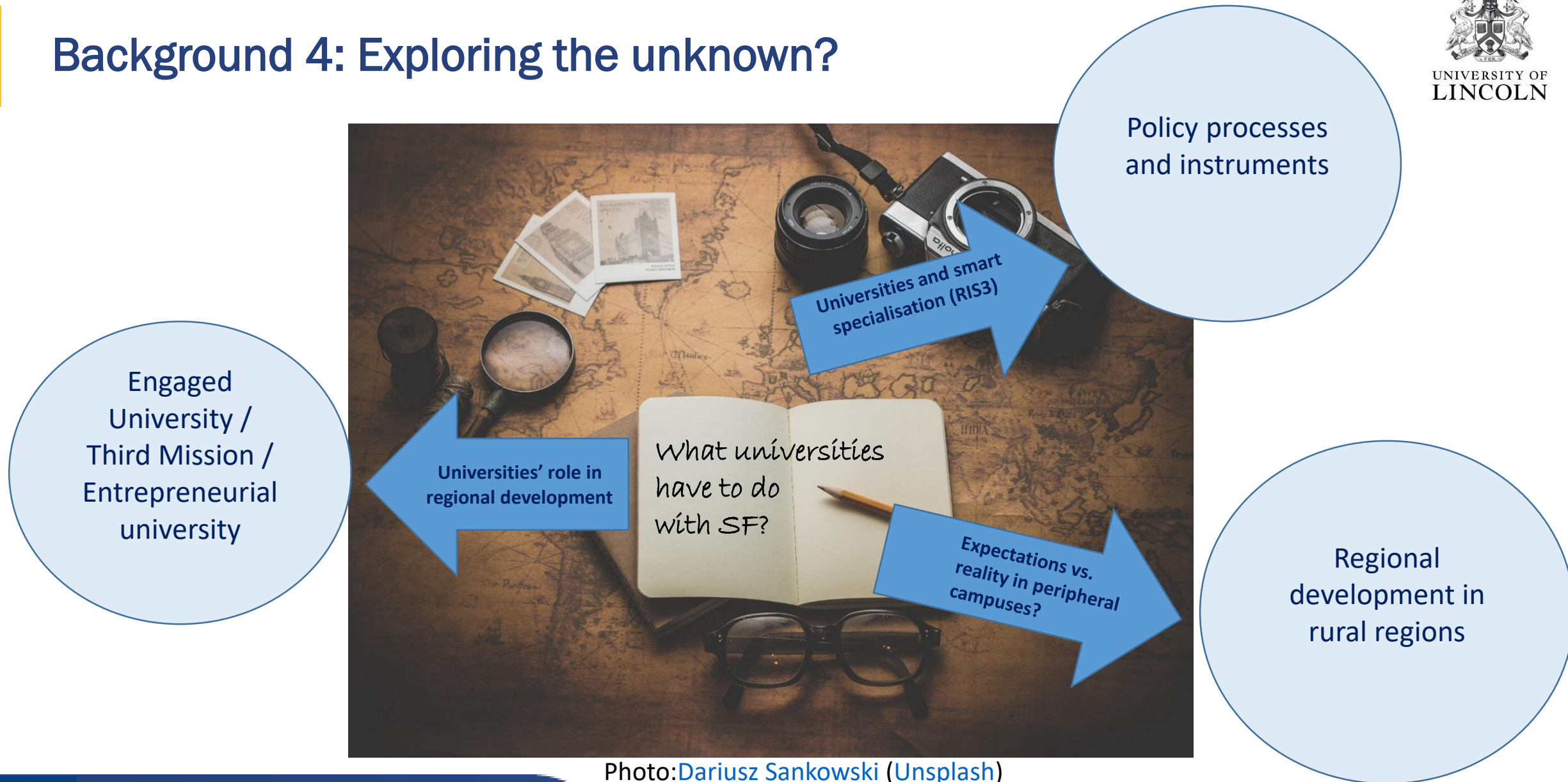
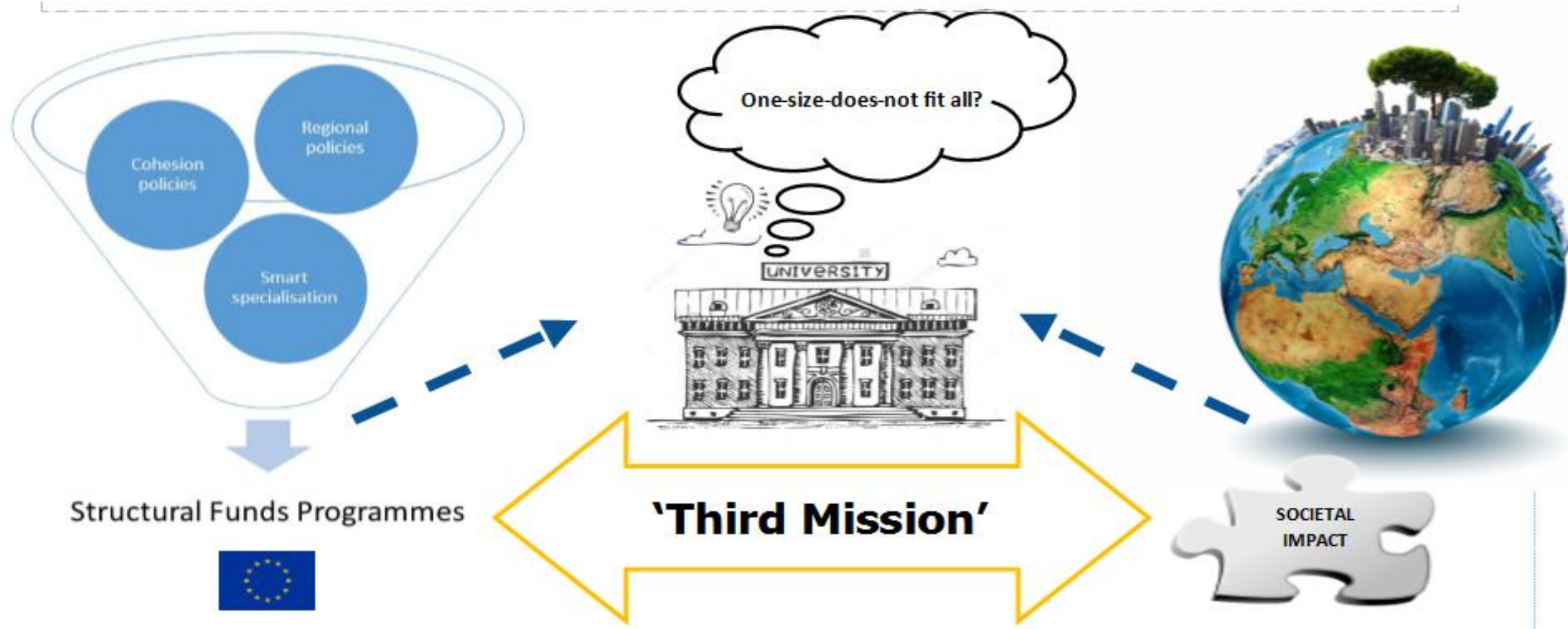
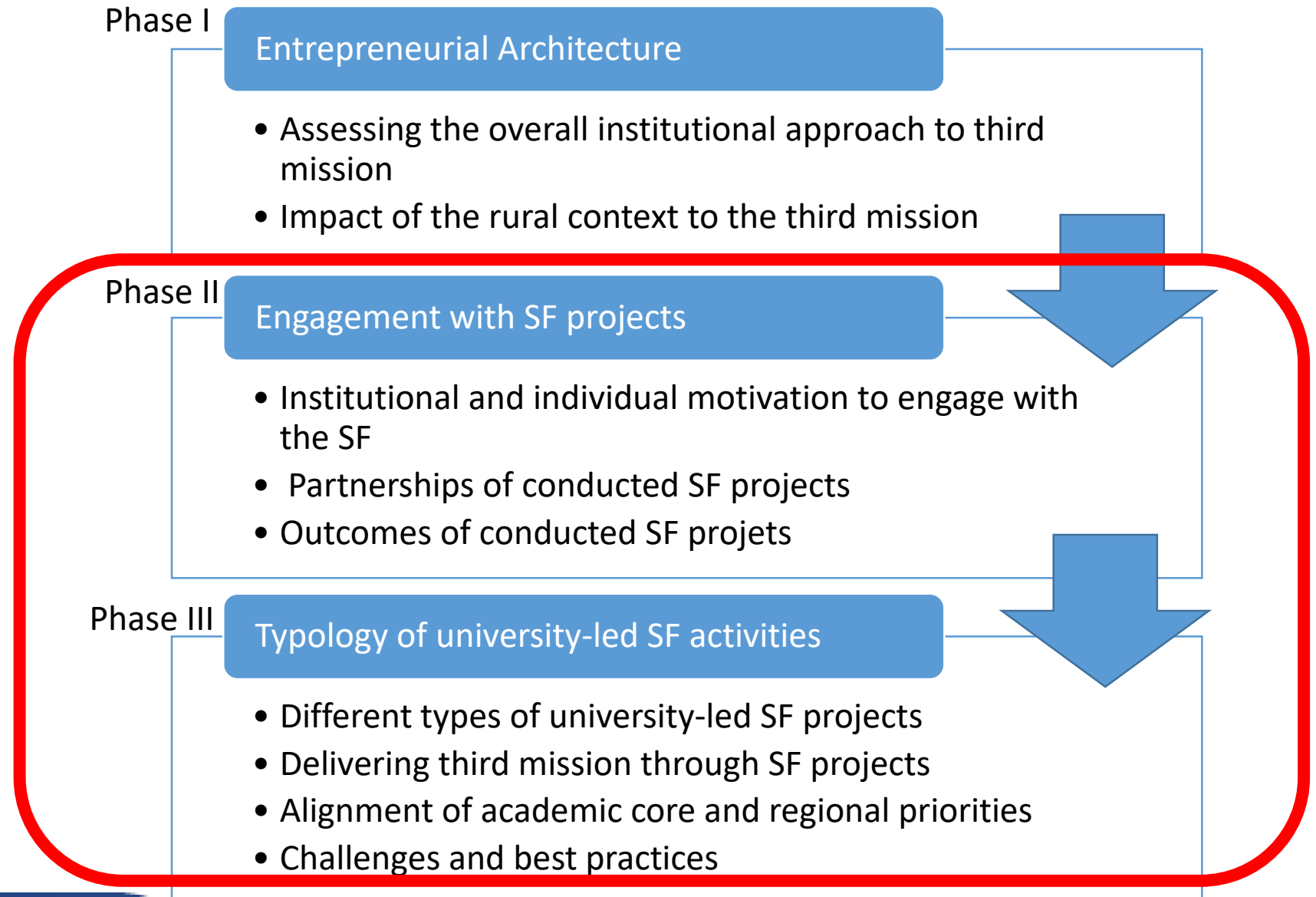


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RQ: How (entrepreneurial) universities manage and deliver regional engagement activities through SF funded projects?



Description of the flow of analysis with expected results

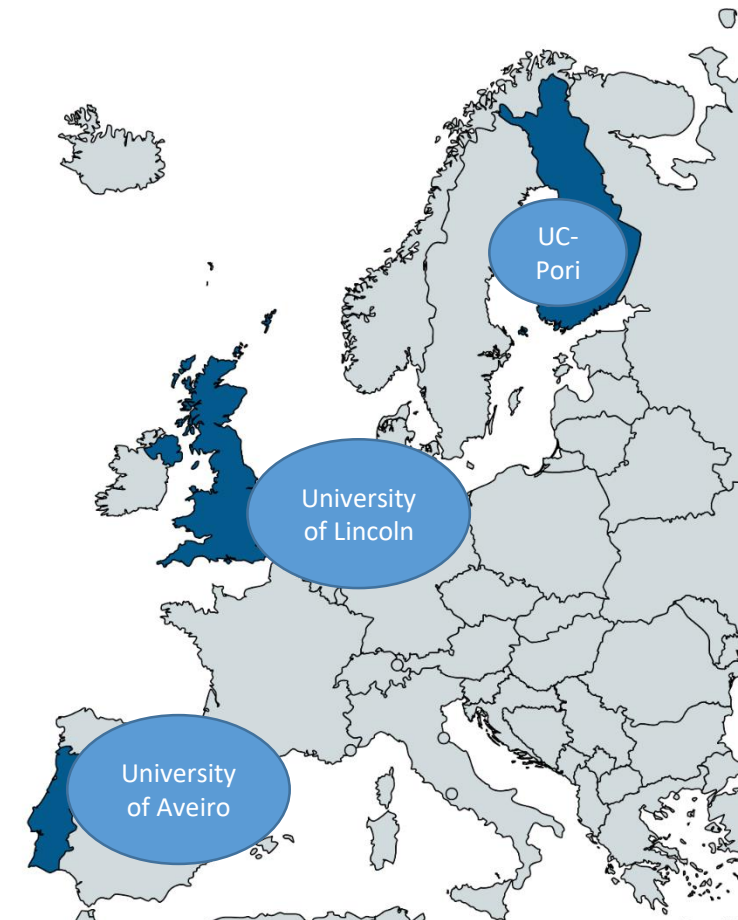


Research outline

STUDY APPROACH: 3 individual case studies, following the logic of 'atypical cases' to obtain richer data set to create a deeper understanding on the phenomenon (Flyvbjerg, 2006) in different national, but comparable regional contexts determining the SF Operational Programmes (Bachtler and Wren, 2007):

- *University of Lincoln*
- *University of Aveiro and*
- *University Consortium of Pori.*

CASE SELECTION: Newer universities, located in somewhat rural setting, strong regional role since the beginning, members of ECIU (excluding Lincoln).



Data and analysis



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EMPIRIC DATA:

96 semi-structured interviews covering 43 SF projects

- (December 2017- June 2019)
- universities' top management, research and enterprise personnel, researchers and other staff members dealing with SF funded projects within the university and regional authorities.

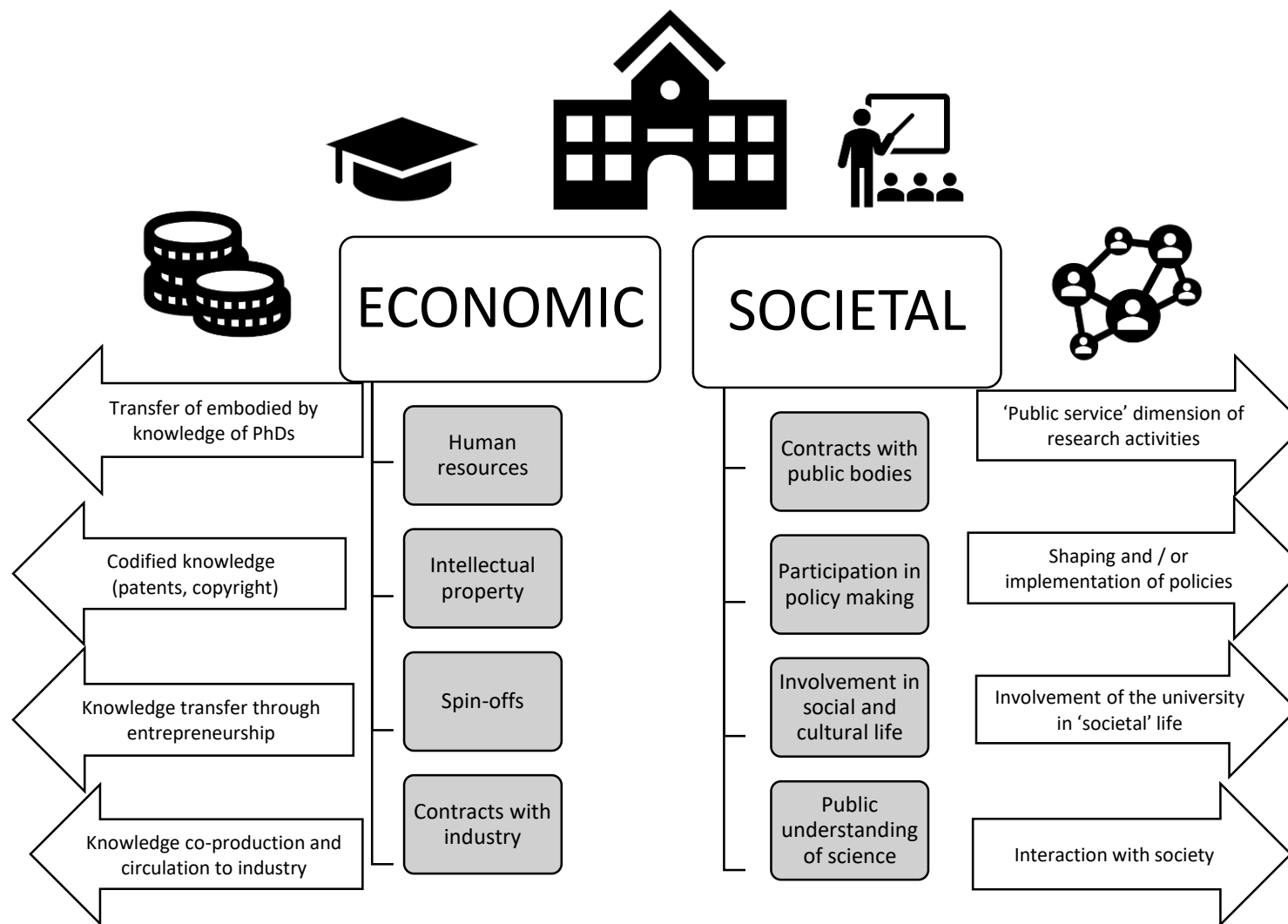
Informants detected through

- Public SF information (Programme period 2014-2020)
- Snowballing

SECONDARY DATA: National SF Operational Programmes, national databases, national HE policies, regional development plans (e.g. RIS3), universities' strategic planning documents, SF project websites.

THEMATIC ANALYSIS using NVivo 11 to ease categorisation and drawing thick description on each case.

Economic and societal dimensions of the third mission



Source: Author's own elaboration after Schoen et al., 2006 and Laredo, 2006.

Challenges of University-led SF projects

1) Collaboration

- Non-desirable competition
- Lack of regional coordination
- Lack of business partners (peripheral regions)
- Difficulties in cross-regional collaboration

Charles, D. (2016). The rural university campus and support for rural innovation. *Science and Public Policy*, 43:6, 763–773.

De Rynck, S. & McAleavey, P. (2001). The cohesion deficit in Structural Fund policy, *Journal of European Public Policy*, 8:4, 541–557.

Kempton, L. (2015). Delivering smart specialization in peripheral regions: the role of Universities, *Regional Studies, Regional Science*, Vol. 2, Issue 1, 489–496.

Muizniece, L. & Peiseniece, L. (2012). EU Structural Funds Investment in R&D and its influence on innovation development – the case of university of Latvia, *European Integration Studies*, 6.

Uyarra, E., Marzocchi, C. & Sorvik, J. (2018). How outward looking is smart specialisation? Rationales, drivers and barriers, *European Planning Studies*, 26:12, 2344–2363



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Challenges of University-led SF projects

2) University organisational culture

- Embedding engagement to academic core complicated; mismatch of academic profiles and regional needs
- Lack of resources
- Absence of institutional strategies for engagement
- Lack of academic outputs

Benneworth, P. & Sanderson, A. (2009). The regional engagement of universities: Building capacity in a sparse innovation environment. *Higher Education Management and Policy*, 21:1, 123–140.

Benneworth, P. & Cunha, J. (2015). Universities' contributions to social innovation: reflections in theory & practice. *European Journal of Innovation Management*, 18, 508–527.

Goddard, J. and Vallance, P. (2013). *The University and the City*, Routledge, London.

Vallance, P, Blazek, J., Edwards, J. & Kveton, V. (2017). Smart specialisation in regions with less-developed research and innovation systems: A changing role for universities?, *Environment and Planning C: Politics and Space*, Vol. 36 (2), 219–238.



Photo: [Wai Siew](#) ([Unsplash](#))

Challenges of University-led SF projects

3) SF administrative procedures

- Unrealistic policy goals
- High bureaucracy
- High risk form of funding
- Match-funding rates

Bachtler, J. & Wishlade, F. (2014). Searching for Consensus: The Debate on Reforming EU Cohesion Policy. European Policies Research Paper 55, European Policies Research Centre.

Spilanis, I., Kizos, T., & Giordano, B. (2016). The effectiveness of European Regional Development Fund projects in Greece: Views from planners, management staff and beneficiaries. European Urban and Regional Studies, 23:2, 182–197.

Gagliardi, L. & Percoco, M. (2017). The impact of European Cohesion Policy in urban and rural regions. Regional Studies, 51:6, 857–868.

Percoco, M. (2017) Impact of European Cohesion Policy on regional growth: does local economic structure matter? Regional Studies, 51:6, 833–843.



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Challenges of University-led SF projects

4) SF Project outputs

- Over-estimated outputs
- Lack of academic outputs
- Low number of commercial results

Charles, D. & Michie, R. (2013). Evaluation of the main achievements of cohesion policy programmes and projects over the longer term in 15 selected regions. Case Study North East England.

Goddard, J. and Vallance, P. (2013). The University and the City, Routledge, London.

Goddard, J., Kempton, L. and Vallance, P. (2013). Universities and Smart Specialisation: challenges, tensions and opportunities for the innovation strategies of European regions, *Ekonomiaz: revista vasca de economia* 2013, (83), 83-102.

Muizniece, L. & Peiseniece, L. (2012). EU Structural Funds Investment in R&D and its influence on innovation development – the case of university of Latvia, *European Integration Studies*, 6.

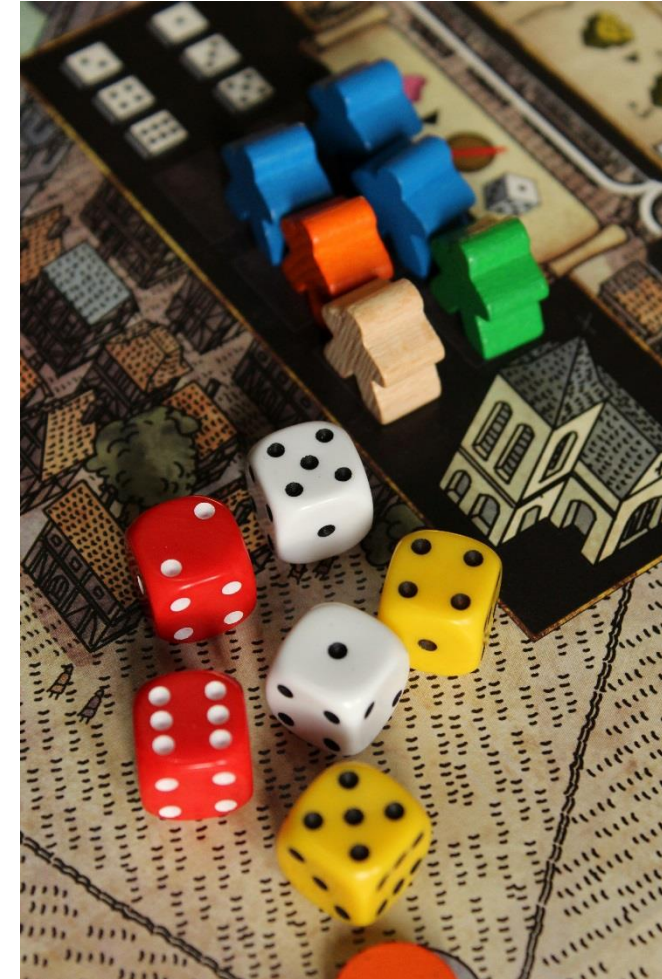


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Case 1: University Consortium of Pori (FI)

A UNIQUE PARTNERSHIP OF FOUR FINNISH UNIVERSITIES ON ONE CAMPUS.

A network of three* Finnish universities in the Satakunta Region

- Established in its current form in 2003
- 2 500 students and 170 staff members
- Strong regional focus
- Multidisciplinary study programmes
- Active participation to SF programmes
- Heavily subsidised by the City of Pori

DATA: 35 interviews (December 2017-June 2019) covering 15 ERDF and 4 ESF projects: UC-Pori units and their home universities' personnel working with SF funded projects, including both academics and supporting staff members as well as top management.



Case 2: University of Lincoln (UK)

- Located in the North East of England in a historic city of Lincoln
- Lincolnshire known especially for agriculture
- Strong local will to have a HEI in the region
- Established in 1996 as a branch campus, rapidly grew into a full range university
- Currently ca. 14,000 students and 1,600 members of staff across three campuses in Lincoln, Riseholme and Holbeach
- **DATA:** 36 semi-structured research interviews covering 3 large-scale ERDF projects: universities' personnel working with SF funded projects, including both academics and supporting staff members as well as top management between September 2017 and January 2019.



Case 3: University of Aveiro (PT)

- Location in the peripheral and less-developed regions of Centro (NUTS II) and Aveiro (NUTS III).
 - Strong connection to its region since its creation in the 1970s;
 - 17 000 students and 2000 staff members
 - Increasingly engaged in regional innovation policy and structural funds' projects at regional, sub-regional and local level.
-
- **DATA:** 24 interviews (February 2018-June 2019) covering 21 ERDF projects: personnel working with SF funded projects, including both academics and supporting staff members as well as top management in March-April 2018 and June 2019.



Findings 1

Characteristics of universities' engagement with SF	Statements	Lincoln	Aveiro	Pori
General *** Agree ** Neutral * Disagree – No response	1. Universities are important drivers of regional development.	***	***	***
	2. Structural Funds programmes are important source of funding for universities, especially in more peripheral regions.	***	***	***
	3. Structural Funds instruments support universities' regional engagement.	***	***	***
	4. Structural Funds are significant factor in developing universities' research capacity and contribution to R&D activities.	***	***	**

Findings 2

Universities' engagement with SF	Statements	Lincoln	Aveiro	Pori
Collaboration	5. Lack of regional coordination hinders participation and finding suitable partners.	***	*	*
	6. SF instruments create competition between regional actors	***	—	*
SF administrative procedures	7. SF instruments are bureaucratic.	***	***	***
	8. High match-financing rates decrease motivation to apply for funding.	***	—	*

Findings 3

Universities' engagement with SF	Statements	Lincoln	Aveiro	Pori
University organisational culture	9. SF projects are difficult to combine with higher education and research.	*	*	**
	10. Lack of motivation decrease participation to projects.	***	*	*
	11. Lack of internal coordination decrease participation to projects.	***	*	*
	12. Other funding instruments are prioritized.	*	*	***
SF Project outputs	13. Projects' expected outcomes can be over-estimated to secure funding.	***	***	***
	14. The number of commercial outcomes is low.	*	*	***

Findings 4: General characteristics

- Strict SF guidelines complicates delivering activities successfully (collaboration, eligibility criteria, match-funding).
- Not strategically planned or managed, marginal activity, strongly associated with the third mission.
- Little institutional interest (especially top management), unless
 - the projects directly generate academic results (Aveiro)
 - large-scale funding promote key research areas (Lincoln, Aveiro)
- Relies on academics' individual interests to engage with the region (Pori) or safeguard their jobs (Pori) BUT SF calls can push academics to think about how their research is relevant for the region (Aveiro, Lincoln, Pori).

Findings 5: Different types of SF projects



Top-down institutional SF projects

Large-scale strategic initiatives build on regional priorities, designed by the university management; university as an intermediary between businesses and SF funding (Lincoln & AU)

Third mission:

Human resources, Contracts with the industry, Spin-offs (knowledge transfer through entrepreneurship)



Academic-led SF projects

Projects vary in scale and scope, based on both fundamental and applied research. ERDF project driven by business-partnerships, ESF by public service and educational mission. (AU & Pori)

Third mission:

Contracts with the industry, Involvement in social and cultural life, Public understand of science



Professional-led SF projects

Capacity building (e.g. internationalisation, IP) and educational projects (e.g. continuous education) (AU & Pori).

Third mission:

Intellectual property, Human resources



Outsourced SF activities

Small-scale activities, providing knowledge and / equipment for local stakeholders (Lincoln)

Third mission:

Contracts with public bodies, Spin-offs (knowledge transfer through entrepreneurship), Contracts with industry

Participation in policy making (RIS3)

Typology 1: The potential impact of institutional SF projects

Type of university-led SF Projects	Characteristics	Potential contribution to the university third mission	Estimated capacity to create a transformative impact on the regional innovation system in rural regions	
			Positive	Negative
Top-down institutional SF projects	Large-scale strategic initiatives build on regional priorities, designed by the university management; university as an intermediary between businesses and SF funding.	<ul style="list-style-type: none"> Human resources Contracts with the industry Spin-offs (knowledge transfer through entrepreneurship) 	Strong aligned with the regional priorities set in the policies reinforce the quality of implementation; can strengthen the innovation capacity of the local SMEs by creating an access point to the university knowledge.	High quality implementation restricted by insufficient regional coordination and lack of communication with the lower level of the university organisation and matching the right academics with the business partners.

Typology 2: The potential impact of academic-led SF projects

Type of university-led SF Projects	Characteristics	Potential contribution to the university third mission	Estimated capacity to create a transformative impact on the regional innovation system in rural regions	
			Positive	Negative
Academic-led SF projects	Projects vary in scale and scope, based on both fundamental and applied research. ERDF project driven by business-partnerships, ESF by public service and educational mission.	<ul style="list-style-type: none"> • Contracts with the industry • Involvement in social and cultural life • Public understand of science 	Seed money to build on larger research projects with a regional value; increased skills level and employability can have a transformative effect to the economic landscape of the region in a long term.	One-off activities unless collaboration based on long-term partnerships; The applied SF projects not valued within the universities diminishing the visibility and the impact of the implemented activities; Low absorptive capacity of the regional partners to build on new generated knowledge.

Typology 3: The potential impact of professional-led SF projects

Type of university-led SF Projects	Characteristics	Potential contribution to the university third mission	Estimated capacity to create a transformative impact on the regional innovation system in rural regions	
			Positive	Negative
Professional led SF projects	Capacity building (e.g. internationalisation , IP) and educational projects (e.g. continuous education).	<ul style="list-style-type: none"> • Intellectual property • Human resources 	Increased institutional entrepreneurial capacity to act as a leading knowledge institution within the region.	One-off activities without reaching the right target groups and sufficient institutional commitment.

Typology 4: The potential impact of professional-led SF projects

Type of university-led SF Projects	Characteristics	Potential contribution to the university third mission	Estimated capacity to create a transformative impact on the regional innovation system in rural regions	
			Positive	Negative
Outsourced SF projects	Small-scale activities, providing knowledge and / equipment for local stakeholders,	<ul style="list-style-type: none"> • Contracts with public bodies • Spin-offs (knowledge transfer through entrepreneurship) • Contracts with industry 	May lead to KTPs or other forms of industry collaboration increasing the regional R&D capacity.	Very small-scale activities can stay hidden within the universities; collaboration and results not widely disseminated, which decreases the regional impact of the delivered services.

Key messages

Unused potential to support universities' third missions activities through SF

- Remote units more able to benefit from SF
- Can contribute to indirectly to teaching and research
- Seed money to build on larger research project
- Academics find the SF projects meaningful

National HE and SF policies steer (restrict) the ways in which universities can deliver SF activities

- Currently SF activities not recognized or valued within universities (management), even if the university unit had a special regional mission → the role of the 'third mission'?
- Mismatch of indicators (SF and HE policies)

Recommendations



POLICIES

More realistic goal setting (regional policy processes – bids – promised outputs)

Tailored approach allowing more suitable objectives for universities.



ORGANISATION

Internal mechanisms supporting SF activities within universities

Training researchers to identify the regional benefits of R&D activities



SYSTEMS

Finding more synergies between academic and applied research / business collaboration



STRATEGIES

Designing SF project activities more efficiently in collaboration with top management and academics

Alignment of the third mission strategies with regional priority areas?



Pepper-robot can understand facial features and sounds - acquired for SF project carried out in the UC-Pori focusing on the utilization of robotics in healthcare.

Future research?

The characteristics, impact and the alignment of the university third mission delivered through Structural Funds funded activities remains a largely under researched area;

- Further empirical studies with a comparative element would also generate more knowledge on the different roles the university is expected to play in the national adaptations of the Cohesion Policy through Structural Funds Operational Programmes, and highlight effective delivery methods of the policies.
- In-depth studies concentrating on university-led, individual SF projects would enable evaluating better their impact to the regional development as well as their contribution to generating academic outputs.
- Empirical studies on how the amount of available SF funding shapes the university involvement would bring new insights on the alignment – or mismatch – of the university third mission and SF activities through multiple case studies, expanding the proposed typology to identify different delivery mechanisms, their institutional foundations and best practices for maximising the outputs.

Related publications

CASE LINCOLN

[Salomaa, M. \(2019\): Third mission and regional context: assessing universities' entrepreneurial architecture in rural regions. *Regional Studies, Regional Science*, 6 \(1\), pp. 233-249.](#)

[Nieth, L., Benneworth, P., Charles, D., Fonseca, L., Rodrigues, C., Salomaa, M., Stienstra, M. \(2018\): Embedding entrepreneurial regional innovation ecosystems: reflecting on the role of effectual entrepreneurial discovery processes. *European planning studies*, 26 \(11\), pp. 2147-2166.](#)

[Ahoba-Sam, R., Salomaa, M. and Charles, D. \(2018\): On Overcoming the Barriers to Regional Development: Reflections from the University of Lincoln. Working Paper, RUNIN working paper series.](#)

CASE AVEIRO

[Fonseca, L. and Salomaa, M. \(2019\): Entrepreneurial Universities and Regional Innovation: Matching Smart Specialisation Strategies to Regional Needs? In: *Examining the Role of Entrepreneurial Universities in Regional Development*. IGI Global, pp. 260-285.](#)

Fonseca, L., Nieth, L., Salomaa, M. & Benneworth, P. (forthcoming, 2020): Universities and Place Leadership – A question of agency and alignment in M. Sotarauta & A. Beer (eds.) *Handbook on City and Regional Leadership*, Cheltenham: Edward Elgar Publishing.

CASE PORI

[Salomaa, M., Nieth, L., Benneworth, P. & Fonseca, L. \(2020\) The role of universities in building dense triple helix ecosystems in sparse regional environments, in L. Farinha, D. Santos, J. Ferreira & M. Ranga \(eds.\) *Regional Helix Ecosystems and Sustainable Growth: Innovation, Entrepreneurship and Technology Transfer*, Springer.](#)

[Salomaa, M. & Charles, D. \(2019\): The university third mission and the European Structural Funds in peripheral regions: Insights from Finland , Working Paper, RUNIN working paper series.](#)



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Thank you for your attention!

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