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Workshop: Innovation Strategies for System-Level Transformation

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# Unravelling Development Traps: The Imperative of Collective Action

Forthcoming in Wostner P, Burger A, Palčič I, Šlander Wostner S, 2024: „Unravelling Development Traps: The Imperative of Collective Action“ in Research Handbook on Regions and Transformative Innovation Policy, Edward Elgar edited by Radošević S, Schwaag Serger S and Soete L

# 1. The Challenge

Difficulties  
in transitioning to  
(or preserving)  
higher value-added activities

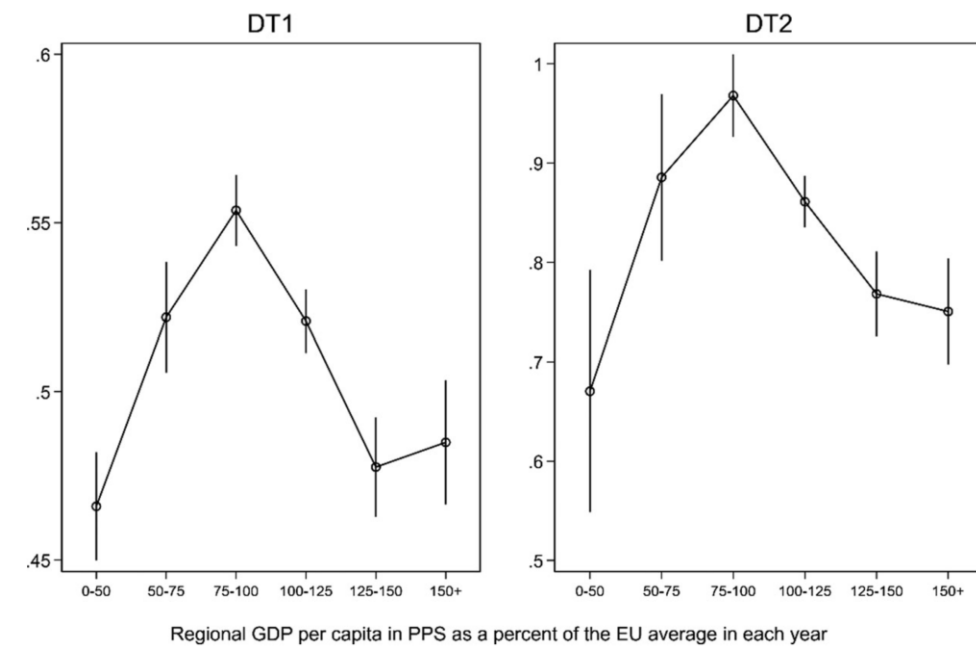
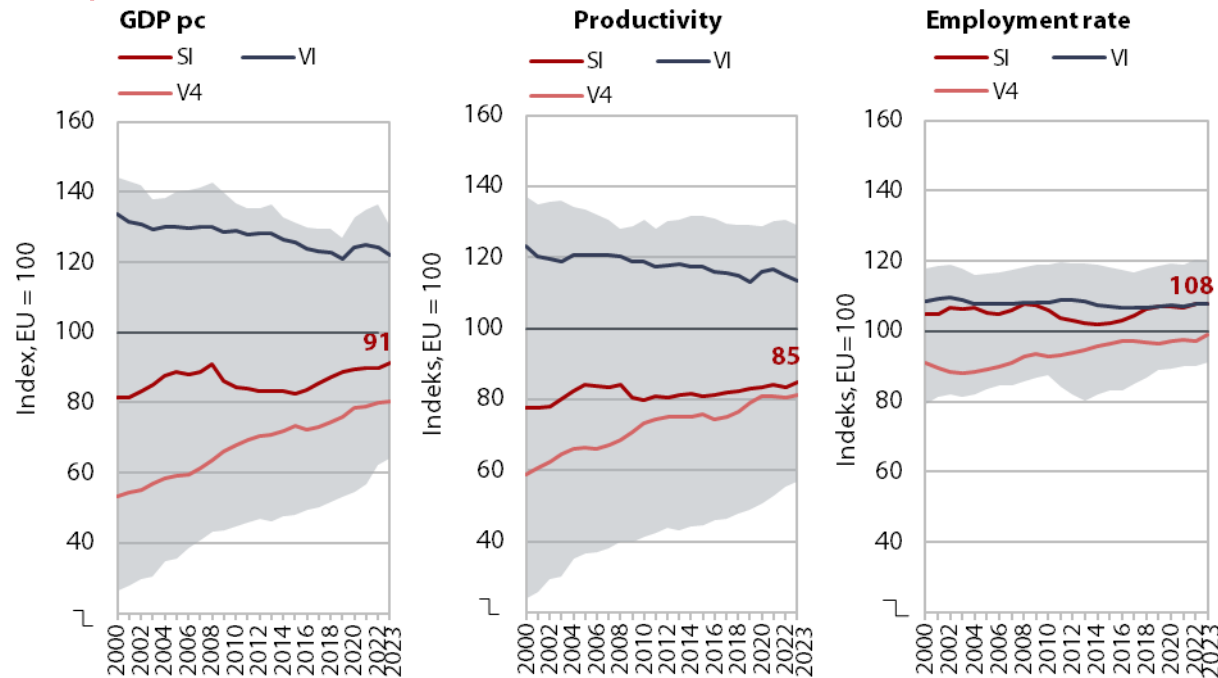
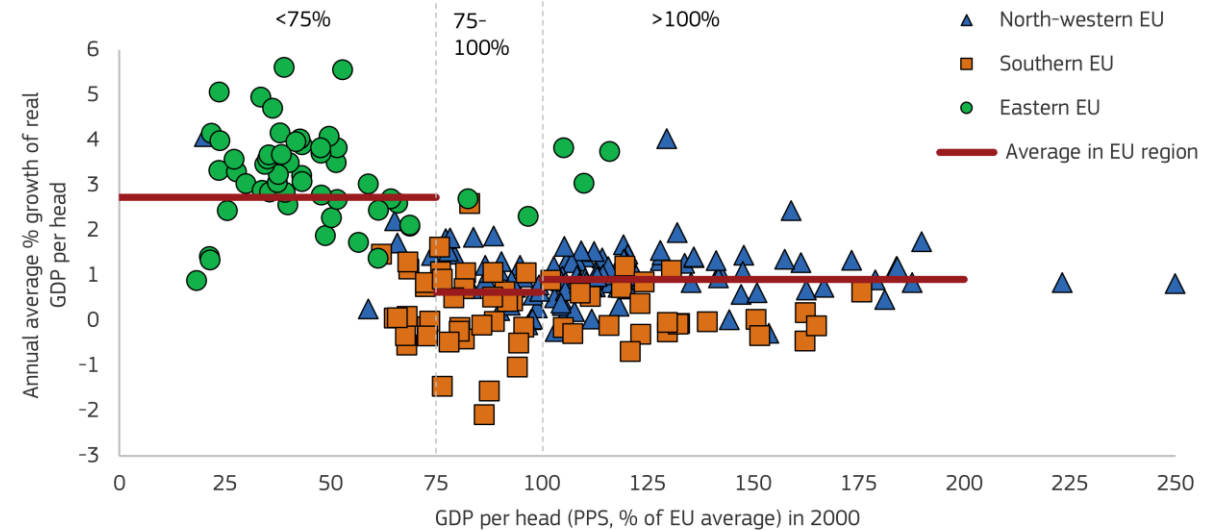


Figure 2.8 Annual growth in real GDP per head in EU regions by level of development, 2001-2019



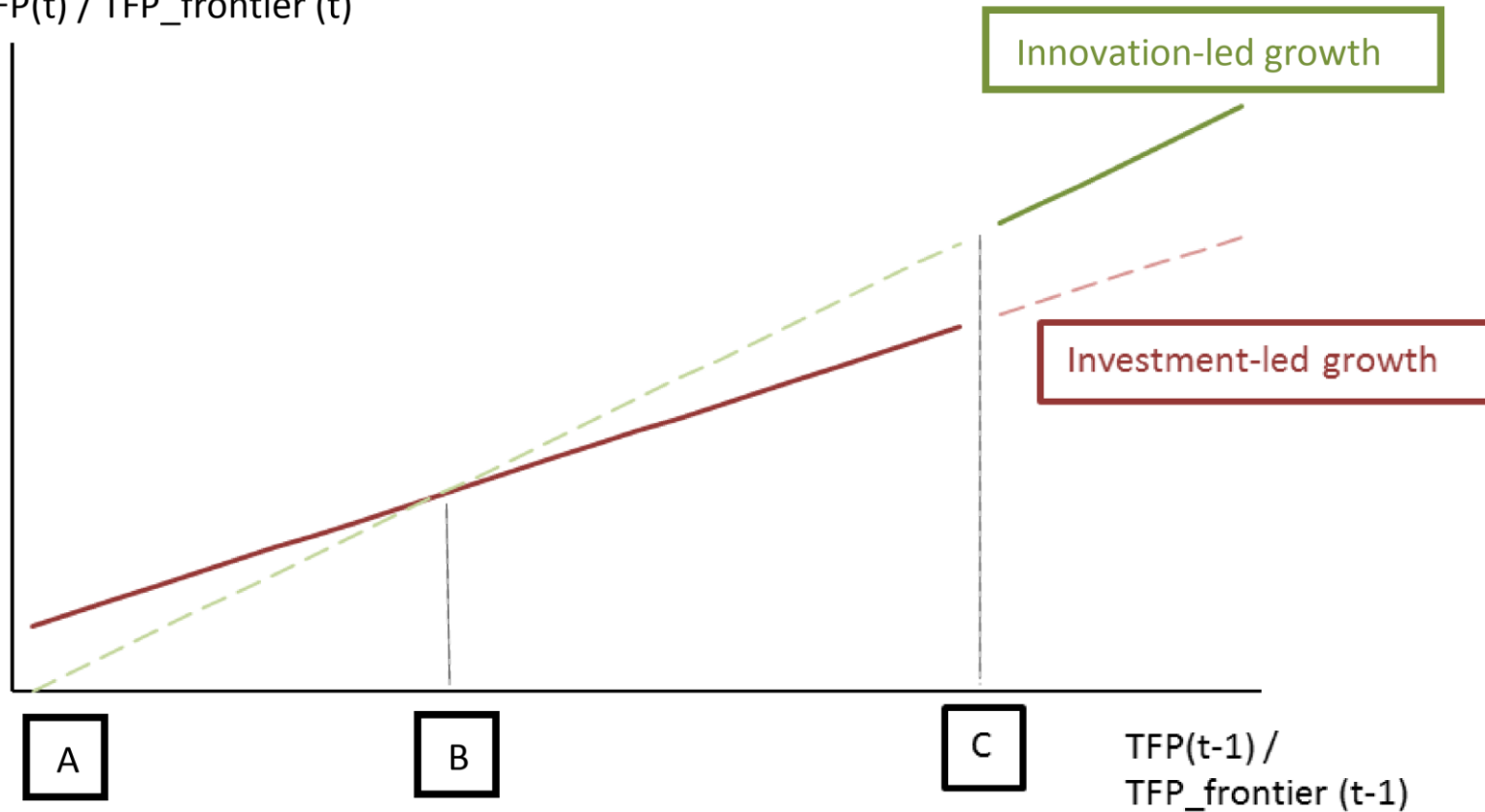
Source: Eurostat [nama\_10r\_2gdp], DG REGIO calculations.



# 1. The Challenge

Transformation  
towards innovation driven growth  
/  
successful navigation of the twin transition.

TFP(t) / TFP\_frontier (t)



Examples of successful catch-up to the developed and high-income group of countries have been “painfully rare” (Im & Rosenblatt, 2013)



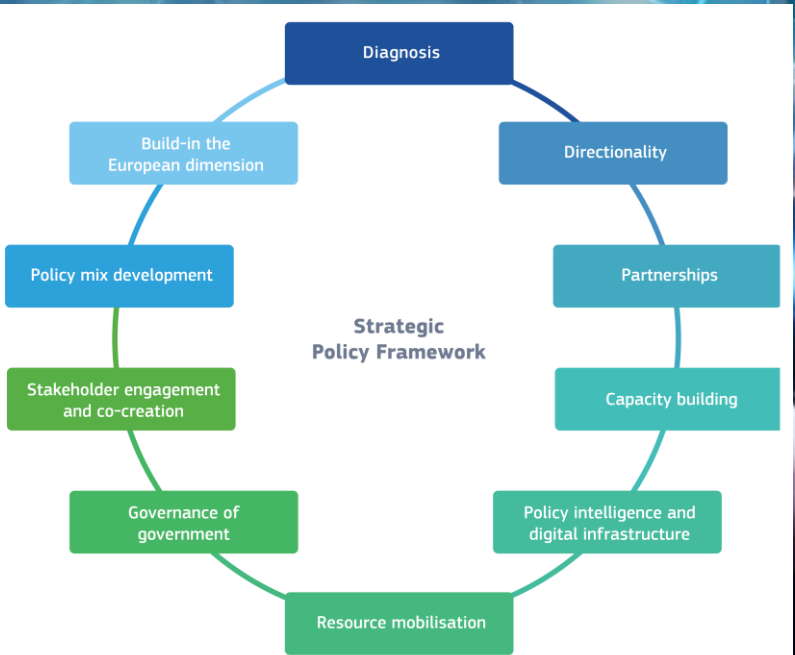
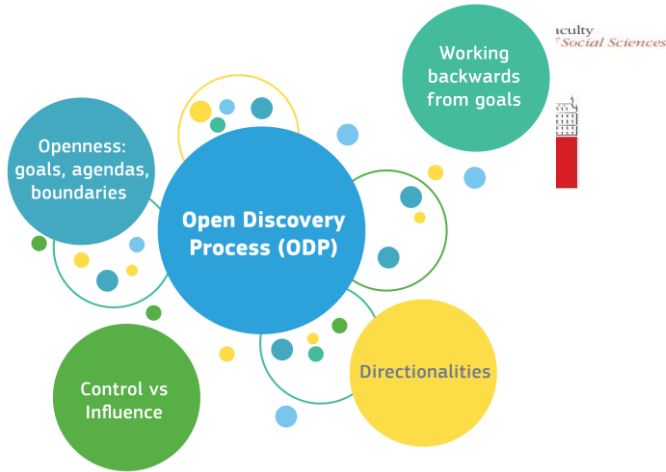
## 2. The approach: Transformational innovation policy:

1. Arnold E, Paunov C, Planes-Satorra S, Schwaag Serger S and Mackle L, 2023: “**Navigating Green and Digital Transitions: Five Imperatives for Effective STI Policy**”, OECD Science, Technology and Industry Policy Papers, November, No. 162:

- Imperatives 1 & 2: **Joint governance**
  - Imperative 1: Coordinated government
  - Imperative 2: Stakeholder engagement for joint governance
- Imperative 3: Agility and **experimentation** in policy making
- Imperative 4. The **directionality** imperative
- Imperative 5: Fostering **breakthrough innovation** to achieve transitions

2. Pontikakis, D., González Vázquez, I., Bianchi, G., Ranga, M., Marques Santos, A., Reimeris, R., Mifsud, S., Morgan, K., Madrid, C., Stierna, J.: „**Partnerships for Regional Innovation – Playbook**“, EUR 31064 EN, Publications Office of the European Union, Luxembourg, 2022

3. Bianchi, G., Matti, C., Pontikakis, D., Reimeris, R., Haegeman, K. H., Miedzinski, M., Sillero Illanes, C., Mifsud, S., Sasso, S., Bol, E., Marques Santos, A., Andreoni, A., Janssen, M., Saublens, C., Stefanov, R., & Tolias, Y. (2024). **Innovation for place-based transformations : ACTIONbook, practices and tools**. (G. Bianchi, Ed.). Publications Office of the European Union. doi:10.2760/234679



TAILORED Policy Mix

3

NICHES Priorities

4

S4

INTEGRATED Collaboration

1&2

Mission:  
to transition, in priority niche areas,  
from a follower to co-creator of global trends

5

GLOBAL Inter

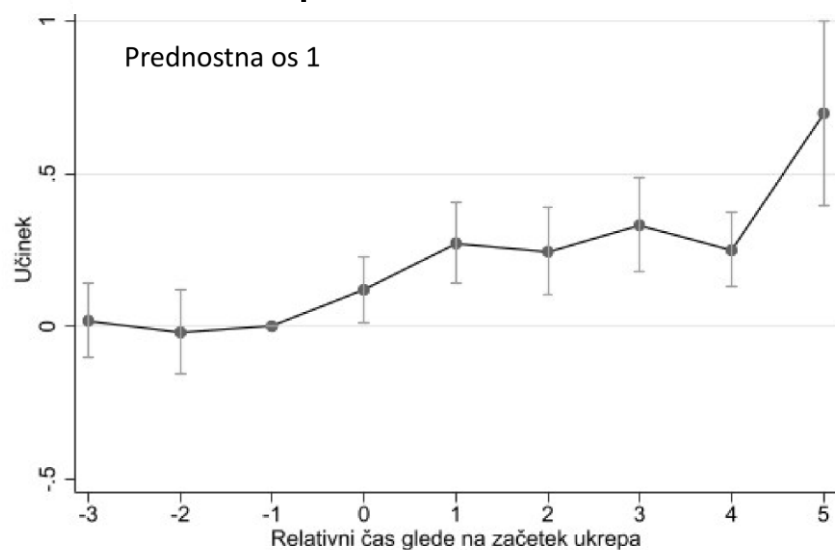


# The S<sub>4</sub> worked:

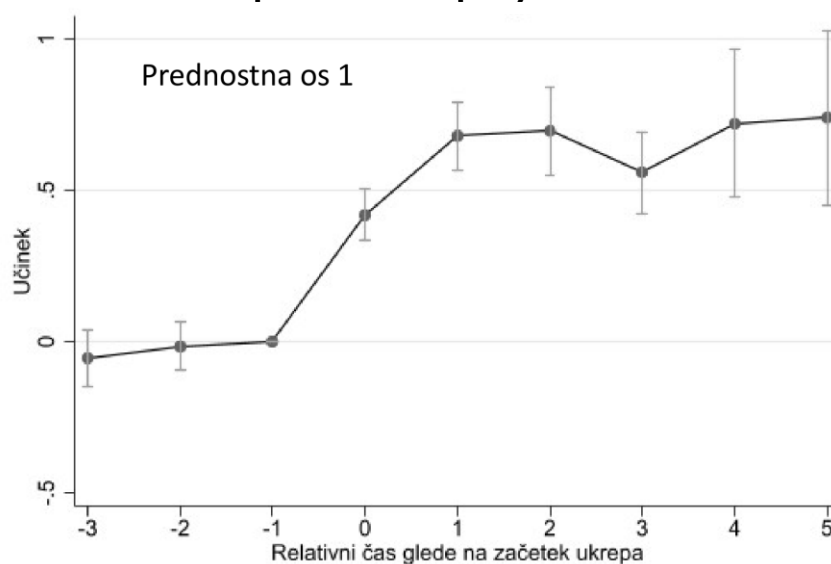
Burger et al., 2023: „Priprave metodologije in presoja učinkovitosti ukrepov iz naslova Strategije pametne specializacije“, FDV in IER, Ljubljana, oktober (Methodology and impact assessment of Slovenian smart specialisation strategy)

➔ Based on robust counterfactual methodology to identify causal relationships (difference-in-differences DID & two-way fixed effects TWFE)

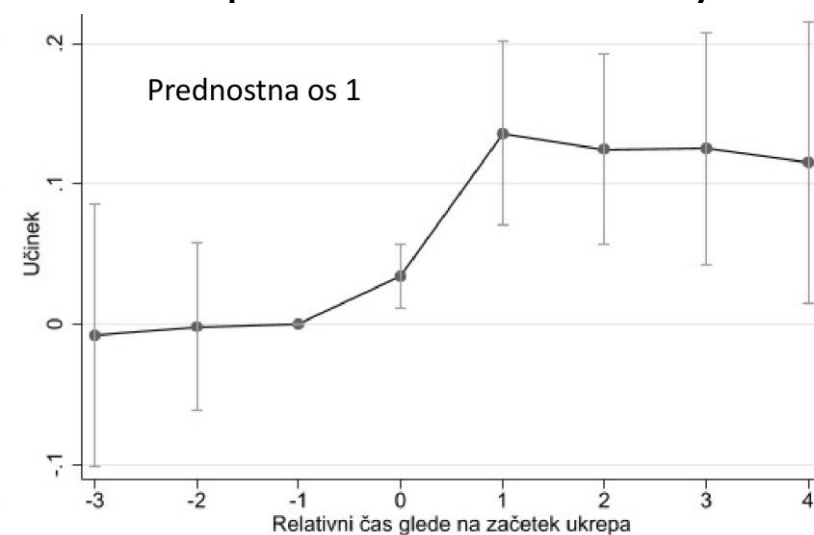
Impact on value added



Impact on employment in R&D



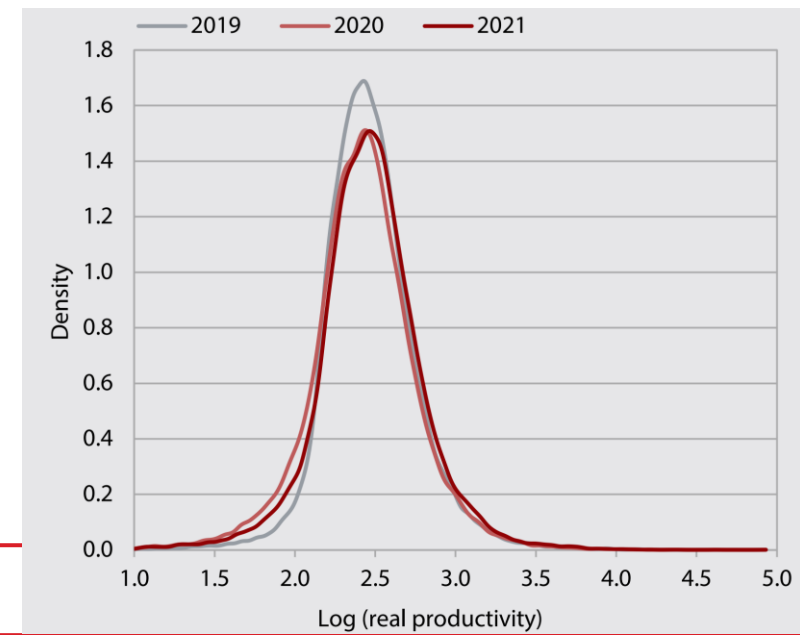
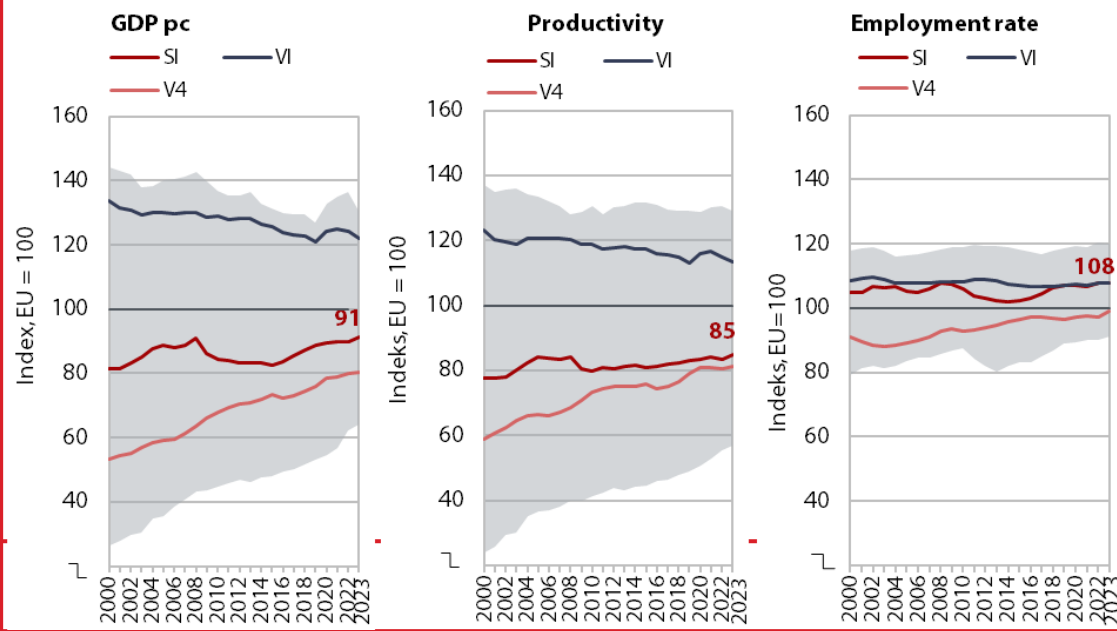
Impact on innovation activity





# BUT ...

1. Towards more granular understanding why is transition to innovation driven growth so hard?  
What is it that needs to change in this transition?
2. How does one succeed not on just on micro, but also on the macro level?  
How does one scale pilots up?

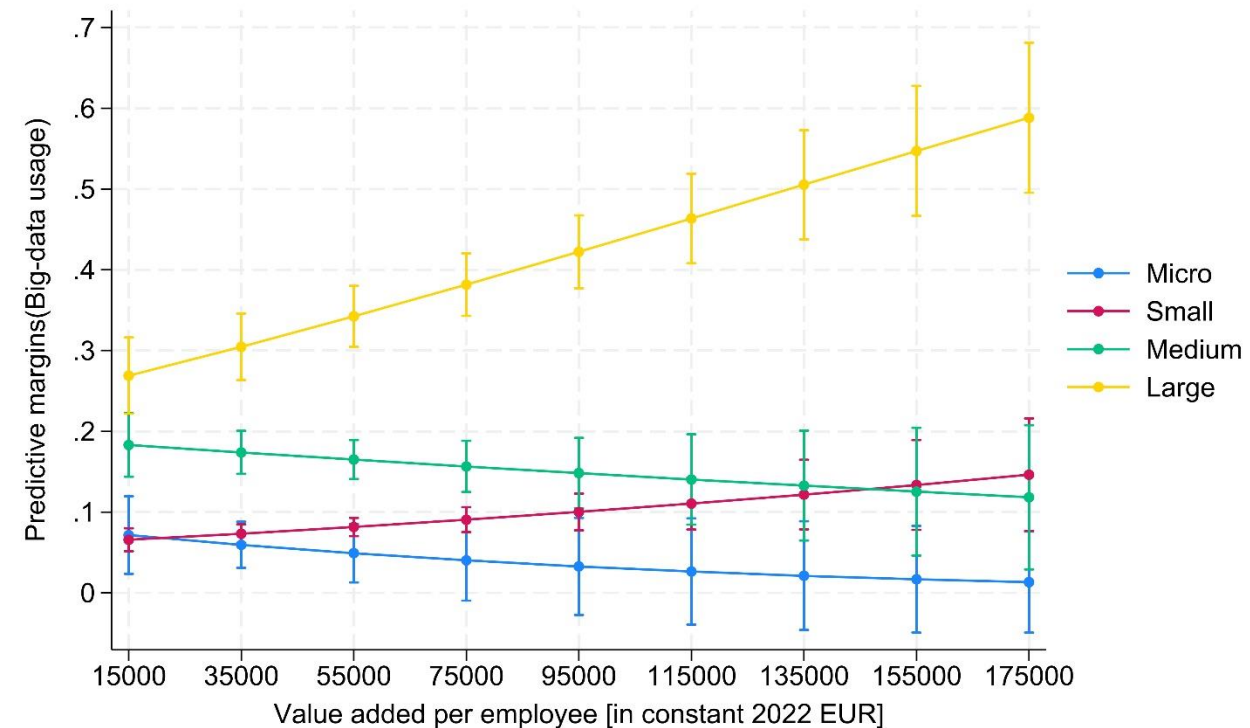
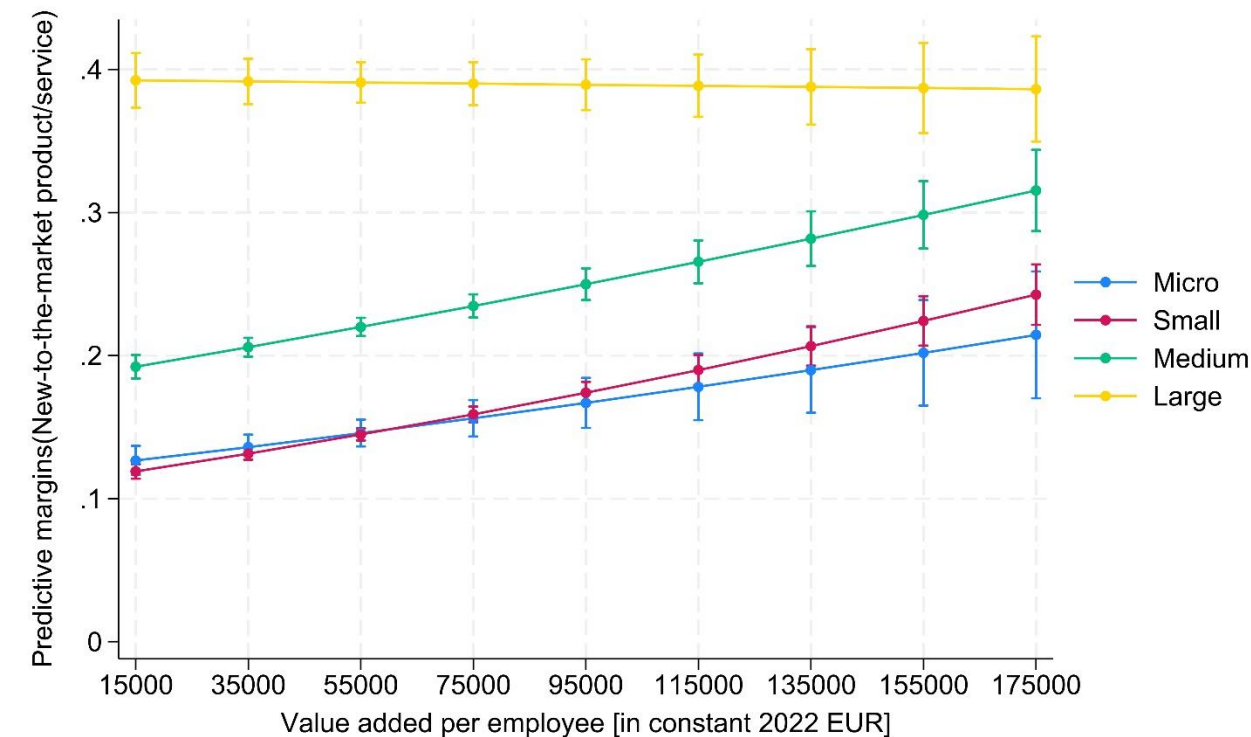




# 3.1 Higher Productivity is not just about any innovation

- **Exploitative I.:** improvement of current products and services are emphasized ~ incremental innovation also consistent with the investment phase
- vs. **Explorative I.:** firms innovate to create new products that deviate from their previous knowledge profile that require change of firms' strategies → new products to the market

## Explorative + Advanced technologies for large firms





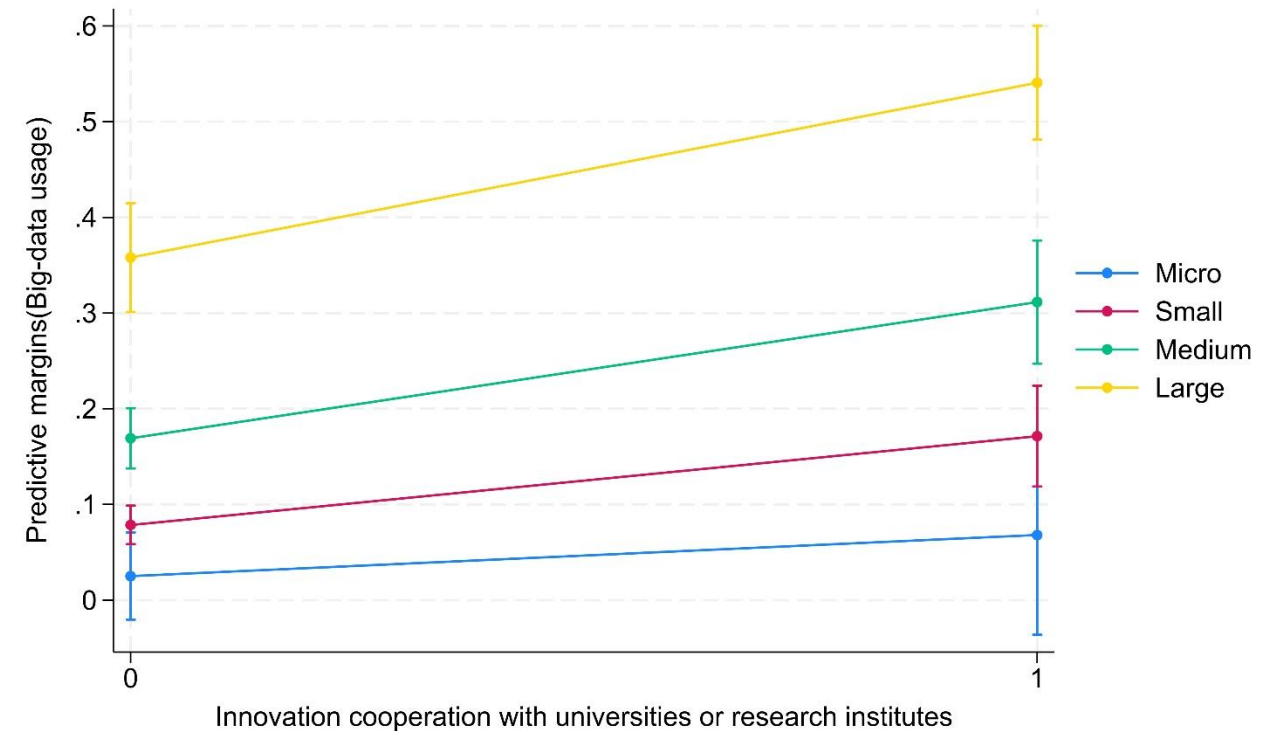
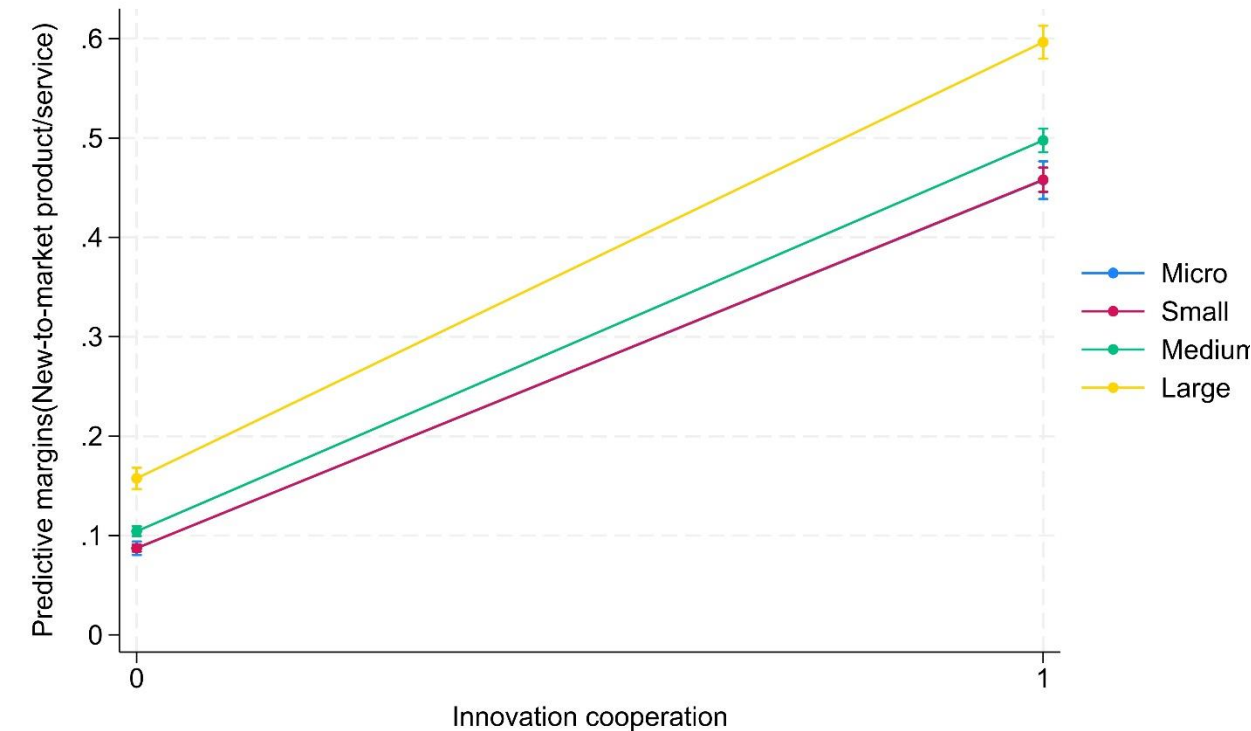
## 3.1 Our thesis: in this transition, firms become co-dependent on their environment, because:

1. (Explorative) Innovation is riskier
  - a) More ambitious strategies and projects require sharing of risks and joint venturing.
  - b) The need amplified in absence of size advantages.
2. (Explorative) Innovation is more complex
  - a) Technology complexities (I4.0)
  - b) The need for specialised capabilities → skills, infrastructure (e.g. research equipment,...), adapted regulation, specialized intermediaries
3. Stronger firm level complementarities:
  - a) Product and value-chain complementarities become more pronounced.
  - b) Particularly in the absence of size advantages, firms are compelled to pool their market-making and GVC-integration activities, including international innovation collaboration.



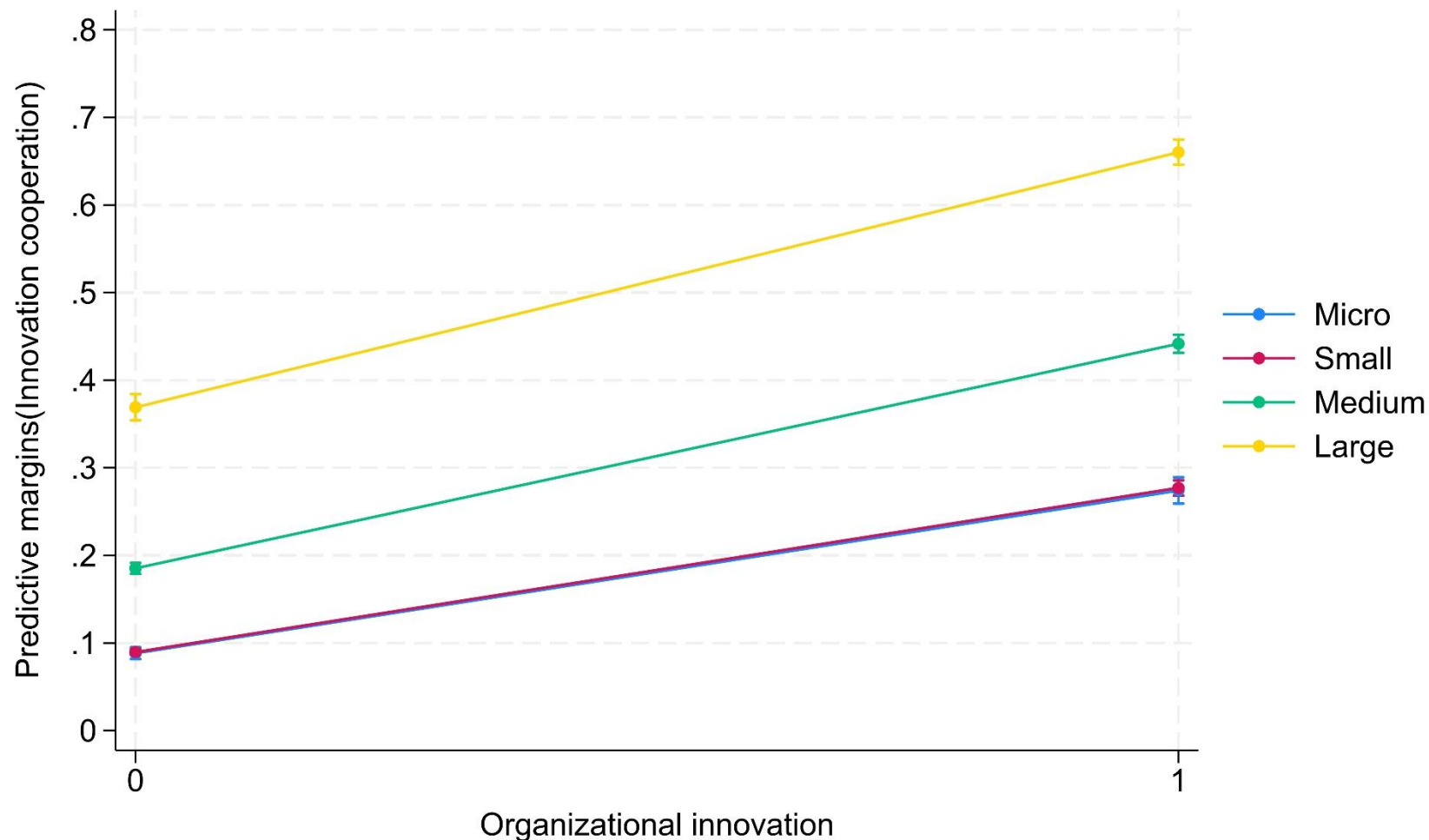
## 3.1 Proxi co-dependence with the need for innovation collaboration

- Firms that engage in explorative innovation are more than 4-times (!) as likely to cooperate in innovation activities with other firms or knowledge institutions!
- Introduction of advanced tech. seems to be more demanding → the key seems to be cooperation with universities or research institutes





## 3.1 Opening up is hard because firms also need to reorganise internally





## 3.2 From micro to macro: Moving beyond pilots...

The key is to

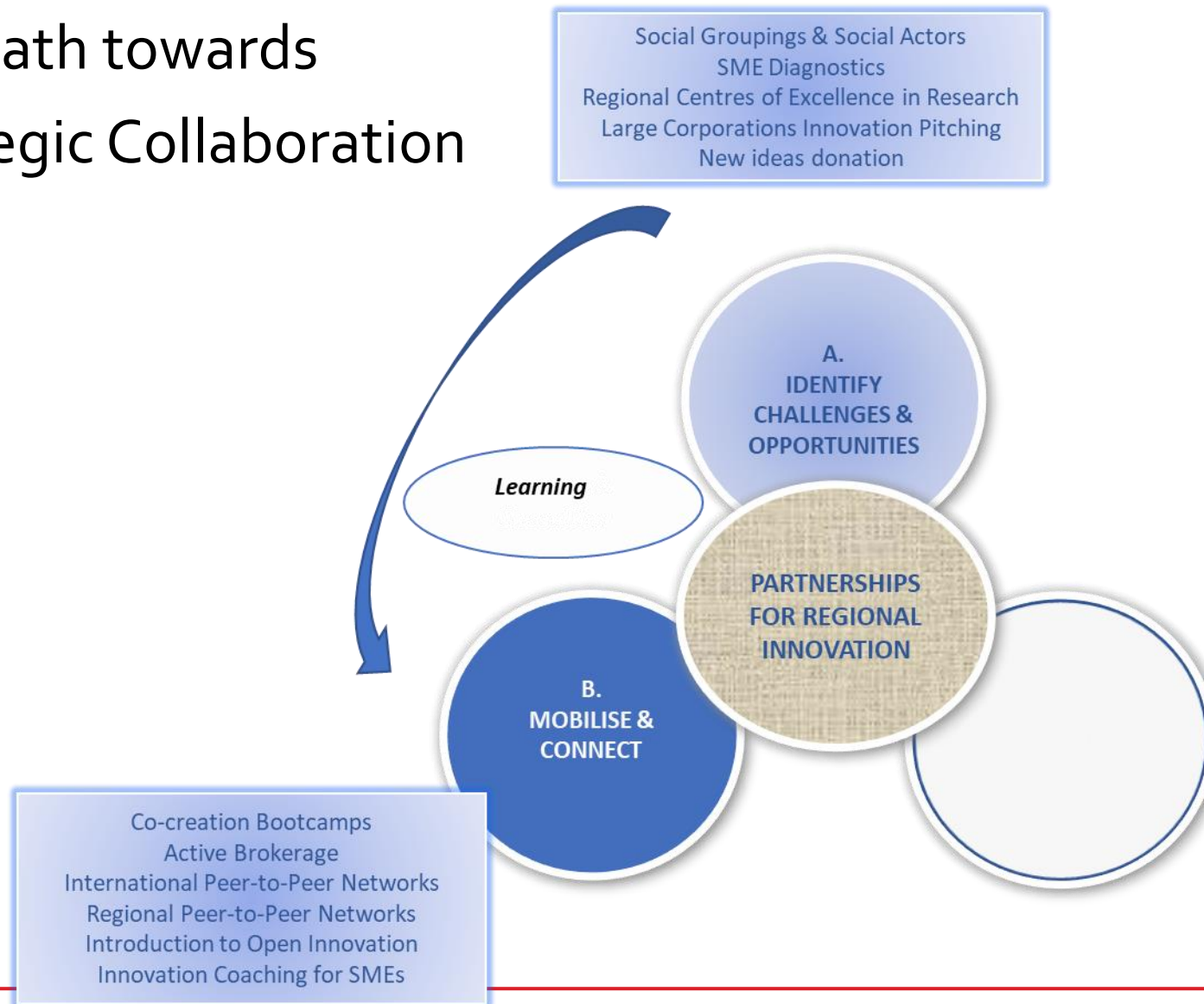
establish the institutional context 'in which an outcome will emerge from interaction among decision-makers, each of whom is in pursuit of solutions to his own problems', BUT who, at the same time, commit towards the same goals and converge their actions in the same direction!

S. Radosevic, G. Tsekouras and P. Wostner., Institutionalising experimentation in innovation policy: challenges and solutions in upscaling, European Commission, Seville, Spain 2023, JRC134408



## 3.2 From pilots to scaling of collaborative environments

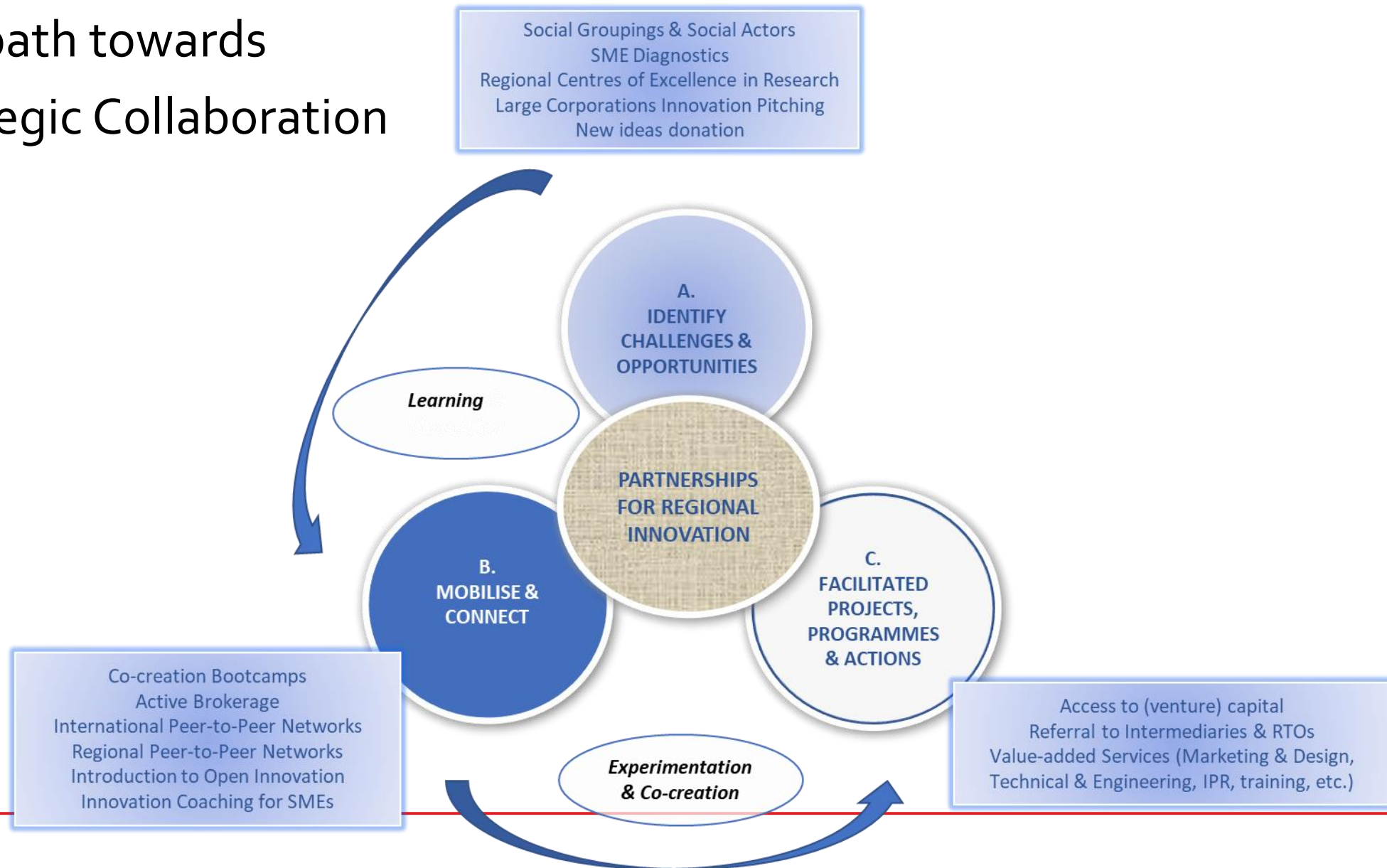
### The path towards Strategic Collaboration





## 3.2 From pilots to scaling of collaborative environments

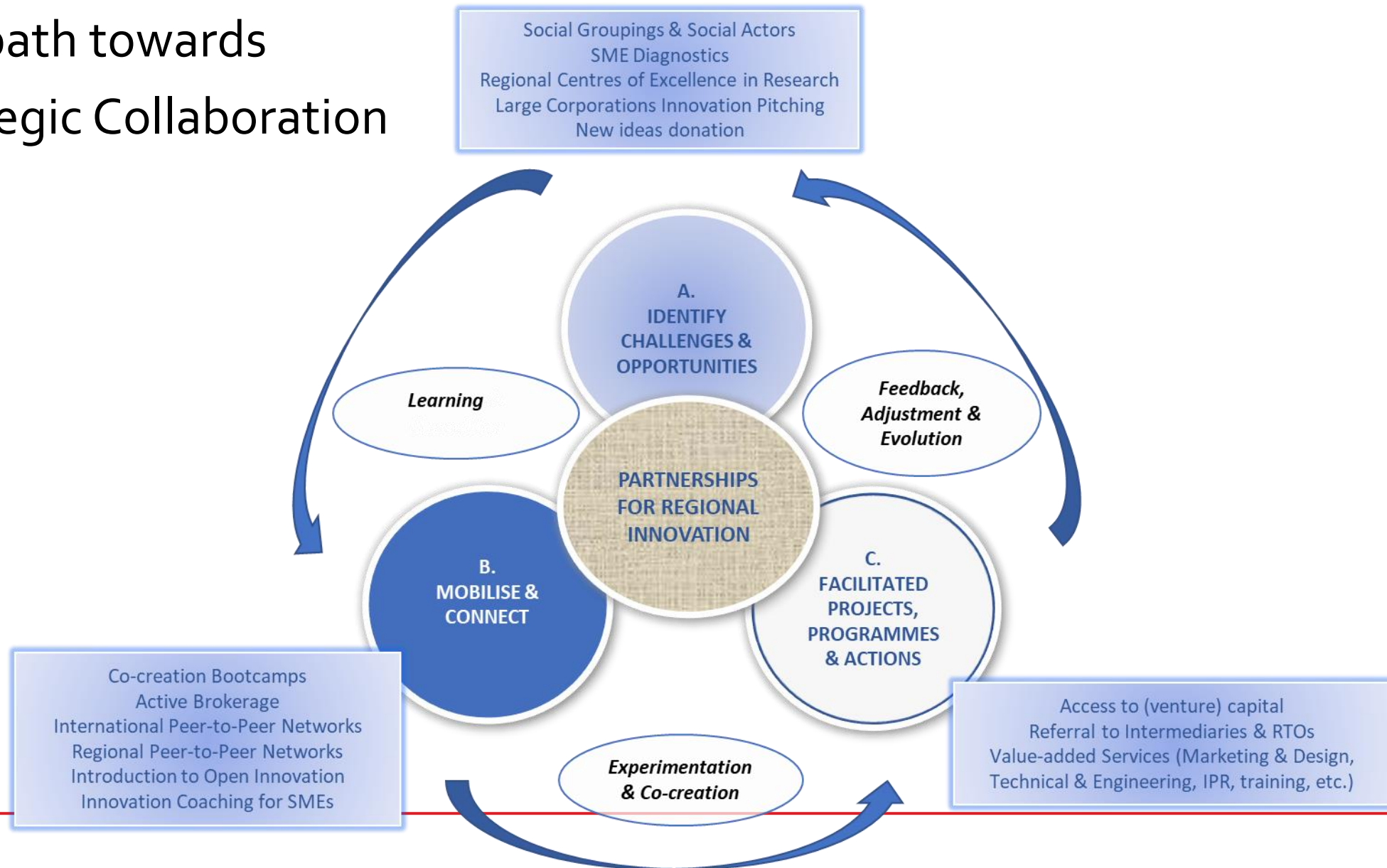
### The path towards Strategic Collaboration





## 3.2 From pilots to scaling of collaborative environments

### The path towards Strategic Collaboration

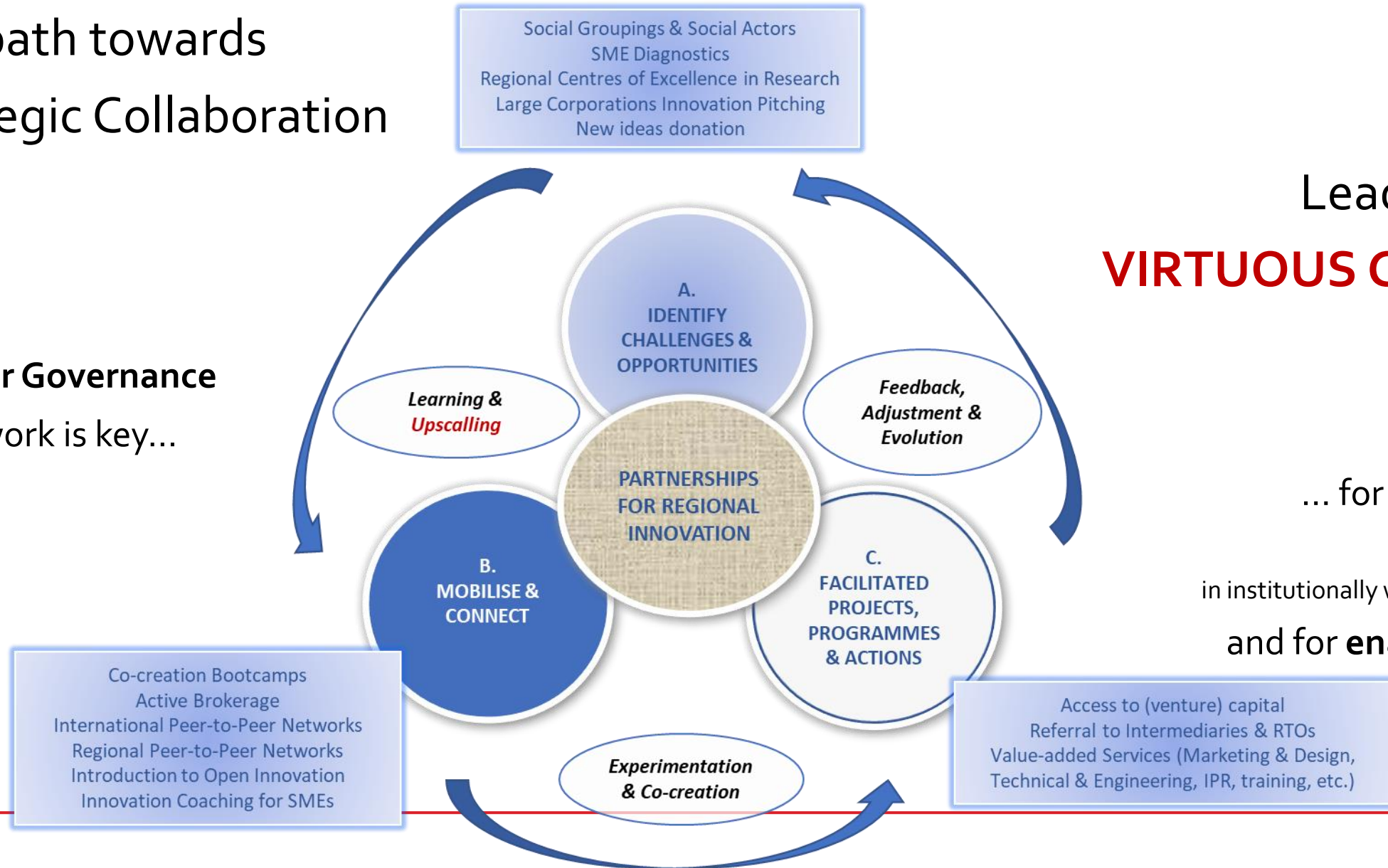




# 3.2 From pilots to scalling of collaborative environments

The path towards Strategic Collaboration

Broader Governance framework is key...



Leading to  
**VIRTUOUS CYCLE!**

... for **scalling**,  
especially  
in institutionally weaker areas,  
and for **enactment!**



# Collaboration & Collective Action

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# Thank you!