

*The case for market and systemic failures in  
innovative services*

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## [1] Introduction: Why this paper?

Paradox: Services and Service-related innovation policies: bias for manufacturing-related R&D and new technologies

### **Factors leading to an explanation:**

- Underestimation of service functions, the intangibles and service innovation in business and economic growth
- The dominance of market failure argumentation
- The obsession for formal horizontal policies ignoring non-technological innovation

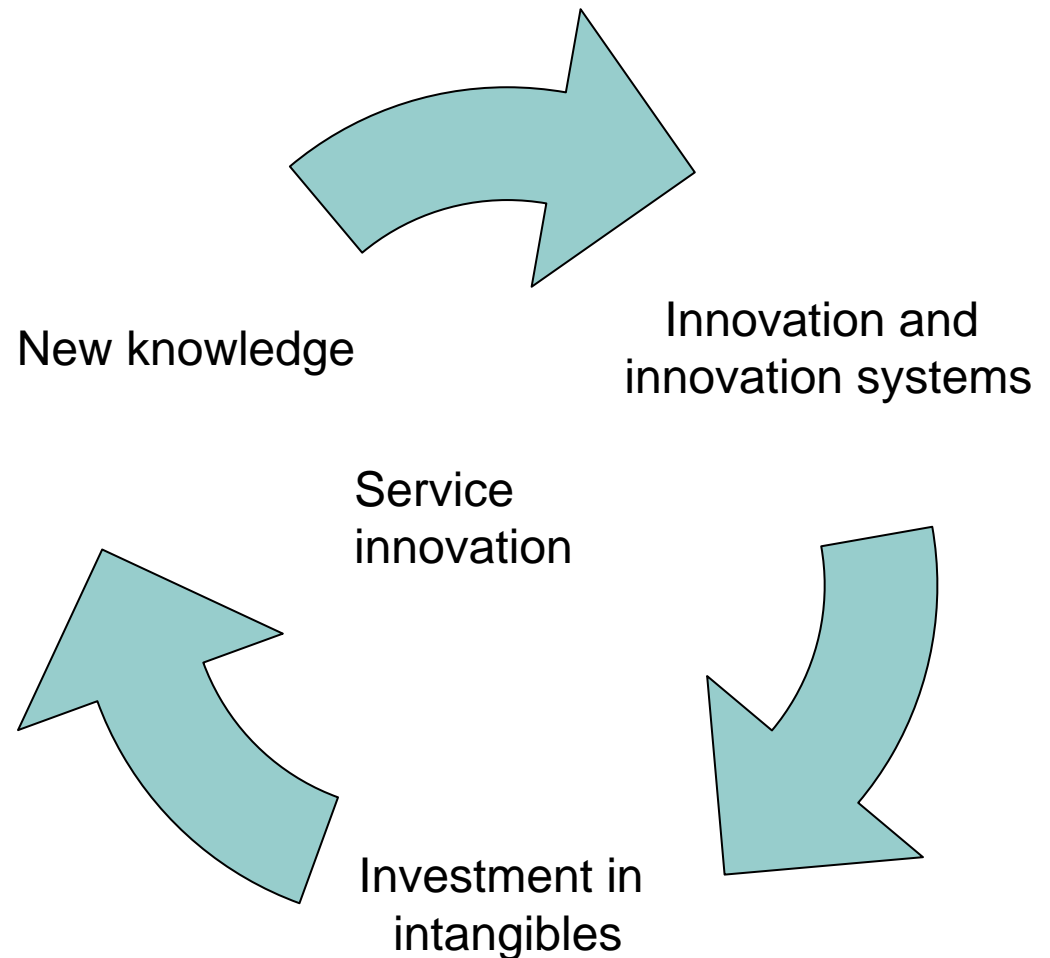
## [1] Introduction: Main paper objectives

- Reflecting on the ongoing academic discussion on the various categories of market and systemic failures.
- Providing empirical research findings for the applicability of such failures to the rationale for service innovation policies.
- Contributing to the linkages between market and systemic failures and policy approaches to facilitate service innovation.

## [2] Macro-economic and contextual argumentation for services' R&D and innovation policies

A preliminary point:  
service innovation  
within innovation

- Part of a virtuous circle:  
service innovation -  
innovation - investment  
in intangibles -  
knowledge.



## [2] Macro-economic and contextual argumentation for services' R&D and innovation policies

### Some main arguments:

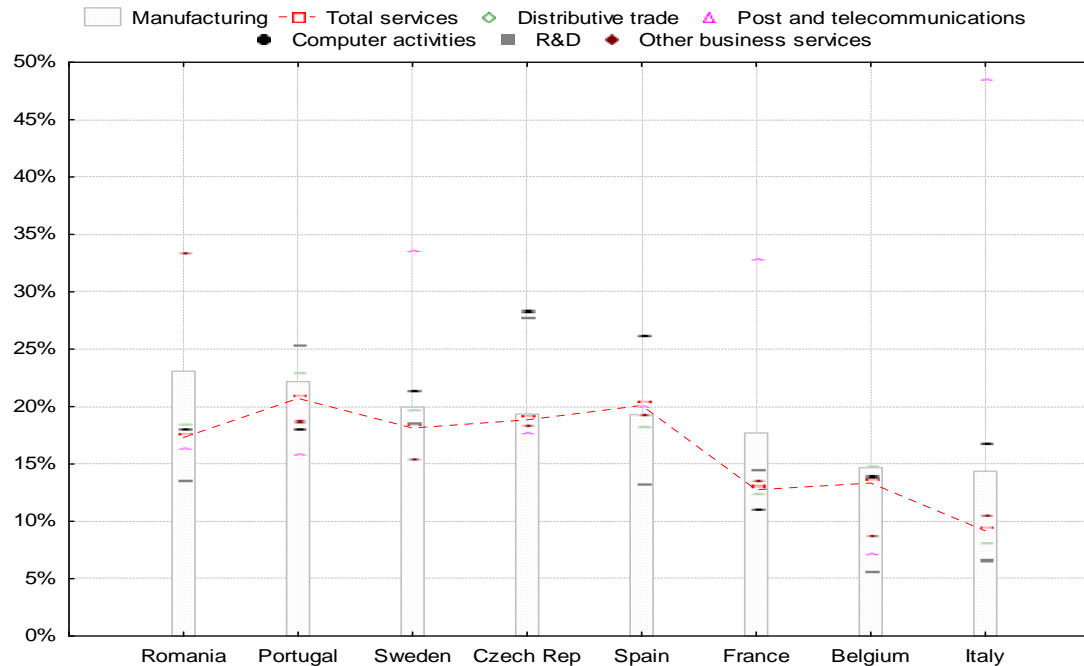
- A sluggish productivity growth
- The relatively low participation of many services companies
- The recent deregulation and liberalization in many services
- Service global sourcing
- The lack of formalisation of service innovation.
- Service innovation and regional development



# [3] Market failure argumentation for services' R&D and innovation policies

## [3.1] Market power

Percentage of innovative enterprises declaring markets dominated by established enterprises as high important factor of hampering innovation activities, 2002-2004

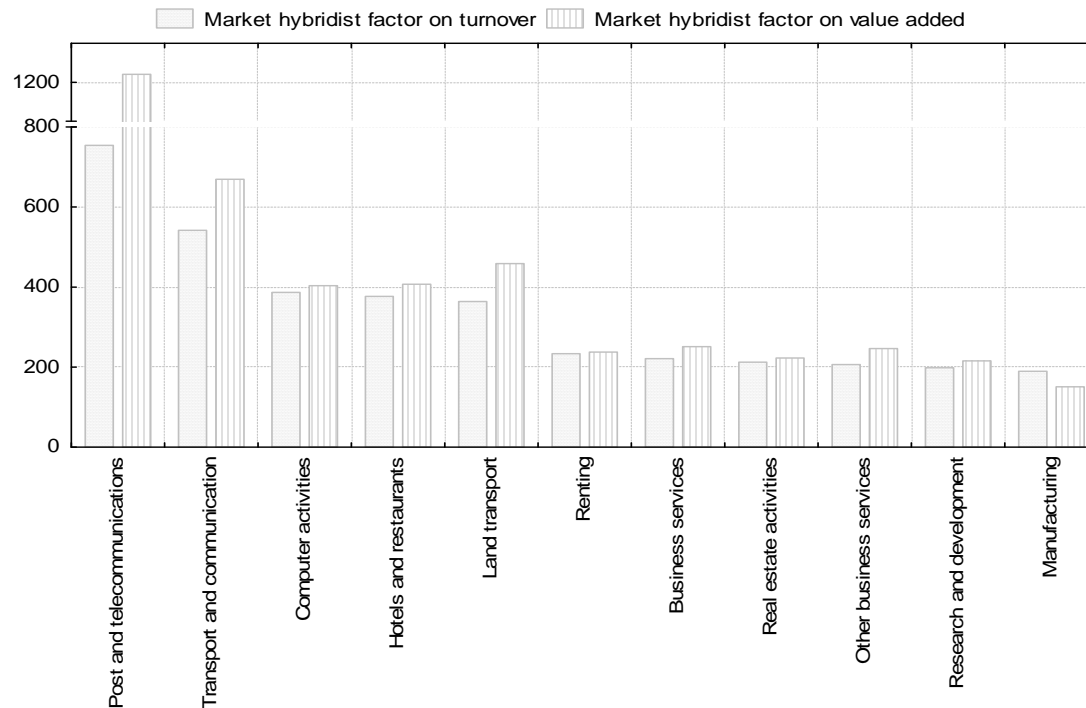


Source: Based on Eurostat database, CIS4.

# [3] Market failure argumentation for services' R&D and innovation policies

## [3.1] Market power

Market hybridist factor by industry sector, 2005, EU27



Note: Hybridist factor is a ratio calculated as the average market share of large firms divided by the market share of small and medium firms.

## [3] Market failure argumentation for services' R&D and innovation policies

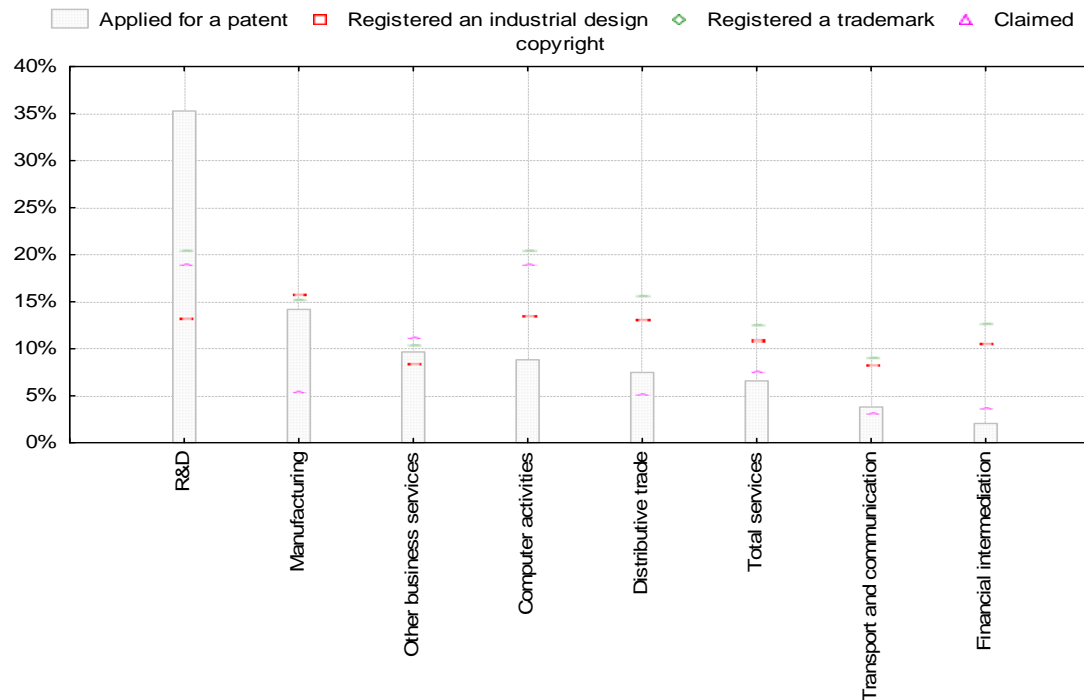
### [3.3] Externalities

- Transactions cannot recuperate the full innovation costs; social benefits > private one
  
- Public nature of knowledge and its spillovers:  
    ➡ Appropriability problems and free-riding.
  
- Importance of intellectual property rights in services:
  - Intangible-activity nature.
  - Insufficient protection offered by copyright systems.
  - Limited use of patents.
  - Intensive role of information in KIBS.

# [3] Market failure argumentation for services' R&D and innovation policies

## [3.3] Externalities

Share of innovative firms (with 10 or more employees) that applies for IPR protection methods by industry sector, 2002-2004



Source: Based on the Eurostat database, CIS4.

Note: Data refer to average values. Country cases: Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Finland and Norway.

## [4] Systemic failure rationale

### [4.1] Capability failure

- Systemic failures since we understand that market failure argumentation is not sufficient to deal with innovation dynamics.
- Providing, as considered for market failures, with some empirical evidence to support the applicability of systemic failures to service innovation.
- Four systemic failures identified: Capability – Network – Institutional – Infrastructural

## [4] Systemic failure rationale

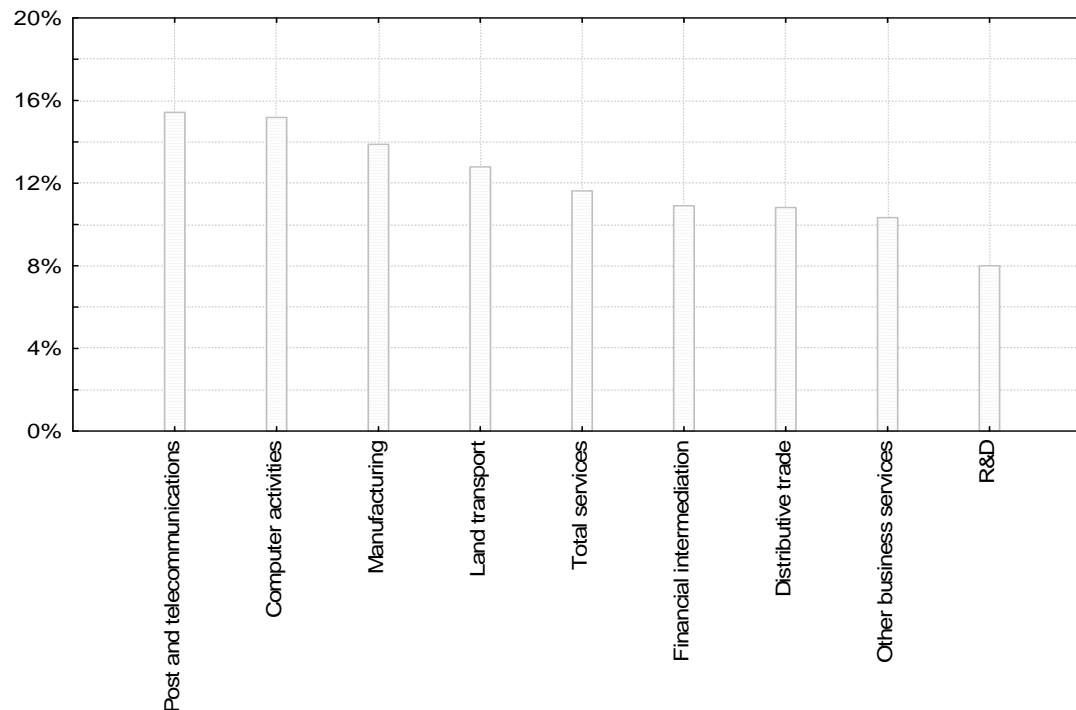
### [4.1] Capability failure

- Inability of firms to move from an old paradigm to a new paradigm:
  - Changes in markets.
  - New technological capacities.
  - New organizational concepts.
- Firms' lack of resources, flexibility, competences and learning capacities to adapt to new developments.
- “When technological changes are taking place, systems may tend to avoid taking the necessary measures to adapt to new circumstances, so that government intervention is required to support structural adaptation of innovation systems (Gustafsson and Autio, 2006).”

# [4] Systemic failure rationale

## [4.1] Capability failure

Share of innovative enterprises that reports the lack of qualified personnel as an important hampering factor to develop innovation activities, 2002-2004



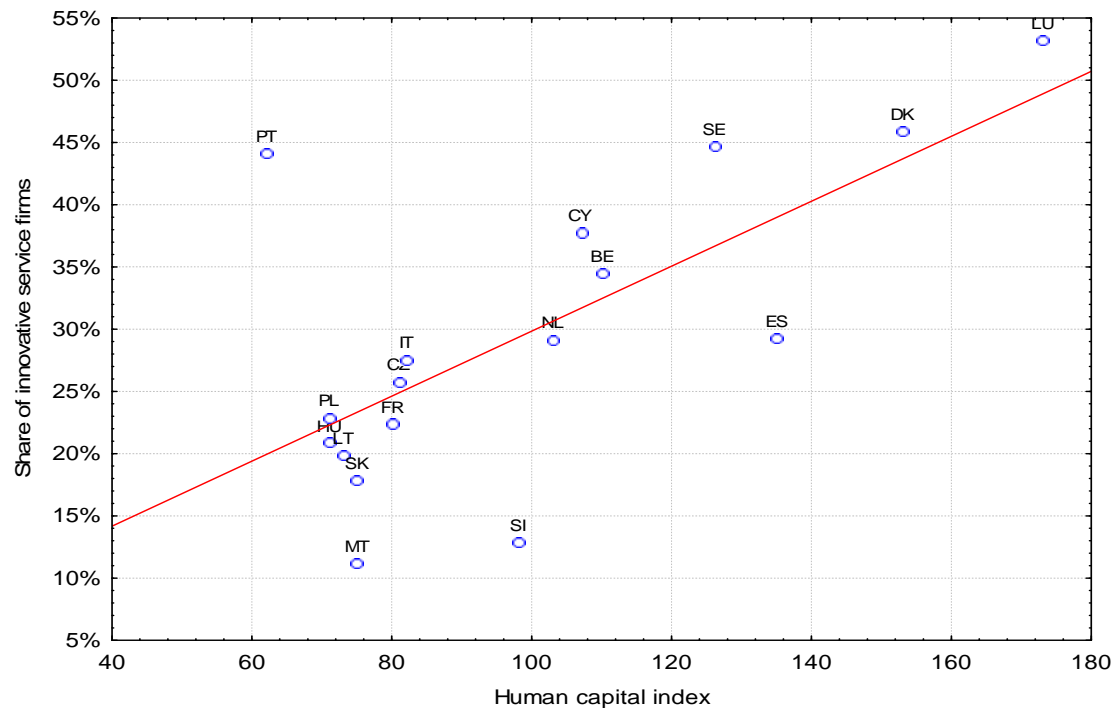
Source: Based on the Eurostat database, CIS4.

Note: Data refer to the average value for Belgium, Czech Republic, Spain, France, Italy, Hungary, Poland, Portugal, Romania and Sweden.

# [4] Systemic failure rationale

## [4.1] Capability failure

Correlation between the level of human capital and the share of innovative service firms at national level



Source: Based on CIS4 and Innovation Watch, Bruno et al. (2008).  
 Note: Correlation factor:  $r = 0.6820$ ;  $p = 0.0026$ .

## [4] Systemic failure rationale

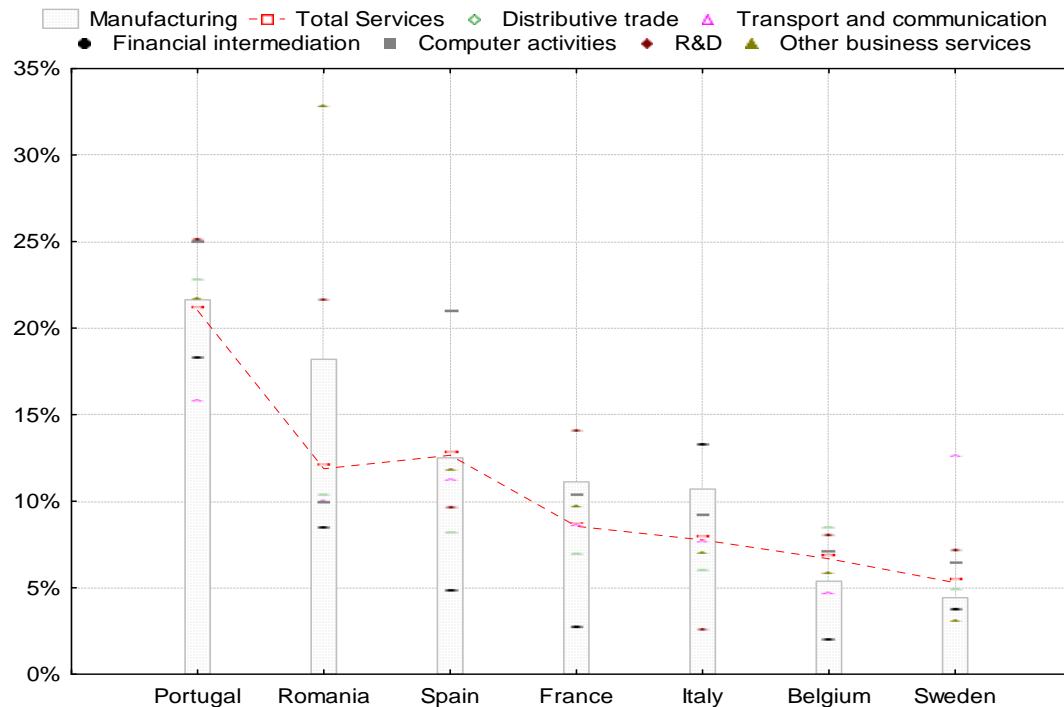
### [4.2] Network failure

- Resulting interactions from a particular innovation system, including firms, research centres, public institutions and specialized knowledge-based organizations.
  
- Such failures may be:
  - Weak – Firms are not well connected to other firms and institutions with an overlapping knowledge base.
  - Strong – Individual firms are guided by other network actors in the wrong direction and/or fail to supply each other with the required knowledge.
  
- Network failures are real failures and are present in both manufacturing and services industries.

# [4] Systemic failure rationale

## [4.2] Network failure

Share of innovative firms that reports the difficulty in finding cooperation partners for innovation as high important factor of hampering innovation activities, 2002-2004



Source: Based on the Eurostat database, CIS4.

## [5] Concluding remarks

- Innovation in services face a range of market failures and systemic failures that are comparable to those occurring in the manufacturing sector.
- In some cases, market and systemic failures to innovation may be even more relevant in the services domain.
- It seems that the influence of the respective market and systemic failures applies differently depending on the self nature of the service sub-activity analysed.
- Under-investment in exploration and exploitation of innovation activities may require government intervention.
- In enhancing innovation and competitiveness, governments should better recognize, create, and improve the current funding strategies for supporting R&D and innovation in services.

# **The case for market and systemic failures in innovative services**

## **THANK YOU FOR YOUR ATTENTION**