



Beyond technological innovations - capturing full potential of innovation

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Technological innovation matters and is important!

- Internet, Google, mobile phones.....
- Would technological innovations succeed without other innovative activities that bring them to the market ?
- Business model of Google: the revenue is not generated by the access to search engine (tech inno), but by clicks on advertisements that are linked to search results
- Displaying ads related to search results is a **non-technological innovation!**
- Non-technological innovations are less visible



Technological innovation matters, but....

- CEO of high-tech company:

*“the excellent team of engineers in our high-tech company develops sophisticated technical solutions, however the company is not sufficiently experienced in design, marketing and branding. **The biggest challenge for our company is related to non-technological activities** that are needed to put our products on the global markets“*

- Since 2006 CIS – provides innovation statistics that indicate the relevance of different types of innovations



Distribution of firms that innovate by type of innovation in %, 2010

		Manufacturing			Services		
		Technol	Non-tech*	Combined	Technol	Non-tech*	Combined
Belgium	1	32.4	13.5	54.1	26.4	16.6	57.0
Germany	1	23.8	13.5	62.6	20.2	24.4	55.4
France	2	23.0	27.6	49.4	12.6	43.7	43.8
Slovenia	2	24.1	20.6	55.1	14.8	41.4	43.8
Czech	3	20.6	27.5	51.9	13.7	40.3	46.0
Hungary	3	25.7	21.9	52.5	15.7	40.6	43.7
Lithuania	4	26.0	30.8	43.4	13.0	38.7	48.4
Bulgaria	4	43.6	27.7	28.8	22.7	46.1	31.2

*Non-technological innovations –organisational and marketing innovation, new business models

Source: CIS 2008-2010



Patterns of innovation in firms (1)

- Differences in innovation capability accros countries as measured by Innovation Union Scoreboard based on 25 indicators (Table shows results for 2 countries in each category (1- innovation leaders, 2- inno followers, 3-moderate innovators and 4- modest innovators)
- However, substantial degree of similariry of firms' innovation patterns observed accros countries
- Manufacturing firms rely more on technological than non-technological innovation (excl. CZ, FR)
- Service firms apply non-technological innovations more often than tehcnological innovation (excl. BE)
- **! Non-technological innovations are of high relevance** since service sector accounts for approx. 70% GDP and employment in advanced economies



Patterns of innovation in firms (2)

- **!** Majority of firms in manufacturing and services introduce technological and non-technological innovation at the same time - the complementary nature of innovation types
- Analyses confirm beneficial effects of combining various types of innovation for firms' growth and for the generation of innovations in the future (EU Inno-Grips, 2012; Evangelista, Vezzani, 2010)
- Both technological and non-technological innovations have positive effects on employment growth in M and S; impacts stronger in manufacturing (Damijan, Stare, 2014);



Patterns of innovation in firms (3)

- **!**Countries that are Innovation leaders have the largest share of firms that combine different types of innovation – is there a causal link?
- Non-technological innovation is not as hidden as we think, but they tend to be overlooked in policy shaping
- **Innovation instruments are biased towards supporting technological innovation**
- **Good policy practices exist: guess who? More balanced approach in policy support to innovation in SE, DE, FI, DK; those countries are innovation leaders !**
- **Do we need more evidence?**



Innovation in the public sector

- No systematic collection of data for innovation in the public sector; reliance on case studies, good practices
- Large expectations about benefits of technological innovation, however public sector is mainly about services, where non-technological innovation prevails
- Technology is the enabler, what is missing is non-technological innovation (new models of public services provision (PPP, PPIN); change in regulation; open data and demand driven approaches;
- Open data offers huge opportunities for innovation and improved efficiency in public services provision
- **Case: Finland- Electronic service** for **construction permits** based on open data: integrates all application processes; user friendly - guidance for users;

Result: adopted by 50 municipalities in one year ; decision on construction permit obtained in 2-3 days, instead 2-3 weeks; satisfaction of citizens, more efficient businesses!



Big picture of innovation....

Social Innovator Exchange

“Technology can be a great catalyst of change, but it cannot be considered a silver bullet for big societal challenges and for the solution of complex problems (e.g. climate, aging population, 9 billion population, water scarcity....). Challenges that the world is facing today require **social innovation**“

The objective of social innovation is to create solutions that meet people's needs at the local and global level. Social innovation

- can be enabled by technologies, but not necessarily;
- requires engagement and cooperation of various actors, networking to build human and social capital
- requires behavioural changes- it is not about them, but about me as well!

Smart policies in different areas could unleash the potential of social innovation and make big impact!



Simbioz@ – inter-generational project

Problem: older population lacks e-skills for using ICT;

Action: young volunteers teach older population how to use computers (2011), internet, email (2012), mobile applications, social networks (2013)

RESULTS:

- Implemented all over Slovenia (500 locations); Large scale project
- 9.300 young volunteers and 15.700 participants
- Initiated and driven by non-profit org; private and public sector

Impacts:

- improved e-skills; contribution to mitigating digital gap
- increase in social capital of both generations creating inter-generational solidarity
- increase in internet use by 25% in age group 55-74
- contribution to EU Digital Agenda implementation; potential!

Advantages of the model of inter-generational cooperation

- Easy to transfer to other countries;
- Model can be used to address problems in other areas (Simbioza 2014 is about young people encouraging older population to take exercises – impact on health and more effort to preventive activities of health care)



Wrap-up

- Rapid technological progress brings productivity gains, but also high risks (jobs loss & outdated skills → increasing inequalities; in addition to big societal challenges)
- Awareness is growing that technological innovation alone cannot deliver sustainable solutions
- Combination of all types of innovation (tech, non-tech, social, institutional innovation) - interaction and cooperation among actors needed
- Little awareness that we also need **policy innovation** – combination and synergy of policies in different areas- not only R&I, but also education, employment, health, etc...
- Policy at the local, regional and macro level need to support different aspects of innovation, encourage cooperation among stakeholders to create **systems of innovation and capture full potential of innovation**

THANK YOU!