

INNOVATION IN THE EU CONTEXT

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Abstract:

A key role in developing business and public-private has innovation indicator that reflects the strengths of national research and innovation systems. A high average-innovation indicator reported in a million people indicate a good connection between science and business. Also, technology transfer is reflected by the indicator license/patent. These two indicators reflect the overall performance of a society that balance between research and innovation.

Key words: *innovation, information society, e-business*

JEL classification: *L86, H55, M15*

INTRODUCTION

IT in general, and business e-business in particular, creates value in the company because the technology itself creates value being available to all (including competition), so they rarely create superiority based on technology. In this regard, evidence suggests that IT costs are often correlated with superior performance [1]. However, even if competition can copy an IT infrastructure, a relative advantage can be created and sustained in cases where technology is used for other critical resources. The literature suggests that a number of these additional resources, such as size, structure, culture, and so on, could be difficult for competitors to copy the overall effect of technology [3].

There are two concepts completely different approach to investments in research and development: the U.S. and European model. The U.S. model is based on innovation, research and development that the small companies, which is considered as the engine of the economy model adopted by Asian countries: Japan, China and Korea. The European model is based on the results for research and development within large corporations, the results of innovation in small firms and there are quite numerous, often having the practical effect or could be implemented through technology transfer for various reasons.

E-BUSINESS AND INNOVATION

There is a considerable literature on the analysis of the innovative potential of the Internet, that electronic business (e-business). And concludes as literature, electronic business are able to lead to significant changes of innovative business models, value, products and services companies, internal business processes, all of which can generate substantial benefits [1, 2, 3, 4].

The literature proposes a four-dimensional approach to innovation and value created in electronic business: trading efficiency, novelty, complementarity (between different products and services) and consumer addiction [2, 4].

Innovation can be classified according to the effects of a change in product innovation and business models in four categories: incremental innovation (minor changes in main components of products and business models), modular innovation (substantial changes in basic components products but not in the business model), architectural innovation (significant changes in the business model but the basic

components of products), and radical innovation (significant changes both in products and business models) [4].

Another approach to analysis is through design innovation of new digital business models (e-business) [3] or by analyzing how to create innovative web support both within him and within firms.

Internet has created new business models: e-shop, e-procurement, e-auction, e-shopping, virtual communities, collaborative platforms, brokerage information [1, 2]. Parts of the web enabled significant innovations in the way companies doing business processes, independently or in partnership with other firms [4].

It should, therefore, increasingly need a more focused approach to innovation policy. Studies conducted to date confirms the that innovation is the main source of competitive advantage, technological change and economic growth.

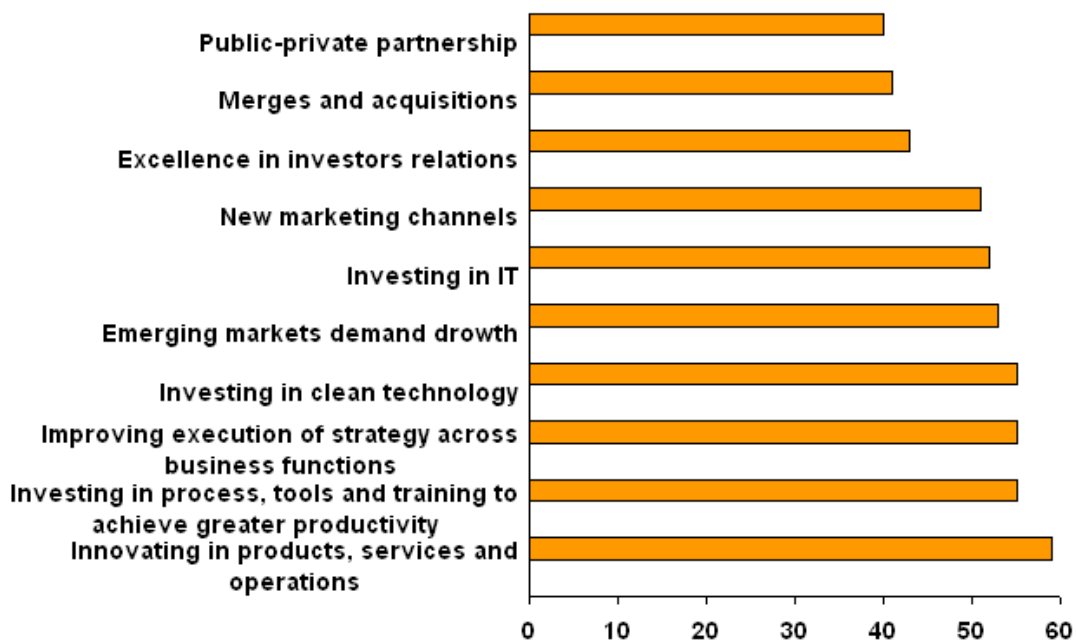


Figure 1. Opportunities for a global businesses
(Source: Study: Turn-risks-and-opportunities-into-results- Ernst & Young, March 2012)

ORGANIZATIONAL IMPACT OF ELECTRONIC BUSINESS AND INNOVATION

To stimulate innovation in the European Community area have been designed a series of programs and projects but they draw after them as many difficulties in implementation.

Complexity of innovation policy is a factor of difficulty in implementing innovation. Distributed in too many programs, actions and strategies in EU innovation policy is pursued through decision chains, objectives and proposals complicated. The result of this situation is spending significant sums of public money by various decision centers, agencies and established term. Goal of being innovative and competitive led to the creation of new programs that overlapped with existing ones.

According to the study - The Power of Simplicity - Ernst & Young in conjunction with the European Centre for European Policy, the proportion of 82%, respondents of this study believe that the allocation of EU funds be simplified, and 69% believe that EU innovation policy is not sufficiently adapted to the requirements of industries. 82% of respondents believe that current policy is fragmented and needs better coordination [6].

Another factor is the difficulty encountered in research and development gap between the U.S versus Europe., and Asia versus Europe.

At EU level, there is a greater concentration of public funds and a lower share of private funding sources to finance research and development projects. In the U.S., South Korea and Japan, private sector spending on R & D are increasing in recent years. This approach to innovation policy seems to be more effective due to the issue of profit.

The only European countries where the level of expenditure in R & D than 2% of GDP - Sweden, Finland and Denmark - are first classified as a level of innovation performance. About innovation policy in the EU, national governments can do more to encourage demand for innovation, but state involvement in this context will be at least 50% of public-private partnership, resulting centralizing policy innovation in the EU.

Based on the average performance of innovation, the EU is divided into four performance groups:

1. Group leaders in innovation: Denmark, Finland, Germany and Sweden - average of innovation performance is much higher than the average of EU27.
2. High performance innovation group: Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, Netherlands, Slovenia and the UK - average of innovation performance is close to the average of EU27.
3. Group with moderate performance in innovation: Czech Republic, Greece, Hungary, Italy, Malta, Poland, Portugal, Slovakia and Spain - average of innovation performance is below the average of EU27.
4. Group modest innovation performance: Bulgaria, Latvia, Lithuania and Romania - average of innovation performance is well below the average of EU27.

In the last statistical report of the EU, Bulgaria, Estonia, Romania, Portugal and Slovenia indicate a significant increase in annual average rate compared to other EU countries, more than 5%. [8]

The annual average of innovation performance

Table 1

CURRENT PERFORMANCE (unit)	BG	LV	LT	PT	RO	SI	EU 27
Human resources and attractive research systems							
New doctorate graduates	0,60	0,50	0,90	2,70	1,30	1,50	1,50
International scientific co-publications	206	129	214	582	140	827	301
Scientific publications among top 10% most cited	3,59	2,05	5,82	9,26	4,22	7,62	10,73
Public-private co-publications	2,30	2,00	3,00	8,70	6,30	51,00	36,20
Finance and support							
R&D expenditure in the public sector	0,29	0,38	0,56	0,70	0,29	0,67	0,76
R&D expenditure in the business sector	0,30	0,22	0,23	0,72	0,18	1,43	1,23
Non-R&D innovation expenditure	0,95	1,20	0,76	0,68	1,36	0,79	0,71
SMEs innovation							
SMEs innovating in-house	17,09	14,44	19,39	34,10	16,66	N/A	30,31
Innovative SMEs collaborating with others	3,50	3,29	8,03	13,31	2,27	14,24	11,16
SMEs introducing product or process innovations	20,72	17,22	21,93	47,73	18,03	31,02	34,18
SMEs introducing marketing/organisational innovations	17,35	13,95	21,39	43,84	25,80	39,37	39,09
Effects of innovations							
PCT patent applications	0,32	0,75	0,54	0,59	0,15	2,97	3,78
PCT patent applications in societal challenges	0,04	0,29	0,02	0,12	0,01	0,63	0,64
Employment in know ledge-intensive activities	8,60	9,60	8,70	8,60	6,00	13,40	13,50
Sales of new to market and new to firm innovations	14,20	5,88	9,59	15,57	14,87	16,31	13,26
Licence and patent revenues from abroad	0,09	0,04	0,00	0,02	0,28	0,08	0,51

Source: Innovation Union Scoreboard 2011

Countries in the first category is characterized by an indicator of innovation that has some strengths in national research and innovation systems with a strong focus on business activities and public-private collaboration. Thus, the emphasis is on the following indicators: Human Resources, Systems Research, Finance and support, Firm investments, Linkages & Entrepreneurship, Intellectual Assets (patents), Patent of innovation and Economic indicators.

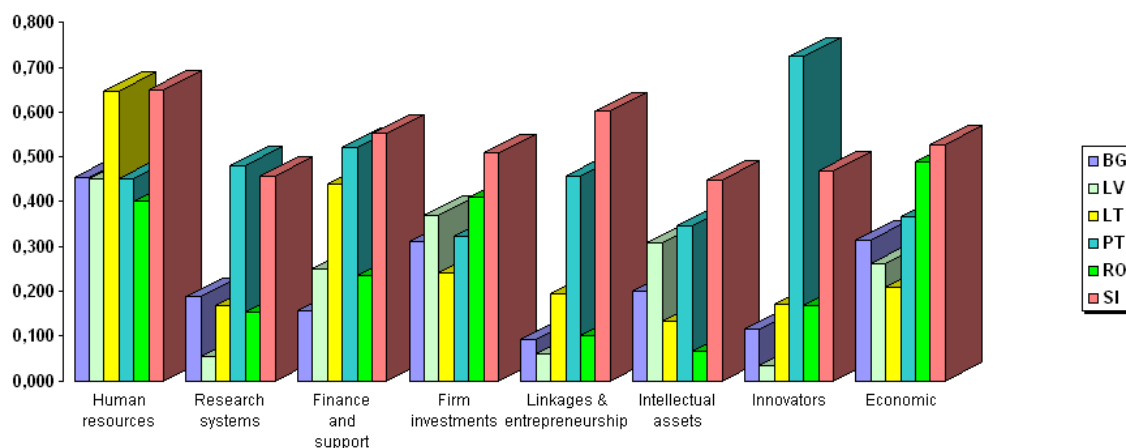


Figure 2. Performance scores per dimension innovation factor
(Source: Innovation Union Scoreboard 2011)

Business has become more uncertain and complex than ever, executives and is increasingly concerned about a number of risks. Deterioration of the situation economic, market volatility, uncertainties related to political decisions are difficult business development.

The annual percentage average of innovation performance

Table 2

GROWTH PERFORMANCE (%)	BG	LV	LT	PT	RO	SI	EU 27		
Human resources and attractive research systems									
New doctorate graduates	4,70	5,70	6,50	1,90	4,30	5,70	2,80		
International scientific co-publications	3,80	4,20	5,50	10,20	12,40	10,00	6,00		
Scientific publications among top 10% most cited	5,50	-9,30	16,70	6,30	7,20	12,90	2,10		
Public-private co-publications	9,80	5,50	9,40	4,40	6,80	5,10	1,10		
Finance and support									
R&D expenditure in the public sector	-3,20	2,10	-0,40	13,00	6,00	2,00	4,00		
R&D expenditure in the business sector	25,70	-	11,00	11,90	-4,90	11,10	1,30		
Non-R&D innovation expenditure	9,90	0,00	11,70	11,20	1,40	-8,40	-2,60		
SMEs innovation									
SMEs innovating in-house	3,10	0,00	-2,00	0,50	0,80	N/A	-1,30		
Innovative SMEs collaborating with others	2,70	-	-	14,30	14,10	15,80	-5,30	7,80	5,50
SMEs introducing product or process innovations	8,60	4,50	-3,50	5,40	0,30	-0,50	-0,70		
SMEs introducing marketing/organisational innovations	5,10	0,00	-7,00	-0,80	-2,30	0,00	0,60		
Effects of innovations									
PCT patent applications	-2,70	0,70	9,10	10,80	-2,80	3,20	-0,80		
PCT patent applications in societal challenges	-5,00	2,90	11,30	17,90	-9,80	-2,30	0,50		
Employment in know ledge-intensive activities	1,20	3,80	0,00	-0,60	1,70	2,40	0,60		

Sales of new to market and new to firm innovations	3,20	-0,30	13,10	11,60	-2,80	3,40	-1,20	
Licence and patent revenues from abroad	8,80	12,50	-2,90	10,30	21,5	0	6,20	2,90

Source: Innovation Union Scoreboard 2011

In such a context of increased probability of making bad business decisions and the inability of companies to respond timely to changes and opportunities. Thus, the main opportunities whose potential can be exploited are: innovation, investment processes and tools to increase productivity, improve the implementation of business strategies and investment in green technologies.

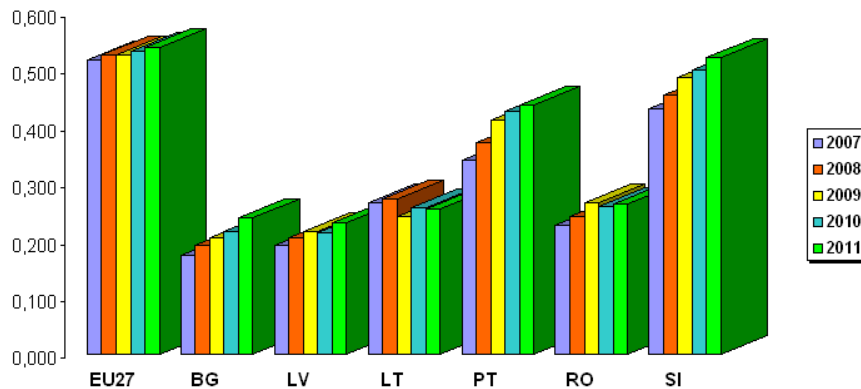


Figure 3. Evolution of Innovations
(Source: Innovation Union Scoreboard 2011)

Although developing a business plan has become more complex and has to face many challenges, there are new opportunities on the horizon. The economic downturn has caused changes in consumer behavior and companies can increase their chances of success, if I meet the new needs of its innovative products and services.

Innovation continues to be on top, and the importance of innovation products, services and operations increased in the current economic climate, leading to budgetary constraints and resources worse.

Potential investments in processes, tools and training is another way to increase productivity. One reason may be, also challenges the economic environment, companies are required to understand that we must be prepared for long term changes.

Another opportunity whose potential is perceived to be increasing is to improve the company's business strategy implementation. In the current economic context is not sufficient for decision-making system to make appropriate strategic choices, crucial is how they are implemented.

Finally, a solution compatible with the EU linking the competition with the innovation is a priority, but there is magic formulas. Creating a more effective policy on innovation is essentially a continuous process that requires cooperation between policy makers at EU level, business leaders, researchers and citizens.

BIBLIOGRAPHY:

- [1] Brynjolfsson, E., Hitt L. M., "Beyond computation: Information technology. organizational transformation and business performance". *Journal of Economic Perspectives*, Vol. 14, No. 4, 2000, pp. 23-48.
- [2] Rosanna Garcia, Calantone R. "A critical look at technological innovation typology and innovativeness terminology: a literature review", *The Journal of Product Innovation Management*, 19, 2002, pp. 110-132.

- [3] Munteanu A., Mladin I. “Promoting innovation, creativity and technology transfer through a web platform for research”, *Proceedings International Conference Quality Management and Higher Education, QMHE 2010*, 2010, pp. 163-166.
- [4] Soto-Acosta P., Colomo-Palacios R., Perez-Gonzalez D., “Examining Whether Highly E-Innovative Firms are More E-Effective”, *Informatica*, 35, 2011, pp. 481-488.
- [5] Innovation Union Scoreboard 2011, <http://www.proinno-europe.eu>
- [6] The power of simplicity, Ernst & Young, March 2010
- [7] Turn-risks-and-opportunities-into-results- Ernst & Young, March 2012
- [8] Eurostat 2011, <http://epp.eurostat.ec.europa.eu/>