

INFORMATION TECHNOLOGY FOR SUPPORTING ORGANIZATIONS IN THE STRATEGY OF GLOBAL COMPETITIVENESS

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The environment market demands constant innovations by the organizations that intend to keep a competitive position. If the organizations want create innovation, they need to develop intern competence and promote a collaborative and propitious environment to generation of new ideas. With the increase of competitiveness, market globalization and customer changing demand, the companies have been encouraged to increase innovation and reduce product time-to-market and all inefficiencies in the organization management. The competence is a set of specific capabilities that compose the organizational strategy to keep your competitively. The objectives of this paper are to identify and characterize the main organizational competences of the organizations that promote the innovation supported by information technologies.

Keywords: competitiveness, management, innovation, ICT, web 2.0

JEL codes: M15, M16, M20

1. Introduction

An especially problem at present is to have in middle relaxation the macroeconomic policy as effect of globalisation by improving the economic competitiveness of both macroeconomic and microeconomic level. In fact the company cannot develop without strong enterprises, which should also improve in a permanent capacity to face international competition.

It appears the competitiveness factor for success as a source of international credibility. Between them there is a steady balance as credibility involves the private sector believes that "intrinsic nature of existing money flexibility will be used to earn production in the short term or to serve a specific".¹

Credibility problem, her solution has been and is still difficult to consider, what are the general relationships of obtaining value for sustainable development:

$$V = P_n + P_s + P_{es} + P_{edr}$$

where:

P_n = direct contribution to the achievement of environmental value,

P_s = economic contribution to support the processes of society,

P_{es} = potential provided by the companies structure,

P_{edr} = economic potential of reintroduced circuit economic waste.

At the national level, firms participate to be the potential competitive advantages have become effective, considering that the country is competitive at the international level.

¹ Mugur Isarescu article open "Five lessons to resume growth" presented at National Scientific Symposium: Boosting economic growth in Romania in May 12, Bucharest 2000 in the Academy of Studies Economics, p.16

To expand the global business and competitiveness, the enterprise must intensify the use of Information Communication Technology (ICT) and in particular the utilization of interactive web platform (web 2.0).

2. The pillars of Global Competitiveness

The framework of Global Competitiveness (Figure 1) is built on 12 pillars:

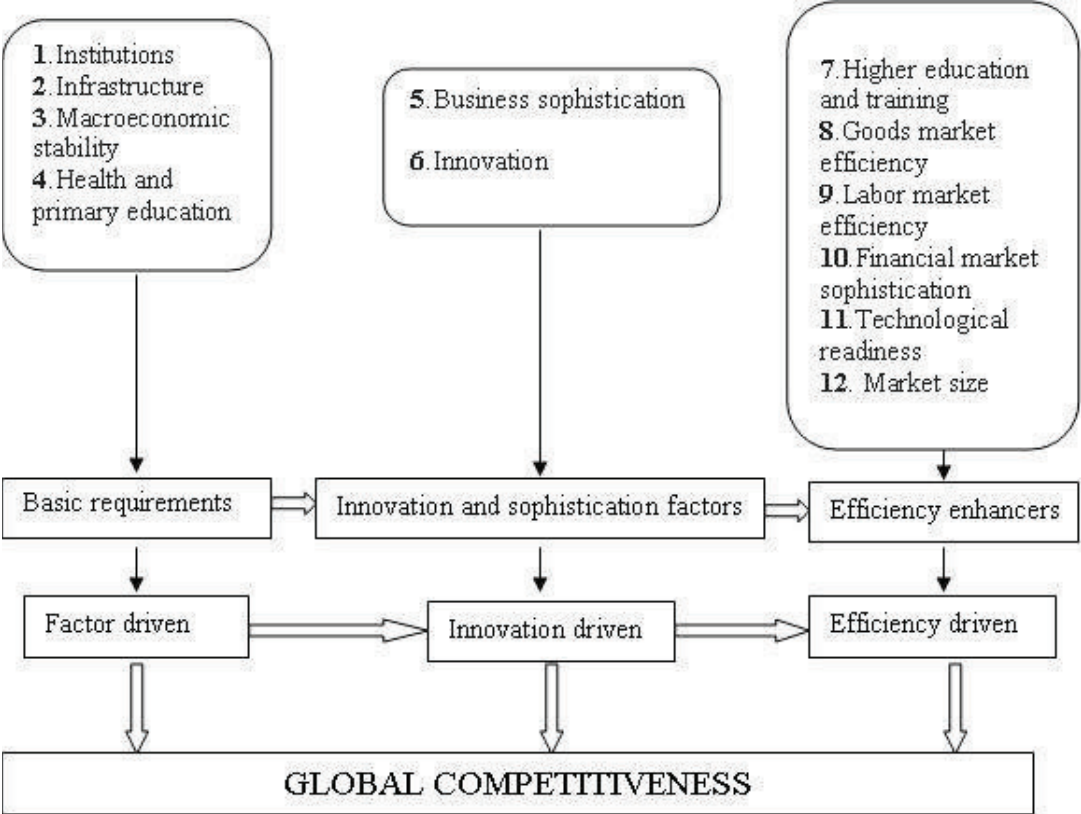


Figure 1. Pillars of global competitiveness (adapted by the authors)

In our opinions the major pillars, in the middle of organization, are “Innovation” and “Business sophistication” that are determined by ICT policy.

2.1 The innovation pillar

The Innovation (and Entrepreneurship) pillar includes the following areas: access to finance, entrepreneurship and innovation culture, innovation and administrative reform, eco-innovation.

The used tools, in this sector are:

- supporting national networks to promote entrepreneurship
- best projects and benchmarking
- twinning between authorities at national and local level
- developing High Growth and Innovative SME Facility (GIF)

Particular attention is shown towards High Growth and Innovative SME Facility (GIF) with two windows: GIF1 and GIF2.

GIF1, shall cover early stage (seed and start up) investments.

GIF2, shall cover expansion stage investments and shall invest in specialised risk capital funds.

2.2 The ICT Pillar

Recent economic history has shown that, as developed countries approach the technological frontier, ICT is crucial for them to continue innovating in their processes and products and to maintain their competitive advantage. ICT provide education and access to business markets and social interactions

In these challenging times of global economic crisis, the extraordinary capacity of ICT to drive growth and innovation should not be overlooked, since it can play a critical role not only in facilitating countries recovery but also in sustaining national competitiveness in the medium to long term.

In the Global Competitiveness Report takes into account the Networked Readiness Index (NRI) that identifies the enabling factors that permit countries to fully benefit from ICT advances, allowing them to follow the progress of their country. The Networked Readiness Index, in the Global Information Technology Report 2008-2009, is the following (Table 1):

Rank	Country	Score
1	Denmark	5.85
2	Sweden	5.84
3	United States	5.68
4	Singapore	5.67
...
45	Italy	4.16
58	Romania	3.97

Table 1 – Networked Readiness Index (NRI)

(Source: Dutta S., Mia I. “The Global Information Technology Report 2008-2009”, World Economic Forum, Geneva, Switzerland, 2009, p. 17)

3. The support of government in the enterprise globalization

For an efficient global company it is important the influence of Public Institutions and the relationship with citizens and enterprises. The competitive capacity of enterprises depends on the quality and responsiveness to business needs and on external infrastructure.

A global company needs:

- an efficient organization of management and therefore good capacities of managers
- infrastructure services which support the globalization and the "real time"
- legal infrastructure / decision-making which reduce transaction costs.

The choice of the global enterprise should take into account three basic variables:

- the internal costs, associated with the territory;
- infrastructure services (high speed, transport, banking, transfer of information, financial system, search and more) regulated by mechanisms of connectivity and portability
- the legal infrastructure to help manager for making business decisions for enterprise

To bring the institutions closer to citizens and enterprises it is important to use ICT technological tools (e-government). In this way Public Institutions can *talk* with citizens and companies by a web portal, an interactive and bi-directional channel.

The Government for supporting this technology must provide large bandwidth, for online access, to citizens/enterprises and promote actively the participation of citizens/enterprises in the public decision with web 2.0 tools (forum, chat, wiki, blog).

Citizens demand better services, better security and more democracy, while business companies demand less bureaucracy and more efficiency. At this stage a greater cooperation between governments and companies is strategic.

The Government itself must stimulate the birth of these virtual communities to increase the communication and collaboration. User exploit web 2.0 tools for both expressing their opinions (Choo et al., 2002) about a service and suggesting solutions for improving it. For the Government it is very important to capitalize users opinions for the improvement of public services.

4. Challenges for global competitiveness

In the global market it is important to have strategic information before competitors (Cha et al., 2006). This information is useful for strategic planning.

An organization is competitive when obtains a sustainable advantage against competitors in terms of the diversity, quality and costs. Competitiveness is in the company's ability to face success as a result of management in open developing strategic models well documented and updated.

The main forms or degrees of competitive advantage are:

- reduced costs (grade 1)
- production factors source created by the effort resulted in investment of fixed capital goods and advanced technologies (grade 2)
- source - innovation that provide specialized and adaptable production factors, improving human capital. The global strategy appear, and competition is extending to integrated international production (grade 3)
- New Economy (based on welfare) (grade 4)

In a country, the Business Competitiveness Index measures the level of prosperity (GDP) that an economy can sustain the competitiveness of the economy, which is determined by the level of productivity achievable by companies. In the Report 2008-2009 (Table 2) the value of Global Competitiveness Index (GCI), for some countries, is the following:

Country	Rank (CGI 2008- 09)	Score	Rank (CGI 2007-08)
United States	1	5.74	1
Switzerland	2	5.61	2
Denmark	3	5.58	3
Sweden	4	5.53	4
...
Italy	49	4.35	46
Romania	68	4.10	74

Table 2- Global Competitiveness Index (GCI)

(Source: Porter E. Michael, Klaus Schwab. "The Global Competitiveness Report 2008-2009", World Economic Forum, Geneva, Switzerland, 2008, p. 23)

This report compiled in 2008, placed Romania ranks 68 of 134 countries evaluated having in mind the following variables: macroeconomic environment, technology and innovative capacity of the country, environmental institutional.

Romania can participate in the process of globalisation. At the moment there aren't yet structures and skills necessary to achieve competitive performance in this context. There are still enormous challenges in terms of overcoming obstacles related to initiating and developing a business. The Government, economic environment and civil society are the actors assigned to outline development of effective services of small business who start from considerations of minimum risk and are developed in a self progressive, accessibility and more effective impact. In all these projects it is important to create a knowledge-based business with other countries.

The CGI taking into account 33 economic variables, including: efficient market operation, quality of economic policies and governance, information technology and innovation.

To stimulate competitiveness and improving the business environment following directions are proposed:

- Education and training of entrepreneurs.

General business skills taught at all levels of education. Specific modules of training in business must become an essential component of educational programs at the pre-university and the university level.

- Initiating less expensive and faster business

- Should increase access to the registration procedures on-line

- Better legislation and regulations.

Experience through benchmarking exercises should lead to improve current practices in the European Union.

- Strengthening the technological capacity of enterprises.

Technological exchange and cooperation between enterprises of all sizes, especially among European Small Enterprises, development of research programs.

- Using e-business models to ensure a successful and quality assistance for small enterprises.

European Commission and Member States should encourage small enterprises to apply best practices and to adopt efficient business models that enable them to enjoy the real progress in the new economy. -Development of a stronger representation and more effective interests of small enterprises at national and at EU level.

- Promote policies to support small and medium enterprises.

5. The competitiveness in Small Medium Enterprise

The evolution of economic systems and the growth of international trade has led to a process of globalization of the economy and markets, encouraging the emergence of integrated production systems in the network, with a concept of extended enterprise that transcends from national boundaries.

With continuous market changing and globalization, the enterprise specializes in a core business and restructures towards more specialized partners that collaborate among themselves and share knowledge. Knowledge is the most important asset of business because generates excellent and innovative products/services, best practices and best relationship with all enterprise stakeholders. It is important sharing this knowledge with all subjects of global extended enterprise.

The production processes of extended enterprise are redesigned with a web-oriented technology that support, internally and externally, the alignment of the information flow in the entire supply chain. This technological context is favourable both small-medium and large companies. As the large company becomes a network of enterprises, in the same manner the SMEs develop a cooperative interconnection.

The Union European must sustain SMEs competitiveness. To this end must formulate specific strategies: creating synergy with EU stakeholders, giving more emphasis to SME clusters, supporting research of new technologies and innovations, facilitating access to global value chain.

It is important that SMEs invest in e-commerce (Marossi, 2006) and e-business:

- e-commerce: use of web platform, order and pay on line, reduction of transaction costs

- e-business: integrated web infrastructure, integration supply chain, maximum accessibility to new markets

For the SMEs it is very important the utilization of web platform. An e-marketplace can be described as an online market where companies can exchange information, do business, and

collaborate with each other. The SME, supported by new technologies, becomes an extensive global knowledge economy.

6. Conclusion

We believe that for the competitiveness is needed to identify those steps that cause slowdown or stagnation, such as bottlenecks that cause congestion on the production processes.

In the international market, must be considered that the creation of networks of enterprises produces new problems related to different types of laws, regulations, infrastructure, organizational models and warrantee. It is necessary to uniform the European policy directives. All directives stipulated in the European Union have as target the goal of competitive advantages of economic agents, with the support of Information Technologies that favour the achievement of Knowledge Society.

BIBLIOGRAPHY

1. Porter E. Michael, Klaus Schwab. "The Global Competitiveness Report 2008-2009", World Economic Forum, Geneva, Switzerland, 2008
2. Dutta S., Mia I. "The Global Information Technology Report 2008-2009", World Economic Forum, Geneva, Switzerland, 2009
3. Gupta, R. 2005. Global competitiveness, outsourcing, and education in the semiconductor industry. *IEEE Des. Test* 22, 1 (Jan. 2005), 5-6.
4. Marossi, A. Z. 2006. Globalization of law and electronic commerce toward a consistent international regulatory framework. In *Proceedings of the 8th international Conference on Electronic Commerce: the New E-Commerce: innovations For Conquering Current Barriers, Obstacles and Limitations To Conducting Successful Business on the internet* (Fredericton, New Brunswick, Canada, August 13 - 16, 2006).
5. Cha, S. K., Anandan, P., Hsu, M., Mohan, C., Rastogi, R., Sikka, V., and Young, H. 2006. Globalization: challenges to database community. In *Proceedings of the 32nd international Conference on Very Large Data Bases* (Seoul, Korea, September 12 - 15, 2006). U. Dayal, K. Whang, D. Lomet, G. Alonso, G. Lohman, M. Kersten, S. K. Cha, and Y. Kim, Eds. *Very Large Data Bases. VLDB Endowment*, 1140-1140.
6. Decision of the European Parliament and of the Council establishing a competitiveness and innovation framework programme (2007-2013) (presented by the commission) {sec(2005) 433} 121 final; http://eurlex.europa.eu/lexuriserv/site/en/com/2005/com2005_0121en01.pdf
7. Mugur Isarescu article "Five lessons to resume growth" presented at National Scientific Symposium: Boosting economic growth in Romania in May 12, Bucharest 2000, in the *Academy of Studies Economics*, p.13-16
8. Cho, Y., Im, I., Hiltz, R. and Fjermestad, J. (2002) An analysis of Online Customer Complaints: Implications for Web Complaint Management, In *35th Hawaii International Conference on System Sciences*
9. Gavrilă I, Gavrilă T, Competitivitate și Mediu Concurențial –Promovarea și protejarea concurenței în UE, Editura Economica, București 2008