

DYNAMIC TRENDS OF THE KNOWLEDGE ECONOMY

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Abstract:

The European welfare economy is and will be based on the results of socio-economic innovation, by increasing the use of knowledge, and focuses on the role of information, technology and learning in the entrepreneurship. One of the most dynamic trends of the contemporary economy springs from the situation that employment in the knowledge-based economy is characterized by an increasing demand for highly-skilled workers. A simultaneous motion goes to direct more investments to information and communication technologies, computers and related equipments as well as to the improvement of the skills and abilities of the labor force. Knowledge can exist not only in technology but also as human capital: maybe the most world-wide known result of the Romanian integration in the European Union is the increasing of the human development index, HDI, from 0,773-before accession, to a steady 0,805 now. Nevertheless, measures are needed to increase resources for excellent science, industrial R&D and science-industry.

Key words: Knowledge economy, innovation, science-industry.

JEL classification: M 21, E60.

INTRODUCTION

The dynamics of the society is grounded on the results of socio-economic innovation: the welfare economy is the most persuasive concept supporting such general believes.

Innovation and knowledge become long lasting achievements and, as well as the national ethos are setting up an original way of historical communication among the generations of economy builders. This is why we perceive the theoretical approach of innovation and knowledge as if it holds the entire monde-economy reshaping, especially in the periods of slowdown and shrinking activities.

Knowledge-based economy concept refers to the use of knowledge to make business more efficient and profitable; knowledge is now recognized as the driver of productivity and economic growth and it is the most important source and key input of the transformation process, feeding the “change factor”. An ideal example could be a rare or unique know-how able to become the crucial factor of the competition in the market.

For an individual economic agent or for larger economic entities, all the possible production factors are important: labor, raw materials, money, including the non-corporal forms of capital, like the ability to learn more than your competitors – which might be a competitive advantage. The development of the science industry is not yet a clear priority for all national entities and not all the countries assumes equal responsibilities in this domain. Also, to enhance creativity in working with these elements proves to be a lasting performance factor.

DEBATE

In the third millennium, economy is based on high-technology businesses, mainly information technology, as well as educational and research institutions, and the European Union is responsible in front of its citizens about this reality.

In 2009, the biggest share of the EU budget – 45% or €60 billion - will go to research, innovation, employment and regional development programs to help Europe respond to the current economic crisis.

Considering such estimation, released during the last month of 2008, an 11% increase in research and a 22% increase in the EU innovation program will help boost competitiveness and a low-carbon economy.

For our country, the macroeconomic indicators of the latest years show a favorable situation, which could continue if the negative effects of the countries' crisis would not strike the national economy and especially the Romanian financial system.

The annual rate of gross domestic product was 8,4% in 2006, 7,9% in 2007 and 7,7% in 2008, and it is obvious that an estimated zero economic growth for 2009 is transferred from the global environment.

During the same period, inflation went under 5%, and formal unemployment decreased dramatically, down to less than a theoretical "natural rate", of 4-5%, even towards the concept of over-employment.

Maybe the most world-wide known result of the Romanian integration in the European Union is the increasing of the human development index, HDI, from 0,773-before accession, to a steady 0,805 now.

The economists are convinced by the results of the activities about the contribution of assets like information, learning and technology to the country's prosperity and success, for short and long run horizon.

Having roots in early times, macroeconomic phenomena such as globalization and integration have brought contemporary demanding to drastic augmentation of the information technology usage, in order to improve the practical conditions for the competition on markets.

From this point of view, bringing more transparency to markets enlightens the perfect competition attributes, a situation able to create better conditions for the markets themselves to develop more intensive than ever before.

Under the European integration achievements, the borders have vanished, markets and products have become larger, and the exchanges more frequent.

If one company aims to survive and make profit in such conditions it has to be flexible and innovative in order to meet the European market demands.

It has to be in a permanent process of change and adaptation to the new economic features of the realities.

Therefore the importance of knowledge and information as well as the value of the employee's education and qualification is increasing: in the last 20 years, the number of students in Romania expanded 4 times, 700.000 students being enrolled last year, while the number of universities rose from 46 in 1989 to 119 in 2008.

Moreover, 40.000 foreign students study in our country, while 10 years ago we had only 20.000 foreign students.

Owing increased mobility of information and using global flows of workforce, knowledge and expertise can be transported around the world, and this context makes possible that advantages gained by one company, could be eliminated by competitive improvements overnight. In order to decrease this embarrassment, the effective knowledge management has become a necessity too.

Stocking information is not enough to gain success, and the main objective of doing business today is to deliver the best information to the appropriate person in the optimum moment in order to make the just decision and take profitable action.

The information and experience must be exchanged and used within organizations.

This requires the establishment of efficient communication among working groups and individuals of each level of the organizational hierarchy.

Such an exchange of the employee's ideas and experience is the most convenient way to accelerate innovation, inventions and creation of new goods or services.

Adopted and shared information create knowledge.

Knowledge in a company is taking two basic forms: the explicit (codified) knowledge, e.g. books, documents, records or images, and the tacit knowledge in the form of skills needed to handle codified knowledge (particularly know-how).

As the access to different information has become easier and less expensive, the necessity to select relevant data, to interpret them correctly and effectively apply in the practice has risen. The knowledge-based economy increases the importance of both gaining current information and the competencies to use them.

Also, the employees are expected to keep up with this trend, within the life long learning perspective.

An important feature of the advanced economies can be observed in delivering the consultancy services, as a result of diversifying the field of counseling and consulting and the general increase of this kind of economic activity help.

More and more tasks and problems are not possible to be solved in an appropriate way without using professional services.

Increasingly searched, among enterprises of all sizes, are the services of professional agencies and consultants that offer solutions tailored to the firm's specific conditions and its unique characteristics.

Targeting to lower costs or focus on competencies and priorities, outsourcing (or contracting out) of non-core operations has risen too, mainly in Western Europe and USA: the most frequent outsourced work includes data analyses, IT operations, medical or health care, software development, environmental services, recruitment and assessment of the candidates and many others.

The fact that more businesses outsource and continue to outsource shows that, in many cases, outsourcing is successful in that it increases product quality, lowers costs substantially, or both.

Through outsourcing, today's businesses have the ability to utilize the technological know-how of other organizations. This allows businesses to find the specific requirements they need to implement their target objectives.

The companies seem to be able to do almost everything to keep abreast with new economic demands, to keep up with their competitors and to retain wanted position in the market.

Another driving trend is the development of computer networks and Internet connection. Information-gathering was a function of time and resources – today, a wealth of information is available to anyone with an Internet connection.

Real time communication with suppliers, customers, and remote or mobile employees used to be the exclusive domain of larger firms, using staff time, leased lines, or dial-up connections.

The more complex challenge, particularly for the small and medium-sized enterprises, is the varied and dynamic access requirements of remote or mobile employees whose ranks are growing rapidly for companies of all sizes.

Having a cost-effective, robust remote access solution is no longer a luxury, it is a business necessity.

Thus, firms utilize information and communication technologies to manage their multinational networks. One reason is the increase of the international competition intensity, the other one is the need of strategic interactions.

These new aspects of the economy reshaping, lead to the necessity of continual education and training of the employees, mainly in the field of information technologies and foreign languages.

Education and training always have been the prior condition of a competitive economy and learning the tool of both individual and organizational development.

The value of the people's education, their knowledge, skills and experience is higher than ever in the past, and gaining higher salaries and incomes prove the efforts are rewarded.

Changes in technology together with increasing competition are making educated and skilled labor more valuable and unskilled labor less so.

The enterprises do not compete to get the cheap workforce in the extent as before. Just the opposite – they make effort to recruit "the best from the best" or to engage and stabilize high-qualified employees.

This is not an easy goal: it requires from the employers to make their enterprises more attractive either for external or for internal publics.

This is usually achieved by different activities of personnel marketing that are often very efficient but costly as well. But the most difficult task is often not to attract suitable candidates, but to keep them employed and willing to utilize their individual potential for the benefit of the company. It is known that a company is usually not left by the worst employees, but usually by the best of them.

Highly qualified and motivated personnel is the first step for the enterprise to become able to thrive in a competitive environment and able to compete, not only within their own country, but in the wider global economy.

Increasing demands and changes in business area make the enterprises more innovative.

They are motivated to spend more for research and development, computer software and technical expertise in order to keep up with the competitors.

Small and medium-sized enterprises (less than 250 employees) are expected to play a key role in the process of innovation, because their number is growing in EU.

In general, small and medium-sized enterprises are considered to be one of the fastest growing segments in today's global economy and even to be the basis of a healthy economy, through the mechanism of feeding the markets.

Although these organizations may be small when seen as individual companies, they have tremendous aggregate power, both economically and politically.

Small and medium-sized enterprises are more flexible in accordance with the market demands. Therefore they play an important role in the knowledge economy, but they are very strongly influenced by its characteristics and effects.

The global knowledge-based economy has posed many challenges and given opportunities to the small and medium-sized enterprises.

Some of the challenges are in the form of shorter product life-time cycle, fast changing technology, entry of multinationals, and awareness of the customer due to deep penetration of media.

Globalization and integration brought up many opportunities in the form of technology access, availability of a variety of raw materials and components, impetus to quality, efficiency, and opportunities to restructure and diversify.

To face these challenges and grab the opportunities, an entrepreneur has to adopt innovative product process, productivity improvement techniques, and effective technology management.

Vast technological changes also lead to the creation of new managerial structures and work organization as well.

Taking these observations as competitive advantages for small and medium-sized enterprises, we notice that in Romania their number is now over 600.000, but they not higher a great deal of workers. Compared to the EU average, our country has much more to do in raising the employment in SME.

On the other hand, a new trend is to support the small firms to handle the challenging task of developing the science industry, to create the network of emergent units able to entail the growth augmentation.

European Union has launched a wide initiative about the 2009-the year of innovation and creativity and all the EU countries comply with this objective.

The main EU recommendation stated in refers to the need for a Pact for Research and Innovation, in order to drive the agenda for an Innovative Europe.

An independent monitoring panel with support from the Commission should annually report on progress in relation to the Pact.

This requires a huge act of willfulness, self-discipline and commitment from political, business and social leaders.

Moreover, simultaneous efforts are specially needed in the following three areas:

1. The major barrier to investment in research is the lack of a friendly market for European businesses, and this requires actions or regulations, standards, public procurement, intellectual property and fostering a culture which applaud innovation. A combination of supply and these measures to create demand should be focused in large scale strategic actions.
2. Measures are needed to increase resources for excellent science, industrial R&D and science-industry: productivity of R&D must be increased. The proportion of structural funds spent on research and innovation should be trebled.
3. Far greater mobility is needed at three levels: human resources need a step change in mobility across boundaries; financial mobility requires an effective venture capital sector and new financial instruments for the knowledge-based economy; mobility in organization and knowledge means cutting across established structures to allow new linkages to be made through the instruments of European technology platforms and clusters.

In Romania it was released a National Plan for Research, Development and Innovation. This document does stipulate the need for the Romanian economy to be more innovative, increasing the change factor.

Romania's R&D spending is 0.46% of GDP, compared with the medium value of 1.84% for EU27, or with the two European "innovation champions", Sweden and Finland, which are spending 3.82%, respectively 3.45% of GDP on innovation.

There are some areas where innovation already is at work, in the web 2.0 area and the financial services, and some where innovation needs money in order to further develop.

There are large-scale measures proposed for this year, in order to launch initiatives at all levels: European, national, regional and local.

Setting up events and promotion campaigns will definitely help the opening to the future of business, economy, society, each person in the environment we build.

Those ambitious tasks require in the first place the proper trained people to build up such a steady goal.

CONCLUSION

In times of economic crisis, more than ever, more resources for research, development and innovation are a necessity. Now, they are insufficient to achieve the goal of an Innovative Europe. The change factor is needed in all European countries where values are preserved but new structures replace old ones.

In Romania, the small and medium-sized enterprises are facing a great deal of embarrassments during the competition, but hopes of progress are directed to their activity.

Small economic units engage people, as holders of useful tacit knowledge, skills and abilities, whose complex represent the human assets which needs to be wisely administrated.

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