

INNOVATION – A KEY-ELEMENT IN PRODUCT AND SERVICES COMPETITIVENESS

Amza Virgil Dan

Academy of Economic Studies, Bucharest, Romania, virgilamza@yahoo.com

Brătianu Constantin

Academy of Economic Studies, Bucharest, Romania, cbratianu@yahoo.com

Summary: Innovation is usually associated with novelty, creativity, performance. In essence, there are four key-elements: the commercialization of technology, informational transfer, receptiveness towards new ideas and innovative spirit. Considering the general vision of the European Union regarding the need of dynamics in research, development and innovation as well as in what concerns the investments of private companies in novelty, necessary in order to resist in a growing competition. Innovation is based on the principles of perpetual improvement, on the efforts of achieving perfection and those of diminishing losses. Thus, through the innovations introduced in any kind of activity, we bring an improvement to products and services, therefore offering necessities to the consumer.

Key-words: creativity, research, innovation, market competition, economical growth, innovative spirit.

1. Introduction

Innovation, a complex notion related to cognition, must be defined in the context of knowledge, technology and informational transfer.

Basically, innovation is formed of four key-elements, applied in distinct activities:

- The commercialization of technology- applying scientific excellence in commercially successful products and services
- Knowledge/informational transfer- promoting collaborating and exchanging through ideas and information
- Receptiveness towards new ideas- the ability of being receptive towards new ideas and to their applications
- Innovative spirit: the dimensioning of new ideas and their successful implementation in a business environment

In the eve of the third millennium, the European Council, reunited at Lisbon during the 23rd-24th march 2000 has launched a now famous strategic objective implying that Europe should become a global leader of modern society, aiming an improvement in the degree of employment efficiency, economical reform and social cohesion as part of informational economy. The Final report included two distinct chapters:

- “The foundation of an European field of research and innovation”
- “The creation of a favorable environment to the establishing and development of innovative companies, especially small and medium businesses”.

2. Aspects of innovation

Innovation represents a product/ a new or significantly improved technological process, launched on the market. Innovation is based on the results of a new technology, technical development, on the merge existing technologies or on the use of information obtained by the innovative company.

Product innovation includes a product, a completely new or significantly improved service, regarding its own fundamental characteristics, technical specifications, software or other immaterial incorporated components, the predicted way of use or the degree of use difficulty. We must also indicate that innovation should imply a novelty for a specific company, not also for the market.

Process innovation includes new or significantly improved production technologies, new or significantly improved methods of service providing and product delivering. The result should be meaningful, regarding

the level of production, the quality of the products(goods or services) or the production and distribution costs. Innovation should be a novelty for the company but could be an already used technological process

Successful innovators are active companies, involved in innovative activities, business introducing new or significantly improved products, services, new procedures. Innovations are based on the results of technological development, merges of existing technologies or on the correct use of other information asked by the company. This term covers all types of innovators: product/ process innovators as well as companies involved in unfinished innovative activities.

3. Considerations regarding innovation and durable development

Research activities should be better incorporated and coordinated on an European level in order to render them highly innovative so that one can assure attractive perspectives for the most qualified brainpower.

Regarding businesses, their competitiveness and dynamics are directly dependant of the regulation framework leading to investments, innovation and entrepreneurship, thus encouraging innovative networks (the interface between companies and financial markets, between research&development and education institutions, between services offering consultancy and technological markets).

A newly introduced element is the approach of durable development in the context of innovation, thus making innovative activities and technological developments the key to attaining durable research . In the same context, innovative politics should be integrated in developing competitiveness policies. Insuring the sources of innovation financing thus leads directly to the increase of competitiveness.

Novelty is the essential element of innovation and is shaped in produced ways.

- Invention. Applying inventions created in research laboratories represents a way to innovation, research being biggest contributor to innovation
- Acquiring ideas inspired from other business sectors and adapting them to an own process of fabrication
- Searching new market segments, unchallenged, modifying existing products and services in order to induce a perceivable favorable transformation for the eye of the consumer
- Introducing a new way of approaching the business, in order to create a new business space or the increase of profit for an existing market
- Organizational innovation, including an innovative business representation, covering marketing and advertising fields

4. Innovation and perpetual improvement

Innovation is based on the principles of perpetual improvement, the efforts to achieving perfection and loss elimination, principles that should be taken into consideration in any activity. The concept of perpetual improvement defines loss as any activity not adding value to the consumers perspective, and added value as any correct activity concretely modifying a product/service in a way that a customer would find worthy to pay for.

The methods of perpetual improvement thus share characteristics:

1. they concentrate on the improvement of performance in a given process
2. imply a minimum of employees in the fabrication process;
3. tend to encourage incremental improvement
4. must assure time continuation

Innovation is defined as the exploitation or the successful use of new materialized ideas . In this way, through perpetual improvement as well as innovations applied in any given field of activity, one can sell relevant goods to consumers.

The basic components of the innovative activity are:

- Research & development accomplished inside the company, including creative activities systematically performed in order to increase the volume of information and use them to create new applications such as products(goods/services) and new, improved processes

- Research & development activities inspired from other companies, including those mentioned above yet accomplished by other businesses or research institutes
- The acquisition of equipment and apparatus, including high-tech equipment: computers especially bought to implement products (goods or services) and /or new (or significantly improved) technological processes
- Other acquisition of information obtained outside the company, including the acquisition of copyright, inventions, licenses, know-how, trademarks, software and other such, used in innovative activities
- Personnel training- training courses (locally or abroad) offered to the employees directly involved in the process of developing and implementing innovation
- Introducing products (goods or services) of innovative activities on the market – internal or external marketing aiming at offering on the market new or significantly improved products (goods or services); it may include preliminary research conducted on the market, advertising trials, but excludes the creation of market networks
- Design and other preparatory activities for the process of production/delivery – procedures and technicalities needed for the implementation of product (goods/services) innovations as well as technical processes not included elsewhere;

5. The promotion of innovation and technological transfer

The use of specific financial resources is opportune to the assurance of the technological transfer. Nevertheless, there exist problems related to the eligibility of companies soliciting financing and thus an important objective becomes that of fulfilling the necessary criteria of eligibility.

Extending this pattern to all types of financed projects, one can consider that such a plan of financial assistance supporting the industry in its effort to adapt to regulations is a preventive measure to the future testing activities verifying the correct application of regulations.

The feasible projects of the program aiming an increase in competitiveness pursue quality and innovative aspects in their manufacturing processes as well as elements leading to the accomplishment of the objectives of durable development: environmentally, economically and socially. Through its components, the program approaches most of the elements of innovation. Applying one of the types of projects in a company, according to the principles previously defined correspond to innovative actions.

Concretely, the innovative component is the type of execution for experimental models, prototypes, assimilations of new technologies applied by economical agents based on the results of the Romanian research units. For this types of projects, one can cover expenses related to the following activities:

1. the execution of experimental models and prototypes:
 - the acquisition of equipment, components/ subassemblies and/ or materials as well as the costs for the manufacturing of equipment;
 - testing experimental models and prototypes;
 - technical assistance for the execution of experimental models and prototypes;
2. the assimilation of new technologies, acquiring new equipment, components/ subassemblies and/or materials as well as the costs for manufacturing equipment and installations;
 - manufacturing –assembling expenses for equipment and installations necessary to the assimilation of new technologies;
 - technical assistance for the assimilation of new technologies.

6. Considerations regarding the evaluation of the capacity of innovation

The speed of the propagation of innovation in the economy is crucial to productivity and economical growth. The evaluation of the capacity of innovation is an instrument that should be developed in order to support companies aiming changes. Innovation is indisputably a factor of competitiveness, the element differentiating competitors. The markers of the degree of innovation of a certain company, along with other

economical indicators represent the key-element in comparative analysis, such as benchmarking market exercises.

Among competitiveness indicators, and important art is played by markers referring to innovation. By studying a series of past company evaluations based on the indicators of competitiveness, a series of weak performances influenced by the degree of innovation emerged.

These indicators are composed of several elements and as for “Products and/or Innovative services” ,they are the following:

- A. The business capital of products and new services, referring only to products and services launched in the current business year (without taking into consideration the existent or slightly modified ones)
- B. The business capital of new market segments, appeared in the current business year (such as investments on a new business field or new appliances for a certain product/service). They must be new business fields, formally developed by an organization through good strategic decisions
- C. The business capital of new geographical markets, national or international, developed as a result of strategic decisions.
- D. The number of new clients attracted during the previous year

Any independent evaluation or auto evaluation of one’s own performances, through the perspective of innovation, substantially contributes to changes in a companies attitude. Moreover, comparative analysis to competitors , especially procedural ones clearly indicate each company’s the areas it must change in order to become more competitive.

In order to attain the objective of the industrial policy of competitiveness growth through innovation each company should take into consideration all the factors (personnel, training, management, marketing) and activities that can influence a perpetual improvement, the growth of productivity and value increase.

The major strategic and organizational changes of a company refer to all the creative improvements, regardless of the existence of innovative activities.

One can identify the following types of modifications:

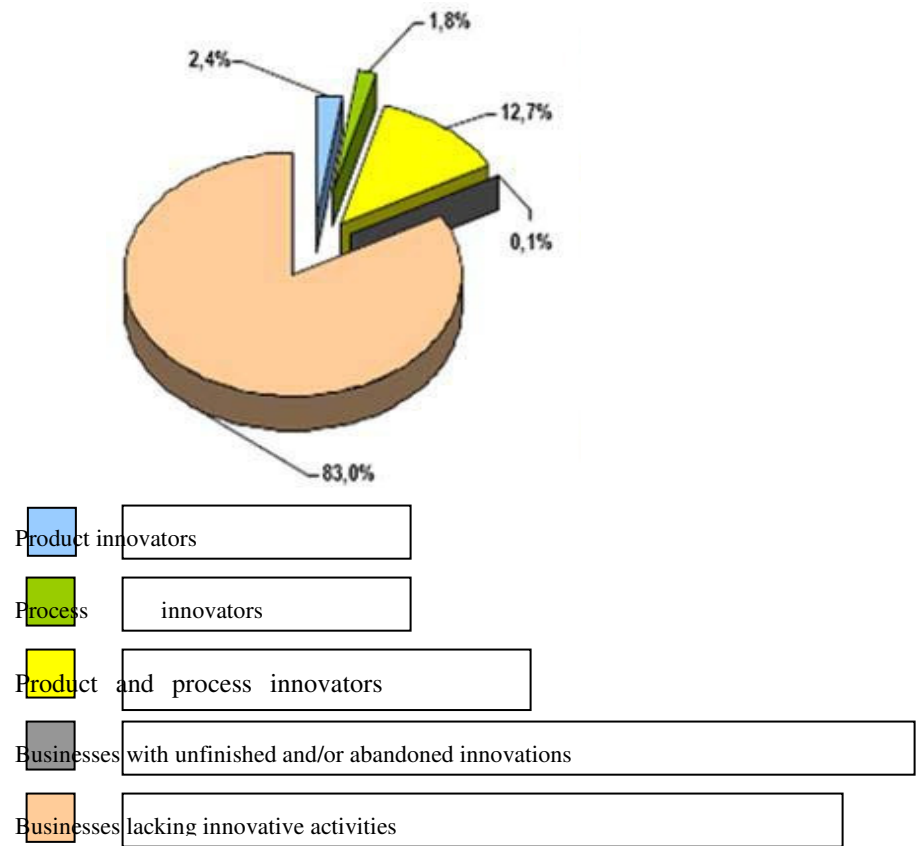
- strategic : the implementation of new or substantially modified strategies in a company
- in management : the implementation of advanced techniques in a company’s management
- organizational: the implementing of new or substantially modified new organizational structures
- in marketing: significant changes in the concept/ strategy of marketing of a certain company
- esthetical: significant modifications in the esthetics of the presentation or design and other subjective changes for at least one of the products manufactured by the company

The cooperation in the domain of innovation is represented by an active participation in research-development projects and in projects shared with other businesses or institutions. Receiving contracts, without an active collaboration is not an act of cooperation.

7. The percentage of active businesses involved in innovative activities and of those lacking innovative activity, compared to the total of roumanien companies during 2004-2006

The percentages for innovatively active businesses are divided according to each type of partner, activity, size category , type of modification.

The percentages for companies lacking innovative activity are divided according to each size class and type of modification.



7.1.Data source: the National Institute of Statistics

- the statistic analysis regarding the innovative activity (INOV) of the industry and services, based on the third statistical Communitarian Innovation Study (CIS 3) of the European Union
- the statistical Register of businesses (REGIS), administrated by the National Institute of Statistics

7.2.Methodological specifications

The statistical study regarding the innovative activity has been conducted on a representative of businesses specialized in industry and services, selected according to the size of the company (the number of employees).

The conducted research studied businesses specialized in the following fields pf activity:

- industry: extractive industry, recasting industry, electric and thermal , electricity, gas and water;
- services: transportation and storage, mail and telecommunications, financial activities, banking and insurance, computing science and related activities; research-development; design, urbanism, engineering and other technical services; testing activities and technical analysis.

The size of the business/company was evaluated according to the number of employees, during the reference period; according to the criteria announced by Eurostat , the specific categorization (for innovative activities) frame companies in the following:

- small businesses: 10-49 employees
- medium businesses: 50-249 employees
- large businesses: over 250 employees

8. Conclusions

Innovation lies at the core of economical growth, being its key-initiator. Successful companies and those registering the quickest growth are the businesses regularly introducing innovation and thus a big proportion of their profit is obtained from new or significantly improved products and services. The blossoming manufacturing sectors tend to register the highest levels of innovative activity. Each organization registers a certain degree of innovation. Through specific techniques one can identify the opportunities of innovation and can specify the methods to increase the innovative coefficient of a company.

The integration of innovation in economical politics has three dimensions:

1. the creation of an innovative strategy, influencing locally, nationally and at European level the behavior of companies;
2. the integration of innovation in regional strategies ;
3. the interaction of innovative politics with other strategies and the introducing of innovation through competitiveness, internal marketing, workforce distribution and environmental protection, in order to systematically check the innovative degree of legislative and politic initiatives. Thus, introducing innovation in regulations is another leading factor to the competitiveness of products.

One must insure the circumstances of the transfer of results to companies that will effectively exploit them and allow the founding of new companies focused on research activities. Informational transfer activities can substitute the lack of informational connections between the company and the scientific substrate.

Bibliografy

1. Bono, Edward de.(2006). Lateral thinking. Bucuresti: Curtea Veche Publishing House.
2. Bratianu, Constantin; Lefter Ion.(2001). Academic strategic management. Bucuresti: RAO Publishing House.
3. Brezeanu , Petre; Novac Laura.(2007). Quality techniques of estimating the impact risk has on organizations . Management and Mmarketing Review, Nr.1, p.148
4. Drucker, Peter.(2000). Innovation and entrepreneurship. Bucuresti: Teora Publishing House.
5. Gerber, Michael.(2004). Manager's Myth. Bucuresti: Amaltea Publishing House.
6. Kotler, Philip.(2003). Kotler On Marketing: how to create, how to win and how to dominate markets. Bucuresti: Curier Marketing Publishing House.
7. Mandruleanu,A., Ivanovici, M. (2008). Knowledge management in organizations. In: The 4-th International Conference - "Economy and Transformation Management", 9-10 May, Timișoara, (classified CNCSIS B+)
8. Popescu, A, Ioneci, M. și Marcu N.(2008). Necesitatea unei strategii de dezvoltare pentru economia romanească. In: "Analele Universității Craiova".
9. Tripon , Avram. (2002). Innovation Management: synthesis and applications. Targu-Mures: Universitatii Petru Maior Publishing House.
10. ***<http://europa.eu.int/2010>
11. ***Institutul National de Statistica. (2005). Bucuresti : Anuarul Statistic al Romaniei