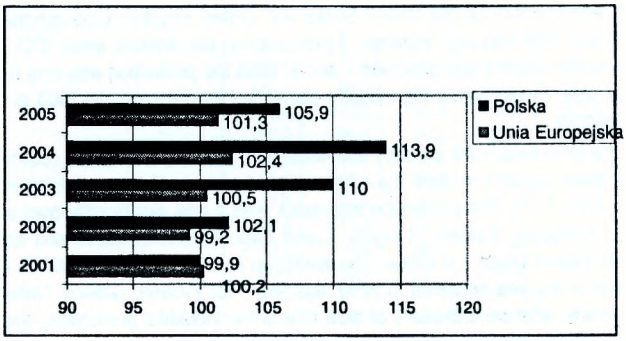

Fig.3.Dynamics of production in industrial processing sector

Source: Eurostat data

As compared to the average for the EU in terms of dynamics of production for the industrial processing, Poland made here significant progress. In 2004, the production dynamics in the industrial processing sector was higher than the average for the EU by 11.5%. The difference between Poland and the average for the EU in production dynamics in the industrial processing sector in 2005 amounted 4.6%.

From the presented assessment of the innovation level and the competitiveness of Polish economy as compared to the EU it results that new members of the European Union, including Poland, may inhibit the economical growth of the united Europe and may contribute to the slowdown in realization of the Lisbon strategy. The results of the analysis suggest ranking and selecting of the economic enterprises of the individual countries.

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GENERAL ASPECTS OF INNOVATION MANAGEMENT IN COMPANIES

Summary: The purpose of the present paper is to show the most important aspects of the innovation management process. We also aim at determining its stages and identifying characteristics and skills that may be useful in its realization. It is particularly important to look at company's relations with macro and micro-environment since proper relations of the environment with company's resources facilitate the transfer of knowledge to organizations and thus speed up the development of innovations.

Keywords: Innovation management, stages of the management process, skills useful in the management process, macro and micro-factors.

Introduction

We would like to start our considerations on the phenomena of the innovation management with quoting T. Peters' argument stating that "the biggest challenge of the 20th century will be the ability to create and absorb innovations".[1] This argument concerns in particular subjects conducting economic activity, but not only. The process of innovation management can also be considered either on the level of a company or that of the economy as a whole. In the latter case it is not only particular companies that take part in it, but also public authorities, state or regional.

It is hard nowadays to find a company which does not perceive and does not appreciate the growing importance of innovations. It is enough to say that innovations create demand, lower prices, speed up the pace of the organization's growth and may also broaden the capabilities of realizing more profitable investments. Many researches show numerous proofs and support the argument that efficiency, competitiveness and commercial exchange development are correlated with the development of innovations.[2]

Since the innovative activity plays such an important role, it is right to ask a question: "if it is possible to manage innovations, what is the best way to do that?".

This problem arises from the very nature of innovations. One has to bear in mind that specialists from many different scientific fields take part in the process of developing innovations and finding the best way to use them. Similarly for the stage of innovations realization, where very often we have to deal with different opinions among particular agents, concerning goals and methods.[3]

There exist two main contradictory opinions concerning the innovation management:[4]

The first one assumes that it is possible to plan innovations and that they can undergo the management process in order to achieve the predicted (optimal) results.

The second opinion grants that innovations are impossible to foresee. According to this view, they comprise a risk of high level because of the fact that it is hard to predict market demands, consumers needs, competition's reactions as well as risks connected with realization of investment projects.

It seems that both opinions are justified. One has to bear in mind that next to innovations that are easy to plan there exist innovations that are impossible to predict. In consequence, this fact leads to impossibility of managing them. Thus a need for classifying the innovations appear, according to their specific characteristics such as the mentioned above uncertainty. It is equally important to draw proper conclusions concerning innovations management.

1. Stages of innovation management

Innovation management, treated as a process can be described by a number of characteristics resulting from its specificity. Thus innovation management is characterized by following features:

- it has strategic dimension meaning that it influences the development of a company in a long period of time,
- it goes beyond the company itself, although realization takes place usually in the production department,
- different economic entities with different specializations take part in it – from scientists to foremen,
- it concerns activities of different character, from intellectual work to final realization,

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[1] Peters T., Liberation Management, Pan Books, London 1993 qtd. in Sikorski C., Zachowanie ludzi w organizacji, PWN, Warszawa 1999

[2] Pomykalski A , Zarządzanie innowacjami, Wydawnictwo Naukowe PWN, Warszawa-Łódź 2001.

[3] Ibid.

[4] Cooper R.G., Winning at New Products, Gage Educational Publishing, London 1988, Spence W.R., Innovation, Chapman and Hall, London 1994, Weeb A., Managing Innovative Projects, Chapman and Hall, London 1994 qtd. in Pomykalski A., Zarządzanie innowacjami, Wydawnictwo Naukowe PWN, Warszawa-Łódź 2001.

– it usually requires financing from different sources (external and internal ones).[1]

The basic question in the innovation management is a perfect understanding of subsequent stages through which a new products or services have to undergo. At every stage the company should establish specific requirements for each of them. It is then crucial to control phasing from one stage to another.

It is generally assumed that innovation management should undergo several stages:[2]

- Stage one – the analysis of macro and micro-environment of the company which enables to collect information concerning potential demand on innovations. This information comprises identified clients needs, results of conducted marketing research, competition activity, etc.
- Stage two – on the basis of the information gathered in the first stage it is possible to choose for realization the innovation projects for which the organization possesses the necessary resources.
- After selecting a project, a company has to assure resources needed for it realization. It can be done either by research and development or by transfer of technology.
- The last stage is introduction of an innovation. By this term we understand transferring it from the initial idea through all stages to final realization which usually takes form of a new product, service or process.

There exist various possibilities of conducting the above-mentioned process of innovation. Much depends on the category of company that we are dealing with. For example, large companies may structure the innovation process in a very complex way, while smaller companies tend to work in a non-formalized way. The specificity of the market on which those companies exist plays an important role as well. For example, companies active in sectors that require very advanced knowledge and technologies as in the case of pharmaceutics, electronics or car industry, concentrate on typical research and development activities, engaging in it an important part of their profit. Other companies, like textile industry tend to accentuate their relations with clients, treating them as a source of innovations. The main condition for a smooth realization of an innovation process for any company is a proper organization i.e. coordination of all of its stages.

2. The influence of company's environment on innovations.

More and more companies treat innovation management as an inherent element of their activities. They understand the need for constant definition of their position and adaptation to the changing conditions of the environment, markets, technologies and clients needs.

This results from the fact that companies environments are complex and changing, which is defined by H.I. Ansoff as turbulence.[3]

The complexity and changeability of the environment results not only from the growing number of its elements but also from more and more differentiated and difficult to predict relations between them. Changes in environments tend to be faster and less predictable nowadays. As a consequence, there appears a growing importance of strategic approach concerning not only the organization management, but also that of innovations.

The changeability of conditions in the environment necessitates working out strategies of development of every company acting independently. It results from the need of determining priorities and directions to achieve them in conditions characterized by some level of uncertainty.[4]

The innovative activity does not take place in hermetic conditions, in relation between a company and its environment. In reality, efficient innovative processes constitute a sum of economic, social and

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[1] Jasiński A., Innowacje i transfer techniki w procesie transformacji, Difin, Warszawa 2006.
[2] Ansoff H.I., Zarządzanie strategiczne, Wydawnictwo Naukowe PWN, Warszawa 1985.
[3] Ansoff H.I., Zarządzanie strategiczne, Wydawnictwo Naukowe PWN, Warszawa 1985.
[4] Bogdanienko J., Zarządzanie postępem technicznym, Uniwersytet M. Kopernika, Toruń 1994.

organizational activities in the whole society. Those activities constitute "innovation systems" which are composed of: educational system, legislative system, tax system, intellectual property protection system, cooperation and competition system or the system of support for innovation activities by the authorities.[1]

The pressure from the environment is not similar for all entities acting at the same time and on the same territory. Much depends on the internal potential of a company. Companies with big financial and economic potential occupying a dominant position tend to be less sensitive to their environment. Those with weaker position have to be quick and flexible and adapt to changes that appear in the environment. They also have to subordinate their activities to potential demands of their clients.

Depending on the level of unit's connections with different elements of its environment, we can list the following environments: closer and further environment, direct and indirect environment, macro and micro-economic environment, industrial environment, competitive environment, marketing environment and finally general environment.[2] The general division is however the one between micro and macro-environment.

2.1. Macro-environmental factors influencing company's innovations.

Among external factors shaping companies innovativeness one has to enumerate the following:

- tendencies in technological development in global scale and possibilities of adaptation of modern technologies in local conditions,
- stage of development of the regional integration,
- a general level of economic development of the country, the level of openness of the economy and investment possibilities,
- particularities of the socio-economic and legal system,
- rules and practices of the conducted economic policy, including innovation policy,
- situation on the market of industrial, consumptive products as well as services.[3]

All the mentioned factors are characterized by an important level of changeability and diversity which leads to the conclusion that they have to be investigated while constructing the strategy of development of the organization.

One has to bear in mind that among the above-mentioned factors one can find particularities influencing the innovativeness in a positive way, but also factors that may block the development.

Economists claim that innovations are favored first by large dynamics of economic growth combined with investments, secondly by openness of the economy which enables expansion on external markets, thirdly by a high degree of social development including advanced high-school and university-degree studies and finally by dynamics in the field of research and development (R+D).

On the other hand, the opposite situation does not favour growth of innovativeness. Such conditions appear when we have to deal with a crisis in the global economy, poor results of the national economy, faulty economic policy of the state and in consequence bad attitude of the whole society focused on survival.

2.2 Micro-environmental factors influencing company's innovations

External factors, which constitute the macro-environment, influence in a very important way the innovative attitudes among companies.

Those factors comprise the following:

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[1] Baruk J., Innowacje a rozwój gospodarczy, Problemy Jakości, July 2004.

[2] Penc J., Innowacje i zmiany w firmie, Agencja Wydawnicza Placet, Warszawa 1999.

[3] Sosnowska A. (ed.), Systemy wspierania innowacji i transferu technologii w krajach Unii Europejskiej i w Polsce, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2003.

1. Factors resulting from entrepreneur's personality:
- creativity
- openness to innovations
- will to stand out
- organizational abilities.

2. Factors connected with entrepreneur's experience:
- education in the defined field
- knowledge of foreign languages
- acquired professional skills
- course of professional career
- experience in managing a company
- abilities to organize teamwork
- financial motivation and a need for economic success.

3. Factors concerning the company's personnel:
- ambitious, educated personnel
- consciousness of common goals, identifying oneself with company
- positive evaluation of the entrepreneur
- proper organization, motivating for innovative activities
- general conditions of work and salary.

4. Factors concerning with direct market environment:
- clients expectations concerning innovations
- cooperation with clients
- innovativeness of competition
- lack of limitations concerning access to markets
- situation on the job market.

5. Factors resulting from the company's localization
- limitations concerning the natural environment protection
- necessity of cooperation with local authorities
- possibility of contact with higher-education entities or R+D entities
- infrastructure condition.

6. Past and present outcome of the company's activity:
- dynamics and value of sales
- financial result
- availability of capitals
- exports value
- commitments concerning suppliers.

7. Legal and financial particularities concerning the company:
- economic activity registration laws
- tax laws
- conditions of taking and paying off loans
- clients laws

– laws concerning protection of intellectual property.[1]

Among the enumerated above internal particularities concerning company's innovativeness one can find personal factors concerning the owner and the personnel but also institutional factors resulting directly from the environment in which a unit has to act.

3. Capabilities conditioning the efficiency of innovative processes

From the point of view of the innovative activity, the most important strategic resource of any company is the human factor. It concerns managers but also engineers and technicians. They should be characterized by creative attitude leading to constant technical and organizational changes.[2]

Particularly important role is played by managers. It is generally assumed that in the context of innovative activity, managers have three key roles to play. First of all they must identify chances (opportunities) arising in the organization's environment. Secondly, they have to construct networks and supply processes which may enable to use these opportunities. They also have to build brands, difficult for competition to imitate and use those opportunities and finally assure clients' loyalty.[3]

Success of managers in the field of innovative activity depends on many characteristics that they have to develop. Those characteristics are presented hereafter:

- efficient communication
- proactive attitude based on constant preparation for changes
- ability to create coalitions and to win allies
- attitude to achieve good results and not to endear to others
- ability to constant education in the field of new behaviors, technologies and ways of acting.[4]

The latter is considered to be the most important. It results from the fact that aptitude to learn how fast changes take place becomes the most important element in building the advantage of competitiveness of a company.

In general, employees of companies, which decide to create and introduce innovations should possess at least four sets of capacities:[5]

1. Strategic capacities i.e. capacities of perspective evaluation, capacities of creating companies development plans, capacities of identification of market trends, etc.
2. Organizational capacities i.e. willingness to take risk and to control it, capacities of organizing cooperation between particular functional areas, capacity to organize internal cooperation with clients, suppliers, research and development entities, capacity to interpret legal and financial solutions and to transform these for the needs of the innovation processes, capacity to incorporate employees and company resources into the process of changes, etc.
3. Technical skills comprising mainly creative association of the latest technical and technological solutions in order to use them in a functional way, without infringing patent rights.
4. Economic skills concerning abilities to estimate economic and social effects brought by innovative projects.

Summing up, it has to be said that efficient innovation management in a company depends more on getting to know and understanding what is going on outside the company, for example on the market, in the R+D sector or competing companies rather than inside the company itself. However, taking into account the fact that the introduction of new scientific or technical solutions usually takes

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[1] Sosnowska A. (ed), Systemy wspierania innowacji i transferu technologii w krajach Unii Europejskiej i w Polsce, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2003.

[2] Jasiński A., Innowacje i transfer techniki w procesie transformacji, Difin, Warszawa 2006.

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[4] Bogdanienko J., Haffer M., Popławski W., Innowacyjność przedsiębiorstw, Wyd. Uniwersytetu M. Kopernika, Toruń 2004.

[5] Baruk J., Innowacje a rozwój gospodarczy, Problemy Jakości, July 2004.

place in the producing department of a company, one cannot forget about assuring its proper functioning and good organization of production.

Consequently, efficient communication and cooperation are required between three main areas of a company's activity, i.e.: research and development, production and marketing.[1]

The innovative activity in companies is a vast issue, which can only be dealt within different points of view and different surfaces. The purpose of the present work is to show only the most crucial aspects of this process, distinguishing its stages and identifying properties and skills useful in its realization.

In the process of innovation management a particularly important role is played by relations between the environment and company's resources since those relations enable innovations development. Because of the above-mentioned fact, this issue has been dealt with in a more detailed way. One has to bear in mind that every company which exists on the market is in mutual and constant relation with the environment. The efficiency of its actions depends fundamentally on the level of the company's adaptation to various elements of its environment as well as on cooperation and orchestration of the company's activity with those elements.

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THE INNOVATION PROCESSES AS AN ELEMENT OF ECONOMIC STRATEGY IN SMALL AND MEDIUM SIZED ENTERPRISES.

Abstract: In the present day the liberalization and globalization processes influence on the small and medium sized enterprises activity. As the result of this we can see the growth of competition among small and medium seized enterprises. The one and only way to keep alive in these difficult circumstances is a choice of suitable, effective economic strategy. The article treats about innovation processes as a one of available means to recover the level of small and medium sized enterprises competition.

Key words: Innovation process, small and medium sized enterprises, economic strategy

In the present day there are many rules and rudiments, that make base of the world's economy. Competition and fight are one of many conditions that are noticeable in every part of economic and social life. In these days the sine qua non clause to reach the success in the market is to get the better of competition.

In bibliography competition is recognized as the most important mechanism to bring on the small and medium sized enterprises development in the market. Philip Kotler says, that: " The enterprise

[1] Jasiński A., Innowacje i transfer techniki w procesie transformacji, Difin, Warszawa 2006.