

Factors influencing the enterprise innovation

V. Yachmeneva, G. Vol's'ka

**Management Department,
The National Academy of Environmental Protection and Resort Development,
95049 Simferopol, Kievskaya street 181; smart.sea.gal@gmail.com**

Received January 19.2014; accepted February 20.2014

Abstract. The factors that influenced the enterprise innovation are investigated and summarized in the article. Key factors of impact on the enterprise innovation are grouped. Their relationship and mutual influence are proved. Graphic reflect on the impact of external and internal environment factors of the innovative enterprise characteristics are constructed.

Key words: innovativeness of enterprise, environmental factors, factors of direct influence, sustainability, factors of indirect influence.

INTRODUCTION

At present results of innovative activity initiated by the acceleration of scientific and technical progress, substantially affect all aspects of human society development, change the environment of life and human activity, ways to ensure its existence and development. The modern economy is characterized by increased competition. In these terms innovations become the mandatory member of economic activity of enterprises and are basic motive force and pre-condition of their development. That is why innovative activity is one of the main activities of any company that uses knowledge and interact with the field of technology, economy and ecology, social psychology and sociology, basic and applied sciences, theory and practice of production and management, strategy and tactics. The growing role of innovations and innovative activity in development of enterprise requires a broader study of the impact of factors on innovation, innovative activity and, in particular, on the level of innovativeness of its activities.

Among the scholars who have researched the factors influencing the level of innovativeness of the enterprise are B.D. Babaev [2], A. Chernykh [4], V.M. Suyazov [2], B. Shlyusarchyk [16], G. I. Zhits [20],

N. V. Sobchenko [17], E. V. Opekun [13], A. I. Nikolaev [12], O. V Myasnikova [10, 11], I. V. Usacheva, V.A. Kuklinov [18], M.A. Ryazanov [15], S.R. Yaholkovskyy [19] and others. But each of these researchers has its own vision to this question, that is why there is a necessity of specifying the factors influencing the level of innovativeness of the company in the context of our study.

The research aim is to systematize the factors affecting the level of innovativeness of the enterprise and to identify the relationship between innovation and the characteristics of its activities.

CLASSIFICATIONS OF FACTORS INFLUENCING THE INNOVATIVE ACTIVITY OF ENTERPRISES

The main prerequisite for competitiveness in the conditions of innovative scientific and technological development is a high level of innovativeness of its activities.

Innovative business is a complex characteristic, which reflects its ability to update through the development and implementation of new ideas as well as transfer of ideas from the outside. Thus, the concept of innovativeness of the enterprise is innovation potential, which is broadly defined as a combination of scientific, technical, technological, infrastructural, financial, legal, cultural and other opportunities to provide perception and realization of innovations, i.e. introduction of innovations. Actualization of innovative potential, in turn, is a prerequisite for innovation company, which is characterized by the intensity of innovation processes and expressed in terms of innovative activity and performance results, expressed in terms of the effectiveness of innovation.

Thus, any research of the essence of innovative capacity, innovative activity, its forms, intensity and results within the research enterprise inevitably implies the need to identify and study the factors that actually determine the parameters of the investigated phenomena.

Obviously, the study of innovation of the company should be given a more detailed classification of factors - their selections in separate groups of more than one criterion to identify the location of each factor in their overall population. Such classification, at first, will describe the effects of changing factor on the business, using multiple classifications. Secondly, it will provide an opportunity to highlight the permanent factors that could increase the level of innovativeness of the enterprise.

In our research while analysing the factors affecting the level of innovativeness of the company, we adhere to the traditional approach, which allows factors in accordance with the environment of their origin, the degree of impact on the company and the possibility of control of the company divided by the factors: macro- (external factors mediated (indirect) impact), microenvironment (external factors directly (direct) effect) and internal factors. And their impact on innovation of the company for the specific conditions of space and time can have both positive and negative direction, i.e. uniquely determine the direction of their influence on the investigated characteristics is impossible, because of its dual nature.

Environmental factors that influence the innovativeness of the company, divided into factors of macro and micro.

It should be noted that an external environment is characterized by several basic properties:

- interconnectedness of environmental factors;
- complexity, large amount and level of variability factors that affect the company as a whole and for its innovation in particular;
- dynamism, due to the dominant economic development of the state;
- probabilistic nature of the changes occurring in the environment [1, 3, 5, 6].

In addition, a detailed study of various aspects of the external environment on the innovation of the company seems relevant since it is a provider of economic resources to support domestic innovation processes on a desired level.

The company is in a constant exchange with the environment, thus providing the opportunity for its effective functioning and development. The successful operation of the company needs to have a thorough understanding of the situation, trends change various components of the environment in order to develop innovative policy that requires behavioral strategies and tactical actions for its implementation.

The state of external environment is key to the development of innovative enterprises, as an external

environment in relation to epy enterprise is the objective and determining condition of its existence. In scientific literature there is a classification of environmental factors: factors of direct influence (factors of microenvironment), factors of indirect influence (factors of macroenvironment) [7, 8, 9].

The factors of indirect influence (macrosurroundings) create general conditions for the existence of enterprises in the environment. In macro factors affecting the innovation of the company, we have included the legal, political, social, technological, economic, sustainable and climatic factors.

FACTORS OF INDIRECT INFLUENCE

Political factors. Stability of the political situation in the country determines the efficiency of innovation, and thus increases the investment attractiveness of the domestic industry, including foreign partners.

Legal factors. Legislated legal status of the company determines the sequence well-organized driving innovation and cooperation with central and local authorities exercising control and supervision of the innovation enterprise, guided by a system of legislation.

Economic factors reflect the general economic situation in the country or region where the company operates. These factors are most significant, as current and projected state of the economy affect the achievement of business objectives, including the implementation of innovations.

The scientific and technical factors of macroenvironment characterized by an indirect effect on innovation of enterprises are crucial for the emergence of technological innovations in production processes. The high level of innovative activity of industrial enterprises is possible in the case when it is fully using all scientific and technological progress does the state support.

Social factors. The social environmental factors include the indirect impact of organizational culture and consumer population, its moral code of conduct, professional and personal qualities of employees, health care and so on. Social environment largely determines the range, volume of production, pushing the requirements for an innovative product, and indirectly affects its quality, subject to the availability of effective demand on this or any other food item. Social factors have a substantial influence on innovative activity of industrial enterprises and, as a consequence on the results of their innovative activity.

Sustainable factors. The importance and significance of the impact of sustainable factors determined their consequences increase the risks in the current difficult conditions and technological production. The main problem of Ukrainian economy is low productivity at a high level of wear of equipment in the leading industries, leading to disasters and improving environmental risks.

Natural and climatic factors - a collection of the natural environment in which the company operates and

it is also the level of sustainability for innovation. The value of these factors in the current situation of limited natural resources due to the fact that they motivate companies to improve their innovation activities in the field of development and innovation related to improving the use of natural resources and their replacement alternatives, including artificially created.

MICROENVIRONMENT FACTORS

Factors of direct influence (microenvironment) are an aggregate of factors that directly affect the activities of the company and feel the feedback i.e. direct impact of the company on them. These factors directly affect the pace and scale of the enterprise, its effectiveness as a full range of these factors is the kind of system constraints. In particular, the micro factors that influence the innovativeness of the company, we have included suppliers, competitors, customers and contacts audience.

Suppliers. Such factors as suppliers take notable place among micro factors affecting the innovativeness of the enterprise. The influence of this factor on the innovativeness of the company can be detected because of the level of prices, quality, volume, delivery time necessary raw materials, components and more. In the market there are alternative proposals from businesses, suppliers, because the effectiveness of supplier selection is a prerequisite for effective innovation.

Consumers. The level of innovation of the enterprise and, in particular, the implementation of its innovation strategy largely depends on such factors directly influence as consumers. In a market environment characterized by active competition among manufacturers for the consumer market saturation is a variety of goods and services. Manufacturers have to meet the needs of customers, constantly improving existing products and developing new headings, i.e. actively implementing various innovations.

Competitors. Competition, as part of a market economy, in modern terms is considered as a continuous (permanent) process, the formation of competitive advantage through innovation. To compete in the market enterprises are the additional costs of research and experimental development for innovation which provide to the enterprise their difference from other.

Pin audiences. The pin audiences include: government agencies that act as regulators, coordinators, controlling, monitoring bodies, etc. of the enterprise, financial and credit institutions that are sources of funds for businesses, social organizations such as performing supervisory and regulatory functions, some speakers claims against the company.

Internal factors impact on the innovativeness of the company, in our opinion, should be considered at the level of its functional subsystems, namely financial, production, personnel, marketing and management. Within the limits of every subsystem it is possible to distinguish many factors that have an impact on the

noted description. Their final list will be determined separately for the particular company.

Graphically, the factors affecting the innovation of the company may be represented as a cone, where each of its bases corresponds to a specific group of factors (Fig. 1).

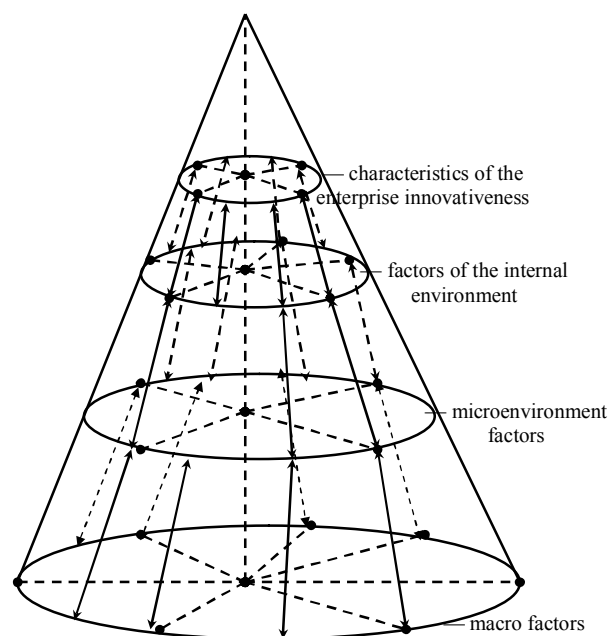


Fig. 1. Factors influencing innovativeness in the enterprise
Source: the results of author's research

Each group of factors influencing the innovativeness of the company meets certain base of the cone, the plane is determined by the degree of exposure to the specified characteristics and the possibility of control of the company: the biggest plane is the basis of the cone that defines leakage as they describe macro that determines the general conditions operation of the business within the state at a particular time and is not subject to review by the company. It should be noted that the base of the cone area decreases with increasing degree of influence factors which they correspond, the innovation of the company and the growth opportunities of the enterprise to their control. The smaller the footprint, the denser the impact of factors on each other and on the characteristics of the innovation enterprise.

Each environment has its own plane, which is limited to a truncated cone, excluding the upper base, and bottom base is divided into sectors which number corresponds to the number of impact factors on the innovativeness of the company. It should be noted that the factors are not isolated from each other, and have poured upwards and vice versa according to the constructed cone, thus increasing or decreasing the mutual influence and impact on the innovativeness of the company.

As already noted, the restrictions created in the bottom level of a truncated cone are determined a set of relevant environmental factors regarding a particular company. Thus, the environment has two levels - macro

and micro, which are described by the following factors namely: macro factors (political, legal, economic, social, technological, environmental, climatic), reflecting the peculiarities of national economic policy state regulatory framework, adequacy of resources, etc.; microenvironment factors (suppliers, customers, competitors, pin audience) , reflecting the immediate environment of market economy, which creates demand and supply in the market and determines the infrastructure components of this market.

Internal environment factors that influence the innovativeness of the company are defined within its functional subsystems (production, finance, personnel, marketing and maagement) and determine the excess or lack of resources, interest in enterprise innovation and institutional capacity to implement innovations.

INTERCOMMUNICATION BETWEEN COMPANY CHARACTERISTICS AND FACTORS OF INNOVATIVENESS

Innovation enterprise is part of its internal environment and the result of many sub-systems company, which is difficult to distinguish clearly in the overall subsystem, as it is essentially a form of innovation potential, that generally determines the innovativeness of the company. Innovation is the manifestation of the company through characteristics such as activity, reliability, market value, sociality and environmental described by a number of indicators. These properties and parameters allow us to isolate those factors of internal and external environment that directly or indirectly affect them (Table 1).

Table 1. Determination of intercommunication between descriptions of enterprises innovativeness and factors, that influence on it

Classification sign	Intercommunication within the limits of classification sign	Factors of influence the innovative activity of enterprise
Market value	Direct	Economic, financial, ecological, political, legal, marketing, competitors, administrative
	Mediated	Social, natural and climatic, personnel
Sustainability	Direct	Natural and climatic, ecological, political, legal, productive
	Mediated	Financial, scientific and technical, economic
Reliability	Direct	Scientific and technical, financial, productive, economic, political, legal, administrative, consumers, suppliers
	Mediated	Competitors, ecological, to the shot
Activity	Direct	Marketing, productive, administrative, political, legal, personnel
	Mediated	Financial, economic, scientific and technical
Sociality	Direct	Social, skilled, financial, economic, political, legal
	Mediated	Ecological, natural and climatic, scientific and technical, competitors

Source: the results of author's research

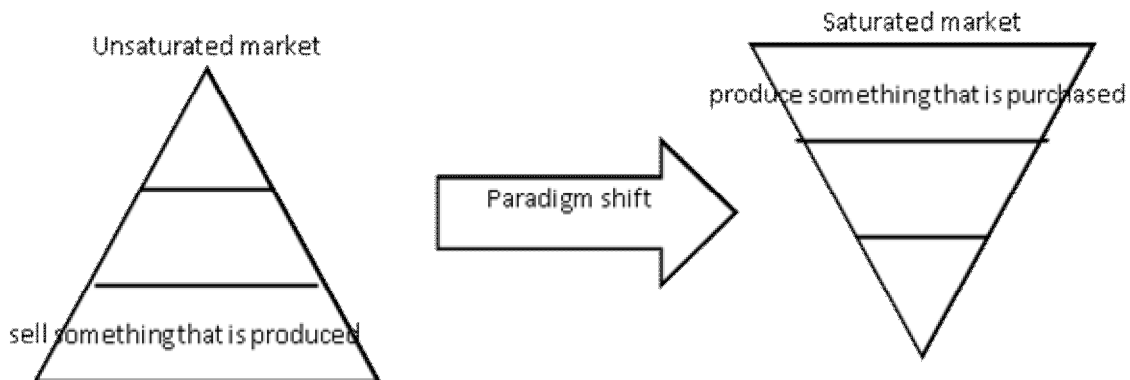


Fig. 2. A paradigm shift in the transition from unsaturated to saturated market

Market value that affects the level of innovation of the enterprise is ambiguous characteristic with certain factors both directly and indirectly. The factors include the direct effects of factors both external and internal environment, namely economic, financial, sustainable, political, legal, marketing, management factors, competitors, as for the indirect effects of factors, they are social, climatic, personnel.

Sustainability that affects the level of innovation of the enterprise is specific and determines the accordance of enterprise activity to the existent norms in relation to ecological safety, so-called "ecological friendliness" of enterprise resulting efficient use of natural resources and the amounts of emissions of pollutants and waste. Natural and climatic, ecological, political, legal, productive factors directly influence this characteristic innovation of enterprises, indirectly - financial, technological and economic factors.

Reliability and activity, these characteristics are influenced by society and are the result of imagination or vision of society that makes demands on product innovation and on the innovation of the company in general. Therefore, we took to the factors that have direct impact on reliability the scientific, technical, financial, industrial, economic, political, legal, administrative factors, customers and suppliers, to the indirect effects of factors - competition, sustainability and personnel. Such factors directly influence activity: marketing, manufacturing, administrative, political, legal, human factors; mediated are financial, economic, scientific and technical factors.

Sociality is ambiguous and the specific characteristic of this innovation of enterprise. Its duality is evident, as with the development of society demands on living conditions increase: the environment, infrastructure, requiring quality improvements that are the basis of innovation. Innovation and innovativeness of a particular company change the paradigm of society (the transition from unsaturated to saturated market) (Fig. 2).

Social, skilled, financial, economic, political, legal factors have a direct influence on the noted description, and mediated are ecological, natural and climatic, scientific and technical factors and competitors.

CONCLUSIONS

Thus, we introduced the system of external and internal environment factors affecting the innovation of the enterprise, and determined their impact on the main characteristics of innovation. Such grouping of factors will affect the management of enterprise to influence internal factors and factors of microenvironment, and also to take into account the factors of macroenvironment, thus reducing the uncertainty of the environment in order to maintain or improve the existing level of innovativeness of the company.

REFERENCES

1. **Anisimov Yu. P. and Usacheva I. V. 2007.** *Ekonomicheskii rost proizvodstva na osnove innovatsiy* : monografiya, Voronezh : AONO VPO "IMMiF", 270. (in Russian).
2. **Babaev B.D.** *Innovatsyonnost' : faktory tormozhenia / Internet portal: <http://newpoliteconomy.org/publications/articles/169.pdf>* (in Russian).
3. **Belkin V. 2010.** *Innovatsionnaya aktivnost' predpriyatiy : vneshnyaya i vnutrennyaya sreda. Chelovek i trud, Nr 7?* 66-68. (in Russian).
4. **Chernyh A.V. 2006.** *Mehanizm ustoichivogo razvitiya predpriyatiya v period aktivnoi investitsionnoi deyatel'nosti [Tekst] : avtoref. dis PhD on Economics. Belgorod, 21.* (in Russian).
5. **Gorodetskiy D. I. 2011.** *Effektivnoe upravlenie innovatsionnoy aktivnostiyu predpriyatiy — vazhneyshiy faktor tehnologicheskogo obnovleniya promishlennogo proizvodstva. Vestnik Rossiyskogo gosudarstvennogo gumanitarnogo universiteta, Nr 4, 153-165.* (in Russian).
6. **Grigor'eva A. N. and Ivanchenko E. S. and Skripnik E. O. 2013.** *Parametry innovatsionnosti promishlennih predpriyatiy i potentsiala ee razvitiya. Vestnik TOGU, Nr 2 (29), 209-222.* (in Russian).
7. **Kozlov K. K. and Sokolov D. G. and Yudaeva K. V. 2004.** *Innovatsionnaya aktivnost' rossiyskikh firm. Ekonomicheskii zhurnal VShE, Nr 3, 399-419.* (in Russian).
8. **Makarova Y. S. 2012.** *Klassifikatsiya faktorov innovatsionnogo potentsiala reguona. Ekonomika i menedzhment innovatsionnykh tekhnologii, Nr 1 (4).* / Internet portal: <http://ekonomika.snauka.ru/2012/01/319> (in Russian).
9. **Makina S. A. and Maksimova E. N. 2010.** *Analiz faktorov, vliyayuschih na innovatsionnyuyu aktivnost' rossiyskikh predpriyatiy. Audit i finansovyy analiz, Nr 5, 368-372.* (in Russian).
10. **Myasnikova O. V. 2011.** *Innovatsionnyye protsessy i organizatsionno-ekonomicheskiye usloviya ikh aktivizatsii. Sovremennyye tendentsii razvitiya teorii i praktiki upravleniya v Rossii i za rubezhom: sb. dokladov i tezisov III (V) Mezhdunar. nauch.-prakt. konf., Stavropol', 22—23 noyab. 2011 / pod obshch. red. d-ra ekon. nauk, prof. V. N. Parakhinoy [i dr]. Stavropol': OOO «Izdatel'sko-informatsionnyy tsentr«Fabula», 37-39.* (in Russian).
11. **Myasnikova, O. V. and Kadolko A. L. 2013.** *Innovatsionnyy potentsial predpriyatiy i faktory ego aktivizatsii. Innovatsionnyye obrazovatelnyye tekhnologii, Nr 1 (33), 69-75.* (in Russian).
12. **Nikolaev A. I. 2001.** *Innovatsionnoe razvitie i innovatsionnaya kultura. Nauka i naukovedenie, Nr 2, 54—64.* (in Russian).
13. **Opekun E. V. and Hatskevich G. A. 2011.** *Innovatsionnost' predpriyatiya : kriterii i podhody k izmereniyu. Teoreticheskie i prikladnie voprosy ekonomiki : sbornik nauchnykh trudov. Vip. 23 / VPTs "Kievskiy universitet". Kiev, 96-105.* (in Ukrainian)
14. **Parhomenko E. L. and Gerasimov B. I. and Parhomenko L. V. 2005.** *Kachestvo innovatsionnogo produkta; pod nauch. red. d-ra ekon. nauk, prof.*

- B. I. Gerasimova. Tambov : Izd-vo Tamb. gos. tehn. un-ta, 116. (in Russian).
15. **Ryazanov M.A.** Opredeliayushie factory razvitia innovatsionnoi deyatelnosti organizatsii / Internet portal: http://www.mivlgu.ru/site_arch/educational_activities/journal_ec/journal_arch/N4/Ryazanov.pdf (in Russian).
 16. **Shliusarchik B.** 2008. Umovy innivatsiynosti pid-priemstv u suchasnyy rynkoviy ekonomitsi. Ekonomichnyi Visnyk Natsionalnogo guirnychogo universytetu, Nr 4, 85-92. (in Ukrainian)
 17. **Sobchenko N. V. and Kuleshova L. V.** 2011. Faktory, vliyayushchie na innovatsionnuyu deyatelnost' hozyaystvuyuschih sub'ektov. Nauchnyy zhurnal KubGAU, Nr 71 (07). / Internet portal: <http://ej.kubagro.ru/2011/07/pdf/23.pdf> (in Russian).
 18. **Usachiova I. V. and Kuklinov V. A.** 2011. Osnovnye factory, formiruyushchie blagopriyatnyie usloviya dlia razvitiya innovatsionnogo potentsiala predpriyatiya InvestReguion, Nr 3, 64-69. (in Russian).
 19. **Yagolkovsky S.R.** 2010. Psihologuiya innovatsiy: podhody, modeli, protsessy. M., 264. (in Russian).
 20. **Zhits G. I.** 2009. Ob innovatsionnoy aktivnosti i faktorah, opredelyayuschih ee uroven na promyshlennyih predpriyatiyah. Innovatsionnaya deyatelnost', Nr 7-2, 11-17. (in Russian).