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RISK MANAGEMENT OF INNOVATIVE DEVELOPMENT OF THE ENTERPRISE IN MODERN CONDITIONS

Abstract: in article on the basis of an integrated approach implemented systematization of innovative risks of micro and macro environment and the features of building management in today's dynamic environment. Researched key aspects of the methodology of management of innovative risks. The quantitative and qualitative aspects of the assessment of innovative risks that affect the performance of enterprises. The dynamics and content of the innovative activity of industrial enterprises in Ukraine are analyzed and identified the factors constraining their innovation activity.

Keywords: risk, innovative risk, risk management, risk factors, industrial enterprises.

JEL Classification: G32, O32.

Introduction

Modern economic development has a fairly high degree of dynamism and instability, which requires companies active innovation but, at the same time, significantly increases the level of riskiness of their activities. Especially actual this problem is for industrial enterprises, the performance of which determines the level of innovativeness and competitiveness of the national economy as a whole, the quality of the produced social product on the basis of innovation. The existence of uncertainties in the external and internal conditions of realization of innovative processes

at the industrial enterprises causes of innovative risks. These causes are risk factors that should act as the main objects of analysis and prevention of the risks of innovation.

Identification of the main factors of innovative risks and to develop action sequences for their efficient elimination should be one of the priorities in the formation of the system of management of innovative development of industrial enterprises. Given this, the special urgency of the problem of research of risk of innovative activity of industrial enterprises and management.

Brief Literature Review

The works of leading foreign and domestic scientists and experts in the field of economy (such as V.G. Andriichuk (2006), L.S. Kobylitskiy, I. V. Balabanov (1996), I.A. Blank (2004), F. H. Knight (2003), V. Zakharchenko, M. Damaskin (2015), Dr David Hillson (2000, 2001, 2010) and others) are dedicated to the problems in the study of innovation risks at enterprises. In the works of these authors the analysis of the different innovation risks, basic approaches to managing, developing methodological foundations for modelling and ways of minimization of risks. A variety of tools and methods of risk management such as analysis of the criticality of the project, creating added value, risk matrix, an online database for the systematization of risks etc. have been widely discussed in the literature (Bstieler, 2005; D. Cooper, Gray, Raymond & Walker, 2005; Hillson, 2000, 2001, 2010; Jaofari, 2003; Kalman, 2006) and became the basis of their own policies of management of innovation risk of enterprises and the use of adequate procedures and tools to manage them with consideration for the uniqueness of the situation of their occurrence. Despite the wide study of the risks of the project and practice management (Hillson, 2000, 2010; Jaofari, 2003; Kallman, 2006; Wideman, 1992) not enough coverage of the organizational aspects of this issue given the current enterprise management model; enough appropriate studies on attitudes to risk, risk perception and risk culture within the framework of the risk management methodology D. Hilson (2000).

In the modern methodology of management of innovative risks in the development of the enterprise in modern conditions the basic concept is the risk ("ridsikon, ridsa"— Greek origin) that is associated, primarily, with the advent of danger or uncertainty in any sphere of economic activities or social and economic life (Klymenko S. M., Dubrova O. S., 2005). Under the innovative understand the risk associated with any activities associated with innovative processes, new products, goods, services, transactions, Commerce, implementation of socio-economic and scientific-technical projects (Vasylenko V. O., Shmatko V. G., 2003). In our opinion, the original generalized concept of innovation risk is this: innovation risks associated with the probability of not receiving the desired re-

sult during the implementation of innovative activities using the existing innovative potential of the enterprise.

Results

The development and prosperity of the state's economy is closely linked to effective implementation of innovations and innovative technologies. That is what has caused the emergence of various methodological approaches to the assessment of national models of innovative development of countries and the quality of governance in their development of both macro-and macrolevels in terms of the countries of the world. The list of States published on the index of innovative development in 2015. specifies that in the top five included Switzerland (68,2), Sweden (64,8), Singapore (63,5), Finland (61,8) and the UK (61,2). Ukraine ranked 63rd place (36,3). The index of innovative development of the shows organizational and operational changes in the economic systems, their ability to develop and use the latest technology, increase human potential, and shows the advantages and disadvantages of systems in relation to innovation policies and practices. In 2017, the international rating of Ukraine's position on the global innovation index increased significantly (50th place among 136 countries).

Among the factors limiting the innovation activity of industrial enterprises in Ukraine are as follows: lack of own funds (83% of respondents), lack of financial assistance from the state (respectively 56%), significant costs innovation PA (55,9%), high economic risks (38.9%) and etc. It is obvious that in Ukraine there are a number of problems hindering the implementation of innovative processes at the enterprise level and at the state level.

One of the main objectives of the study is to identify innovative risks which arise in the process of innovation development at industrial enterprises with a view to their effective management and functioning. When choosing a method of risk identification it should be noted that each of known methods has both advantages and disadvantages, hence the choice of one method while ignoring others does not allow to identify the whole range of existing or possible threats and opportunities (Cooper, D., Grey, S., Raymond, G., & Walker, P., 2005). During the implementation of the innovative activity (at each stage in the development, implementation and use of innovations), there is a likelihood of adverse events or deviations of actual result from planned, which may lead to unplanned losses that arise when investing enterprise funds in production, to the development of new techniques and technologies, by investing in the development of managerial innovations that will not give the desired effect.

The company shall identify the sources of risk, areas of impact, risk cases (including changes in circumstances), their causes and their potential consequences. Therefore, you need to have a clear understanding of

the risks innovative activity of the enterprise, identify the risky situations which can increase the possibility to prevent, exacerbate, reduce the time to achieve goals. It is important to identify the risks associated with missed opportunities. Comprehensive identification of innovative risks is critical, because a risk not identified at this stage will not be included in further analysis (ISO 31000, 2009).

Of an enterprise in the development of innovative activities tend to face problems and hardships due to the instability of the external environment (e.g., variability in demand for products, changing prices, exchange rates, customer requirements, market conditions, competition, inflation etc.), as well as the influence of internal factors. The growing influence of all risk factors makes a significant and every time large uncertainties in the planning and management of the enterprise and requires a quick and adequate response to address them.

In turn, the uncertainty that is manifested in the incompleteness or inaccuracy of the information available in management, can lead to situations of risk. And they are associated with the occurrence during the implementation of the innovative activities of certain events, in some cases, yield losses effect of investment or even bankruptcy of the company, and in other cases, the creation of additional benefits that contribute to the rapid growth of the company. This is confirmed by the study which carried out a consulting company. For example, according to the study of The Standish Group International (the study analyzed 7400 innovative and investment projects), 31% of projects completed or not in time or cost overrun planned financial resources, 53% of the projects failed and its aims are not achieved or modified Only 16% of all projects are successful, completed on time and within budget (The standish group international chaos report, 2012).

When accounting for project risks is important not only the absolute loss or gain, and taking account of their influence on the final result of the project. Consideration of risk in the context of not only the negative impact but also positive impact on the project, to the greatest extent contributes to the successful project management (Hillson, D., February, 2010)

In the framework of innovative projects for each stage of its realization inherent in various types of risks. To evaluate innovation risks in industrial enterprises it is important to highlight the kinds of innovative risks depending on the impact they may have on the enterprise in the course of his work. In particular, a significant impact on the innovation activity of companies can have a so-called risks of micro and macro environment (Balabanov I. T., 1996).

Scientists have identified the following types of innovation risk (Knight F. H., 2003):

- production risks (technical and operational development of the company did not meet the needs of the market, there were problems related to the organization of the production process, the automation equipment is not consistent with competitiveness, there is a shortage of innovative stocks, increased production costs, decreased productivity, there were disruptions in suppliers);

- financial risk (lack of funding for investment and innovation of the project, the insolvency of the enterprise, a wrong calculation of the cost of innovative products, unprofitable cost of innovative products);

- human risks (workers of the enterprise is not able to implement an innovative project, insufficient level of staff, full-time workers unable to master the new equipment and technology, staff turnover, inefficient system of motivation of employees who are involved in the innovation process);

- information risks (lack of necessary information about market situation and trends of innovation development, leakage of sensitive information in the process of concluding agreements with other enterprises or organizations, inadequately assessed existing innovative information on the company, misuse of information resources of the enterprise);

- transfer, technological risks (new technology did not match the internal capabilities of the enterprise, failure by the partner of the terms of the contract of purchase and sale of technology, the obsolescence or low quality of the acquired technology, up of new technologies by competitors or partners, the new technology did not meet the needs of consumers);

- research risks (discrepancy of performed scientific and technical works and services set innovation goals, the low level of patent protection of completed R & d, intellectual property infringement, high costs of basic and applied research).

Innovative development provides business with the opportunity to obtain significant revenues that are in the process of distribution is the source of GDP formation and the budgets of all levels and extrabudgetary funds. Consequences of innovative development of enterprises should be considered as an object of planning and further management and at the level of enterprises and at the level of state bodies (Bilynska U. V., 2014).

On the basis of the state statistics on innovation in industrial enterprises over the past 16 years, the following dynamics was observed (See Table 1).

Management of innovative development should Orient marketing, and through it, innovation, investment and production and distribution activities of industrial enterprises in identifying and making full use of existing and future market opportunities, maintaining a balance of internal and external resources in the development, with the aim of achieving success

at the competition, maximize current and future income (Halchynskiy A., Heiets V., Kinakh A., Semynozhenko V., 2002).

Table 1. Introduction of innovations at industrial enterprises

Year	Specific weight of enterprises which introduced innovation. %	Implemented new technological processes.	Mastered the production of innovative products. names	of them new types of equipment	The specific weight of the sold innovation products in the total industrial. %
2000	14.8	1403	15323	631	9.4
2001	14.3	1421	19484	610	6.8
2002	14.6	1142	22847	520	7.0
2003	11.5	1482	7416	710	5.6
2004	10.0	1727	3978	769	5.8
2005	8.2	1808	3152	657	6.5
2006	10.0	1145	2408	786	6.7
2007	11.5	1419	2526	881	6.7
2008	10.8	1647	2446	758	5.9
2009	10.7	1893	2685	641	4.8
2010	11.5	2043	2408	663	3.8
2011	12.8	2510	3238	897	3.8
2012	13.6	2188	3403	942	3.3
2013	13.6	1576	3138	809	3.3
2014	12.1	1743	3661	1314	2.5
2015	15.2	1217	3136	966	1.4
2016	16.6	3489	4139		

Source: Science and innovation for 2016 - Electronic information Bulletin of the State Statistics Service of Ukraine, 2017

Completely avoid the risks in innovative activity is impossible, but they can be minimized. One of the traditional options minimize innovation risk is the diversification of innovative activities consisting in the distribution of resources and efforts by researchers to perform various, not related to each other for innovative projects. If one of the projects will be unprofitable, others, successful, can cover losses that occur.

In addition, there are certain basic methods of risk reduction (Pavlova D. N., 2011):

- avoidance - simple avoidance of activities or circumstances that contain risk;
- transfer - transfer the risk to another party;
- minimize the use of their own special measures to limit exposure, the creation of special systems of preventing the damage;
- acceptance - responsibility for risk, willingness and ability to cover all the possible losses at the expense of own means.

To implement these methods, you can use such means of protection as the allocation of risk between the project participants; insurance; reserve funds to cover unforeseen expenses.

Qualitative analysis of innovation risk involves the identification of sources and causes, stages and works at which performance is most likely to occur the innovation risk, i.e. the identification of potential areas of innovation risks, identify practical usefulness and possible negative consequences that may arise in the implementation process of innovation. The main task of qualitative analysis, innovative risk - identify factors of innovative risks, and to establish its potential areas (Hillson, D., 2001).

Quantitative analysis of innovative risk comes from the theory of probability, mathematical statistics, theory of operations research. The task of the quantitative analysis of innovation risk - the numerical measurement of the impact of changes factors of project, check on risk and behaviour performance criteria of the project. The main goal is to obtain the necessary information for making management decisions on the feasibility of implementation of innovative activities and protect the enterprise from potential losses (Hryhorieva O., 2008).

Important aspects for formation system management of innovation risk are: the choice of risk management methods and determination of criteria (financial, economic, technical, social, etc.) and scales of their evaluation on character of influence on activity of enterprise; the choice of methods and procedures for the management of innovation processes in order to reduce the impact of potential risks; organization of monitoring of results of management of innovation risks and the improvement of the management system; evaluation of the effectiveness of management activities on reducing or completely eliminate the negative impact of innovation risks on the final results of the company.

Conclusion

Consequently, the implementation of innovative activities in enterprises innovation is accompanied by sure risks napolitanki of which are manufacturing, financial, human, information transfer, technological and scientific. They are characterized by the features of the scope of their occurrence and forms of manifestation, depending on the existing resources of the enterprise. In the formation of the system of management of innovation risk in the enterprise, it is first necessary to identify these risks, determine and evaluate the factors and effects of innovation the risks inherent in each stage of the implementation of the innovation project.

The proposed methodological approach provides a basis for the formation of the effective mechanism of use of innovative potential and manage the risks mainly arise in the innovation process in industrial enterprises. Proposed recommendations to improve the effectiveness of innovation in the enterprise can be the tools for further study of the problem of increase

of efficiency of use of innovative potential of enterprises and its development.

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