INNOVATION STRATEGIES IN GLOBAL ENVIRONMENT

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Abstract- This research is related to global innovation environment. Author discusses different innovation strategies in global environment and its relevance to development of global economy. The importance of global innovations is noticed and benefits from innovation environment are mentioned. The discussion about how does innovations affect global company's development is held.

Keywords- Innovation, Strategy, Global Company.

I. INTRODUCTION

Innovative strategy is the leading functional strategy of a high-tech industrial enterprise. It presupposes the formation of a whole range of measures - on techno-logical improvement of production, changes in the organizational structure of the enterprise, introduction of modern management technologies. In other words, the strategy is a detailed multilateral plan for the integrated achievement of the objectives of the enterprise.

The strategy assumes consistent behavior that allows an enterprise to position itself in the environment, and changes in strategy are a response to changes in external conditions.

Innovation leadership appears to be a new branch of study dealing with new complexities in value realization and the role of innovation in dealing with these. The first scholarly use of the term is uncertain but one such reference originates from a study by Carmeli who examined the importance of innovation leadership in cultivating the strategic fit of the organization with its environment, and enhancing various economic, relationship and product performance outcomes [1]. The results suggest that innovation leadership significantly enhanced firm performance [2]. The study however failed to indicate to which extent the individual leader or a collective leadership had been studied, which limits the value of these insights in studying innovation leadership.

II. INNOVATIONS IN GLOBAL WORLD: THEORETICAL FRAMEWORK

A. Types of innovation strategies

Depending on the specifics of the external and internal environment of the enterprise, innovative strategies can be considered in the directions indicated in Table. 1.

Characteristic of classification	Type	Definition
1. By reaction to the external and internal environment of the enterprise.	The strategy of the technological leader (offensive, pioneer)	It is characterized by constant development of technological product and innovation process
	Strategy follow-up behind the leader (defensive)	It includes innovative development of reactionary character - reaction to changes in external environment, in particular innovations of competitors
2. Depending on the model of the company's conduct in the new market conditions.	Active (technological): - Leadership; - Imitation	Represents a response to what is happening and possible Changes in the external environment through the continuous implementation of technological innovations
	Passive (marketing)	Are connected with focusing of attention of firm on constant marketing innovations
3. Depending on the stage of application of the strategy.	R&D strategies	Associated with the conduct of the company research and development
	Strategies for introducing and adapting innovations	Refers to the system of production renewal, the withdrawal of products to markets, the use of technological advantages
4. Depending on the development of new products (diversification).	Horizontal	The firm expands its scope of activity by producing new products or services within the framework of one industry
	Vertical	The company covers various stages of the production cycle
	Integrative	The brand nomenclature is expanded at the expense of the goods of different branches
5. Depending on the competitive position in the market.	Violent	It is based on a decrease in production costs, which is achieved through the organization of a mass production of relatively inexpensive but quite benign goods
	Patient	It consists in the production of a limited number of highly specialized products of the highest quality, sold at a very high price

	Commutate	It presupposes the most flexible satisfaction of small in terms of volume (local) market needs
	Exploring	Focused on radical innovations
6. Classification depending on the marketing strategy.	Offensive	It is elected only by small enterprises, concentrating efforts on one or several innovative projects
	Protective	Used in the presence of a significant market share that is not occupied by competitors, and the real possibility of obtaining profits, including due to the relatively low level of costs
	Licensed	Characterized by the need to conduct their own R & D for the subsequent more accurate selection of licenses for purchase
	Intermediate	It is based on marketing research, requires high creative activity of marketing services personnel
	The Robber	Assumes a sharp invasion of the manufacturer on the market, which could lead to its reduction
	The strategy of creating a new market	Assumes that in this period the organization is the only manufacturer of a new product

Table 1 Types of innovative strategies

Understanding under the innovation strategy one or another model of the company's behavior under the new market conditions, two groups of strategies can be distinguished: active and passive.
On the basis of already existing classifications, author's types of innovative strategies were developed; in which four types of innovative strategy were identified: aggressive-attack, combat, defensive and licensing. These types of strategies can be combined into one group, as they characterize the process of their implementation.

Aggressive-attack strategy is typical for industrial enterprises, striving for leadership when introducing innovations in a certain market segment. An indispensable condition in this situation is the availability of necessary resources, which al-lows surpassing potential competitors in the innovation and production spheres. In most cases, such a strategy is used in enterprises that function in a rather narrow sector of the production mix.
A large number of innovative products offered for implementation are characteristic of the combat strategy. This strategy is peculiar to the manufacturer, which is oriented to a wide range of consumers and is fairly confident in a high level of superiority over future competitors. However, in conditions when competitors are strong and successfully implement the aggressively-aggressive strategy, the probability of losing the won position is growing. This is typical of enterprises that implement significant technological and logical advances, and use the combat strategy.
Defensive strategy is chosen by the enterprise in the case of an insignificant number of competitors in the market. This strategy is aimed at preserving the position held in the market. The enterprise in this case needs todevelop a system of measures for long-term and short-term competition.

If an enterprise is more strongly in marketing, rather than in research and development (R&D), then it is logical for him to choose a combat strategy. At the same time, we should not forget about the development of the level of scientific and technical potential, since this contributes to a timely response to the innovations of competitors.
With the borrowing strategy, the enterprise acquires a new technology or product from other enterprises. An example in this case is the purchase of a license.
In addition to all of the above, in the literature on strategic and innovative management, there are various variations of the classification of innovation strategies. In a sense, they correspond to the listed methods. It is worth noting that quite often in different sources all.

B. Technological leadership in global environment

The first kind of strategy is also called technological, which is a reaction to changes in the external environment through the continuous introduction of technological innovation. The enterprise, choosing active strategies, re-lies on the use of a new technological idea. Among the active innovation strategies, two types of strategies can be distinguished: leadership and imitation. Their fundamental difference is that if a technology that is embodied in a new product or service is absolutely new to the market, then in this case the firm implements the technology leadership strategy. With imitation strategy, the company uses among the first the technological idea, which is already known on the market.

Passive or marketing innovation strategies are permanent innovations in marketing. The enterprise in this case often chooses an innovative strategy in the sphere of differentiation of the product, while it allocates its absolutely new competitive advantages. The segmentation strategy is based on the continuous search for new segments or entire markets, as well as the use of new methods for attracting buyers of these groups for the market and / or pre-acceptance. When choosing pre-acceptance of passive innovation strategies, the constant innovation of the form and method of marketing products reflect the reaction to changes in external conditions.
When an enterprise chooses a leadership strategy, it implements a policy of non-disruptive introduction of

completely new products to the market. Therefore, the whole spectrum of research and development, as well as production and marketing systems, is aimed at creating a product that would not have any analogues. Enterprises that have chosen a leadership strategy, the main part of investments are directed to R &D - research and development, and these studies are not only applied, but also fundamental. The consequence is the need to create strategic alliances in the field of R & D with other scientific and technical organizations, the creation of venture funds and units within the company. The enterprise's actions when choosing the strategy of "technological leadership" are shown in Figure 8.

Having chosen the strategy of following the leader, the enterprise is in the expectation that the competitive enterprise will release new products to the market, and after that starts producing and selling similar products. One of the main reasons for the success of the strategy of following a leader is the recognition and reputation of the enterprise as a brand, since it allows the novelty to become commercially successful in a short time.

Strategies in general and innovative ones in particular, are aimed at developing and realizing the potential of the enterprise and are seen as a reaction to changing the external environment. Therefore, the diversity of innovative strategies is associated with the existing components of the internal environment of the enterprise (figure 1).

Innovative strategies can be directed:

- to receive new products, technologies and services;
- use of new methods in R & D, production, marketing and management;
- transition to new organizational structures;
- the use of new types of resources and new approaches to the use of traditional resources.



Fig. 1 Formulation of technological leadership

Innovative strategies of industrial enterprises significantly complicate the conditions for the management of the enterprise and projects in particular. To such conditions it is possible to carry:

- increasing the level of uncertainty of results. Is manifested in the addition of difficulties that may be associated with a sharp increase in the level of uncertainty in terms of results, costs, quality and efficiency, which leads to the development of management of innovative risks;
- Increase of investment risks of projects occurs due to the no-visibility of the tasks to be solved, namely, with the addition of an innovative component.

III. INNOVATION ADOPTION

A. Strategy implementation in global environment

The theoretical development of economists, laying the scientific and methodological foundations for the design of competitive industrial structures, is called upon to play a significant role in the solution of the tasks set. This is based on the so-called biological approach to the classification of competitive behavior, pro-posed by the Russian scientist Ramensky [3]. His biological classification was taken as the basis of the scheme of the competitive strategy of enterprises by the Moscow economist. Yudanov [4] and many his followers. They correlated the mechanisms of adaptation of biological species to the environment with the strategies of enterprises in economic markets. In this approach, strategic behavior can be divided into 4 types:

1. Violent is mainly characteristic of large enterprises, which carry out mass production and enter the mass market with own or purchased new products. Such enterprises are ahead of competitors with serial production and scale effect. In Russia they include large complexes of defense and civil industry.
2. Patient based on the adaptation of the enterprise to the narrow segments of the markets through the specialized release of improved or absolutely new products that have unique characteristics.
3. Efficient means that the enterprise enters the market with an absolutely new innovative product and captures a part of the market.
4. Commutative is based on adapting to the level of demand of a specific market, filling in niches that are not occupied by "violent" and "patients". The company in this situation is developing new types of services, resulting from the emergence of new products, technologies, imitation of new products and their introduction to the widest range of customers.

The well-known economist Stevenson VD considers the following types of innovative strategy as the main ones: offensive, defensive, licensed, intermediate, robbery, strategy of creating a new market.

According to statistics [5], [6], the activity to create and implement innovations, despite the high risk, is characterized by high profitability, on average more than 3 times higher than the profit of investments in economically developed countries. Production and commerce related to the development of new science-intensive products are among the main sources of replenishment of national budgets. According to the Ministry of Science of the Russian

Federation, Russia has accumulated intellectual property for 400 billion rubles, 12% of scientists around the world are concentrated, but only 15% of entrepreneurs whose innovative products do not exceed 1.5-2% of the total of the country's exports. The world market of science-intensive products exceeds 2 trillion. dollars per year, and Russia has a chance to raise its rating, strengthening the national innovation sys-tem, since only in this case chances are realized for high quality of growth, resource saving, production efficiency, production of competitively produced products on domestic and world markets.
All economic activities of the entrepreneur are subject to the basic laws of the economy, such as the law of value, the law of money circulation, the law of com-petition.

The law of competition determines that all market participants seek to obtain the most favorable conditions for the production and marketing of goods and services. In this regard, their interests collide. Competition in the economy performs a number of functions, the most important of which are the determination of the market value of goods, the reduction of specific labor to socially necessary, pressure on unprofitable production.

B. Competitiveness of global innovation

Features of competition in the innovation sphere, causing the need for its development:

- competition - the main factor of the enterprise's susceptibility to in-novation;
- competition forces the entrepreneur to constantly seek and find new types of products and services that the market needs;
- competition promotes that entrepreneurs try to master high-quality products at market prices;
- competition stimulates the use of the most effective methods of production.

The entire system of competitiveness factors of an innovation firm can be di-vided into two main groups:

1. The first group of factors is determined by the elements of the company's competitive advantage. This group of internal factors includes various aspects of market activity, reflecting the degree of use of production factors.
2. The second group of factors (external) includes parameters of the socio-economic environment.

In addition to those noted, it is necessary to identify the factors that directly influence the competitiveness of the firm: the useful effect of manufactured goods, the price of consumption of manufactured goods, and the efficiency of production.

The above classification of factors of competitiveness of the innovation firm ensures the adequacy of analysis and the impact of the causes of non-competitiveness of innovation firms.

The main form of competition in the innovation sphere is the scientific and technical superiority of new products, and the main characteristics by which the types of competition in the sphere of innovation can be grouped are: first, the sub-jects of competition (individual and group); secondly, the nature of relations (free, oligopolistic, monopolistic); thirdly, functional purpose (intra-industry, inter-sectoral, regional); fourthly, the methods of action (price and non-price, conscientious and unfair).

Competition stimulates the market of innovations, forming scientific organizations, temporary scientific collectives, universities, research organizations. The main forms of the innovative company's participation in the market of innovations are the availability of a scientific and technical and experimental basis for R & D, the acquisition of licenses for the right to produce products, the purchase of know-how, technology and other intellectual property.
Like the analysis of demand, the study of competitors is carried out in three stages:

- identification of existing and potential competitors;
- analysis of performance indicators and strategies of competitors;
- identification of their strengths and weaknesses.

The choice of the company's strategy of behavior depends on the type of its entrepreneurial activities and market conditions.
The entrepreneurial strategy is a detailed plan for entering the market with innovation and ensuring through its long-term competitive advantages.
P. Drucker [7] identifies four entrepreneurial strategies, the names of which speak for themselves:

- break first and inflict a massive blow;
- attack quickly and unexpectedly;
- to find and seize an economic niche;
- change the economic characteristics of the product, market or industry.

The competitive strategy of innovation depends on the stages of the NTP that are the role of these or those firms. Taking a strategic decision, you need to answer the questions:

- What and in what quantity to produce?
- For whom and when to produce?

In order to answer these questions, the firm's strategy must work out the rules:

1. Research conditions of competitive advantage.
2. Distribution of available resources.
3. Interaction with the markets of factors of production, securities, foreign exchange markets.
4. Formation of an effective price policy.
5. Preventing bankruptcy.

According to N. Musov and V. Nenadyshev [8], two models of entrepreneurship are possible, with

which innovative activity is directly related and on which entrepreneurial behavior on the market depends.

The first model is characterized by the fact that the company seeks to organize work with the expectation of maximum return on resources. In this case, there is a factor inherent in the survival strategy, which does not take into account the concept of growth management or innovation. The strategy of survival is achieved through strict regulation of the structure, short-term planning, and weak regulation of problem situations. At the same time, the effectiveness of innovations falls, the share of the market decreases.

The second model - innovative - offers a search for new ways of development, direction of the economic breakthrough, neutralization of resistance to change, stimulation of innovation activity. Such an aggressive market strategy is provided by creating and maintaining the technological advancing of competitors.

Depending on the position on the market and the claims in this regard, there are different strategies for conducting competition:

1. Offensive strategy characterizes entrepreneurs who produce goods on the market with fundamentally new properties.
2. Defensive strategy - keeping positions in existing markets. The main function is to optimize the "cost-result" ratio in the innovation process.
3. The simulation strategy, most often used in conditions of commercial uncertainty.
4. Leading strategy is used by entrepreneurs who have strong market technological positions.

The choice of a competitive strategy based on the analysis of the studies presented by M. Porter, determines two main points:

1. the structure of the industry in which firms operate;
2. the position that the firm occupies within the industry.

The firm should not only react to changes in the structure of the industry, but also choose the appropriate position to obtain a competitive advantage, characterized by low costs, product differentiation, and high profit margins.

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The type of competitive advantage and the sphere in which it is achieved can be combined, using the model of the five forces according to M. Porter, into the concept of the new strategy.

IV. EVALUATION OF TECHNOLOGICAL INNOVATION IN GLOBAL MARKET (EXAMPLE)

Many theoretical frameworks seek to describe the dynamic process of the implementation of innovations. Little is known, however, about factors related to decisions to adopt innovations and how the likelihood of adoption of innovations can be increased. Using a narrative synthesis approach, this paper compared constructs theorized to be related to adoption of innovations proposed in existing theoretical frameworks in order to identify characteristics likely to increase adoption of innovations. The overall goal was to identify elements across adoption frameworks that are potentially modifiable and, thus, might be employed to improve the adoption of evidence-based practices. The review identified 20 theoretical frameworks that could be grouped into two broad categories: theories that mainly address the adoption process (N = 10) and theories that address adoption within the context of implementation, diffusion, dissemination, and/or sustainability (N = 10). Constructs of leadership, operational size and structure, innovation fit with norms and values, and attitudes/motivation toward innovations each are mentioned in at least half of the theories, though there were no consistent definitions of measures for these constructs. A lack of precise definitions and measurement of constructs suggests further work is needed to increase our understanding of adoption of innovations.

Aarons et al. [9] point out that there are a number of models to “summarize factors at multiple levels of the social and organizational context that potentially influence the process of translating research into effective improvements in practice”. These authors go on to say that many models divide the process of implementation of evidence-based practices (EBPs) into phases and that while there are many common elements in these models they often emphasize different factors. Further, they assert that the implementation and diffusion literature has focused most heavily on the implementation phase of the process with less emphasis on the exploration/adoption phases (also known as pre-implementation) or the maintenance/sustainability phase (also known as post-implementation). The implementation of an EBP or treatment (called EBP in this review) is predicated on the organization’s decision to adopt that EBP. Adoption, the decision to proceed with a full or partial implementation of an EBP, is a complex process and understanding this process may provide insights for the development of strategies to increase the uptake of EBPs [10].

There is limited research on the adoption phase of the implementation process in human service organizations, even though prior to actually

implementing an EBP there has to be a decision to proceed with the adoption of the EBP either fully or partially. Although Tabak et al. synthesized a collection of 61 theoretical frameworks that are necessary for quality dissemination and implementation research, their review did not identify the active ingredients of adoption [11], [12]. Thus, there is a need to identify modifiable factors with the ultimate goal of crafting interventions to improve adoption. Although understanding adoption in regard to its endpoint – implementation - is important, it may overlook the complexity in the adoption process itself and the impact of the adoption process on implementation and eventually sustainability. If successful adoption precedes successful implementation, then there needs to be a focused exploration of adoption theories and constructs. Therefore, the purpose of this review is to: (1) identify key theoretical frameworks that address adoption; and (2) synthesize constructs that are hypothesized to be related to adoption of EBPs into a unifying, overarching theory of adoption of innovations.

This example applies a narrative synthesis approach that incorporates aspects of realist review methods to summarize theories and constructs associated with in-novation adoption. Narrative synthesis is a way of systematically reviewing and synthesizing findings from multiple studies relying primary on the use of words and text to summarize and explain findings. The product of a narrative synthesis is a summary of the current state of knowledge in relation to a particular review question.

CONCLUSION

Note that the innovative development of economic systems is characterized by three interdependent signs:

1) setting the innovative objectives of the enterprise,
2) means to achieve the relevant objectives,
3) a combination of conditions of internal and external environment, which al-lows to constantly support the innovative activity of the enterprise at a high level.

These conditions include the regulatory and legal framework, the constantly updated mechanism for the development of innovative activities, the effective management of it, the availability of resources, the ability of the business entity to organically integrate science, production and the market.

Orientation of the enterprise to an innovative type of activity will inevitably lead to the transformation of all components of the economic system. The strategy of the enterprise will be radically changed. Therefore, the interaction of strategic and innovative activities can be considered an evolution of management systems of economic entities in a situation of rapid changes and unpredictability of environ-mental conditions.

It follows that when making decisions about the introduction of innovations, it is necessary to take into account such strategic factors as the analysis of the external environment, the allocation of resources and the corporate strategy of the enterprise. It is important to remember that during the adoption of strategic decisions the introduction of new technologies is currently one of the determining factors. This is due to the fact that the implementation of the innovation strategy, as a rule, leads to transformations in the activities of the enterprise, and any changes focused on the improvement of any process are innovations.

Thus, at present, innovations determine the company's orientation to long-term development, and, consequently, the company's innovative and strategic activities with the development of the market are fully unified.

Innovation is considered to be activity aimed at obtaining the results of scientific research and carrying out experimental developments that should be realized as a new or improved product demanded by the market, as well as creating a new or improving the existing technological process that will be used in the future production activities of the organization.

It should be remembered that the introduction of technical, organizational and economic innovations causes adequate changes in existing forms and methods of organizing management. This necessitates the continuity of the process of developing managerial innovations and is becoming an increasingly important condition for increasing the efficiency of enterprises' activities.

Innovative activity is one of the forms of managerial activity of managers of an enterprise, taking into account both the influence of the external environment and the change in the Russian market of innovations that occur under the influence of general and specific factors.

Common factors that affect the enterprise's innovation activity include cyclical fluctuations, whose influence on the Russian economy as a result of the process of globalization is constantly increasing. So the rise in prices for Russian food is influenced by the growth of world prices, or the rise in prices for gasoline is the result of rising world oil prices or the growth of world demand raises prices for individual resources.

As a specific factor, the state of the scientific and technological potential of the production sphere, the commercial and political conditions for the implementation of specific products of innovation activity in the market, the activity of the managers themselves, which it is difficult to call innovative, stand out.

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