

Strategy of Innovative Development of Enterprise Structures

Petr Pavlovich Taburchak and Anna Nikolaevna Grodinskaya

Russian Federation, Saint Petersburg Moskovsky Prospect, 26,
Doroshenko Svetlana Yurievna, Belgorod Shukhov State Technological University

Abstract: Current trends of innovative development of enterprise structures are reflected in article. Various innovative strategy from introduction of a new product to organizational innovations are considered. The review of methods of an assessment of efficiency of introductions of innovations and innovative strategy is carried out. The way of definition of an indicator of efficiency of an innovation and method of an assessment of profitability of actions are offered.

Key words: Innovative development • Innovative strategy • Enterprise structures • Corporation • Assessment of efficiency of innovations • Assessment of innovative strategy • Assessment of competitiveness of enterprise structures • Partnership and cooperation

INTRODUCTION

Innovation is integrated into all areas of the enterprise. To better implement the innovation firm must have an innovation strategy.

Now the enterprises develop the various directions of the activity from introduction of new goods and ideas of their positioning before formation of innovative enterprise structures. For successful implementation of similar projects it is necessary to consider all possible factors and risks. Determination of efficiency of introduction of this or that project is an important point in planning of innovative activity.

At any method of determination of efficiency of projects results can be shown by all criteria having essential value for determination of efficiency of activity of firm: profit gain; increase in sales volume; productivity increase; decrease in expenses, etc.

It is obvious that it isn't possible to consider all methods of conducting innovative activity and determination of its efficiency. Today there is a set of methods of determination of efficiency of innovations and are constantly developed new, all of them have the merits and demerits, for various situations and firms various solutions can be proposed.

Therefore, the question of a choice of innovative strategy of development of enterprise structure is very actual.

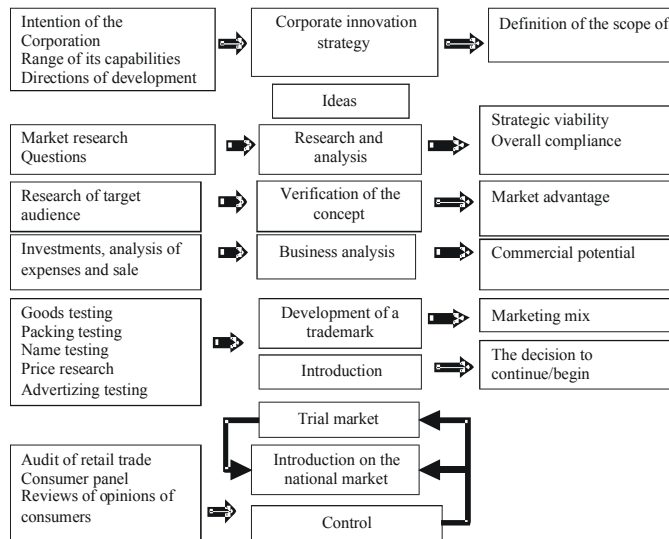
Main Part: Innovations must be included into the general activity of the company according to special programs, because their realization needs enough amount of resources and their effective distribution.

First of all, a corporation needs the protectors of an article of trade taken from the project group, who promote its progress, a sponsor from the number of upper managers of the organization, who provides protectors with definite powers, support and resources for the realization of the project. In the end, it needs the organizer of the project - it must be a representative of the authorities, who will coordinate with the innovation policy. To be effective, an innovation must correspond to the whole innovation strategy, i.e. it must have covered all the steps of management, its scheme is given in the Picture 1.

A corporation must have the general strategy, in which its tasks, opportunities, the sphere of interests at the market and the specialization are formulated.

Innovation corporations must develop perspective directions along with testing the goods by the customers, what guarantees so-called feedback with potential users and gives the opportunity to modify and improve the article which is being projected. The success is almost guaranteed if the next three factors are taken into consideration: the place of the idea in the corporate strategy, the demand for the article and the capability of the corporation to define the effectively of the product.

Corresponding Author: Petr Pavlovich Taburchak, Russian Federation, Saint Petersburg Moskovsky Prospect, 26,
Doroshenko Svetlana Yurievna, Belgorod Shukhov State Technological University.



Pic. 1: Process of development and assessment of corporate efficiency of innovative strategy

For the valuation of the article's attractiveness at the initial stages of its production various techniques can be used.

The idea which has passed preliminary selection is estimated by consumers. Thus users buy not goods and solutions. Therefore it is important to share idea of goods and its positioning. The idea of goods is a new functional service and the concept of positioning is a sphere of a choice of the target market and the favorable offer. So this distinction is decisive in a strategy choice as a new product can have a set of various concepts of positioning. Therefore many of new chemical goods is not new products and new, revolutionary ideas.

During the production of a new article of trade it is necessary to take into account the limited nature of the resources of a corporation. The effectiveness of the new corporation's article is defined according to the valuation of such factors the profitability of the project, the level of commercial risks, the dimension of investments and so on, which gives the characteristics of the effectiveness of the project of planning production at the definite markets.

The approximate data, received during the prognosis of the strategy (the optimistic assessment, pessimistic assessment and average assessment) contain discounted currents of the money of the new business during the first 10 years of the life of "the article". And if the awaited the net specified cost of the project if above zero, so the new project will give profit and the article is of a great interest and is effective for enterprises and corporations.

Formalized valuation of the effectiveness of the investments is defined with the help of different techniques of the valuation of the effectiveness of innovation project.

In those cases when corporation is aimed to inculcate the new kinds of production or in the improvement of technology to identify the priorities in the sphere of innovation the formula of F. Olsen is used. The risk of the research is considered according to Olsen.

The effectiveness is connected with planned realization and the expenses for the research, the elaboration of the article and the brand. The Olsen's formula defines the value of this project and it is equal to the using of the main measure of profitability, which is used in practice considering the probability of the success.

Taking into account different types of risks, efficiency of future results will have the following appearance:

$$I = \frac{P_1 * P_2 * P_3 (\Pi_i * t)}{K}$$

where,

- I – An indicator of future results;
- P_1 – The risk connected with scientific and technical realization;
- P_2 – The risk connected with technological realization at the enterprise;
- P_3 – The risk caused by the market;
- Π_i – Profit on results of an innovation;
- t – Time period;
- To – The capital expenditure necessary for commercial distribution of results of development.

There are also other methods of an assessment of separate factors of uncertainty and risk. For example,

D. Kiefer proceeds from the following factors: R_t - probability of receiving the yielded technical result; R_c - probability of receiving the yielded commercial result; Π_i - expected total income (profit); To - the general costs of the offered project. Thus expected productivity of the project determine by a formula:

$$N = \frac{R_t * R_c * \Pi_i}{V}$$

The given formula is suitable for an assessment of the offers which realization in principle isn't interfaced to big risk and is calculated approximately on 5 years. The option is considered noteworthy, if expected efficiency by more than two.

At any method of determination of efficiency of projects results can be shown by all criterias having essential value for determination of efficiency of activity of firm: profit gain; increase in sales volume; productivity increase; decrease in expenses, etc.

At selection of criterias for planning of innovations it is possible to use a technique offered by G. Date. He recommends to consider the following indicators: profit in a year; invested; sales volume in a year; costs of production in a year both on made and on new production; annual charges on researches and development on made and new production; the annual charges connected with sale, management, etc.

Thus, with a certain degree of reliability it is possible to reveal interrelation between costs of innovations at various strategy of firm, need for the capital, costs of production and the expected income from sales.

There are other methods of evaluation of some uncertainty and risk. Based on G. Kraukh's statements and comparing alternative options of offered indicators, it is possible to enter a performance indicator of an innovation (L), calculated on a formula:

$$L = \frac{N_i \times P_i}{K} \times V \times S$$

where,

N_i - Social, scientific and technical, economic effect of an innovation during its lifecycle (i - an effect type) (rub);

P_i - Probability of success of i that type (unit);

To - Investments up to practical implementation (rub);

V - Availability of the corresponding capacity of corporation (costs of the personnel and scientific and technical base) for creation and application of an innovation (rub);

S - Share of a profit increase of corporation at the expense of innovation application in its activities (unit).

The offered technique will allow rather fully and to give an efficiency evaluation of an investment strategy of corporation precisely.

A certain mechanism of interaction of the entrepreneurial structures (ES) is necessary for more effective implementation of an innovation with third parties.

The competition and cooperation can coexist as they occur in the different planes and between different participants; associations in one spheres help to conduct successfully competitive struggle in others [6]. Nevertheless, despite all benefits of consolidation of activities of the chemical companies in corporation, it is rather difficult to find "compatibility" in activities with other entities, corporations as there is no single approach to forming of the mechanism of interaction between entrepreneurial structures, despite unity of applied resources. Therefore these organizations provide maintenance of the competitive advantages in case of interaction with other entrepreneurial structures, using third-party material, financial, managerial, marketing, etc. resources.

Thus, there is a need of development of an assessment of interaction of entrepreneurial structure with third parties (suppliers, consumers, competitors, etc.), including:

- Assessment of competitiveness of corporation and dynamics of its development (stable, positive, negative);
- Decision making about the directions of competitive development of corporation (own or interaction with other organizations);
- Assessment of "groups of interaction" - competitors, partners (suppliers, the consumers, the providing organizations);
- Assessment of synergy effect from interaction.

The assessment of competitiveness of corporation and dynamics of its development occurs on competitiveness factors according to a rank and an expert evaluation of a factor in case of PS assessment. Determination of dynamics of change of competitiveness can take place as a whole and on its separate system indicators.

Table 1: Comparison of the directions of competitive development

	The isolated development	Development in interaction advantages
	1) Solely made decisions 2) Implementation of own development plans 3) Preserving key factors of success	1) In addition resources 2) Use of competitive advantages 3) Expansion of borders of the market 4) Cost structure optimization between the organizations
Defects	1) Danger of competitors 2) Limitation of spheres of the market 3) Restriction on resources	1) Collective decisions 2) Need of a compromise 3) Spraying of means

Table 2: Preliminary competitor analysis

Distinction signs	Corporations - competitors		
	Large	Averages	Small
Identification	Similar corporations, in the same market, different the sizes and release scale	Similar chemical corporations similar by the size, assortment, sales volume	The corporations competing only by separate types of products.
Assessment of the competitor- a capability	The key competitive benefits	Assessment of determination of a place and situation among competitors	
Purpose corporations	At the expense of accession to the large competitor receipt of additional financial resources or allocation of a segment of the market	Expansion of the markets, use of synergy effect	Use of resources for development of competitive advantages
Essence of interaction	Allocation of the benefits, which development is possible in case of merge (absorption)	Information exchange before legal merge	Creation of the companies "cunning foxes" in case of big corporations
Priority of management decisions	Priority of the large organization	Parity contractual relations	Priority of entrepreneurial structure

Decision making about the directions of competitive development of corporation is determined by a set of factors: specifics of activities of the entrepreneurial structure, resources available at its order, management purposes, etc. Each of these directions possesses the merits and demerits (Table 1).

N case of an assessment of "groups of interaction" three groups of the competing organizations (Table 2) are determined.

The assessment of synergy effect from corporation interaction with other organizations is performed in two directions:

- Assessment of economic effect of decrease in the cost level or increase in sales volume of the interacting entities;
- Assessment of change of competitiveness of corporation.

As a basis for an assessment of economic effect of interaction the methodic of Mareny S.A. is used [10].

As a result of interaction, the new economic structure possessing emergence properties is formed; that is there

is the synergy effect providing excess of effect of joint functioning of the entities over the algebraic amount of effects of their independent activities.

Generally each entity brings the contribution to the common cause and takes out the certain costs connected with cooperation and on the other hand receives additional benefit from consolidation which is created of two components: additional income and decrease in transactional expenses as a result of effect of the corporate structure formed from number of the chemical companies depends on the size of individual indicators of activities of each of them: individual effect, effect from cost reduction and a contribution to considered consolidation. Than more size of additional benefit, especially is rallied and viable considered corporation.

The effect of the corporate structure formed of n of number of the chemical companies depends on the size of individual indicators of activities of each of them: individual effect, effect from cost reduction and a contribution to considered consolidation. Than more size of additional benefit, especially is rallied and viable considered corporation.

The assessment of change of competitiveness of entrepreneurial structure (corporation) is determined in the following sequence:

- Level of competitiveness of entrepreneurial structure, structure of factors, it forming and also the resource pool, supporting a competitiveness factor is calculated.
- Other entity with which the corporation will perform interaction, possesses a number of the resources which part the entity will use together with corporation. Therefore, influence of a mutual exchange by resources on maintenance (development) of due level of the competitive status of considered corporation is estimated.

The assessment of resources shall be carried out as on absolute value and impact on competitiveness level. Therefore each change of resources has the different importance for considered entrepreneurial structure.

- The effect of change of competitiveness for considered entrepreneurial structure is determined.
- As in case of a choice of options of interaction preferable will be option with positive change of size of resource ensuring competitive advantages, level of competitiveness will raise.

Strategy of development shall specify ways of transformation, transition of the chemical company to corporation in the course of interaction with the partners. About strategy of development of the entities such authors wrote, as I. Ansoff, B. Karlof, A. Yu. Yudanov [1, 3].

Though in these works bases of strategic management are opened, but content of separate stages of strategy of development of corporation is insufficiently fully described. With respect thereto it should be noted that the entrepreneurial structure can be guided by development (forming) of the competitive advantages being in the entity and (or) to use external sources of attraction of competitive advantages.

Interaction has a clear boundary of joint activities and is expressed in the form of the conclusion of the relevant agreements.

The contract (agreement) fixes the reached agreements between two and more entities on cooperation in which they orally or in writing express intentions to do

or not to do something. The agreement comes into force, after determination by the parties [11] subjects of cooperation, the rights and obligations of the Parties and conditions under which works (or doesn't work) the agreement.

The reason of emergence of the integrated communications is explained by that in case of consolidation of efforts of the entities for implementation of collateral actions, they are interested in increase of extent of influence at each other. As a result there is a need for mutual participation for the equities and resources that gives stability to communications.

Deepening of inter-company cooperation objectively leads to new level of interaction - to partnership and inter-company communications evolutionarily develop into partnership [9]. The partnership has the laws of existence and development.

The partnership was considered, first of all, as the legal form of the organization of joint activities. However, the partnership acts as the difficult (integrated) phenomenon which is in aggregate determined by system of the signs identifying partnership: in a form of business interaction; according to the management concept business; on strategy of economic development.

In modern interpretation the partnership is as a form of inter-company interaction. However, remaining uncertainty when using the concept "partnership" conducts to a blurriness of results of researches in the field of the inter-company relations, to misstatement of strategy of development of the entities, corporations. Today there is no accurate side in understanding of partnership and cooperation. The partnership arises in case of development (expansion and deepening) interrelations.

For a choice of strategy of development of the entity it is important to determine a place which it takes in the region in interaction with other entities.

The first direction is oriented to the interaction organization with similar on the sphere and a type of activity the entities. Benefits of such interaction consist in uniform distribution of management and responsibility and equivalent interest from the interacting organizations. Shortcomings are: possible shortage of resources; insufficiency of floor spaces and other property.

The second direction is oriented to the interaction organization with larger entrepreneurial structures - corporations and its advantage is use of competitive advantages of corporation.

There are following methods of an assessment of the organization of interaction of the entities: type definition of the organization and its motives; forming of "interaction card"; efficiency evaluation of an organizational component of interaction.

In modern times the importance of the effectiveness of the strategic management of Russian corporations has risen sharply as a result of the process of business concentration, mergers and acquisitions. As a result at the forefront of effective decision making. Therefore in modern times the main result of the establishment of a corporation shall be to consider synergies because today 90% of the chemical corporations are institutional and synergy - a measure of the emergence of the implementation of the projects.

Corporation through the optimal selection of products and markets can gain more market share due to low prices, spend more on research and development than its competitors, to maximize the rate of return on investment and thus to attract investors. That is the use of synergies - is the foundation of success.

The types of synergies:

- The synergy of sales can take place when the range consists of interrelated products and they are sold together in one channel of distribution, management of this process comes from a single center. This increases the efficiency of the sales staff.
- Operational synergies - as a result of more efficient use of assets and personnel, allocation of overheads and other methods of organization of industrial production.
- Investment synergy manifested in the sharing of production capacity, the total reserves of raw materials and etc.

However if the company goes into the industry in which the internal environment is significantly different from the one in which there is a corporation or the problems of the new branch are unknown the positive synergy will not only low, but also negative. Thus synergies can be both positive and negative.

The synergistic effect is seen either as a reduction of costs in the joint conduct of operations or as an increase in profits for a given level of investment.

In the first case the entry into a new market segment of inventory takes place in two stages: the beginning and

the subsequent maintenance activities. In the initial phase are added to the cost of the implicit one-time charges of risk associated with the transition into a new business area. When entering the market with low demand react quickly is less important than a stable slow-growing market. Therefore initially there is a synergy in the form of monetary savings corporation and time savings in the form in which the company becomes competitive.

When you doing business as there are two major opportunities for synergy. First - this is the scale effect - reducing the cost per unit of production by increasing the volume of production, the second possibility of synergism is the effect on the distribution of overhead costs across multiple products.

In principle, all synergistic effects can be described by four variables: an increase in profits in monetary terms, lower operating costs, lower investment requirements and a reduction in the period of changes in these variables. Methods of assessing synergies, which summarizes all the conditions mentioned above are designed by I. Ansoff. The proposed definition of corporate synergy in strategic management will significantly improve the efficiency of the formation of corporations and to ensure their competitiveness in the global market.

Determination of the effectiveness of organizational innovation that is the methods of formation of large corporate structures through mergers and acquisitions for Russian entrepreneurs is a vital issue. Integrated formation were actually the only way to accumulate financial flows needed for investment, innovation and redistribution of ownership through mergers and acquisitions. Therefore the recognition of big business as the most important subject of national modernization and global competitiveness - this is the most important link in the economic policies of the state. Mergers and acquisitions provide the resources with which the company can grow quickly. Achieving synergies are associated with the risk.

One of the most commonly used methods for determining the effectiveness of mergers and acquisitions that are used to select the strategy of innovative development is the Gordon model to evaluate stocks based on dividend payments. This model determines the value of the common shares on the basis of the present value of dividends. The disadvantage of the Gordon model is that it considers only a small number of factors. They preferred the definition of dividends as a residual after the formation of the capital budget and the

distribution of the remaining profit. The most important factor is the liquidity of the securities market development as judged by the number of shares outstanding the number participating in the auction. The greater the risk the higher the discount rate and the lower the share price.

A similar effect on the price per share, has a concentration in the hands of corporations. The greater the concentration of the securities in the hands of the objects of opposing the absorption, the more expensive it can be. Valuation of shares for the purposes of mergers and acquisitions should focus on profits rather than on dividends as income reflects the willingness to pay by the buyer.

In 2008-2012 increased liquidity of the shares traded on the stock exchange. If last year's list of "Capitalization-200" liquidity category A (regularly traded shares turnover on which significant) was awarded 52 shares of domestic companies that are in this category A included 85 securities and their share in the total market capitalization was 83%. Moreover market liquidity growth occurred due to lower number of stock shares traded irregularly (liquidity category B and C in the list).

Earnings estimates for corporations is defined in four ways: EBITDA - earnings before interest, taxes and depreciation and amortization; EBIT - earnings before interest and taxes, EBT - earnings before income taxes; income at the disposal of the enterprise - profit after all operating expenses, depreciation, interest, tax and compensation of owners. Using different methods two identical corporations can vary greatly in return.

Free cash flow is defined as a corporation profit after tax. In an alternative definition of cash flow this Michael Jensen: "Free cash flow is the cash flow in excess of what is needed to fund all projects that have positive net present value (NPV), discounted at the appropriate cost of capital."

Price-to-free cash flow instead of the commonly used cost-effectiveness ratio (P/E) gives a different picture of the investment value of the corporation.

M. Jensen argues that many of the mergers lead to "... a minor benefits or even destroying value." Industries that have large free cash flows and limited opportunities for growth are considered good candidates for purchase with credit financing (LBO). This is confirmed by a study by Tim Oplera and Sheridan Titman against 180 companies that have passed LBO in 1980 - 1990. They found that companies that have passed LBO had a relatively high cash flow and poor investment

opportunities (Tobin's q expressed low). These results confirm the findings of Kenneth and Lena Ann Paulsen, who investigated the free cash flow. They found that the presence of free cash flow does LBO real, but the company can service its debt obligations to repurchase.

The theory of acquisitions based on free cash flow suggests that managers are able to use them for their own purposes.

Given the negative aspects in the assessment of the shares, it is proposed to use for these purposes in their profitability index (kvi), which consists of dividends and changes in the market value of shares:

$$kvi = \frac{D_i + P_i - P_{i-1}}{P_{i-1}}$$

where,

Di - Dividend for the period i;

Pi - The share price at the end of the year i.

Of equal measure by year revenue growth shares is determined by its value:

$$P = kv \sum_{i=1}^n \frac{P_0(1+kv)^i}{(1+kc)^i}$$

where

P0 - the price of the shares at the initial time of purchase;

kvi - returns for the period i;

kc - cost of capital of the company.

Growth rate of return is determined for the period. The average annual growth rate can be defined as the geometric mean:

$$\overline{kv} = \sqrt[n]{kv_1 \times kv_2 \times \dots \times kv_n}$$

The application of this approach can be used as a discount rate for the valuation of the target company cost of capital (kc).

Determining the price of capital involves identifying sources of capital corporation - debt, preferred stock and equity, which are reduced to a single measure of the Weight Average Cost of Capital (WACC).

CONCLUSIONS

A study in this article, the study allows us to formulate the following conclusions:

- Innovation should be integrated into the overall activities of the corporation under special programs. The corporation should have a common strategy which formulates its challenges, opportunities, areas of interest and specialization in the market.
- Existing methods for evaluating the effectiveness of innovative strategies are diverse, but they are not universal.
- The formation of business organizations is an effective way of doing business, but it can have both positive and negative sides.

REFERENCES

1. Ansoff, I., 2009. = Strategic Management: Classical publishing / Translation from English A.N.Petrova.- Saint Petersburg, pp: 344.
2. Innovations in business Harvard Business Review on the Innovative Enterprise / (HBR) Authors staff. – Alpina Publisher, 2007. pp: 189.
3. Karlof, B., 1991. = Business strategy: A Guide to Concepts and Models: Concepts, content, symbols/ Translation from English O.D. Gorina; Economics, pp: 239.
4. Michael Hammer, 2011. Re-engineering of corporation. Manifest of revolution in business / Michael Hammer, James Champy. Mann, Ivanov and Ferber, 2011. pp: 288.
5. Modernization of economics on the basis of technological innovations / A.N. Asaul, B.M. Karpov, V.B. Perevyazkin, M.K. Starovoytov, 2008., pp: 606.
6. Molochnikov, N.R., 2008. The development of multilevel competitiveness / N.R. Molochnikov – Publishing House of Polytechnic University.
7. Piter Skarzinsky. Innovations as the basis of business. Recommendations for companies, planning the innovation strategies / Piter Skarzinsky, Rowen Gibson Harvard Business Review Press, 2008.
8. Rubin Yu B., 2004. Theory and practice of business competition. Moscow finance-industry academy. M., pp: 572.
9. Analysis of forms development of intercompany relationships / M.A. Gosudarev. // Economic Analysis: Theory and Practice, 2: 38-48.
10. Methods of financial analysis of cooperation interactions of small industry enterprises / M.A. Marenyy // Audit and Finance Analysis, 2001, pp: 3.
11. Development of small business / I. Grachev // Money and Credit, 2001., 1: 3-4.
13. Batkovsky, A.M., 0000. Common characteristics of innovation activity of economic systems <http://www.creativeconomy.ru/articles/15692/>.
14. Borisova, I.S., 0000. The basis of innovation development of enterprises И.С. <http://cyberleninka.ru/article/n/osnovy-innovatsionnogo-razvitiya-predpriyatiy>.
15. Rodionova, E.V., 0000. Innovation strategies of enterprises http://www.company-nm.com/files/2011_jul/36-38.pdf.
16. Damian Hine. Innovative Methodologies in Enterprise Research / Damian Hine, David Carson. - Edward Elgar Publishing, 2007, pp: 323.
17. Latif Al-Hakim, 2010. Innovation in Business and Enterprise: Technologies and Frameworks /Latif Al-Hakim (University of Southern Queensland, Australia) and Chen Jin (Zhejiang University, China), pp: 374.