MANAGEMENT OF AN INNOVATIVE PROJECT IN THE POLYMER INDUSTRY OF THE REGION UNDER THE CONDITIONS OF AN INVESTMENT CRISIS

Igor L. Beilin
Institute of Management, Economics and Finance, Kazan Federal University, 8 Kremlyovskaya street Kazan 420008, Russian Federation
Vadim V. Khomenko
Institute of Management, Economics and Finance, Kazan Federal University, 8 Kremlyovskaya street Kazan 420008, Russian Federation

Abstract. Innovative activity is the activity directed on search and realization of innovations with a view of expansion of assortment and improvement of quality of production, perfection of technology and the manufacture organization. Innovative activities include: Identification of problems of the enterprise; implementation of the innovation process; organization of innovation activities. The main prerequisite for the innovative activity of the enterprise is that everything that exists is aging. Therefore, it is necessary to systematically discard all that has worn out, become obsolete, become a brake on the way to progress, and also take into account errors, failures and miscalculations. To this end, enterprises periodically need to certify products, technologies and jobs, analyze the market and distribution channels. In other words, an original roentgenogram of all aspects of the enterprise's activities should be conducted. This is not just a diagnosis of the production and economic activities of the enterprise, its products, markets, etc. On its basis, leaders should first think about how to make their products (services) morally obsolete, and not wait until it is done by competitors. And this, in turn, will encourage enterprises to innovate. Practice shows: nothing forces the leader to concentrate on the innovative idea, as the realization that the product will be obsolete in the near future..

Keywords: management, innovative project, regional economy, investment crisis.

1. Introduction

There are seven sources of such ideas. Let's list the internal sources; they arise within the enterprise or industry. These include:

1. An unexpected event (for an enterprise or industry) - success, failure, an external event;
2. Not congruence - the discrepancy between reality (what it really is) and our ideas about it;
3. Innovations based on the needs of the process;
4. Sudden changes in the structure of the industry or market.

The next three sources of innovation are external, since they have their origin outside the enterprise or industry. It:

1. demographic changes;
2. changes in perceptions, moods and values;
3. New knowledge (both scientific and unscientific).

Analysis of these situations when considering a particular type of change allows us to establish the nature of the innovative solution. In any case, you can always get answers to the following questions. What happens if we use the change that has been created? Where can this lead the enterprise? What needs to be done to make the change a source of development?

At the same time, of the seven sources of change, the most important are the third and seventh, since they are of the most radical nature.

2. Analytical review

The change caused by the need for the process is much more important than the first two. The old adage says: "necessity is the mother of invention." In this case, the change is based on the needs of practice, life. However, the implementation of this type of change implies the need to understand that:

it is not enough to feel the need, it is important to know and understand its essence, otherwise it is impossible to find its solution;

it is not always possible to satisfy the need, in which case only a solution of some part remains.

In any case, when solving this type of problem it is necessary to answer the following questions [1-3]. Do we understand what and in what changes the process needs? Are the necessary knowledge available or need to be obtained? Do our decisions correspond to the habits, traditions and target orientations of potential consumers?

The most significant changes, one can say radical, occur on the basis of "new knowledge". Innovations based on new knowledge (discoveries), as a rule, are difficult to control. This is due to a number of circumstances [4]. First of all, there is usually a big gap between the emergence of new knowledge and its technological use, and secondly, it takes a long time before the new technology materializes in a new product, process or service [5].

In this regard, innovations based on new knowledge require:

careful analysis of all necessary factors;

clear understanding of the goal pursued, i. a clear strategic orientation is needed;

organization of entrepreneurial management, since financial and managerial flexibility and a focus on the market are needed here.

An innovation based on new knowledge must "mature" and be perceived by society. Only in this case it will bring success.

What is being done to introduce new technologies:

1. Purposeful systematic innovative activity requires a continuous analysis of the capabilities of the above sources of innovation.

2. Innovation should correspond to the needs, desires, habits of people who will use it. Innovation should be simple and have an accurate goal. The greatest praise of innovation is: "Look, how simple it all is! How did I not think of it before?"

3. Implement innovation more effectively, with little money and a small number of people, limited risk. Otherwise, there is almost always not enough time and money for the many improvements that innovation needs.

4. Effective innovation should be aimed at leadership in a limited market, in its niche.

Innovation is a work that requires knowledge, ingenuity, talent. It is noted that innovators mainly work in only one area.

Finally, innovation means changes in the economy, industry, society, in the behavior of buyers, producers, workers. Therefore, it should always be guided by the market, guided by its needs.

3. Results

The innovative way of development requires the intensification of industrial activity at the level of economic entities - this is the creation of appropriate scientific and technological developments, investments [6-9]. To start introducing innovations in the industrial environment, the following factors must be taken into account:

consideration of innovation as an ongoing process;

emphasize the controllability of the process, i.e. the ability to exert influence on it;

the existence of common dependencies between certain factors and the conditions of innovation at the level of an industrial enterprise.

The main source of financing innovation in industrial enterprises are financial resources. In this case, the backbone of the financial and economic problem is the lack of own funds [10]. The deficit of own funds, which are the main source of financing for innovations, leads to the problem of the development of the production and technological base. However, one of the main problems of introducing innovations is not the financial and economic problem, but the management of innovation processes, the lack of ability to organize their development and implementation [11]. Qualification of the manager becomes the major factor of maintenance of efficiency of innovative process. Correctly chosen structure allows to provide the enterprise full employment of the personnel, flexibility in the use of resources and compliance with market requirements [12]. Thus, it is necessary to reorganize the management system of the company's innovation activities. Manage this activity is much more complicated than the current, repetitive production. It is necessary to improve the model of organization of innovation activity [13-21]. For this, an industrial enterprise needs to go through several stages:

selection and implementation of an innovative enterprise strategy, which is based on material, financial, personnel, information and other resources;

integrated approach for an industrial enterprise;

risk distribution requires the formation of an innovative portfolio, the creation of an innovative program of the enterprise and the constant redistribution of funds from completed innovative projects to those being developed.

As a result of the developed portfolio management measures of six innovative projects in the polymer industry [22-26], it was possible to rank the combinations of projects with the best values of net discounted income, taking into account the time factor and inflation.

$$NPV = \sum_{k=1}^{n} \frac{P_k}{(1+r)^k} - \sum_{j=1}^{m} \frac{IC_j}{(1+i)^j}$$

The regional crisis of investing in innovative projects is associated with an increase in external and internal political and economic risks and uncertainties. In addition, the continuous influence on the venture business in the polymer industry of the region has traditional risks: commercial, conjuncture, raw materials and industry. Managing the portfolio of innovative polymer projects, taking into account the correct evaluation of their impact, has made it possible to identify the most promising combinations of projects. The redistribution of investment ensured a higher net discounted maximum and total income (Figure 1.2).

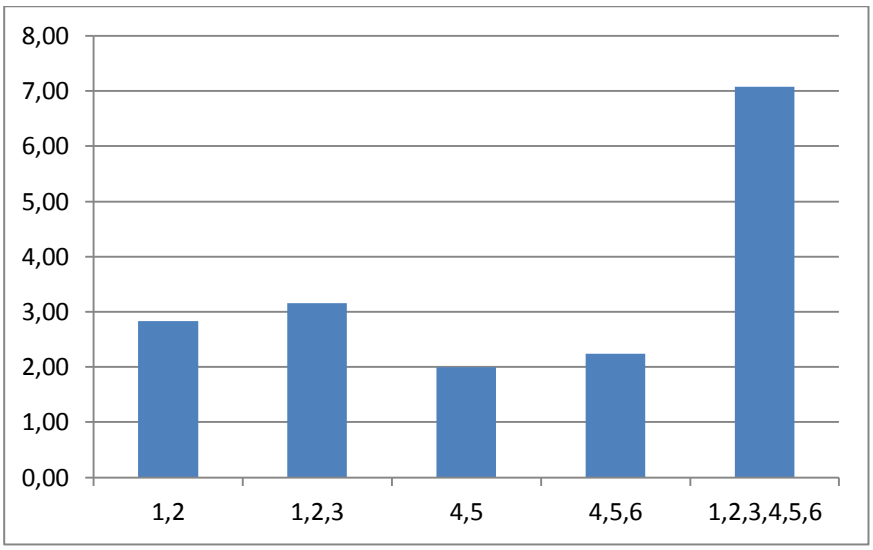

Fig. 1. Net discounted revenue from combinations of six innovative polymer projects prior to management activities. Combinations of projects are arranged in the order of their investment.

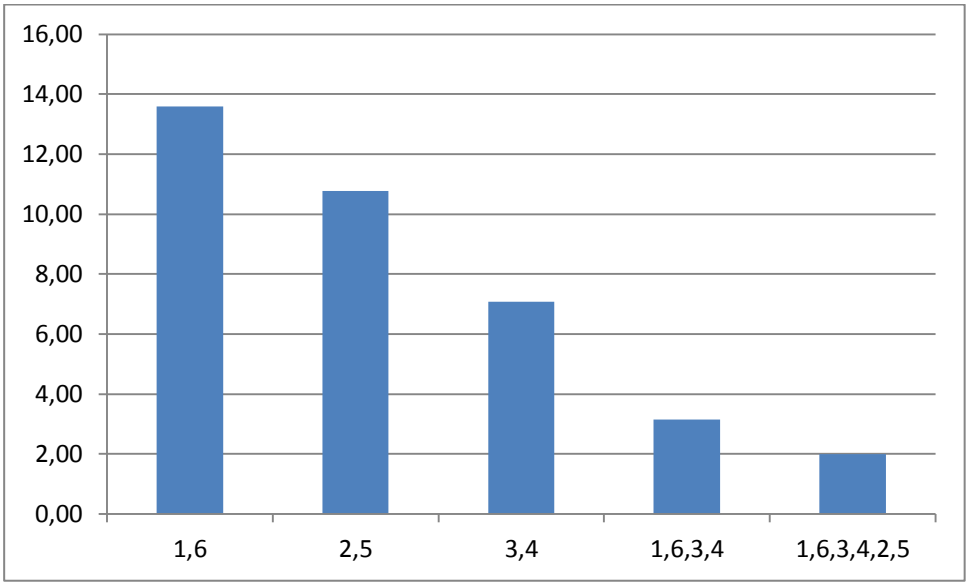

Fig. 2. Net discounted revenue from combinations of six innovative polymer projects after management actions. Combinations of projects are arranged in the order of their investment.

4. Conclusions

To introduce innovations in industrial enterprises, methods for determining the socio-economic efficiency of new equipment, managing scientific and technological progress and efficiency have been developed [27-30]. Innovative activity in industry covers the implementation of innovative processes, the result of which are industrial innovations in the form of new technologies, technology, materials, which are the basis of scientific and technological progress in enterprises. At the regional level, innovations determine the economic and social behavior of citizens, the competitiveness of the region, the development of the industrial sector.

5. Summary

In the context of a systemic production crisis, the development of innovations at enterprises is especially important, it should cover various areas of activity related to innovation cycles, combining research methods, technologies and enterprise management system. Foreign experience in introducing innovations in manufacturing enterprises should be actively applied in Russian conditions with respect to independent subjects of the economy, factors and driving forces of the innovation process on the part of companies. At the same time, innovation processes and their impact on the state of the economy and society are characterized by significant differences.

6. Acknowledgments

The work is carried out according to the Russian Government Program of Competitive Growth of Kazan Federal University.

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