

PAPER • OPEN ACCESS

A methodology for assessing the prospects of modifying business strategy of an enterprise in the external environment

To cite this article: O I Antamoshkina and O V Zinina 2019 *IOP Conf. Ser.: Mater. Sci. Eng.* **537** 042023

View the [article online](#) for updates and enhancements.



IOP | ebooks™

Bringing you innovative digital publishing with leading voices to create your essential collection of books in STEM research.

Start exploring the **collection** - download the first chapter of every title for free.

A methodology for assessing the prospects of modifying business strategy of an enterprise in the external environment

O I Antamoshkina and O V Zinina

Krasnoyarsk State Agrarian University, 90, Mira ave., Krasnoyarsk, Russia

E-mail: zinnia.olya@bk.ru

Abstract. This paper proposes a method of assessing the prospects of modifying the Business strategy of an enterprise within its market making use of economic data. Using the assessment of the prospects of innovative development allows the company not only to prevent the risk of low market returns from innovation, but also to avoid unnecessary research costs. The technique allows one to answer questions about how a new technology will affect the important indicators of the enterprise: revenue, profits, assets, and how it will affect the innovative development of the enterprise as a whole.

1. Introduction

The assessment of the impact for the involvement of new technologies in business turnover is based on a comparison of economic indicators in the current and planning periods. When assessing the prospects for the introduction of new technologies, economic data for the implementation of the innovation strategy of whole enterprise can be taken as a basis for such a comparison.

2. Factors to choose a new technology

The process of selecting and assessing a strategy for the technological development of production is informed by a number of factors and the technological capabilities of the enterprise. The classification of factors determining the choice of strategy is shown in figure 1.

Further factors that determine the choice of a technological development strategy allow one to take into account the level of current development of a particular enterprise in order to identify risks of low innovation potential and the necessary investment costs for the implementation of the new technological development. This strategy also confirms whether there are sufficient available resources to implement this move.

These factors represent an assessment of available and required costs for technological development of enterprises involved in mechanical engineering and manufacturing.

The creation of an integrated management system based on modern approaches and technologies is the most important strategic task of any manufacturing enterprise. This can only be successfully achieved through an overall development strategy.

The strategic goal of Russian manufacturing enterprises is to gain a strong competitive position in the domestic and foreign markets in a highly competitive environment.

Modern market conditions are characterized by the variability of the political and economic situation, intense competition and technological races. In such circumstances, the achievement of the strategic



goal depends entirely on the ability of the enterprise to respond quickly to changes and challenges of the external environment.

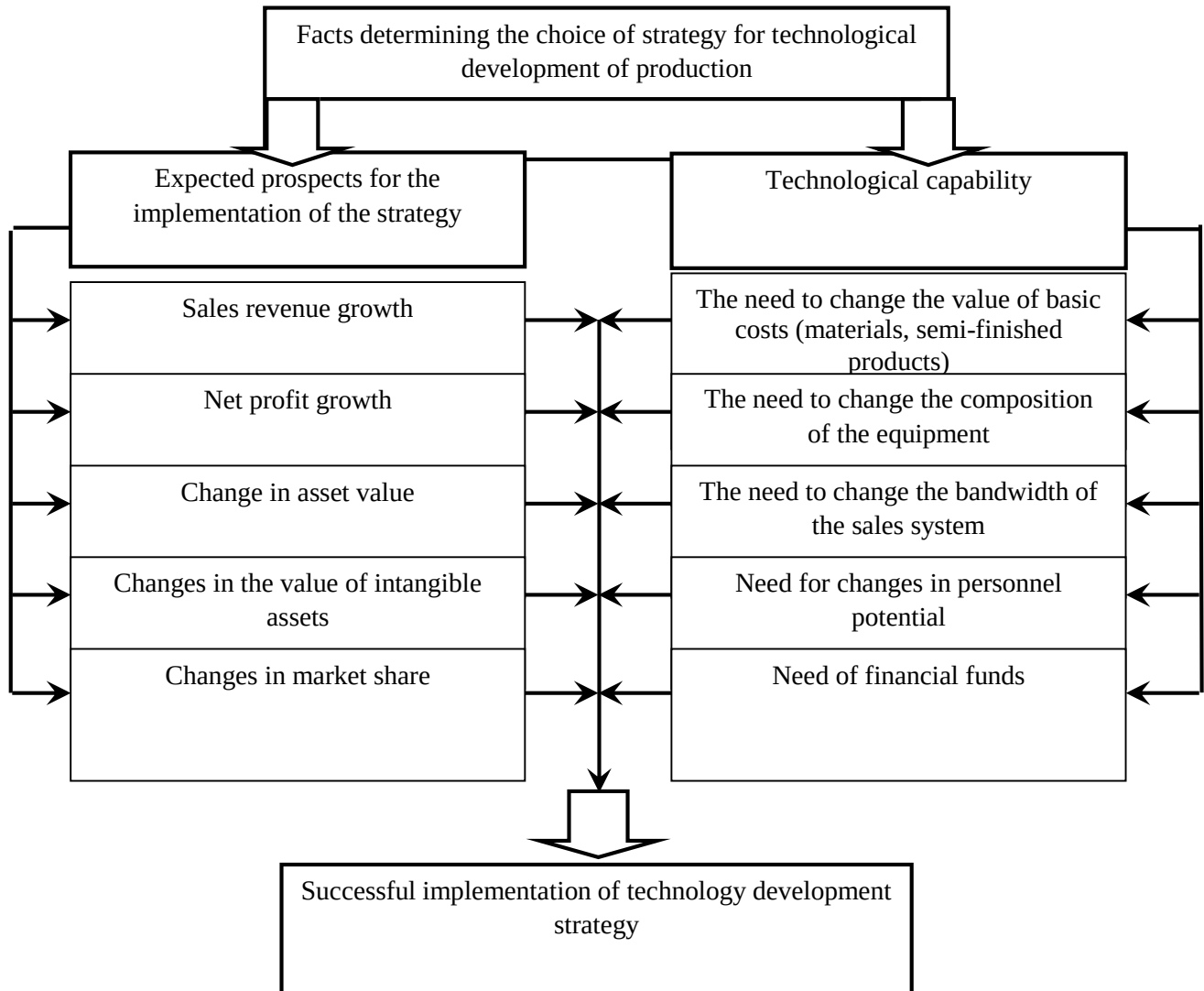


Figure 1. Factors for the technological development of production.

Strategy for maintaining the manufacturing enterprise can be addresses as follows:

1. The prospects for the development of the enterprise entirely depend on the ability to create and bring new products to market.
2. A new product must be created and put into production within five to six years.
3. Within one and a half to two years, the restructuring of activities should be carried out, ensuring a reduction in the time frame in creating a new product.

The most important competitive advantage of the enterprise will be an ability to quickly develop and bring to market new products and services of high quality at affordable prices, customized for a particular customer.

3. Methodology based on the results

To assess the risk of low market returns in the implementation of improved technologies, it is advisable to carry out a comparative analysis of the new improved product based on the calculation of the following group of coefficients:

- the profitability of technological development on the basis of the growth of sales revenues. Determined by comparing the sales revenue of the company before and after appropriate development;
- planned revenue from sales after implementation of the technological innovation;
- planned net (retained) profit of the enterprise after the implementation of the technological development project
- the profitability of the technological development project based on the growth of assets of the company. Determined by comparing the value of the company's assets before and after the project
- the planned value of the company's assets after the implementation of the technological development project;
- cash assets of the enterprise after the implementation of the technological development project;
- the planned value of intangible assets of the enterprise after the implementation of the technological development project;
- profitability indicator of technological development strategies based on the growth factor of the company's market share. Determined by comparing the company's market share before and after the implementation of the technological development project, %;
- the planned volume of sales by the enterprise in the market after the implementation of the project of technological development, RUB.;
- planned labor costs after the implementation of the production development project.

4. Results

The results obtained from the calculation of these indicators can be both optimistic and pessimistic. In order to select the optimal variant of the innovation development strategy and make a final decision on the prospects of a particular technology, it is possible to be guided by the comparative dynamics of these indicators. In the economic literature, in particular, the following optimal ratio is given:

$$\Delta\Pi > \Delta B > \Delta A > 100,$$

where $\Delta\Pi$ - the rate of change of profit, %;
 ΔB - rate of change in revenue from sales of products (works, services), %;
 ΔA - rate of change of assets (property) of the enterprise, %.

The above ratio is called the "Golden rule of the enterprise economy" [1]: profit should increase at a higher rate than the volume of sales and property of the enterprise. This means that production and distribution costs should be reduced and the resources of the enterprise used more efficiently. Taking into account the presented coefficients, it is possible to continue the chain of relations:

$$\Delta\Pi > \Delta B > \Delta A > \Delta H > \Delta N > \Delta O > 100,$$

where ΔH - rate of change in the structure of intangible assets of the enterprise, %;
 ΔN - the rate of change in the company's profit share in the market, %;
 ΔO - the rate of change in the remuneration of personnel of the enterprise, %.

The changed ratio implies the following meaning: the profit of the enterprise should increase at a higher rate than the volume of sales and property of the enterprise, due to the comparative growth of intangible assets, the share of the enterprise in the market and due to the motivation of human resources based on the growth of their remuneration.

5 Summary

Assessing this approach as a method of analyzing the effectiveness of developmental strategies, it should be noted that it is a functional assessment of possible economic changes in the activities of the enterprise associated with the implementation of the strategy of innovative development, including production,

finances, organizational structure, R & D, marketing and personnel management. The technique allows one to answer questions about how the selected way of implementing a new technology will affect the revenue profits of the enterprise and asset status, changes in R & D, the share of the enterprise market and staff wages.

This approach is necessary to prove whether the enterprise has enough production factors for the effective implementation of the strategy of technological development and achievement of strategic goals.

References

- [1] Rac M V and Oizerman M T 1991 Thinking about innovations *Man and nature* **4(6)**