

**New trends in the economic  
systems management in the  
context of modern global  
challenges**

**Collective monograph**  
**scientific edited by M. Bezpartochnyi**

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**ASSESSMENT  
COMPETITIVENESS OF  
INNOVATIVE  
ENTERPRISES WITH  
FOREIGN  
INVESTMENTS**

**Introduction.** In recent years, almost all of Ukraine's foundations have developed long-term socio-economic development strategies, in which the formation and development of enterprises with foreign investments often appear as priorities.

The solution of the problem of increasing competitiveness is inextricably linked with the assessment of the level of competitiveness. It is clear that an analysis of the competitive position of the business entity in the sectoral market, the identification of the main sources and reserves for increasing competitiveness is impossible without objective assessment. In the course of the analysis of the reasons for the low practical applicability of existing methods for assessing the competitiveness of economic entities, the authors of the dynamic approach came to the conclusion that the main reason for this is the lack of a clear definition of the concept of competitiveness of the company and the criteria for evaluating the analyzed category (as shown in the first section of this paper).

In general, agreeing with the thesis that the most accurate results of the assessment of the competitiveness of enterprises can be obtained by mutually supplemented the strengths of the product and operating methods, it is obvious that before combining these methods, it would be nice to get rid of their shortcomings. The desired complementarity can only be achieved through synthesis, (Krylova N., 2012) but not mechanistic "accumulation" of techniques, by clarifying the definitions and criteria for assessing the competitiveness of business entities, but not the eclectic of heterogeneous categories (as is done in combined methods) (Borysova T., 2011).

The dynamic approach is based on the assumption that the main way of making profit in a market economy is the sale of products and the added value in it. In this case, the production and sale of products is

carried out through the use of limited economic resources. It follows that gaining profit in a market economy is mediated by the efficiency of the use of economic resources. The ratio of the result obtained and the costs incurred for its achievement. That is, the essence of market competition is to fight for maximizing profits by maximizing the efficient use of economic resources.

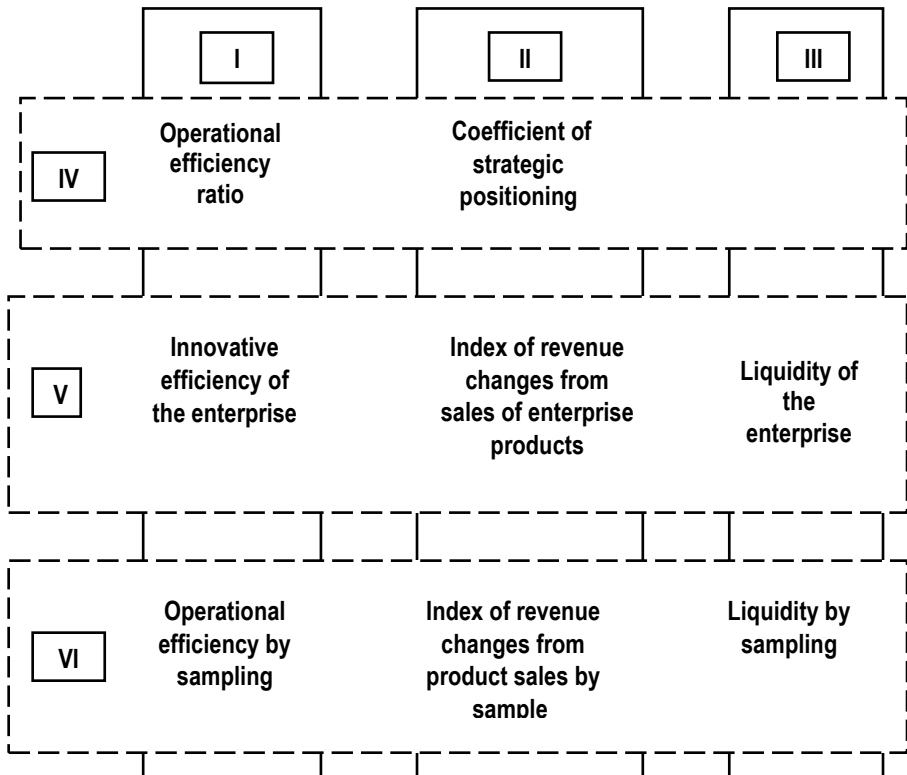
Based on the previously mentioned shortcomings of existing methods to assess the competitiveness of the enterprise, we can conclude the limited practical application of most of them. An exception, in our opinion, is a dynamic method of assessing the competitiveness of enterprises (Polischuk H., (2017). Thus, the study of evaluation of innovative enterprises with foreign investments in enhancing competitiveness and ensuring sustainable development of Ukraine at the present stage is very relevant.

**Analysis of recent research and publications.** The work of such scientists as T. Borisova, V. Dikan, N. Kasyanova, N. Krylova, K. Kuznetsova, M. Moretova, M. Rogozi, Yu Samoilenko, etc were devoted to the research of the assessment of the competitiveness of the functioning of innovative enterprises. Despite the significant scientific contribution made by many scholars in the identified competitiveness of innovative enterprises, the competitiveness of the dynamic method of evaluation requires a more detailed consideration.

The purpose of the article is to analyze the competitiveness of innovative enterprises with foreign investments, based on the dynamic method of assessing the competitiveness.

**Presentation of the main research material.** The advantages of the dynamic method are as follows: it covers the key characteristics of the enterprise activity and eliminates the duplication of valuation parameters (Apostoliuk O., 2016); is based on a clearly expressed mathematical relationship between the established evaluation parameters, which allows to detect and analyze the dependence of the estimated competitiveness indicator from the initial parameters in the dynamics; allows to predict the level of the competitiveness of the enterprise (groups of enterprises) (Samoylenko Y., 2010); is a universal method, that is, it allows to assess the competitiveness of individual enterprises (groups of enterprises) taking into account the purposes of the analysis and the availability of output data; It is flexible, that is, the ability to record the conditions and features of the functioning of individual enterprises (groups of enterprises) (Zaikina, O., 2008); allows to assess the competitiveness of innovative enterprises with foreign investments

(groups of enterprises), regardless of size and sectoral affiliation (Dykan' V. und Ponomar'ova T., 2011).



**Figure 4.2 Main stages of assessing the level of competitiveness of innovative enterprises with foreign investments**

The essence of the proposed method and the methodology of assessing the level and sources of competitiveness of the enterprise, as well as the identification of reserves to increase the competitiveness of the economic entity, are discussed in detail below. This method of assessing the competitiveness involves the analysis of the main indicators of enterprise activity in the dynamics. The key indicators are considered: operational efficiency (profitability of economic activity), strategic positioning (dynamics of market share), as well as financial stability (liquidity).

The essence of operational efficiency is the implementation of similar types of competition with competitors in order to ensure profit in the process of implementation of additional value. The main result and the criterion of operational efficiency can be related to the profitability (profitability) of production and sales of final products. However, the result of evaluating operational efficiency through profitability on profit can be both positive and negative, in connection with which the most capacious and universal indicator of operational efficiency – the ratio of proceeds from sales of manufactured goods (goods, works, services) to costs, incurred in the process of its production and implementation (Karlsson, E. und Liljevern, J., 2017).

The operational efficiency of the analyzed agrarian enterprise (Figure 4.2), the cell at the intersection of blocks I and V) is determined by the formula (4.1):

$$R_A = \frac{S_A}{E_A}, \quad (4.1)$$

where:  $R_A$  – operational efficiency of the analyzed innovative enterprises with foreign investments for the reporting period;

$S_A$  – proceeds from the sale of products (goods, works, services) of innovative enterprises with foreign investments, analyzed during the reporting period;

$E_A$  – proceeds for the production and sale of products (goods, works, services), which include the cost, non-operating expenses, mandatory payments to budgets of all levels in the analyzed enterprises for the reporting.

The calculation of operational efficiency by sampling (Figure 4.2, the cell at the intersection of blocks I and VI) is carried out by the formula (4.2):

$$R_S = \frac{S_S}{E_S}, \quad (4.2)$$

where:  $R_S$  – operational efficiency of the sample for the reporting period;

$S_S$  – proceeds from the sale of products (goods, works, services) by sample for the reporting period;

$E_S$  – costs of production and sale of products (goods, works,



services), which include cost, non-operating expenses, mandatory payments to budgets of all levels by sample for the reporting period.

To calculate the operational efficiency (Figure 4.2, block I) according to formula (4.3), it is necessary to compare the value of the analyzed index of the analyzed enterprise with the corresponding indicator on the sample:

$$K_R = \frac{R_A}{R_S}, \quad (4.3)$$

where:  $K_R$  – efficiency factor of operational activity;

$R_A$  – efficiency of operational activity of the analyzed innovative enterprises with foreign investments for the reporting period;

$R_S$  – efficiency of operating activity for the reporting period by sampling.

The essence of strategic positioning is to create a unique position based on the implementation of a combination of activities, different from the activities of competitors. By creating, supporting and expanding sales markets, strategic positioning provides the very opportunity for the process of implementing additional value (Krupskiy O. et al., 2017). The main result and criterion of this indicator is the change of revenue from the sale of products (goods, works, services) compared with the previous period. The index of changes of revenue from the sale of products (goods, works, services) of the enterprise being analyzed (Figure 4.2, the cell at the intersection of blocks II and V) is determined by the formula (4.4):

$$I_A = \frac{S_A}{S_{A0}}, \quad (4.4)$$

where:  $I_A$  – the index of changes in sales proceeds from the sale of products (goods, works, services) of innovative enterprises with foreign investments, analyzed for the reporting period;

$S_A$  – proceeds from the sale of products (goods, works, services) of innovative enterprises with foreign investments, analyzed during the reporting period;

$S_{A0}$  – proceeds from the sale of products (goods, works, services) of innovative enterprises with foreign investments, analyzed in the previous period.

Calculation of the index of change of revenue from the sale of products (goods, works, services) by sampling (Figure 4.2, cell at the intersection of blocks II and VI) is carried out by the formula (4.5):

$$I_S = \frac{S_S}{S_{S0}}, \quad (4.5)$$

where:  $I_S$  – the index of changes in sales proceeds from the sale of products (goods, works, services) by sample for the reporting period;

$S_S$  – proceeds from the sale of products (goods, works, services) by sample for the reporting period;

$S_{S0}$  – proceeds from sales of products (goods, works, services) by sample in the previous period.

In order to calculate the strategic positioning factor (Figure 4.2, block II), in accordance with formula (4.6), it is necessary to compare the value of the analyzed index of the analyzed enterprise with the corresponding indicator on the sample:

$$K_I = \frac{I_A}{I_S}, \quad (4.6)$$

where:  $K_I$  – the coefficient of strategic positioning;

$I_A$  – the index of changes in revenues of agrarian enterprises with foreign investments, analyzed for the reporting period;

$I_S$  – the index of changes in revenues by sample over the reporting period.

The essence of financial sustainability in the short run is to ensure the availability of current assets by sources of financing. Short-term financial stability can be characterized by the provision of the company's own working capital (Manoilenko, O. and Stokov, Y. E., 2013). It is important to note that the indicator of financial stability in comparison with the indicators of operational efficiency and strategic positioning are large fluctuations, resulting in becoming a key factor affecting the level of competitiveness of the enterprise. As a result, the influence of these indicators on the competitiveness of the enterprise leads to comparable values, by removing from the index of liquidity of the square root (Kuznyetsova K., 2013).

The liquidity of the analyzed enterprise (Figure 4.2, the cell at the intersection of blocks III and V) is determined by the formula (4.7):

$$L_A = \sqrt{\frac{CA_A}{CL_A}}, \quad (4.7)$$

where:  $L_A$  – the liquidity of the analyzed enterprise at the end of the reporting period;

$CA_A$  – current assets of the enterprise analyzed at the end of the reporting period;

$CL_A$  – short-term liabilities of the analyzed enterprise at the end of the reporting period.

The calculation of liquidity by sampling (Figure 4.2, the cell at the intersection of blocks III and VI) is carried out by the formula (4.8):

$$L_S = \sqrt{\frac{CA_S}{CL_S}}, \quad (4.8)$$

where:  $L_S$  – liquidity by sample at the end of the reporting period;

$CA_S$  – current assets by sample at the end of the reporting period;

$CL_S$  – short-term sample commitments at the end of the reporting period.

In order to calculate the coefficient of financial condition (Figure 4.2, block III) according to formula (4.9) it is necessary to compare the value of the analyzed index of the analyzed enterprise with the corresponding indicator on the sample:

$$K_L = \frac{L_A}{L_S}, \quad (4.9)$$

where:  $K_L$  – the coefficient of financial state

$L_A$  – the liquidity of the analyzed enterprise at the end of the reporting period;

$L_S$  – the liquidity by sample at the end of the reporting period.

Then, taking into account the above expressions (4.3), (4.6) and (4.9), the only indicator of the competitiveness level of the investigated enterprise (Figure 4.2, block IV) can be represented by the formula (4.10):

$$K = \frac{R_A}{R_S} \times \frac{I_A}{I_S} \times \frac{L_A}{L_S}, \quad (4.10)$$

where:  $K$  – the level of competitiveness of the analyzed enterprise;

$K_R$  – operational efficiency;

$K_I$  – the coefficient of strategic positioning;

$K_L$  – coefficient of financial condition.

The values of the coefficient of competitiveness are analyzed as follows: the higher the coefficient of competitiveness, the more competitive the analyzed company in relation to the sample. If the coefficient of competitiveness is greater than zero, but less than one, the competitiveness of the enterprise in relation to the sample is low. If the coefficient of competitiveness is equal to one – the competitiveness of the company is identical to the competitiveness of the sample (Fatkhutdinov, R.A. 2012). If the coefficient of competitiveness is more than one – the competitiveness of the enterprise is higher than the sample.

It is important to note that each of the above-mentioned sources of competitiveness is individually necessary, but not a sufficient condition for ensuring the competitiveness of the enterprise. Sustainable competitiveness of the enterprise can be achieved only by combining all sources of competitiveness, complementing each other and creating competitive advantages of the enterprise (Shyshkina O., 2016).

By presenting a general indicator of competitiveness of the enterprise in terms of sources of competitiveness and objects of comparison, the assessment of integral values reflects the efficiency of the use of foreign investment resources by the investigated business entity and the sample (Szarowski, I., 2017). An analysis of the competitiveness of the enterprise in terms of the sources of competitiveness and the objects of comparison makes it possible to identify the main factors that determine the current level of competitiveness. That, in turn, allows us to determine the basic reserves for improving the competitiveness of the investigated entity. The coefficient of efficiency of using the enterprise resources analyzed (Figure 4.2, block V) is determined by the formula (4.11) given below:

$$K_A = R_A \times I_A \times L_A , \quad (4.11)$$

where:  $K_A$  – the coefficient of efficiency of using the resources of the enterprise being analyzed.

The coefficient of efficiency of the use of resources by sampling (Figure 4.2, block VI) is determined by the formula (4.12) below:

$$K_S = R_S \times I_S \times L_S, \quad (4.12)$$

where:  $K_S$  – the coefficient of efficiency of the use of resources by sampling.

Taking into account that the value of each of the factors used to calculate the efficiency of the use of resources has a necessary value greater than one, it can be concluded that the recommended value of the indicated coefficient is also greater than one. On the basis of the above methodology it is envisaged to assess the level of competitiveness. And also to identify the basic reserves for improving the competitiveness of the investigated business entity.

On the basis of the above analysis of the general situation in the agrarian sector and the selection of objects of comparison, an estimation of the level, sources and reserves of the competitiveness of innovative enterprises with foreign investments is carried out.

In accordance with the previously considered algorithm, in the first stage, the basic indicators of economic activity of agrarian enterprises are calculated: the coefficient of operational efficiency by the formula, the coefficient of strategic positioning by the formula and the coefficient of financial stability by the formula. On the basis of which the formula provides an assessment of the level and dynamics of competitiveness.

**Conclusion.** The proposed methodology for assessing the competitiveness of innovative enterprises with foreign investments, based on the dynamic method of assessing competitiveness and taking into account the weight of each type of product in total, allows to assess objectively the level of competitiveness of innovative enterprises and take managerial (strategic) decisions to improve their activities.

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