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MODERN TOOLS FOR SUPPORTING BUSINESS DECISIONS IN LOGISTICS AND INVESTMENT PROJECTS

In modern conditions, there is a growing need for rapid yet well-grounded business decision-making, especially in the fields of logistics and investment project management. The increasing complexity of the economic environment, instability of market conditions, and uncertainty in supply chains create a demand for tools capable of minimizing risks and improving the efficiency of business processes. One of the key problems is the high cost of erroneous decisions in logistics systems (delivery delays, inefficient routing, selection of unreliable suppliers), as well as in the investment sphere (ineffective projects, capital losses, underestimation of risks).

Scoring methodologies are becoming increasingly important as tools for evaluating and substantiating managerial decisions. They make it possible to systematize information, compare alternative options, and consider both quantitative and qualitative factors. The use of such approaches in logistics and investment activities contributes to the development of sound strategies, enhances the competitiveness of enterprises, and reduces the impact of uncertainty on business performance.

At the same time, the war has intensified the need for adaptation: redirecting flows from maritime to land routes, accelerating the digitalization of processes, mobilizing human capital, and developing new operational models. However, despite examples of successful adaptation, the Ukrainian logistics sector remains vulnerable and lacks a systemic foundation to ensure resilience and long-term recovery. Thus, the central issue lies in the insufficient theoretical and practical justification of business decisions in the investment and logistics sectors during wartime and the post-war period.

Among the stages of the investment project life cycle, several phases can be identified, beginning with idea generation and ending with the operational stage. Each of these stages plays an important role in project development and requires a careful approach to achieve successful outcomes.

A large number of ideas and proposals require thorough analysis and evaluation of their attractiveness before implementation. Analysis at the preliminary stages allows potential problems and difficulties to be identified, which may hinder an adequate project assessment. Solving these issues at an early stage helps reduce risks and increase the likelihood of successful project implementation in the future.

There are quantitative and qualitative methods for evaluating both investment projects and borrowers seeking financing from banks or investors.

Qualitative methods can also be divided into expert and scoring methods (ranking and multi-criteria evaluation).

Such systems operate as follows: customer data are collected, including age, marital status, education, place of residence, credit history, place of work and position, number of children, and many other parameters. Based on these data, a mathematical model is developed that assigns a certain score to each borrower. The higher the score, the greater the probability that the borrower will successfully repay the loan. Accordingly, if the score falls below a certain threshold, the bank may either refuse to grant the loan or impose stricter repayment conditions, collateral requirements, guarantees, or higher interest rates. The most well-known systems today are FICO (Fair Isaac Corporation) and VantageScore.

Both methods use specific sets of customer-related factors and make it possible to evaluate any borrower by calculating the corresponding number of points to decide whether or not to issue a loan.

In addition to scoring, various quantitative methods are used to evaluate investment projects, each having its own advantages and limitations. They are generally characterized by simplicity, speed, and versatility, but they also have certain disadvantages.

The real options method is also applied, allowing investment projects to be evaluated as financial options with the possibility of changing strategy in the future. This approach provides more flexibility in responding to changing conditions and market risks, but it requires complex mathematical calculations.

Other quantitative methods include cost sensitivity analysis, statistical methods, and others. Their main advantages are efficiency and the ability to obtain numerical results. However, such methods often fail to account for the human factor, the complexity of assessing external influences and risks, and they require large amounts of data.

The disadvantages of quantitative methods include the limited number of evaluation criteria considered and the tendency to rank projects solely by numerical indicators rather than by the quality of the project itself. Therefore, the evaluation of investment projects using quantitative methods should be supplemented by qualitative and risk analysis, allowing a more comprehensive understanding of project potential before making investment decisions.

Qualitative methods for evaluating investment projects, such as expert evaluation, the Analytic Hierarchy Process (AHP), Strategic Technology Assessment Review (STAR), and the Industrial Research Institute (IRI) methodology, have significant advantages but also certain drawbacks that must be taken into account when applying them.

The main advantages of qualitative methods include:

- the use of expert experience and intuition;
- the possibility of assessing risks and the human factor;

- effectiveness even in the absence of sufficient statistical information.

However, there are also disadvantages:

- subjectivity of expert assessments;
- difficulty in finding competent experts;
- challenges in assessing expert competence;
- risk of bias;
- influence of expert authority on decision-making.

In general, qualitative methods are a useful complement to quantitative approaches, but their application requires careful analysis and control of subjectivity.

Scoring methodologies such as the Brooks Method, Bill Payne Method, Flagship Pioneering, Ioniq, M13, Rocket Internet, and others are designed to evaluate investment projects based on a combination of quantitative and qualitative criteria. They make it possible to combine different types of indicators and evaluation methods, creating a comprehensive view of project potential.

One of the main advantages of scoring methods is their ease of use. For example, they can be implemented in the form of questionnaires or rating scales, which simplifies data collection and analysis. In addition, they can be adapted to regional characteristics, industry trends, and market conditions.

On the other hand, scoring methods also have certain disadvantages. A serious challenge is the difficulty of creating a universal model, since different projects require different evaluation criteria. There is also a degree of subjectivity in assessing some qualitative factors.

Despite these shortcomings, scoring methodologies remain an important tool for investment decision-making. They allow large volumes of information to be systematized and analyzed, providing an objective approach to determining project potential and risks.

The main idea of the methodology is that comparing a new startup with existing projects helps identify its potential opportunities and advantages. This enables investors and market analysts to better understand how a new project can integrate into the existing ecosystem and achieve its objectives.

The methodology can be briefly described as follows: selection of evaluation criteria; comparison with similar startups; assigning points for each criterion; determining the final result.

The authors propose a simplified Team, Market, Product, Risk (TMPR) scoring methodology that allows investors to conduct a preliminary assessment of a project.

The simplified TMPR methodology enables investors to quickly perform a preliminary analysis of a startup or investment project and compare it with other projects before beginning detailed research and developing a feasibility study. When applied to logistics projects (for example, the creation of a new warehouse

management system, development of an IT platform for transport monitoring, or construction of a multimodal hub), each of the four criteria acquires specific industry significance. The TMPR methodology evaluates four key criteria: team, market, product, and risk.

The quality and experience of the team are among the most important factors for project success. It is necessary to conduct a preliminary assessment of management competence, communication efficiency, and motivation levels. A strong team is capable of effectively solving emerging problems and adapting to changes.

The calculation is performed according to the formula:

$$S = \frac{\left(\sum_{i=1}^3 c_i x + \sum_{j=1}^4 m_j y + \sum_{r=1}^6 p_r z \right) * 1}{R}, \quad (1)$$

where c_i , m_j , p_r is the score of the corresponding parameter in points from 1 to 3;

x , y , z - coefficients reflecting the importance of such blocks as “team”, “market”, “product”;

R - risk coefficient.

Thus, the minimum possible result, taking risk into account, is 0.56 points, while the maximum is 13.5 points. This calculation enables an investor to quickly conduct a preliminary analysis of a startup in comparison with other projects before undertaking in-depth research, developing a feasibility study, and proceeding to subsequent stages of analysis.

The proposed simplified TMPR methodology allows investors to evaluate four key criteria — team, market, product, and risk — while considering the specifics of logistics projects. The scoring formula provides an opportunity for rapid preliminary project analysis, contributing to more effective planning of subsequent research stages, development of feasibility studies, and informed managerial decision-making.