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### **INFORMATION ANALYTICAL PROVISION IN FORMATION OF INNOVATIONAL PROJECTS PORTFOLIO OF ENTERPRISES IN THE CONTEXT OF SAFETY-ORIENTED MANAGEMENT**

**Abstract.** It is devoted to the research of methodological approaches aimed at the objective assessment of cost aspects, means and results of implementation of management and technological decisions while balancing the portfolio of innovative projects. It is established that the project portfolio management mechanism is aimed at reconciling project implementation goals with the tactical and strategic orientations of the enterprise with parallel balancing of project budgets and determining the mutual impact of each of them. The article deals with the approach of forming a portfolio of industrial enterprises innovation projects in the aspect of strengthening its market positions on the basis of security-oriented management.

Based on the use of multivariate analysis, a model of influence indicators on the level of economic security of the enterprise has been developed. The using of the hierarchy method algorithm in formulating of recommendations for the selection of innovative projects on the criterion of economic security preserving is justified. The characteristics of the of communication features between economic security and the reputation of the enterprise have been determined and given. The closeness of relationship between the level of economic security and its reputation by using the correlation analysis was assessed. The authors identify the directions of balancing the project portfolio according to the criterion of ensuring a rational level of economic security and in conditions of preventive reputation strengthening. It is proposed to set the priorities of the criteria based on the results of correlation-regression analysis on the impact of factors on the enterprise's economic security, namely: target efficiency, cost performance, security of financing, investment efficiency, reactive performance. The result of the method application is the formation of strategic recommendations for the selection of innovative projects on the criterion of maintaining economic security.

**Keywords:** project, innovation, security-oriented approach, portfolio of projects, reputation, hierarchy, model.

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## **ІНФОРМАЦІЙНО-АНАЛІТИЧНЕ ЗАБЕЗПЕЧЕННЯ ФОРМУВАННЯ ПОРТФЕЛЯ ІННОВАЦІЙНИХ ПРОЄКТІВ У КОНТЕКСТІ БЕЗПЕКО-ОРІЄНТОВАНОГО УПРАВЛІННЯ ПІДПРИЄМСТВОМ**

**Анотація.** Присвячено дослідженню методичних підходів, спрямованих на об'єктивну оцінку витратних аспектів, засобів і результатів реалізації управлінських і технологічних рішень при збалансуванні портфеля інноваційних проєктів. Установлено, що механізм управління портфелем проєктів має на меті узгодження цілей реалізації проєктів із тактичними і стратегічними орієнтирами підприємства за паралельного збалансування проєктних бюджетів і визначення взаємного впливу кожного з них. Розглянуто підхід до формування портфеля інноваційних проєктів промислових підприємств в аспекті зміцнення його ринкових позицій на основі безпеко-орієнтованого управління.

На основі використання багатофакторного аналізу розроблено модель індикаторів впливу на стан економічної безпеки підприємства. Обґрунтовано використання алгоритму методу ієрархій (реалізовано в середовищі MS Excel) при формуванні рекомендацій щодо відбору інноваційних проєктів за критерієм збереження економічної безпеки. Визначено і надано характеристику особливостям зв'язку між економічною безпекою і репутацією підприємства. За допомогою кореляційного аналізу оцінено тісноту зв'язку між рівнем економічної безпеки і його репутацією, проведено аналіз впливу репутації підприємства на його економічну безпеку та оцінку якості результатів впливу. Визначено напрями збалансування портфеля проєктів за критерієм забезпечення раціонального рівня економічної безпеки і за умов превентивного зміцнення репутації. Запропоновано встановлювати пріоритети критеріїв за результатами кореляційно-регресійного аналізу щодо впливу чинників на стан економічної безпеки підприємства, а саме: цільова ефективність, витратна результативність, безпека фінансування, інвестиційна результативність, реактивна результативність. Результатом застосування методики є формування стратегічних рекомендацій щодо відбору інноваційних проєктів за критерієм збереження економічної безпеки.

**Ключові слова:** проєкт, інновації, безпеко-орієнтований підхід, портфель проєктів, репутація, ієрархія, модель.

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## **ИНФОРМАЦИОННО-АНАЛИТИЧЕСКОЕ ОБЕСПЕЧЕНИЕ ФОРМИРОВАНИЯ ПОРТФЕЛЯ ИННОВАЦИОННЫХ ПРОЕКТОВ В КОНТЕКСТЕ БЕЗОПАСНО-ОРИЕНТИРОВАННОГО УПРАВЛЕНИЯ ПРЕДПРИЯТИЕМ**

**Аннотация.** Рассмотрен подход к формированию портфеля инновационных проектов промышленных предприятий в аспекте укрепления его рыночных позиций на основе безопасно-ориентированного управления. На основе использования многофакторного анализа разработана модель индикаторов влияния на состояние экономической безопасности предприятия. Определены направления сбалансирования портфеля проектов по критерию обеспечения рационального уровня экономической безопасности и в условиях превентивного укрепления репутации. Результатом применения методики является формирование стратегических рекомендаций по отбору инновационных проектов по критерию сохранения экономической безопасности.

**Ключевые слова:** проект, инновации, безопасно-ориентированный подход, портфель проектов, репутация, иерархия, модель.

Формул: 1; рис.: 3; табл.: 4; библи.: 12.

**Introduction.** In the management of innovation activities, the formation of a portfolio of innovative projects, the company focuses on the final target criterion, which is defined as the maximization of the ratio of the result and costs or the resources used. Therefore, it would be advisable to focus on the study of methodological approaches and appropriate tools aimed at an objective assessment of the cost aspects, means and results of the implementation of managerial and technological decisions when balancing the portfolio of innovation projects.

Traditional standard methods for assessing the effectiveness of projects provide the opportunity to select (or rank) mutually exclusive projects according to predicted or explicit cost, time or qualitative criteria. At the same time, the following aspects of the process of forming a portfolio of projects, such as the readiness of the enterprise to innovate changes, its reputation as a basis for the effective promotion of food innovations and the prerequisite for attracting investments remain. It should be noted that the investor is interested not only in the question of the profitability of the project, but also the timing of its implementation, the impact of external threats to the implementation of the project and the ability of the company to counteract them.

In our opinion, the characteristic complex indicator that reflects the performance of the enterprise on the various functional components and the degree of control of the company's balance with the external environment, is the level of economic security. This explains the possibility of its use as a criterion for selecting the components of the target portfolio of innovation projects. Also, given the dual nature of the link between reputation and the state of the company's economic security, it is appropriate to identify the peculiarities of their interaction in the context of project portfolio management.

The theoretical, methodological and applied aspects of improving the management of investment and innovation projects are devoted to a significant number of works of domestic and foreign scientists [1]. Thus, the fundamental basis of modern approaches to optimizing the portfolio of financial investments was laid in the works of G. Markowitz and W. Sharp [2], which proposed the application of quadratic and linear optimization problems in the distribution of capital by types

and specific assets. The application of the theory-game model in determining the reliability of the project is substantiated in the research N. Apatova, A. Sihal [3], which proposed a way to optimize economic risk in project activities. Also, issues of preventive management of the success of the projects are devoted to the work of V. Dubrovin, V. Liovkin [4]. Approaches to the formation of a portfolio of innovative projects on the basis of partial criteria of optimality, taking into account the specifics of agrarian enterprises, are elucidated in detail in the work of O. Yankovskaya [5].

The paper [6] notes that along with the successful use of modern software tools in the project management system, considerable complexity is the choice of parameters in the calculation and planning of innovation and investment projects. Under such conditions, determining the directions of balancing the project portfolio on the criterion of ensuring economic security is very relevant.

**Review of sources, surveys and publications.** The purpose of the article is to study the approaches to the formation of innovative projects portfolio on the criterion of maintaining economic security. In accordance with the stated purpose in the article put the following scientific and practical tasks: identification of the stages of balancing the project portfolio on the criterion of maintaining economic security; assessment of the reputation of the machine-building enterprise on the basis of the use of a relative indicator, which is formed as the ratio of the actual value to a certain partial criterion to its conventionally «ideal» value; establishing the relationship between the level of economic security and the reputation of the industrial enterprise on the basis of a comprehensive assessment of economic security by functional components; construction of a regression model of the dependence of the level of economic security of the enterprise on the system of variable factors; presentation of the results of the introduction of information technologies into the portfolio management system of innovation projects.

**Results.** Often, at the project selection stage, indicators are used: NPV (net present value), ROI — return on investment, profitability index, term and internal rate of return. At the same time, the ranking of projects according to local criteria may sometimes give rise to inconsistent or even opposite results, so it is expedient to use a multicriteria model for project portfolio assessment. The multicriteria analysis allows you to formulate solutions while simultaneously combining several evaluation indicators, but the analysis of alternative innovation projects is carried out in terms of content-heterogeneous criteria, which complicates the adoption of managerial decisions in case of inconsistency of the result.

The project portfolio management mechanism is aimed at precisely matching the goals of implementing projects with the tactical and strategic goals of the enterprise, while balancing the project budgets and determining the mutual influence of each of them. In this context, we propose an approach to determining the directions of balancing the portfolio of projects on the criterion of ensuring a rational level of economic security and in conditions of preventive strengthening of reputation. In order to optimize the state of economic security at a particular enterprise, first of all, it is necessary to investigate the effectiveness of the mechanism of innovation activity management, since its results serve as a basis for further changes, determining, on the one hand, the possibility of using those or other methods and the implementation of management functions. Each company directs its resources to increase the level of competitiveness, which is determined both by material and non-material factors. Today's market economy attaches increasing importance to intangible values, therefore the reputation of the company is one of the important intangible resources.

Ensuring an adequate level of economic security is one of the main tasks of any enterprise, while strengthening reputation will contribute to the achievement of the goal. The better the reputation - the company has a higher level of economic security, and, consequently, more likely to succeed in further long-term activities. This necessitates constant improvement of products by increasing the share of innovative products, as well as developing such approaches in managing the costs of the enterprise, taking into account the costs of distributing information about products in different information environments in order to increase profits and attract new customers. In the framework of the research, considerable scientific interest is the issue of quantification of reputation as an intangible asset, which affects the performance and cost performance of the enterprise, in

particular, the state of its economic security. In this assessment should have not abstract, but a very specific quantitative result. In order to assess the reputation of a machine-building enterprise, we propose using a relative index, which is formed as the ratio of the actual value to a certain partial criterion to its conventionally «ideal» value. Partial criteria should take into account the effective performance of the enterprise in the market: market share, existence time, the establishment of ties for direct and indirect sales channels, the adequacy of the price of sales compared with other goods, consumer perception.

Important in the aspect of maintaining the level of economic security should recognize the perception of consumers of new, innovative products. From the effectiveness of its promotion on the market, customer satisfaction depends significantly on the indicators of profitability of the main activities, profit and profitability indicators. The assessment of the degree of satisfaction of the buyer's needs consumer properties of the product is carried out with the help of a composite parametric index, calculated by the formula:

$$I_n = \sum_{j=1}^n i_j \cdot a_j, \quad (1)$$

where  $n$  — the number of analyzed quantitative parameters;

$i$  — significance of  $j$ -th parametric index;

$a$  — index of  $j$ -th parameter.

On the basis of the most significant technical-economic and value characteristics of products, the integral index of reputation of the enterprise — the manufacturer of wheel products — was calculated for the private joint-stock company «Kremenchug Wheel Plant» (PJSC «KrKZ») (Table 1).

Table 1

**Calculation of the integral reputation index of PJSC «KrKZ»**

Indexes	2012	2013	2014	2015	2016
Weighted average score according to the criterion: Brand name, $K_{bn}$	0,446	0,445	0,453	0,449	0,451
Weighted average score by criterion: Market share, $K_{ms}$	0,899	0,605	0,891	0,223	0,552
Weighted average by criterion: Time of existence on the market, $K_{tm}$	0,297	0,314	0,342	0,344	0,345
Weighted average by criterion: Adequate value (adequacy of the sale price in comparison with other goods), $K_{av}$	0,347	0,301	0,362	0,378	0,371
Weighted average by criterion: Representation in the network of sales, $K_{rs}$	0,765	0,354	0,681	0,237	0,653
Weighted average by criterion: Customer satisfaction, $K_{cs}$	0,346	0,243	0,356	0,321	0,335
Weighted average by criterion: Compliance with standards, $K_{cws}$	0,987	0,803	0,962	0,965	0,945
Weighted average by criterion: The level of efficiency of the main functions, $K_{reof}$	0,973	0,794	0,976	0,957	0,959
<i>Integral indicator for the average value of the attribute:</i> $0,2 K_{bn} + 0,15 K_{ms} + 0,1 K_{tm} + 0,1 K_{av} + 0,1 K_{rs} + 0,1 K_{cs} + 0,05 K_{cws} + 0,2 K_{reof}$	0,644	0,500	0,642	0,491	0,502
<i>linguistic variable</i>	«good» (0,5; 1]	questionable (0,3; 5]	«good» (0,5; 1]	questionable (0,3; 5]	«good» (0,5; 1]

Source: Calculated by the authors on the basis of data [7].

You should bear in mind that neither  $ij$  nor  $ip$  should exceed 100%, because the need is satisfied by more than 100% — it is economically inexpedient spending resources that does not matter to the consumer. For PJSC «KrKZ» during 2012—2015, Russia and CIS countries (63,4%—53,4%) remained the main market for realization, 30%—40,3% of the main products of the company were sold to the Ukrainian market, as follows in the sales policy. To note the gradual expansion of geography and sales volumes in countries of distant foreign countries (7%—6,3%).

As we can see, the surveyed figure was reduced in 2015, however, it increased already in the following year by 2,24%; the decrease was due, first of all, to the impact of crisis phenomena, the break-up of the established connections of PJSC «KrKZ» with enterprises — harvesting conveyors. During 2016, the company managed to reorient itself to the domestic secondary market and take

steps to enter the foreign market. During 2016, the company carried out significant work on improving the production of basic products, developing technological cards for the production of non-bulk products, and working on the implementation of ISO/TS 16949-2002 (ISO 9001:2009) quality standards, as evidenced by the dynamics of product and process innovation [8]. The next stage of the proposed methodological approach is related to the assessment of the level of economic security of the enterprise on the basis of the analysis of indicators of dominant components. The selection of indicators of quantitative evaluation was carried out on the basis of research and systematization of the views of various authors, in particular [9; 10] (this stage, given its prevalence, is outside the scope of this article). The local assessment for each component is formed using the standardization procedure with variational scope, taking into account the multi-directional effects of the indicators of stimuli and indicators of disintegration, the integral index is obtained by the method of calculating the weighted average of the weight coefficient (Table 2) [11].

Table 2

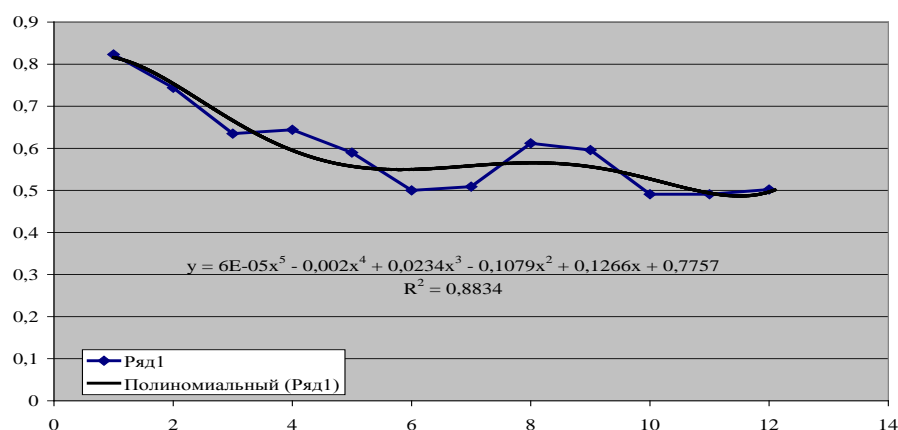
**Estimation of the level of economic security of PJSC «KrKZ» according to functional components**

Year	2012	2013	2014	2015	2016
Integral indicator of the level of economic security of the enterprise: $0,2 I_1$ (technological component)+ $0,15 I_2$ (production component)+ $0,15 I_3$ (intellectual and personnel component)+ $0,2 I_4$ (financial component)+ $0,15 I_5$ (interface component)+ $0,15 I_6$ (sales component)	0,614	0,269	0,447	0,575	0,485

Source: Calculated by the authors on the basis of data [8].

As can be seen from the calculations, the local economic assessment of the technological component positively characterizes the state of economic security, which testifies to its satisfactory level and the possibility of activating the innovation processes in industrial production while taking into account the riskiness of these processes. Putting forward the hypothesis that the most significant non-material factors affecting the economic security of an industrial enterprise should include the reputation of it, at the next stage we will carry out a statistical processing of the data obtained and, based on its results, determine the relationship between the reputation of the enterprise and its level of economic security. The procedure for assessing such exposure is discussed in detail in [12].

On the third stage, the correlation analysis analyzes the link between the level of economic security and its reputation, analyzes the impact of the company’s reputation on its economic security and assesses the quality of the impact. Investigate the pairwise relationship between the indicators based on the correlation field of the level of economic security of the enterprise and the integral level of reputation (Fig. 1, 2).



**Fig. 1. Forecast for extrapolation of the trend line of the integral reputation index of PJSC «KrKZ» (with a forecast of an increase in the factor by 0.5 points)**

Source: calculated by the authors on the basis of data [8].

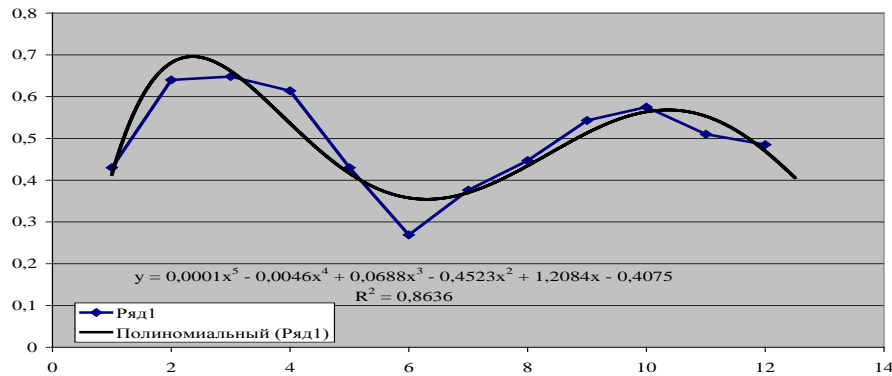


Fig. 2. Weather for the extrapolation of the trend line level of economic security PJSC «KrKZ» (the forecast increase factor by 0.5 points)

Source: calculated by the authors on the basis of data [8].

According to the data of the forecast on the basis of extrapolation of the trend line of the integral reputation index of PJSC «KrKZ» (polynomial trend), the deteriorating reputation may negatively affect the security of the enterprise. The forecast of factor increase by 0.5 points forms the downward trend of the trend line as an integral index of reputation, as well as the level of economic security, with the determination coefficients equal to 0,8834; 0,8636 respectively.

Thus, the establishment of the above dependence allows us to formulate an analytical conclusion on the mechanism of ensuring economic security. Thus, increasing the value of enterprise customers form a positive reputation helps correct business management so that it acquired economic growth, there is little opportunity to strengthen the level of economic security. The main argument of modeling the impact of reputation on its level of economic security is that any enterprise in its essence is a complex system that has many properties, characteristics and functions, and the simulation as a research method to reliably assess the study views the impact, owing to the seizure of the actions of those properties of an enterprise that are not inherent in such an influence. Implementation of information technology management system processes to ensure economic security industry due to the need to facilitate and accelerate the perception of an array of primary empirical data about the company. The fourth stage is the formation of regressive economic and mathematical model depending on economic security (example development of algorithms for its solution is illustrated according to existing enterprise PJSC «KrKZ» using the software package Statistica 7.0). We believe that estimates of future results or organizational product innovation it is possible to use multifactor regression equation in which the dependent variable plays the role of an indicator that reflects the results of economic activity or describes a separate component of its effectiveness as an objective function. The peculiarity of development is the inclusion in the system of the factors of influence of the integral index of reputation (Table 3).

Table 3

**Input data for constructing a multi-factor regression model of the indicators of the impact on the level of economic security of PJSC «KrKZ» enterprise**

year	half-year	Level of economic security	Level of integral reputation index	Costs for 1 UAH PP (Profitability of products), UAH	Profitability of equity capital, coefficient	Coefficient of financial autonomy	Level of progressiveness of implemented innovative products, coefficient	Level of quality of information provision of management processes, coefficient
		Y	X1	X2	X3	X4	X5	X6
2011	I	<b>0,430</b>	0,823	0,891	7,81	0,71	36,76	0,156
	II	<b>0,640</b>	0,744	0,816	8,63	0,72	44,44	0,788
2012	I	<b>0,648</b>	0,635	0,804	12,36	0,72	41,75	0,799
	II	<b>0,614</b>	0,644	0,800	11,56	0,69	33,07	0,658
2013	I	<b>0,430</b>	0,591	0,867	10,68	0,64	33,74	0,612
	II	<b>0,269</b>	0,500	0,92	4,46	0,65	32,94	0,391

2014	I	<b>0,376</b>	0,591	0,893	8,34	0,66	26,54	0,456
	II	<b>0,447</b>	0,642	0,804	15,05	0,67	14,65	0,693
2015	I	<b>0,543</b>	0,596	0,798	11,69	0,58	14,56	0,699
	II	<b>0,575</b>	0,491	0,792	9,55	0,57	14,59	0,619
2016	I	<b>0,510</b>	0,491	0,761	8,39	0,57	13,65	0,691
	II	<b>0,485</b>	0,502	0,797	7,84	0,71	13,23	0,689

Source: Calculated by the authors on the basis of data [8].

Detailing in the economic and mathematical model of indicative indicators gives grounds for assessing the directions of the use of borrowed funds and the probability of obtaining the expected income from the company invested in the development of a monetary amount:

1) dependent variable (value of the target function) — level of economic security of the enterprise (Cs), % (Y);

2) the most significant factors that influence it differently: the level of the integral index of reputation ( $x_1$ ), the costs of 1 UAH PP, UAH ( $x_2$ ), profitability of equity capital, coefficient ( $x_3$ ), coefficient of financial autonomy ( $x_4$ ), level of progressiveness of implemented innovative products, coefficient ( $x_5$ ) and Level of quality of information provision of management processes, coefficient ( $x_6$ ).

The value of the proposed method of optimization calculations increases in the conditions of asymmetry of information, that is, in the case when at the disposal only carefully elaborated reporting information is available at a certain date of operation of the enterprise, but the current documentation on the course of economic processes is inaccessible. Since the determination coefficient ( $R^2 = 0,995$ ) is close to one, the variation of the dependent variable Y is largely determined by the variation of the independent variables. That is, 99.5% of the change in the indicator is due to factors included in the regression. The correlation coefficient is also close to unity, so there is a close connection between all independent variables with dependent variable Y (Table 4).

Table 4

**Multivariate regression model of the level of economic security of the enterprise of PJSC «KrKZ» from the system of variable factors**

Y - level of economic security of the enterprise	Estimation of the parameters of multiple linear regression						
	$a_6 =$ 0,004	$a_5 =$ 0,006	$a_4 =$ -0,175	$a_3 =$ 0,001	$a_2 =$ -2,341	$a_1 =$ 0,164	$a_0 =$ 2,293
The mean square deviation of the estimates of parameters	0,216	0,003	0,413	0,009	0,724	0,328	0,726
Determination coefficient $R^2=0,995$	Average square deviation of the indicator $S = 0,054$				$Y=2,293+0,164X_1 -2,341X_2 +$ $+0,001X_3 -0,175X_4 +0,006X_5 +$ $+0,004X_6$		
Calculated value F — of statistics $F_r=149,959$	The number of degrees of freedom $k=5$						
Sum of squares of deviations of calculated values from its average value = 3,096	Residual sum of squares = 0,015						

Source: Calculated by the authors on the basis of data [8].

At the fifth stage of the methodological approach, it is proposed to use the hierarchy analysis method to prioritize target efficiency, cost, investment, reactive performance, and security of enterprise financing. The method of hierarchy has found practical application in analytical planning of resource allocation, determination of priorities in the selection of alternative solutions, cost-effectiveness analysis. In this context, the application of the hierarchy method represents the sequence of operations: 1) the decomposition of the managerial process; 2) setting criteria priorities relative to the goal; 3) pair evaluation of each alternative in relation to the impact on a certain criterion in order to achieve the goal.

Setting priority criteria: target efficiency, cost effectiveness, security of funding; investment performance; reactive performance — we propose to perform the results of the correlation-regression analysis on the impact of factors on the state of economic security of the enterprise.

So, in Fig. 3 illustrates the methodological approach to optimizing a portfolio of projects based on the hierarchy analysis method.

The screenshot displays a Microsoft Excel spreadsheet titled "Microsoft Excel - розрахунок\_терарії\_3\_1.xls". The interface includes the standard menu bar (File, Edit, View, Insert, Format, Tools, Data, Window, Help) and a toolbar. The spreadsheet is divided into several sections:

- Section 1 (Rows 18-24):** "Порівняння альтернатив відносно впливу на рівень комунікативності". It features a comparison matrix for alternatives A1 through A5, with priority values and a vector.
- Section 2 (Rows 25-30):** "нормалізована матриця" (normalized matrix) for the communication level, showing pairwise comparison values.
- Section 3 (Rows 31-36):** "Перевірка достовірності оцінок" (consistency check) for the communication level, including lambda\_max, IU, VI, and VU values, and a consistency ratio.
- Section 4 (Rows 37-43):** "Порівняння альтернатив відносно впливу на рівень маневреності" (comparison of alternatives regarding maneuverability). Similar to Section 1, it includes a matrix and priority values.
- Section 5 (Rows 44-49):** "нормалізована матриця" (normalized matrix) for the maneuverability level.
- Section 6 (Rows 50-52):** "Перевірка достовірності оцінок" (consistency check) for the maneuverability level.
- Section 7 (Rows 37-43):** "Порівняння альтернатив відносно впливу на рівень стійкості" (comparison of alternatives regarding stability). This section follows a similar structure to the maneuverability section.
- Section 8 (Rows 44-49):** "нормалізована матриця" (normalized matrix) for the stability level.
- Section 9 (Rows 50-52):** "Перевірка достовірності оцінок" (consistency check) for the stability level.

Fig. 3. Implementation of a methodological approach to optimizing a portfolio of projects based on hierarchy analysis method

Source: calculated by data-based authors [8].

The environment of MS Excel provides the ability to monitor and automate calculations, while the obligatory procedure is to determine the degree of consistency of expert assessments (and their correction on demand).

**Conclusions.** Thus, the article presents the implementation of the author's hypothesis about the formation of a target portfolio of projects based on the application of the criterion of security-oriented assessment. From the first to the third stage of the proposed methodological approach, an integrated assessment of the level of economic security of the enterprise and its reputation has been carried out, their mutual influence has been investigated.

The use of the algorithm of the hierarchy method (implemented in the MS Excel environment) is substantiated in formulating recommendations for the selection of innovative projects on the criterion of maintaining economic security. A separate element of the proposed methodological approach is the establishment of the mutual influence of the reputation and economic security of the enterprise, which is used when allocating alternative reactions of the enterprise in optimizing the project portfolio.

The purpose of further exploration is to study the transformational capacity of projects in the formation of a target project portfolio.

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