

RESOURCE SUPPORTING OF BUSINESS ECONOMIC SECURITY
AT THE MICRO AND MACRO LEVELS

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Abstract. The article presents the methodological components of the system of ensuring the economic security of business at the micro and macro levels. The components of the impact on the economic security of the business are identified. A corporate scorecard has been developed to form an economic security information mechanism using a system of balanced indicators. A process approach to information security of economic security using a system of balanced indicators is also formed. A methodological approach to the functional division of work in the project team is developed having the aim of developing the approaches to managing information security of business. A map of using information for economic security on the basis of a balanced scorecard has been developed. The expediency of the model of choice of alternatives of information management in the system of ensuring economic security of business is formed and calculated. The mechanism of adopting approaches to information management for the purpose of ensuring economic security of business is considered as a special kind and relatively independent, local subsystem.

Keywords: economic security of business; information support of economic security; information; system of indicators; security agents; functional distribution; priority of information movement

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1. Introduction

In today's situation with the economy management, the resource security of economic security of a business is determined by the need to achieve stability of functioning and the main economic goals and tasks of its functioning, which can be carried out only in the conditions of effective functioning of the financial, legislative, technological, personnel, intellectual and information components. The management of information of the entity becomes of particular importance in the context of ensuring an adequate level of economic security. This thing is due to the high level of informatization of all management processes, the need to fast solving of current economic problems based on the analysis of external and internal information.

The imperfect management of information processes at the stage of collection, formation, analysis, movement of business information can have negative effect on the adoption of strategic and tactical decisions, which in its turn will discourage its activities in the context of: reducing the presence of business in the market, increasing the likelihood of losing competitive advantages, reducing the quality level goods and services, failure of accessing for credit

or investments, threatening criminal prosecution of top managers, deteriorating of economic performance of businesses, which threatens its economic security. Sometimes, business senior executives inefficiently perform their functions of introducing of information systems capabilities to meet the challenges of ensuring an adequate level of economic security. In this case, the issue of ensuring the economic security of the business becomes relevant.

2. Literature Survey

The scientists such as (Baldwin, 1997; Buzan et. al., 1998; Hough, 2008) define the economic security as a universal category that reflects the protection of subjects of socio-economic relations from the state to each of its citizens at all levels. The researches (Zucker, 1987; Cummins et. al. 2005; Mason, 2007; Chehabeddine, Tvaronavičienė, 2020) state that ensuring of the economic security in the business is related to protecting of its activities from adverse environmental influences, as well as with the ability of quick elimination of variety of threats or adjusting to present conditions that do not adversely affect its functioning.

In a number of studies (Agius, 2010; Bernard, 2007) the economic security is a characteristic of a self-organizing and self-evolving system, that is a condition in which the economic parameters make it possible to preserve their main properties: balance and stability in a case of minimizing of the threats. The situation with the productional and the commercial activity in conditions of sufficient level of economic security should be such that the economic interests of the business are ensured on the basis of its stability and features of the self-developing system and prevent the influence of internal and external threats.

Researchers such as (Hacker et. al. 2014; Timothy, 2016; Drobyazko et. al. 2019a; Drobyazko et. al. 2019b) believe that a sufficient level of economic security for a business can be achieved through the formation of a rational system of its economic security, which is represented by a set of actions, interrelated, coordinated in a single system, and aimed on sustainable development business, as well as the effective implementation of the strategy of operational, investment and financial activities. Therefore, a wide range of tasks and opinions on business security indicates the importance of our research.

3. Methods

From a methodological point of view, we can identify the groups of security agents. The agents of the economic business security system are those persons, divisions, services, bodies, establishments which are directly dealing with various aspects of security. The agents can be divided into several groups, the difference between them lies in the ability of the business to influence their behavior (Fig. 1).

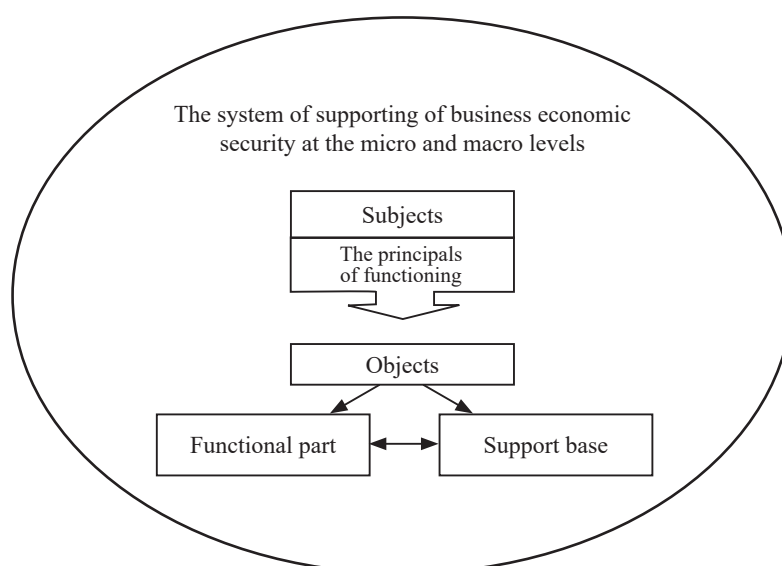


Figure 1. Dynamics of simple and weighted average rate of customs tariffs, world markets (%) (World Tariff Profiles)

The first group includes the entities that are part of the structure of the business itself and are aimed on solving the problem of ensuring its security. These are special entities (security department or guards, fire-fighting unit, life-saving service, etc.); semi-specialized (law department, financial service, medical unit, etc.); other staff who also take care of the safety of the business or organization.

The second group includes the entities that are outside the structure of the business itself and are not subjects of its management. Primarily the public authorities that create the conditions for business security represent them. The legislative authorities, which enact legislation, create the legal basis for security activities at the level of the whole state, region, business and individuals (Baulch and Hoddinott, 2000).

The objects of the business security system are (Rupert, 2007): a) various activities (production, commercial, supply, management, etc.); b) property and resources (financial, logistical, information, intellectual, etc.).

4. Results

Economic security of a business can be defined as a condition of the development of the business entity, which is in attendance of stable economic and financial growth, effective elimination and counteracting to adverse external and internal influences in the process of decision-making and implementation of management decisions. The main purpose of economic security of a business is to guarantee its stable maximum effective activity today and high potential for development in the future. In order to ensure the economic security of a business, it is necessary to take into account all types of threats and their subjects, as well as the features of a particular business.

The functioning of every business involves the adoption of a large number of management decisions aimed on solving various problems. The chief executive officers of business entities are constantly operating a significant flow of information, which should be inspected in details, should be analyzed and the variant of its application should be chosen. The one that will have the optimum effect, thereby ensuring the proper level of economic security. Let's examine the approaches to information managing in the economic security system, with the definition of the variants of decision-making for the information flows. The whole set of business decisions can be divided into two types - tactical ones that focus on the current use of existing economic potential and strategic ones that regard to replenishment processes, create economic potential and meet the requirements of system security and underpin business strategy (Basel & Brühl, 2013).

Based on the above, with implementation of the balanced system of indicators for increasing of the economic security of the business, it is possible to increase employees' awareness of the business strategy and to ensure responsibility for the stages of its implementation, motivating staffing potential. A balanced system of indicators can become an effective management tool. The interrelated indicators will allow to take into account the real situation and to achieve the strategic goals of economic security at all levels of management with rational expenditure of the resources. Corporate scorecard is shown in the Table 1.

Table 1. A corporate scorecard for forming the mechanism of information support of economic security using a system of balanced indicators

No	Tasks	Results
1	Defining corporate performance indicators for financial and client goals, as well as for the perspectives of business processes and its potential	
1.1	Definition and formulation of financial, client and business indicators and the indicators of perspectives and potentials.	The list of indicators
1.2	Identification of the cause and effect relationships between financial, client and business perspectives and the indicators of business perspectives and potentials and creating of the scorecard on prospects	The scorecard on prospects
2	Formulation of values of corporate indicators for planning periods	Corporate performance scoreboard
3	Development of the final corporate scorecard	The corporate scorecard

It is recommended not to use more than two indicators for clear understanding of the degree of achievement of the results for each strategic objective. The indicators should be tested for suitability, for example data sources, frequency of measurement, availability of planned values should be taken into the account. Further on, the duty holders for the implementation of the measures are identified and the measures are coordinated. After formulating the measures, it is necessary to estimate the costs of their implementation.

The measures are divided into the following groups: 1) the measures that can be fully implemented; 2) the measures that are resource-dependent; 3) the measures that are postponed to a later date. The developing a strategic budget means cost planning, in other words, the defining a cost plan: how much, to whom, when, and for what will be paid when conducting strategic activities. Budgeting allows controlling the cost of strategic measures of a balanced scorecard at each stage.

The implementation algorithm for the mechanism of ensuring of the economic security using a system of balanced indicators and information support is shown in the Table 2.

Table 2. The implementation of the information support of the economic security by the usage a system of balanced indicators

No	Tasks	Results
1	Allocation of responsibility for achievement of planned values and introduction of economic security indicators in the system of motivation	Matrix of responsibility for economic security indicators
2	Development and implementation of feedback processes	
2.1	Development of processes, procedures of formation and obtaining of actual values on indicators for the purposes of carrying out the plan factorial control	Schemes of formation of actual values of indicators
2.2	Adjustment of objectives and indicators	Operating procedure
3	Documentation	Regulatory documents

The proposed project is based on the definition of the main stages, works list, their duration and needed costs. It will allow providing a proper solution for the tasks of managing information security of economic security of business. The project can be implemented through the following four steps (Flanagan et. al. 2006; Makedon et al. 2018b): 1) the development of corporate cause and effect relationships; 2) the creation of corporate scorecard and a plan of strategic measures; 3) the forming of the budget; 4) the implementation of a balanced indicators. The functional division of work in the project team aimed on the development of a balanced indicators for economic security has been made, the linkage of the balanced system of indicators to the budgets has been described, an algorithm for developing a motivation system has been described.

Let's create a table of functional division of labor in the project team for developing the mechanism for ensuring economic security of business using information resources based on a system of balanced indicators. The scheme of functional devision of labor in the project team for the development of approaches to the information management is created with the purpose to streamline work sharing, to eliminate duplication of individual's functions, for more balanced load of the employees and for making a clear balance of project implementation rights (Cha, 2008; Kaplan & Norton, 1992). The following literal symbols are used for this purpose: O - is responsible for the execution of this function, organizes its execution, forms and prepares the final document; - presents the information to perform this function; U - participates in the performance of this function; P - makes the decision, approves, signs the document; K0 - consultations; C - coordinates documents and individual issues during the performance of the function; K - controls. A schematic representation of these characters is given in Table 3.

Table 3. Functional division of labor in a project team to develop approaches to managing information security of business

Tasks	Business leader	Project head manager	External consultants	Members of behavior department	Members of subdivision of controlling business processes	Members of financial department	Members of personnel department	Owners of business processes	Members of sales department
1. Development of the corporate strategic map and cause-and-effect relationships									
1.1. Organization of work on the project	P, K	P, K	K0			–	–	–	–
1.2. Strategic analysis	–	–	K0	O	K0, C	–	–	–	U
1.3. Development of the perspectives of “finance”, “clients”, “business processes”, “potential” of strategic map	–	P, K	K0	I	K0, C, I, K	I, O	I, O	I, O	I, O
1.4. Checking of the balance of strategic goals, developing a plan for ensuring economic security of business	P, K	O, C	K0	I	K0, C, I, K	I, O	I, O	I, O	I, O
2. Development of corporate scorecard									
2.1. Defining of corporate performance indicators for financial and client goals, as well as for business and potential perspectives	P, K	K0	O, I	K0, C	O, I	O, I	O, I	O, I	P, K
2.2. Formulation of values of corporate indicators for planning periods	–	P, K	K0	O, I	K0, C	O, I	O, I	O, I	O, I
2.3. Development of the final corporate scorecard	P, K	O, C	K0	O, I	K0, C	O, I	O, I	O, I	O, I
3. Development of strategic measures. Development of a strategic budget									
3.1. Development of strategic measures.	–	P, K	K0	O, I	K0, C	O, I	O, I	O, I	O, I
3.2. Development of a strategic budget of tasks	P, K	O, C	K0	O, I	K0, C	O, I	O, I	O, I	O, I
4. Implementation of a balanced system of indicators to ensure the economic security of the business									
4.1. Distribution of responsibility for achieving planned values and entering indicators into the system of ensuring economic security	P, K	O	K0	U	K0, C	U	U	U	U
4.2. Develop and implement feedback processes	–	P, K	K0	U	O	U	U	U	U
4.3. Documentation	P, K	P, K		U	–	U	U	U	U

An indispensable element of building information management plans created on the basis of the balanced indicators for the maintenance of the economic security of the business is their growing placement across the levels of the business hierarchy. Growing placement should to be understood as the development of tasks for

the implementation of the business security system through the managing of information flows at the operational level using regulatory documents (Perkins, 2012). Through this process, a business entity accomplishes the following tasks: partial allocation of balanced indicators across structural units; delegation of tasks and responsibilities; reflecting the contribution of the units in the implementation of the overall strategy, realizing of the opportunities for creative development of employees of the business during the implementation of adopted strategy (Safa, et. al. 2016).

Depending on the goals of the business and the set of indicators for each of the four basic groups, the area of activities as a part of the economic security program is identified (Table 4).

Table 4. Using information to ensure economic security based on a balanced system of indicators

Strategic tasks	Indicators	Direction of activity for achievement of strategic goals	Tasks for improvement of economic security
Finance			
Capitalization growth (business profitability)	Net profit	Market segmentation and product positioning	Conducting SWOT analysis and PEST analysis
Cost reduction	Level of cost of treatment	Optimization of technological and marketing processes	Introduction of finished goods movement charts to minimize costs
Increase in revenue from increased sales	Revenue from the sale of goods	Formation of marketing policy	Conducting the measures to increase demand
Customers (Consumers)			
Increase in consumer's demand	Number of regular and new buyers	Formation of a client base	Maintaining a customer database, introducing the system of motivation for employees for increasing the number of customers, developing a list of services
Provision of low prices	Price index	Pricing policy development	Analysis of market prices and establishment of optimal prices, development of a discount system, organization of sales and promotions
Saving the time for production and sales	Time spent on the production and sale of goods	Organization of production and marketing processes	Usage of the latest technologies and advanced trade methods
Internal business processes			
Provision of product choice in the medium and low price range	Range width and depth in the medium and low price range	Development of assortment policy	Analysis of the level of demand for goods
Ensuring optimal structure of dealer network	Number of dealers in different regions and other countries	Ensuring of competitiveness	Profitability analysis of retail stores. Estimate the reach radius for a particular store network
Improving business image	Number of PR promos	Development of the program of advertising campaign	Analysis of the impact of promotional activities on sales promotion
Achieving strong correspondences with the vendors	Degree of performance by the vendors	Selecting and working with the vendors	Creating a vendor database
Reducing of administrative expenses	Share of administrative expenses in the total cost of circulation	Optimization of the level of administrative expenses	Determination of administrative expenses reduction reserves
Staff training and development			
Increasing of the automation level in production and technological processes	The share of automated operations	Implementation of modern automated control systems	Analyzing the software market and developing a plan for implementing automated control systems
Increasing of organizational compliance	The correspondence between different categories of employees	Optimization of organizational structure	Implementation of quality management systems

Improvement of the level of qualification of employees	Number of employees who have completed advanced training courses	Staff training and development	Organization of advanced training courses for the employees
The reduction of brain drain	The level of satisfaction of employees	Formation of personnel's potential	Carrying out activities aimed at enhancing the corporate culture, setting wage ratios

The disadvantages of the system of balanced indicators, namely: the lack of responsibility for the overall result; the focus on managing assets and resources rather than operating them, should be taken into account in the process of building mechanisms for ensuring the economic security of the business. However, if the strategic information map of economic security is well-designed, using a balanced system of indicators as a management tool, it will help to minimize intellectual and material costs.

The implementation of measures for improving information support of economic security of business can be carried out on the basis of a strategic map, which should be provided with organizational and financial resources. It is also important to identify the specific features of the implementation of the strategic system of indicators and activities that contribute to the implementation of the strategy. First of all, the business entity should have sufficient funds to implement the balanced system of indicators, including financial and human resources, which enable the opportunity of meeting its operational level objectives.

The economic efficiency of the information management model in the system of ensuring the economic security of local business. The effectiveness of evaluating of the alternative directions of information movement in the case of ensuring the economic security of the business may be based on the usage of modern techniques and economic models.

Quite often in business, there is a need to make a decision on the choice of better and more efficient information technology (IT). The solution of this task is a complex and multifaceted problem (Tien, 2013). In this regard, the choice of methods and techniques of theoretical and practical application, aimed on successful development and adoption of economically sound and reasonably well founded IT management decisions becomes relevant. The priority assessment is required to be done because of this fact.

Using the model, we will justify the information security of economic security and determine its effectiveness. You can make the right decision to implement information technology using the criteria for choosing the best solution - to define the most effective option for investing in business informatization. Thus, business entities are faced with the question of choosing an alternative strategy for investing in the informatization of activities: x1 – the usage of the already existing IT, ie work on already implemented ones; x2 – development of own programs; x3 – investing in modern IT.

Thus, the management of economic security of a business should be based on the principles of ensuring its rational level, which does not limit the possibility of progressive development of the system and at the same time reserves the resources for maintaining the stability of boundary conditions, taking into account the dualistic nature of the impact of investment and innovation activities on the situation with the economic security (Rivera, 2017). Given into the account the above, it is important to underline that the important element and the task of effective management of economic security of business is the ensurence its rational level. At the same time, the rationality in the context of ensuring the level of economic security should be understood as a balance of timely, adequate reaction of the business to the changes of external and internal environment, that is, its compliance with the potential devastating effects of threats. To make an alternative decision on the priority of information flow in the direction of self-preservation, stabilization, formation of competitive, innovative position or position of providing long-term potential within the framework of business economic security management, it is proposed to use the models of hierarchy analysis. The scope of this model's application is the allocation of resources, the prioritization of alternatives, and the cost-effectiveness analysis.

The process of application of this model consists of a number of steps. The first step includes the structuring of the selection problem with the result of which is the presentation of the decision-making process in the form of a subordinate hierarchy or network. In elementary form, the hierarchy is formed from the top (goal) through intermediate levels (criteria) to the lowest level, which is a set of alternatives and a system of relationships that demonstrate the mutual influence of factors (criteria) and alternatives (Zobel et. al. 2017; Stoyanova et. al. 2019).

Thus, the basis of the first stage is the application of the systematic approach to the decision-making problem, which is implemented through the following components: the identification and explanation of trends for more specialization and reducing the coherence of system elements; identification and ordering of the dominant elements before describing the system as a whole, focusing on the usage of limited resources primarily to control the dominant elements; when collecting the relevant information about the creativeness of the decision maker who determine the desired purpose and structure of the system, you should identify the components and formulate alternative intervention strategies; the focus on the end result, facilitation of comparison of alternatives to select the most appropriate ones; that description of how an open system model should use the information from the external environment to verify the correct management of the system and modify its purpose or to simulate the responses of the external environment (Mintzberg, 2004).

At the second stage, the priorities of the criteria's are established and each alternative is evaluated against the established criteria, using the method of pairwise comparisons of the elements with respect to their influence on their overall characteristic. The pairwise comparison system produces a result that can be represented in the form of the inversely symmetric matrix. The evaluation is performed on the basis of the proposed method by an intensity scale from 1 to 9. Therefore, the model of hierarchy analysis allows decomposing a complex decision-making process by separating the elementary, formalized components of this process.

At the third stage of implementation of the hierarchy model, using the mechanism of determining the eigenvectors of the priority matrixes and the algorithm of calculating of global priorities of the alternatives with respect to the goal, the final rating is calculated, in other words, the position of the priority of the alternatives in the decision-making process with the focus on the above goal. According to the authors, the local criteria are the qualitative characteristics of the system of management of economic security of business. Figure 2 schematically depicts the hierarchical connection between the chosen alternatives and the criteria in the system of ensure a rational level of economic security for the business.

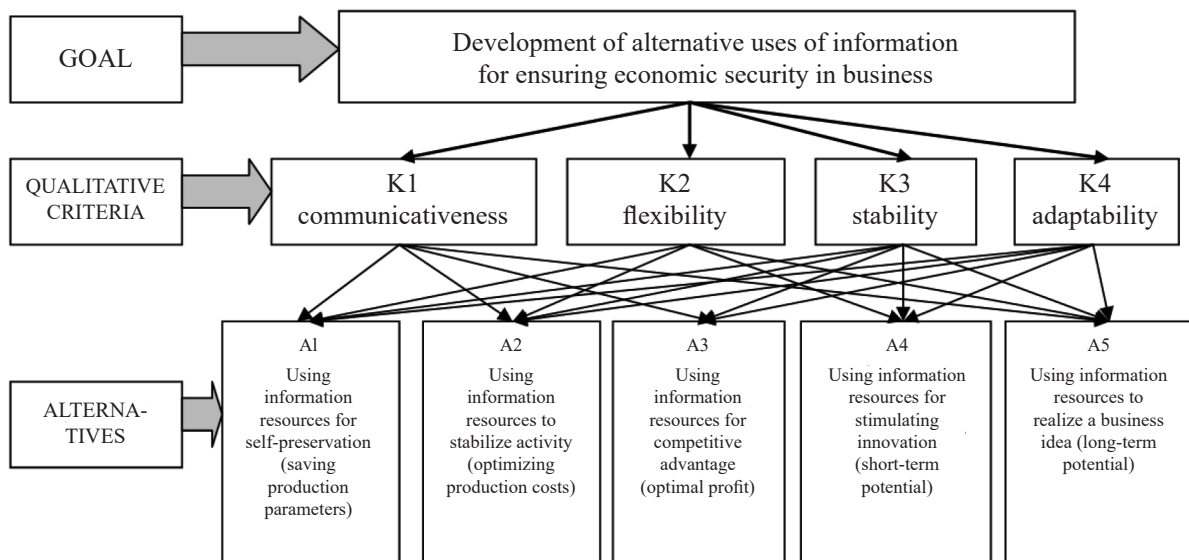


Figure 2. Dynamics of simple and weighted average rate of customs tariffs, world markets (%) (World Tariff Profiles)

Regulatory analysis results on the impact of qualitative indicators of the economic security on the dynamics of net income can be taken as the basis for setting the criteria priorities (Dyan, 2009). That is, at the second stage, by pairwise comparison of the β -coefficients of the formed multifactor models of the dependence of net profit on qualitative economic security indicators, we construct a 4x4 matrix.

As a result, the hierarchy model is based on a systematic approach and peer assessment, which is enabling the forming of the rating of local priorities for the objectives at the intermediate stage. The opportunity of checking the contradictions of experts' estimates by determining the level of consistency and their possible correction is another advantage of the hierarchy model. According to the defined facts, we will determine the priorities of alternatives to information flow management regarding the qualitative criteria of the economic security of the business. Toward this end, the alternatives should be analyzed from the point of the purpose they are promoting.

In this case, the directions of usage of business information resources for self-preservation, stabilization, and formation of competitive, innovative position or position of providing long-term potential in the framework of business economic security management can be determined as alternatives. It is worth noting that several criteria are used to select the optimal strategy in an uncertain situation: Wald's, Maximax, Hurwicz's, Savage's models. It is necessary to begin the studying of this problematic issue by considering of the features of constructing a static game model that is used for decision making under uncertainty and risk. In general, the model is given as a matrix, the rows of which are possible alternative solutions, and the columns mean the condition of the system (environment). Next, we should look at each of the criteria and the corresponding formulas for their calculation.

1. The weighted sum model. If the probabilities of the state of nature are known, then the weighted sum model can be used. According to this criterion, based on the optimization at the mean, the average gain is maximized, i.e.:

$$a_c = \max_j \left[\sum_{j=1}^n a_{ij} \times q_j \right] \quad (1)$$

2. Laplace's criterion. If there is no a priori information about the probabilities of possible states of nature, then they should be considered equally probable:

$$a_c = \max_j \left[\frac{1}{n} \sum_{j=1}^n a_{ij} \right] \quad (2)$$

3. Wald's criterion. According to this criterion, the minimum win is considered the maximum. This strategy guarantees a certain win in the worst case:

$$W = \max_i \min_j a_{ij} \quad (3)$$

4. Savage's criterion. According to this criterion, a strategy that minimizes the losses in the worst conditions should be chosen:

$$S = \max_i \min_j r_{ij} \quad (4)$$

where r_{ij} is the risk of applying x_i strategy in the P_j conditions, namely the difference between the maximum gain that the decision-maker could obtain if he knew reliably the occurrence of P_j conditions and the gain of applying x_i strategy under the P_j conditions.

5. Hurwicz’s criterion. This criterion assumes that deciding in the conditions of uncertainty, you should not expect the worst or the best result, but recommends you to look for some intermediate situation, weighing the worst and the best conditions. According to this criterion we will obtain:

$$H = \max_i \left[\alpha \min a_{ij} + (1 - \alpha) \max_i a_{ij} \right] \quad (5)$$

where α is a given coefficient ($0 < \alpha < 1$), which can be interpreted as a degree of propensity to risk.

By applying the possible alternative solutions into the corresponding formulas of criteria, we have obtained the corresponding values. The following calculations can be used to find out the list of the factors and criteria that have their effect (the criterion of the weighted sum is calculated with the following assumptions about the probabilities of economic situation: 0,2 – for P_1 stage, 0,4 – for P_2 , 0,4 – for P_3 ; Hurwicz’s criterion was calculated for 0,5).

Table 5. The task of making a management decision in the face of uncertainty

Alternative investment strategy	State of the economic environment			The criterion for choosing the optimal solution				
	P_1	P_2	P_3	The weighted sum model	Laplace’s criterion	Wald’s criterion	Savage’s criterion	Hurwicz’s criterion
x_1	50	60	70	34	30	50	30	60
x^2	30	40	50	26	23	30	30	40
x^3	80	90	140	50	43	60	60	85

According to the calculation given in Table 5, we can find out what criteria and what strategy is optimal for the entity in the case of investment in IT modernization and the implementation of new information products. It is clear that the choice of alternative investment strategy depends on the state of the economy and the business opportunities. Therefore, if a business entity wants to invest optimally, then it is necessary to use the criterion of weighted sum or Hurwicz’s model, which are more suitable than first or third strategy, ie to use the existing IT or to invest in modern IT. If you want to minimize costs, then the Savage’s criterion is recommended. You should choose the second strategy, in other words, to develop your own programs.

The peculiarities of the formed information systems that are providing the economic security for a particular business determine their specific approaches to establishing a rational level of economic security. The results of calculating the hierarchy of local criteria illustrate the importance of each qualitative indicator for the economic security system of each business.

By the same principle, we should make the pairwise comparison of the A_i alternatives for each K_i criterion, which has been analyzed at the previous stage, and we will calculate the priority vectors for each matrix. The process of determining of the global priority for the alternatives in the case of the goal is made by multiplying the priority matrix by the priority vector of the criteria.

The particular features of economic security, its components, the dynamics of occurrence of threats require the attitude to the information management system as to the synthesis of individual information elements of management, the application of which provides the development of alternative approaches in the implementation of operational and strategic management of economic security to achieve the ultimate goals and results of business activities. The important task is to properly organize the movement of information flows in business in order to optimize them. The role and importance of information management in a business planning system is determined by the need for information generated by that system (Mansell, 2012).

In the process of creating an effective mechanism for ensuring the economic security of a business, the following must be taken into account: the specifics of the business (its structure, profile, size, development strategy); the level of penetration into the global information space (use of specific software and Internet services);

business conditions (external and internal environment); the need for timely and accurate implementation of planned actions aimed at adequate response to threats; planning and developing strategies and decisions; optimal allocation and use of resources; the use of available economic security features; continuous monitoring and adjustment of business activities, the state of its economic security forming process (Makedon et. al. 2019a).

A business economic security model should be formed through a financial management system using certain principles, financial leverages, instruments, financial methods, legal and information support, and financial studies that enable the achievement of the basic goals of the business. The following are the main components of the business security model.

Firstly, they should be formed regarding to the financial interests: increasing the market value of the business and maximizing profits; sufficiency of basic stock and current capital; availability of the necessary amount of investment resources; optimizing budget allocations and more.

Secondly, it is necessary to take into account the principles of managing the economic security of business: the application of accountability management; the mandatory determination of the list of the business financial interests as part of its mission; integration of the business security management subsystem to the overall financial management system; minimizing the cost of ensuring the economic security of the business.

Thirdly, the economic security management model of the business should take into account the degree of use of modern information systems in the economic activity: the level of involvement of Internet network services in promoting the company's products and services; the quality and quantity of the used software, which have an access to the global information space; the qualification of the personnel managing the information space of the business; cost of information systems maintenance; growth prospects of the company using internal information systems and services of the Internet.

The mechanism of approaches adopting for information management having the purpose of ensuring the economic security of business is considered as a special species and a relatively independent, local subsystem in business activities. The proposed concept of managing system-wide characteristics of the economic security system of business solves the problem of improving the information management processes by using modern technologies, indicators and methods of performance evaluation.

5. Discussion

The results of the calculations give grounds for further research and experiments in the case the following components: the features of information security support of economic security for a particular business; specific approaches to establishing a rational level of economic security; the priority of alternative business reactions in the economic security management system depending on the level of economic security achieved in the previous period; the feasibility of implementing projects and activities that have a significant payback time depends directly on the underlying strength formed for a particular type of business economic security system. Cost-effectiveness assessment is one of the important steps in determining the feasibility of implementing measures to improve the economic security of business.

Information management in the business economic security system is defined as the purposeful organizing influence of the management entity on the information security of the business through the means of interconnected planning, organization, motivation and control processes that ensure the economic activity of the business in order of effective movement, exchange and share of information for providing the system of economic relations by the business line of the entity, by minimizing the impact of internal and external threats and achieving its strategic goals. The components of information management in modern economic conditions are as follows: management functions; management process; management structure; control mechanism; the object of management; the subject of management.

The place of information and communication in the business security system is determined by the value of the information, it is an integral part of doing business and necessary to maintain all aspects of ensuring the economic security of the business; information is a strategic common business resource subject to legislative and regulatory requirements; the information is protected and made available to the public in accordance with legislative and regulatory requirements; high-quality information is very important for successful business operations; information management is the responsibility of the managers of each business unit.

Conclusions

The methodical approaches to determining the need for the necessary information resources for supporting of the economic security system for business entities have been grounded and developed. The list of information factors influencing economic security has been formed on the basis of them. The effect of a number of factors has been analyzed, in details: the costs for ensuring the information and analytical security of the economics and the share of costs in the gross sales for information economic security.

The process of information management in the system of providing economic security of business is formed and proposed, consisting of the following stages: the stage of defining the goals of information economic security; a planning stage consisting of developing alternative business plans; verification and approval of plans for structural units; providing the needed information for plans developing; creation of alternative methods of ensuring economic security; the stage of collecting and analyzing of accounting information for economic security planning decisions in the account of economic safety, the stage of control, the stage of collecting and processing accounting and economic information for decision making on economic security, the use of the analytical function, the stage of preparing recommendations and proposing the alternative variants during decision-making process for the formation of the system of ensuring economic security of business.

The proposed project is based on the definition of the main stages and works, duration and costs. It will allow to provide a high quality solution to the tasks of managing information economic security of the business at micro and macro levels. The project can be realized by the implementation of four steps: the development of corporate cause and effect relationships, the creation of corporate account card, the forming of strategic measures plan and the budget and by the implementation of a balanced scorecard. The adoption of alternative information management options aimed at the ensurence of the economic security of a business is considered as a special kind and a relatively independent, local subsystem of an individual business entity, a separate element of the built-in system is the use of the proposed methodological approach, which makes it possible to increase the degree of economic validity of decision-making regarding the choice of alternative variant of business information movement in the case of self-preservation, stabilization, formation of competitive, innovative position or position of providing long-term potential within the framework of economic security management.

References

- Agius, C. (2010). Social Constructivism. Chapter 4 In *Contemporary Security Studies*, 2nd ed., edited by Alan Collins, 84-105. New York: Oxford University Press.
- Baldwin, D.A. (1997). The Concept Of Security. *Review Of International Studies*, 23(1), 5-26.
- Basel, J.S. & Brühl, R. (2013). Rationality and dual process models of reasoning in managerial cognition and decision making. *European Management Journal*, 31(6), 745-754.
- Baulch, B., Hoddinott, J. (2000). Economic mobility and poverty dynamics in developing countries. *Journal of Development Studies*, Vol. 36, No. 6, 1–24.
- Bernard, R. (2007). Information lifecycle security risk assessment: A tool for closing security gaps. *Computers & Security* 26 (1), 26–30.
- Bossert, Walter, and Conchita D'Ambrosio. (2013). Measuring Economic Insecurity. *International Economic Review* 54(10), 17–30.
- Buzan, B., Wever, O., de Wilde, J. (1998). *Security: A New framework for analysis*. 1st ed., Colorado: Lynne Rienner publishers.

- Cha, I.H. (2008). A study on the development of personnel security management for protection against insider threat. *The Journal of The Korea Institute of Electronic Communication Sciences*, 3(4), 210–220.
- Chehabeddine, M., Tvaronavičienė, M. (2020). Securing regional development. *Insights into Regional Development*, 2(1), 430-442. [http://doi.org/10.9770/IRD.2020.2.1\(3\)](http://doi.org/10.9770/IRD.2020.2.1(3))
- Cummins, T.G. and Worley, C.G. (2005). *Organization Development and Change*, South Western, Mason, OH
- David, F. & David, F. R. (2016). *Strategic Management: A Competitive Advantage Approach, Concepts and Cases*. Florence: South Carolina: Francis Marion University
- Drobyazko, S., Blahuta, R., Gurkovskiy, V., Marchenko, Y., Shevchenko, L. (2019a). Peculiarities of the legal control of cryptocurrency circulation in Ukraine. *Journal of Legal, Ethical and Regulatory Issues*. Vol: 22 Issue: 6. URL: <https://www.abacademies.org/articles/peculiarities-of-the-legal-control-of-cryptocurrency-circulation-in-ukraine-8813.html>
- Drobyazko, S., Bondarevska, O., Klymenko, D., Pletenetska, S., & Pylypenko, O. (2019b). Model for forming of optimal credit portfolio of commercial bank. *Journal of Management Information and Decision Sciences*, 22(4), 501-506. URL: <https://www.abacademies.org/articles/model-for-forming-of-optimal-credit-portfolio-of-commercial-bank.pdf>
- Dynan, Karen E. (2009). Changing Household Financial Opportunities and Economic Security. *Journal of Economic Perspectives* 23, 49–68.
- Flanagan, R., Norman, G. and Chapman, R. (2006). *Risk management and construction*, 2nd ed., Blackwell Pub, Oxford.
- Hough, P. (2008). *Understanding Global Security*, 2nd ed., Routledge, London.
- Hacker, Jacob S., Gregory A. Huber, Austin Nichols, Philipp Rehm, Mark Schlesinger, Rob Valletta, and Stuart Craig. (2014). The Economic Security Index: A New Measure for Research and Policy Analysis. *Review of Income and Wealth* 60, S5–S32.
- Kaplan, R. S., & Norton, D. P. (1992). *The Balanced Scorecard Measures that Drive Performance*. Harvard Business Review. Boston; Mass.
- Makedon, V., Kostyshyna, T., Tuzhykina, O., Stepanova, L., Filippov, V. (2019a). Ensuring the efficiency of integration processes in the international corporate sector on the basis of strategic management. *Academy of Strategic Management Journal*, Volume 18, Special Issue 1, 2019: URL: <https://www.abacademies.org/articles/Ensuring-the-efficiency-of-integration-processes-in-the-international-corporate-sector-on-the-basis-of-strategic-management-1939-6104-18-SI-1-452.pdf>
- Makedon, V., Korneyev, M. (2014b). Improving methodology of estimating value of financial sector entities dealing in mergers and acquisitions. *Investment Management and Financial Innovations*, 11(1), 44-55.
- Mansell, R. (2012). *Imagining the internet: Communication, innovation, and governance*. Oxford: Oxford University Press.
- Mason, R. (2007). The external environment's effect on management and strategy. A complexity theory approach. *Management Decision*, 45(1). Available at: www.emeraldinsight.com/doi/abs/10.1108/00251740710718935
- Mintzberg, G. (2004). *The Structuring of Organizations: A Synthesis of the research*. Published by Lebanon, Indiana, U. S. A.: Prentice Hall
- Page, J., Pearson, J., Jurgeit, B. and Kidson, M. (2012). *Transforming Whitehall: Leading Major Change in Whitehall Departments*.
- Perkins, J. (2012). *Information security-information classification*. LSE Governance.
- Rivera, M.J. (2017). Leveraging innovation & intrapreneurship as a source for organizational growth. *International Journal of Innovation Science*, 9(2), 137-152.
- Rupert, M., (2007). *International Relations Theory*, Department of Political Science, Oxford
- Safa, N.S., Von Solms, R. and Fitcher, L. (2016). Human aspects of information security in organisations. *Computer Fraud & Security*, (2), 15–18.
- Stoyanova T.A., Koev S.R., Stoyanov P.P., Zhyvko Z., Laptiev V. (2019). Strategic Management of the Personnel Development of Industry Companies. *Academy of Strategic Management Journal*. 2019, Vol: 18 Issue: 3. URL: <https://www.abacademies.org/articles/strategic-management-of-the-personnel-development-of-industry-companies-8241.html>
- Tien, J.M. (2013). Big data: Unleashing information. *Journal of Systems Science and Systems Engineering*, 22 (2), 127–151.

Timothy, P.L. (2016). Information security: Design, implementation, measurement, and compliance. Boca Raton: CRC Press.
Zobel, A.K., Lokshin B., and Hagedoorn J. (2017). Formal and informal appropriation mechanisms: the role of openness and innovativeness. *Technovation*, 59, 44–54.

Zucker, L. G. (1987). Institutional theories of organizations. *Annual Review of Sociology*, 13, 443-464.

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