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ASSESSMENT OF ENTREPRENEURIAL RISKS IN AGRICULTURE

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The object of research is entrepreneurial risks in the agricultural sector of Ukraine and the degree of their influence on the results of agricultural activity. One of the biggest problems of business is the presence of risks, but it is difficult to measure them. Currently, the standard (protocol) of risk assessment, which describes its tasks, methodology, procedures, statistical aspects and organization of research, is not recognized by the scientific community and expert practitioners. So, the improvement of methodological approaches to assessing entrepreneurial risks remains important.

During the study, the following methods were used: abstract-logical, comparative analysis, statistical, monographic, expert assessments, graphical, tabular and dialectical. For risk analysis, a system of indicators is proposed, which are formed taking into account the methods of decomposition, analysis and synthesis. When selecting types of risks, a content analysis of literature sources of authorship of experts in the field of agricultural risks is applied to the indicator system.

The result is development of the concept of the author's methodology for the qualitative assessment of the impact of risks in agriculture performance. The methodology has a number of features, in particular, it takes into account the impact of the largest industry risks – natural, macroeconomic, internal economic, political and criminal.

The proposed assessment methodology includes the stages:

1. Expert assessment of 20 factors that may most significantly affect the results of agricultural activity. Experts in points on a scale of 1 to 5 assess the degree of influence of the factor.

2. Check the consistency of expert opinions.

3. Calculation of the average scoring risk with the subsequent gradation of the degree of risk by groups: low or moderate, acceptable and critically dangerous level of risk.

4. Formation of conclusions on risk management activities.

Compared with similar methods of risk analysis, the proposed method has the following advantages:

– an integrated approach, the possibility of detailing individual risks;

– simplicity of mathematical calculations;

– saving time and resources based on the analysis of a small number of factors that have the greatest impact on agricultural activities;

– minimization of the subjectivity of expert assessments;

– possibility of using the results in assessing the insured risk or assessing the investment attractiveness of projects.

Through the use of this methodology, it is possible to obtain an unambiguous and scientifically based answer to the question «How high is the risk of incurring losses in this activity?»

Keywords: entrepreneurial risk, risk assessment methodology, agriculture.

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CONSTRUCTION OF A MODEL OF STRATEGIC MANAGEMENT OF COSTS AT THE MACHINE-BUILDING ENTERPRISE

page 11–21

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The object of research is a system of strategic cost management at a machine-building enterprise. One of the most problematic places is building a model of strategic cost management, which is associated with modeling the processes of accounting and analytical support and the complexity of adapting cost management methods. Providing an integrated and systematic approach will help the company's management personnel to obtain a sufficient amount of information to manage both at the operational and strategic levels.

The analysis of the current state of engineering in Ukraine is conducted on the example of a comprehensive analysis of the structure and dynamics of costs of LLC VEEM-Metallavtoprom (Lviv, Ukraine). This will help to find the strengths and weaknesses of the enterprise regarding the cost formation strategy. By deciding at a strategic level (for example, changing technology), it is possible to immediately get rid of a large number of factors at the operational level (production, commercial cost object).

In the course of the study, modeling of accounting and analytical support processes for strategic cost management of the enterprise under study is applied based on the implementation of an integrated approach with the following components: strategic accounting, strategic analysis, information support. In particular, strategic accounting as an element of accounting and analytical support will provide information on the state of the external and internal environment of the company; financial and non-financial indicators to make informed decisions. The use of strategic analysis will ensure the influence of factors on the company's strategy, its behavior in the market, the possibility of competing and positioning, as well as strategic performance.

However, the introduction of the model at the machine-building enterprise under investigation is associated with insignificant financial, organizational costs, which will not always ensure its high efficiency in priory. Additional opportunities will be obtained by the investigated enterprise, using the advantages of strategic accounting, strategic analysis, and management approach:

– improving the level of automation;

– introduction of measures that will affect the improvement of the quality characteristics of products;

– use of advanced methods for planning, accounting;

– view the range of products;

– improving the organization of production and labor.

Keywords: cost-forming factors, strategic cost management, strategic accounting, strategic analysis, Deming-Shewhart model.

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THE ANALYSISS OF IMPACT OF SMALL AND MEDIUM-SIZED ENTERPRISES ON COUNTRY INNOVATION POLICY: TAIWAN EXPERIENCE

page 22–29

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The object of research is the small and medium size enterprises (SMEs) of Taiwan. The implementation of the program Europe 2020 – construction of the innovation economy of the European Union (EU) countries is a priority of the EU. In Latvia, both on average and in the EU, 99.8 % of enterprises are SMEs. The search for indicators that influence the creation of an innovative economy and the inclusion of small and medium-sized businesses in the innovation environment is a problem not only for Latvia and the Baltic countries, but for the whole EU. Taiwan is one of the «Asian tigers», which made a huge economic jumpstart from an agrarian country to an industrial one. The release in 2016 of a number of high-tech products, such as: Motherboards – 89.7 % of the world market, Cable CPE – 84.5 % and Notebook PCs – 83.5 % of the global market place. The country in a number of countries with innovative economies. Therefore analysis of Taiwan's experience in building an innovative economy deserves further study and implementation in other countries.

For the research, the author used the following methods: content analysis – Information source form and content of a systematic, numerical processing evaluation and interpretation,and statistical analysis – Pearson, Spearman and Tau-Kendall correlation method. Using these methods indicators affecting the number of SMEs were selected. During the theoretical analysis, the author has formulated the advantages of small and medium businesses, conducted a search for indicators affecting small and medium enterprises and their involvement in the innovative environment of Taiwan.

The establishment of a linear relationship and the use of the correlation analysis of Pearson, Spearman and Tau Kendall, using SPSS program allowed the author to find the relationship between the indicators:

– Number of Researchers (full time equivalent);
– Annual Papers in Science Citation Index (SCI);
– Annual Papers in Engineering Index (EI);
– Number of SMEs;
– Total Employment SMEs;
– Number ofregistered patents.

The use of interrelated indicators solves an important economic task – improving the standard of living of the population based on innovation. Evaluation of these perfomences in the EU countries using econometric methods will allow to implement the innovation policy of states.

Keywords: small and medium-sized enterprises in Taiwan, innovation policy, economic policy of the EU.

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CHEMICAL PRODUCTION MODERNIZATION IN THE FORMATIVE PHASE OF INDUSTRY 4.0: STUDY OF TRENDS AND PROBLEMS OF INVESTMENT SUPPORT

page 30–37

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The object of the research is the investment process of modernization of chemical production. The long-term systemic crisis in the Ukrainian chemical industry, unprofitability and high capital intensity of production are constraining factors for its radical modernization. Modern tasks of digitalization of production and introduction of smart innovations form new problems and require new approaches to their solution.

In the process of research, the methods of analysis and synthesis, comparison, structural analysis, generalization and graphical method were used.

The analysis of foreign practice of innovative investment in chemical production found that the development strategies of companies and their investment priorities depend on the role of the segment in the global value chain. Industry leaders are diversifying their investment portfolios in the direction of high technologies for deep processing and production of high-tech low-tonnage products. At the same time, the technologies of Industry 4.0 and smart manufacturing become an integral part of their innovative investment strategies.

The study of trends and problems of investment support for the Ukrainian chemical industry showed that its traditional business model is gradually losing its resource and technological basis, and there are not enough investments within the industry for large-scale modernization. For external investors, certain segments of the chemical industry, producing liquid differentiated small-tonnage consumer goods, are of particular interest.

Promising approaches to the revitalization of investment activities in the chemical industry in the context of the formation of the Industry 4.0 are identified. They are based on the special role of chemical production as a supplier of smart materials and technologies, making it a necessary component of any innovation ecosystem. It is shown that external investments for the smart modernization of the industry should be sought among the industries consuming chemicals.

It is substantiated that small and medium-sized enterprises should become the key subject of Industry 4.0 processes in the Ukrainian chemical industry. Considering the insufficient technological readiness and investment support of such entities, their specialized support and program financing is necessary.

The proposed approaches allow overcoming the existing internal and external limited financial resources and mobilizing investments to launch smart modernization of chemical production.

Keywords: modernization of chemical production, investment in innovative development, Industry 4.0 processes.

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RESEARCH AND SYSTEMATIZATION OF SPECIFIC EXPRESSIONS OF THE ADAPTATION OF RETAIL TRADE ENTERPRISE

page 38–43

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The object of research is the process of systematization of specific manifestations of the retailer adaptation. The responsiveness of the retailer to various changes in the external environment requires flexibility and adaptability in making various management decisions and is determined by its adaptation potential. One of the most problematic places is the identification of specific types of adaptation for enterprises in the trade sector. Systematization of the specific manifestations of the adaptation of an enterprise is complicated by the lack of a single view in the economic literature, which hampers the process of forming an effective adaptation policy in commercial enterprises.

The analysis of existing approaches to the classification of types of adaptation. The main accents of adaptation of business structures are defined. The main specific manifestations of the adaptation of the enterprise are systematized and characterized. Expanded criteria for the enterprise adaptation by introducing additional ones: according to the level and degree of planning, if necessary, investment support and according to the degree of recoupment of adaptation costs. The study identified the characteristic features of the adaptation potential of enterprises in the retail industry from enterprises in other sectors of the economy: sensitivity to the variability of input resources and the requirements and demands of consumers.

The structure of the marketing adaptation of the retail enterprise has been determined and the commodity, price, spatial and communication types of the marketing adaptation of the retail enterprise have been highlighted, taking into account their industry specifics. These types of adaptation allow the retailer to more reasonably identify a set of adaptation solutions, the implementation of which ensures the adequacy and retailer adaptability to the conditions of market demand, customer requirements and demands. To determine the basic directions of marketing adaptation of a retail enterprise, key characteristics of the elements of the 4P marketing mix have been identified. Compared with the existing approaches to the classification, the proposed structuring of the marketing adaptation of a retailer creates the opportunity to meet the demands and demands of consumers and form a positive consumer mood. The implementation of marketing adaptation, respectively, elements of the 4P marketing mix, will contribute to the growth of the main resulting indicators of the retail enterprise.

Keywords: adaptation of a commercial enterprise, economic adaptability, adaptive capacity, adaptive response, adaptive policy.

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ECONOMIC CYBERNETICS

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RESEARCH OF PRACTICAL ASPECTS OF THE MODELING OF THE RISK TOLERANCE MANAGEMENT SYSTEM OF BUSINESS MODELS OF RESTAURANT BUSINESS ENTERPRISE

page 44–50

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The object of research is the risk tolerance management process of the business model of a restaurant enterprise. One of the most problematic places in the implementation of the business model of the enterprise is the timely recognition of risk and minimization of its impact on activities. The restaurant business is the most profitable and profitable in the world. Competition in this area increases over time. Risk arises where there is profit and competition, as well as various options related to the likelihood of risk occurring in conditions of uncertainty. Identification and consideration of risk factors is the basis for making management decisions on the timely transformation of the current business model of the enterprise in accordance with changes in the external environment.

It is shown that the risk tolerance management process of a restaurant business enterprise is associated with the difficulty of identifying key aspects of the risk tolerance of its business model and the need to take into account risks arising in the process of creating value. This is due to the peculiarities of the set of risks and the nature of their manifestation in the restaurant business. The restaurant industry is characterized by specific risk groups. These risks are associated with the formation and promotion of value propositions, revenue streams and customer/consumer relationships.

The stages of modeling the risk tolerance management system of the business model of a restaurant enterprise have been determined. These stages include identifying the main risk groups and key value management systems, assessing their parameters and allow to define a set of management decisions to improve the risk tolerance level of the business model of the restaurant business enterprise.

To implement the stages of modeling the risk tolerance management system of the business model of a restaurant business enterprise, an algorithm is proposed based on the theory of fuzzy sets with the ability to assess the compliance of the actual system parameters with their target value.

This ensures the possibility of assessing the actual state of the risk tolerance management system of the enterprise's business model by key business processes. A set of management decisions has been developed that makes it possible for a restaurant enterprise to respond in a timely manner to various kinds of risks in the context of resource and time constraints.

Keywords: risk tolerance of the business model of an enterprise, a set of management decisions, management system modeling.

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REPORTS ON RESEARCH PROJECTS

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IMPROVEMENT OF THE MODEL OF THE INNOVATIVE DEVELOPMENT OF THE PRODUCTION SYSTEM OF INDUSTRIAL ENTERPRISES

page 51–53

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The object of research is the features of the formation, use and development of the economic and mathematical model of the innovative development of the production system of industrial enterprises (IE). One of the main problems in the field of modeling innovation processes and optimizing the development processes of IE production systems is that the existing economic and mathematical models of the innovative development of the production system do not take into account the task of optimizing the production program in the operational management system. Here the interrelation of control accounts of digraphic accounting is important, based on the analysis of the specific features of the IE production capacity in the system for ensuring its competitiveness. In the process of research, the methods of generalization, systematization, system analysis, economic and mathematical modeling and a graphic method are used. With the help of these methods, a system of relations (equations) of the economical and mathematical model of the innovative development of the IE production system is proposed and theoretical principles are substantiated. As well as, existing solutions are systematized and practical recommendations for determining an option from an acceptable variant of the IE production program of an option that satisfies the conditions of production and optimizes the objective function in the «costs – production volume – profit» system are improved. Namely – the optimal ratio of the volume of production (sales) of products with the costs and the absolute financial criterion of development (net profit) of the enterprise. It is found that the production system of a modern IE should take into account the conceptual framework for determining the break-even and effective production volumes and consists of 3 subsystems: the «innovation» subsystem, the «development» subsystem and the «production» subsystem. The economical and mathematical model of the innovative development of the IE production system based on the business model for determining the break-even and effective production volumes in the system «costs – production volume – profit» in the enterprise is improved. And also takes into account the task of optimizing the production program in the system of operational management, taking into account the relationship of control accounts of digraphic accounting. The presented research should be considered when improving the IE system-oriented diagnostics and monitoring.

Keywords: innovative development of the enterprise production system, enterprise production program, operational management.

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