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DEVELOPMENT OF AN ECONOMETRIC MODEL FOR ASSESSING THE IMPACT OF PRODUCTION COST COMPONENTS ON THE FORMATION OF INCOMES OF AGRICULTURAL ENTERPRISES

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The object of research is the financial and economic activity of agricultural enterprises that grow plant products. The problem is that some components of the production cost have different effects on the growth of incomes of agricultural enterprises, and therefore they need to be identified for the purposes of managing the production of plant products. Therefore, there is a need to develop econometrically substantiated tools that will provide a quantitative assessment of the impact of the structural components of the production cost of plant products on the formation of net incomes of agricultural enterprises. This makes it possible to integrate the results of the analysis into the system of strategic management of such enterprises. An econometric model of the dependence of net incomes on the production cost of agricultural enterprises has been constructed. Statistically significant factors of influence have been identified and the degree of their elasticity has been established. It has been proven that the optimization of individual elements of the production cost has a differentiated effect on the formation of net incomes of agricultural enterprises. The results obtained have allowed to form the basis of analytical support for the management of plant production for making management decisions to increase the efficiency of agricultural enterprises. The research did not take into account global economic and political events, although they often change the structure of incomes and expenses in the agricultural sector. War, changes in foreign trade, inflation – all this significantly affects the results. The results obtained can be used in practice – the developed analytical tools work well in the crop production management system of agricultural enterprises. The multiple regression model helps management personnel see how individual components of the production cost of crop products affect net incomes, and quickly find inefficient areas of resource use. This opens the way for expense optimization, increasing profitability and improving the financial performance of an agricultural enterprise.

Keywords: production costs, regression analysis, agricultural enterprises, production management, incomes, expenses, analytical support.

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METHODOLOGICAL SUPPORT FOR ASSESSMENT OF THE COMPANY'S PERSONNEL POTENTIAL QUALITY BASED ON THE QUALITY FUNCTION DEPLOYMENT METHOD

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The object of research is the company's success key factors implementation by improving the quality of its personnel potential. The research is directed at studying the issue of assessing the quality of a company's personnel potential.

The paper is devoted to substantiating methodological recommendations for assessing the quality of the company's personnel potential based on the method of deploying the quality function. It takes into account the cause-and-effect relationships between the company's target requirements, the components of its personnel potential, and the processes that ensure the level of its implementation.

The quality function deployment analysis uses permits to reveal relationships among the personnel potential components. This method helps to set factors influencing their implementation level. Results will permit the company's management to develop a clear measures plan for personnel work. It will be focused on the company's key success factors achievement. Emphasis on the key areas will make it possible to minimize the costs spent on maintaining and realizing the company's employees' potential.

To obtain an objective evaluation valid for decision-making, it is suggested to determine the company's personnel potential quality through success key factors. Such an approach makes it possible to form the objective criteria to compare personnel potential of different companies.

The results are presented with using the ratio matrix. It shows correlation of the company's personnel potential components implementation level and influencing on them factors. The results suggest that company's management must pay attention to the team socio-psychological climate, organizational management structure and material and non-material stimulation system.

The quality function deployment method can be used for constant improvement and quality increasing the personnel management system functioning at the enterprise in general: social and labor relations, HR policy, personnel planning, personnel selection and adaptation, personnel stimulation, personnel development, corporate culture forming, personnel assessment and control.

Keywords: company's personnel potential, quality function deployment method, house of quality, company's key success factors, consumer's needs.

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MODELING OF RESOURCE PROVISION OF ECONOMIC SECURITY OF CORPORATE CULTURE IN PUBLIC ADMINISTRATION

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The object of research is the resource provision of economic security of corporate culture in public administration in the context of digital transformation. The problem being solved is to form a comprehensive approach to the specified object. Currently, the implementation of digital transformation tools is forming new requirements for organizational behavior, personnel stability and the management apparatus of state institutions. A generalization and justification of the place of corporate culture as a component of an intangible asset, which creates opportunities for authorities to ensure an appropriate level of economic security. The paper proposes a mathematical model for assessing the impact of corporate culture on economic security based on sequential actions: assignment, normalization of weight coefficients and multi-criteria assessment of subordinates. The methodological basis is the use of tools for correlation and regression analysis, index method, expert assessment and adaptive modelling. Resource elements of corporate culture are identified, such as digital competencies, mentoring, experience, and innovative activity. All of them have an impact on the aggregate indicator of economic security ($r = 0.82-0.91$). The results obtained indicate a transition to a digital cultural environment, which provides an increase in the indicator of the integral index of economic security by 0.27–0.34 units. Optimization of card distribution contributes to increasing the efficiency of managerial decision-making ($f = 8.27$). It is substantiated that further implementation of digital practices into corporate culture will increase resource provision indicators by 18–22% and enhance management transparency. The results can be used in the formation of a strategy for resource provision of economic security of public administration by improving corporate culture.

Keywords: company culture, civil service, institutional sustainability, resources, optimization, security, management, personnel, potential.

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DEVELOPMENT AND APPLICATION OF THE SCENARIO-FRACTAL ESG ASSESSMENT METHOD FOR ENTERPRISE DECISION SUSTAINABILITY

39–55

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The object of research is a scenario-fractal assessment of the ecology, society, management (ESG assessment) of the sustainability of management decisions of enterprises. The problem of assessing not the general level of sustainability of the enterprise, but specific decisions was solved. Such decisions are made in conditions of military challenges, climate risks, resource instability and

increasing requirements for ESG reporting. The theoretical part of the work is based on a combination of various scientific approaches. The methodological part involves the formation of a system of ESG indicators. Also used are the normalization of indicators, eclecticism of weights and a scenario ESG index. The data completeness coefficient and the fractal consistency coefficient, which show the similarity of the ESG profile of the decision at the strategic, tactical and operational levels of management, were separately taken into account. The empirical basis of the research was formed using open data of metallurgical enterprises. The decarbonization solutions of Interpipe Group, Metinvest and SSAB were analyzed. The choice of the industry was made from the standpoint of high carbon intensity of metallurgy and availability of public ESG information. The results of the method showed that the highest sustainability index is for the SSAB solution. Its advantage is related to both the environmental component and social manageability, management evidence and scenario endurance. The Interpipe solution has environmental advantages, but requires strengthening the verifiability of ESG data. The Metinvest solution is distinguished by high decarbonization ambition, but has shortcomings of a social and crisis nature. The results confirm that the sustainability of the solution must be formed through the balance of components, scenario stability and inter-level consistency.

The practical use of the obtained results is appropriate in the field of corporate ESG analysis, preparation of ESG reporting and selection of management alternatives. The method is suitable for use in conditions of uncertainty.

Keywords: sustainable development, ESG assessment, management decisions, scenario approach, fractal consistency, decarbonization.

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ECONOMIC CYBERNETICS

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LOGISTICS RISK ASSESSMENT AND THE DEVELOPMENT OF A RISK-ORIENTED CONTROLLING APPROACH UNDER UNCERTAINTY

56–66

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The object of research is the process of management and functioning of logistics systems of the European Union countries and Ukraine under conditions of uncertainty and crisis phenomena. The problem addressed is the lack of a methodologically formalized link between the type of logistics risk environment and the choice of a controlling model capable of ensuring efficiency and resilience of logistics processes. The results are based on internationally comparable indicators, including the logistics performance index, time to export procedures, the transport services cost index, and the political stability and absence of violence index. After data standardization, k-means cluster analysis identified three types of logistics risk environments in the European Union with different levels

of risk exposure. This confirms the heterogeneity of logistics risk profiles across EU countries and limits the applicability of unified controlling models focused exclusively on efficiency. A comparative assessment of Ukraine relative to average cluster values revealed an extreme logistics risk environment. It is characterized by a 22–31% lower Logistics Performance Index, a 2.7–4.3 times longer time required for export procedures, a 24–35% higher transport services cost index, and a significant deterioration in institutional parameters compared with the average values of all EU clusters. A mechanism for selecting a risk-oriented logistics controlling model depending on the operating conditions of the system has been developed, which enhances the validity of managerial decisions and the resilience of logistics processes. A distinctive feature of the results is the proposed mechanism for selecting a risk-oriented controlling model depending on the type of logistics environment. The findings can be used by enterprises and logistics governance bodies to develop logistics risk monitoring systems, improve management accounting and logistics cost budgeting, and design anti-crisis solutions under conditions of uncertainty and crises.

Keywords: controlling, logistics risks, supply chains, logistics risk environment, logistics system resilience.

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FEATURES OF CSR DEVELOPMENT IN VARIOUS SECTORS OF THE ECONOMY: CASE STUDY FROM UKRAINE BASED ON THE ANALYTICAL-HIERARCHICAL METHOD

67–73

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The object of research is the level of development of corporate social responsibility (CSR) in various sectors of the economy. The conducted research solves the problem of the lack of a comprehensive assessment of the level of development of CSR in various sectors of the economy. The research method is the construction of an analytical hierarchical model (AHP) for assessing CSR, taking into account economic, social and environmental aspects. The empirical basis of the research is an expert survey of specialists in the field of management and CSR. The research results were processed using the Expert Choice software. The data show that for enterprises in the IT (0.316) and energy (0.323) industries, the most important aspect of CSR is the working environment (0.383). The latter can be explained by the high level of digital culture, the significant importance of human capital and environmental responsibility. Enterprises of the light, food and machine-building industries received lower weight coefficients (0.104; 0.11 and 0.146, respectively), which is due to the low level of investment in employees, lower interest in environmental initiatives or low participation in social projects. In general, the AHP analysis shows that CSR in Ukraine is formed at the expense of social, labor and public aspects, while the market and financial and economic blocks play a less significant role. The applied structured multi-aspect approach to expert assessment will allow to form priorities of components and elements of CSR in different sectors of the economy. The results can be used by enterprises of different sectors of the economy to form corporate social responsibility policies. The use of the AHP model allows to structure the decision-making process, reduce the level of uncertainty and increase the validity of resource allocation regarding corporate social responsibility.

Keywords: CSR of enterprises, market environment, working environment, environment, society, analytical-hierarchical method.

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DEVELOPMENT OF PRODUCTIVE FORCES AND REGIONAL ECONOMY

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INTEGRATED DIAGNOSTIC ASSESSMENT OF LIGHT INDUSTRY CLUSTERS DEVELOPMENT IN THE SOCIO-ECONOMIC SYSTEM OF AZERBAIJAN

74–80

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The object of research is the processes of formation and development of light industry clusters in the socio-economic system of Azerbaijan, as well as the mechanisms of their technological audit and assessment of production

reserves in the conditions of innovative transformation of the economy. The research problematic lies in the lack of comprehensive diagnostic tools for assessing the integration potential of industrial zones and identifying hidden production reserves. Existing fragmented approaches do not allow for an accurate measurement of the impact of networking on labor productivity indicators, which complicates informed management decisions regarding the allocation of public investment in infrastructure.

The results include a developed diagnostic model for assessing industrial cluster potential based on the Integral Diagnostic Index (IDI). Calculations revealed the highest value for the Baku-Absheron region (0.74). The Aran (0.54) and Lankaran-Astara (0.46) regions, however, have limited potential. The research quantified a stable investment multiplier – 1.61, demonstrating the effectiveness of cluster infrastructure development. It was also found that cluster integration provides a 22% increase in labor productivity compared to stand-alone enterprises.

The results are mainly explained by the synergistic effect of concentrating resources in technology parks, including the Mingachevir Technology Park, and lowering transaction costs. The Baku-Absheron region's leadership is based on its well-developed innovation infrastructure. The higher efficiency of clusters is due to optimizing supply chains (reducing logistics time by 45%) and the dominant influence of human capital: the share of qualified personnel in leading clusters reaches 72%.

The results can be utilized in practice if they are incorporated into government monitoring programs for industrial policy until 2030. The developed IDI model is applicable to assessing the effectiveness of existing industrial districts and identifying regions requiring priority financial support for non-oil sector development.

Keywords: innovation, economic potential, industrial clusters, light industry, non-oil sector, competitiveness.

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THE INTEGRATION OF DIGITALIZATION AND SOCIAL RESPONSIBILITY AS A FACTOR IN ACHIEVING SUSTAINABLE DEVELOPMENT

81–87

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The object of this research is the management of social responsibility in the context of digitalization and sustainable development. The problem to be solved is the stems from the lack of tools to assess the synergistic effect of combining digitalization and corporate social responsibility (CSR), as current approaches treat these factors in isolation, creating a gap in our understanding of them as factors influencing sustainable development. The paper describes the economic and social effects of digital transformations. An analysis of CSR transformations in the post-war period and during post-war reconstruction was conducted. It was noted that national business entities currently do not make sufficient use of existing production reserves when implementing sustainable development initiatives. The existence of a certain gap between the achieved digitization of nationwide processes and the business sector's orientation towards responsible digitalization is substantiated. The paper identifies existing sustainability reserves and proposes measures to enhance social responsibility among entrepreneurs based on modern digital tools.

The work was carried out using methods such as comparison and systematic evaluation of phenomena and processes, as well as methods of logical generalization. It has been demonstrated that the practical application of cloud computing and artificial intelligence for monitoring social and environmental data can serve as a significant operational resource for Ukrainian enterprises. It has been substantiated that the implementation of online transparency is a key factor in enhancing the trust of partners, investors and customers. The recommendations presented may be of practical significance to business entities and senior company managers when implementing CSR initiatives, and to regional and national government bodies when formulating digitalization strategies that take into account socio-environmental rules, regulations and standards.

Keywords: social responsibility, digital transformation, sustainable development, production capabilities, ESG criteria, environmental sustainability, ethical standards.

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ECONOMIC AND LEGAL SUPPORT FOR THE STRATEGIC SUSTAINABILITY OF HIGHER EDUCATION INSTITUTIONS IN THE CONTEXT OF ENTROPIC DEVELOPMENT

88–94

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It is currently important to develop a methodology for assessing the comprehensive index of strategic sustainability of higher education institutions in Ukraine for the economic and legal support of universities in the context of entropic development.

The object of research is the process of evaluating the effectiveness of economic and legal support for the strategic sustainability of higher education institutions in the context of entropic development.

The problem addressed lies in the formation of a comprehensive approach that takes into account economic and legal factors for assessing the effectiveness of economic and legal support for the strategic sustainability of universities under conditions of entropy.

The research aimed to assess the level of economic and legal support for the strategic sustainability of state higher education institutions in Ukraine under conditions of entropic development.

The information base of V.N. Karazin Kharkiv National University; Ivan Franko National University of Lviv; Sumy State University; and the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" was analyzed.

The proposed comprehensive methodology for assessing the strategic resilience of higher education institutions in Ukraine under conditions of entropic development showed that all the universities studied are characterized by different internal configurations of strong and vulnerable elements.

The practical implementation of the methodology for assessing the integral index of HEI strategic sustainability was carried out, which showed that the index is within the regulatory requirements. This indicates a medium-high and high level of HEI strategic sustainability of Ukraine in the conditions of entropic development.

The highest level of strategic sustainability was recorded at Kharkiv National University ($InSS = 0.86$), indicating a sufficiently high level of institutional capacity of a classical university and long-term development in an unstable external environment.

The practical application of the research results allows for a comprehensive assessment of the economic, legal, educational, and scientific activities of universities under martial law.

Keywords: strategic resilience, higher education institutions, economic and legal support, conditions of entropic development.

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PROBLEMS OF MACROECONOMICS AND SOCIO-ECONOMIC DEVELOPMENT

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DEVELOPING A COMPOSITE ECONOMIC EFFICIENCY INDEX FOR UKRAINE'S AGRICULTURAL POST-WAR TRANSFORMATION: RECYCLING, BIOENERGY, AND EXPORT-IMPORT REGULATORY MECHANISMS

95–100

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The object of this research is Ukraine's agricultural sector undergoing structural transformation towards sustainable development. The analysis focuses on three interconnected dimensions of this transformation: agricultural recycling, bioenergy development, and regulatory mechanisms support-

ing sustainable change, including export-import governance. The research addresses the lack of integrated quantitative tools capable of assessing the effectiveness of agricultural transformation across these dimensions under wartime conditions and within the context of Ukraine's European integration agenda. Since February 2022, the Ukrainian agricultural sector has faced unprecedented challenges resulting from military aggression. Total losses have been estimated at 80.1 billion USD, the area of cultivated land has decreased by approximately 1.9 million hectares, and traditional maritime export routes have become vulnerable to external disruptions. Drawing on verified data from the World Bank, the United States Department of Agriculture (USDA), the Food and Agriculture Organization (FAO), and the European Parliamentary Research Service, a Composite Economic Efficiency Index (EEI) was developed to evaluate the sector's transformation. The index combines four dimensions: the Trade Efficiency Index (TEI, $w = 0.30$), the Bioenergy Efficiency Index (BEI, $w = 0.25$), the Recycling Efficiency Index (REI, $w = 0.25$), and the Green Economy Index (GEI, $w = 0.20$). The EEI declined from 0.447 in 2021 to its lowest value of 0.337 in 2022, reflecting the immediate impact of the war. Subsequently, the indicator recovered and reached 0.468 in 2024. However, this recovery has been uneven across the analyzed dimensions. While the TEI increased to 0.96, the BEI (0.090) and REI (0.250) remained substantially below their projected 2030 benchmark levels. These findings suggest that the restoration of export volumes through the Grain Corridor should not be interpreted as evidence of deep structural transformation. Without targeted investments in biomethane production, recycling infrastructure, and circular economy initiatives, the sector largely continues to follow its pre-war commodity-export model. Under conditions of a legally secured multilateral framework for the Grain Corridor and consistent government support for scaling bioenergy production, the EEI could increase to approximately 0.55 by 2030. The proposed approach and obtained results may support strategic planning for the post-war recovery of Ukraine's agricultural sector and provide analytical input for negotiations related to the agricultural chapter of the country's accession process to the European Union.

Keywords: agricultural sector transformation, bioenergy, circular economy, recycling, export-import regulation, sustainable development, biomethane.

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