

**ECONOMICS AND MANAGEMENT OF ENTERPRISE**

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**IDENTIFICATION OF THE ROLE OF INTELLECTUAL PROPERTY IN THE STARTUP PROJECTS MANAGEMENT SYSTEM**

pages 6–10

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The object of the research in the paper is intellectual property as one of the key resources of startup projects. The research is aimed at providing the understanding of intellectual property role in ensuring the efficiency of startup projects management and overcoming its undervaluing. Current conditions of Ukrainian enterprises functioning demand the search of effective tools for forming competitive advantages and ensuring the recovery of economy, that emphasizes the necessity of innovation activity activation. The study focused on startup projects as one of the forms of activation of innovation activity. The author proposed the definition of a startup as a temporary structure (organized in the form of a business entity and/or project), which has innovative characteristics of the business model, generates an innovative product and is aimed at significant growth and scaling. Startup projects have their peculiarities which influence the respective management system. On the basis of the conducted research the directions of startup projects management were identified, one of which is the management of startup project resources. Intellectual property, in its turn, is one of the key resources of startup projects considering the innovative nature of their business models. Efficient management of the intellectual property objects is capable of forming significant advantages for the startup project, which will result in its performance indicators. The main directions of intellectual property management in startup projects include development of intellectual property, market analysis, protection of intellectual property rights, commercialization of intellectual property rights. Ensuring the efficiency of the intellectual property management provides for the observance of relevant principles, the main of which include the principles of systematicity, reasonableness, efficiency, alternativeness, ensuring development, adaptability, social responsibility. The obtained research results will contribute to increasing the awareness of startup founders regarding the role and peculiarities of management of intellectual property.

**Keywords:** entrepreneurship, innovation activity, startup, startup project management, intellectual property, intellectual property rights.

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**GENERALIZATION OF APPROACHES TO VALUE-ORIENTED PROJECT MANAGEMENT AT OIL AND GAS PRODUCTION ENTERPRISES**

pages 11–15

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The political and economic situation in Ukraine leads to the fact that companies today are stuck with the deterioration of their financial condition and need effective mechanisms for further development even in the conditions of martial law. The ability to plan the project management process, formulate value guidelines for project management and implement the necessary management tools can help to form an optimal approach for the company to value-oriented project management at oil and gas production enterprises. To optimize the project management process, it is necessary to detail and improve the process of planning the implementation of these projects. Implementation of such detailing is possible under the condition of applying modeling of business processes at the enterprise. Therefore,

the object of this research is approaches to value-oriented project management at oil and gas production enterprises.

The paper uses general scientific methods of analysis, synthesis, systematization, generalization, and also used the method of modeling business processes to determine a clear sequence of actions in the process of implementing projects at oil and gas production enterprises.

According to the results of the research, it was established that for optimal value-oriented project management at oil and gas production enterprises, a certain business process should be followed, which provides for a clear sequence of actions and the possibility of controlling the result at each stage of the project. In general, according to the author's business process, value-oriented project management at oil and gas production enterprises involves the following stages:

- formation of a clear sequence of actions aimed at the implementation of the project (establishment of value indicators of the project);
- identification of responsible persons and allocation of resources for the implementation of each stage of the project;
- general implementation of the project (this stage involves detailing individual tasks);
- control of efficiency and achievement of value indicators of the project.

Adherence to such a sequence of actions will improve the efficiency of project management and ensure the coordination of project performance indicators with the general value orientations of the enterprise.

**Keywords:** value-oriented management, business process, data visualization, project management, oil and gas production enterprises.

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#### EVALUATING TECHNOLOGY CAPABILITY IN STRATEGY IMPLEMENTATION AND FIRM PERFORMANCE OF THE FURNITURE MANUFACTURING SECTOR IN KENYA

pages 16–24

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The object of the study is the performance of the furniture manufacturing sector in Kenya. The paper utilized descriptive and explanatory research design. The study targeted a population of 686 managerial staff and 195 CEOs in the furniture manufacturing sector. Structured questionnaires were distributed to the senior managers and a factor analysis was used to reduce the number of variables and establish the underlying constructs while analysis of moments of structures was applied to develop the theory.

Technology capability was found to explain 49 % of the variance in the firm performance. The fit indices suggested that the data was an adequate fit of the hypothesized model relating to technology capability and firm performance NFI=0.604, RFI=0.501, IFI=0.639, TLI=0.539 and CFI=0.634 with a *p*-value>0.05. In addition, the study found out that technology capability and firm performance had a positive and statistically significant contribution at 0.05 level of significance. This was depicted by the significance of the standardized regression coefficient of technology capability hypothesized path ( $\beta=0.878$ , S.E.=0.75, C.R.=11.743, and *p*-value<0.05). The findings also revealed that the size and age of the firm do not moderate technology capability in strategy implementation on firm performance. This was depicted by the significance of the standardized regression coefficient of firm size and firm age hypothesized path ( $\beta=-0.171$ , S.E.=2.015, C.R.=-0.085 and *p*-value>0.05). Therefore, the alternative hypothesis that size and age have a negative moderating contribution on firm performance was rejected at 0.05 level of significance.

To enhance a firm's performance in terms of profitability and growth, it is crucial to manage and sustain technology capabilities through an effective strategy implementation process. The study not only adds value to the existing body of knowledge in strategic management practice but points out that when implementing strategy, CEOs and senior managers should consider technology capability factors to improve the firm performance.

**Keywords:** technology capability, strategy implementation, firm size and firm age, firm performance.

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## ECONOMIC CYBERNETICS

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### THE GRAPH THEORETIC FORMULATION OF THE TEAM FORMATION PROBLEM BASED ON THE FACTOR OF COMPETITION

pages 25–30

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The object of the research is to increase the level of productivity of teamwork due to the effective selection of participants who demonstrate the highest level of productivity in cooperation. The presented research is aimed at the mathematical formalization of the problem of team formation based on the results of a series of competitions using graph-theoretic approaches. Each competition in this series involves teams with the same number of participants. The composition of the

team necessarily changes for each subsequent competition. After the competitive series, the obtained information about the teams' composition and their results is evaluated for the success of the interaction of the participants, which can be used in the formation of successful teams. A graph-theoretic formalization of the team formation problem on a complete undirected weighted graph has been developed. The set of vertices of this graph corresponds to the set of potential participants. Each edge is weighted with a number that reflects the quality of the interaction between the two participants. A valid solution is to cover the graph with cliques, the size of which is determined by the number of team members. A mathematical model of a two-criterion problem with MAXSUM and MAXMIN criteria was built, where the first criterion evaluates the overall success of the created teams, the second criterion evaluates the «weakest link», allowing to choose the option that maximizes the minimum edge weights for each clique. A two-criterion objective function defines a Pareto set consisting of all Pareto optima in the set of admissible solutions. The algorithmic problem of finding the complete set of alternatives, which is a subset of the Pareto set of minimum power when the condition of equality of the objective functions for the complete set of alternatives and the Pareto set is fulfilled, is considered. The weight of the edges of the graph is calculated using the scores obtained during the series of competitions. In practice, the research results can be used as a basis for the development of team building techniques.

**Keywords:** teamwork, pareto set, multi-criteria objective functions, graph, multi-criteria optimization, competition.

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## DEVELOPMENT OF PRODUCTIVE FORCES AND REGIONAL ECONOMY

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### CONSIDERATION OF OBSTACLES TO THE DEVELOPMENT OF THE DAIRY INDUSTRY OF UKRAINE ON THE WAY TO EUROPEAN INTEGRATION

pages 31–37

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The object of research is the key tasks of the European integration processes of the dairy industry of Ukraine and obstacles to their implementation. In the course of the study, the author used general scientific and special methods, in particular: the method of system analysis and the method of generalization; methods of analysis and synthesis; statistical and tabular methods; and the method of comparison.

The paper examines the main tasks of the European integration processes of the dairy industry of Ukraine, which take into account the general concept of development of the European economy: food security; safety and quality of dairy products; maintenance of healthy livestock; openness and transparency of market organization and reporting; Environmental issue. The study highlights the obstacles to the development of the dairy industry of Ukraine on the way to joining the EU, and the plan of priority actions of the state for 2023–2024. The main obstacle to the development of Ukraine is the occupation of the territory, which hinders socio-economic development and increases macroeconomic risks. Widespread migration and the growth of counterfeiting and the shadow market do not contribute to positive assessments of the fulfillment of the conditions

for Ukraine's accession to the EU. We are witnessing decisive steps on the part of the state to improve the quality of dairy products and resolve issues related to the establishment of logistics links between Ukraine and the EU countries. This study needs to be discussed and further studied.

The country desperately needs to build up stable and mutually beneficial economic relations between the EU and Ukraine in the dairy industry. Despite the loss of Ukrainian territory, disruption of logistical links, migration and lack of qualified personnel, reduction in the number of dairy cows, decrease in the production of raw milk, changes in the production process, Ukraine has great chances to become one of the main suppliers of dairy products to European markets.

**Keywords:** dairy industry, European integration processes, obstacles to development, agricultural enterprises, households.

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## PROBLEMS OF MACROECONOMICS AND SOCIO-ECONOMIC DEVELOPMENT

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### STATISTICAL ANALYSIS OF GLOBAL DEBT IN THE WORLD ECONOMY

pages 38–42

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The object of research is global debt (or world debt) in the world economy. Today, the problem of global debt (or global indebtedness) is extremely acute in the world economy. The global debt indicator is the largest in all history of the world economy and has already amounted to 315 trillion USD in 2024. The interdependence of the global debt and the main macroeconomic indicators were investigated in this paper. The main world macroeconomic indicators (GDP, inflation, imports, exports, economic growth) and world population are treated as global in this publication. The forecasting of the global debt index was also carried out until 2035 in the world economy.

Statistical analysis methods were used in this research. All research results were obtained through the Statgraphics Centurion statistical package. This package made it possible to carry out the Multiple Analysis of Variance procedure and forecasting through the ARIMA (1,0,0) model.

During applying the Multiple Analysis of Variance procedure, this publication included the results of Pearson's correlation, Spear-

man's rank correlation and analysis of covariance. Pearson's correlation made possible to reveal which global macroeconomic indicators the global debt has very strong and weak connections. Spearman's rank correlation also demonstrates the interdependence of global debt and global macroeconomic indicators. Covariance analysis gave results that differ from the above methods. In turn, the ARIMA model was used to forecast the global debt until 2035 in this research.

The essence of the research results is that global debt has the closest relationships with such global macroeconomic indicators as global GDP, global exports and global imports and world population. Global debt is moderately correlated with such global macroeconomic indicators as global inflation and global economic growth. The ARIMA model predicts an increase of global debt by 2035, rather than a decrease, and, accordingly, these global macroeconomic indicators as interdependent from the debt.

In practice, these results can be used to implement appropriate economic policies to balance the main macroeconomic indicators in the economy in order to reduce the indebtedness of states that, in turn, affects on the global debt.

**Keywords:** global debt, global macroeconomic indicators, Multiple Analysis of Variance, Pearson's correlation, Spearman's rank correlation.

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