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DEVELOPMENT OF A CONCEPTUAL MODEL OF ADAPTIVE MANAGEMENT OF HUMAN CAPITAL REPRODUCTION OF INDUSTRIAL ENTERPRISES

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The object of research is the adaptive management of the human capital reproduction of industrial enterprises. It is established that the management of the human capital reproduction of Ukrainian industrial enterprises is characterized by a complex of problems. Among them – a long lag from world standards for labor costs, which leads to a gap in the characteristics of human capital, hyper-turbulence of the business environment. It is determined that the lack of scientific research in the field of adaptive management of the human capital reproduction enhances the depth of existing practical problems and makes it impossible to form an innovative economy in the country. This required the formation of a conceptual model of appropriate management.

The expediency of the formation of adaptive control by the characteristics of adaptation when improving its meaningful definition is proved. The principal aspects of the new design, the «adaptation» concept are: continuity of changes, process as an activity, the interaction of the business environment and the system, the response to changes in the general environment, incorporation into the result of active and passive behavior of enterprises, the strategic context of adaptive changes. Based on the reaction and the time of its implementation, the main types of adaptive processes are identified.

The elements of adaptive control are defined: signal, change, management cycle, control result. Based on the integration of these elements and the content context of the human capital reproduction management system, the concept of «adaptive management of the human capital reproduction of industrial enterprises» is constructed. The stages of such management and their tasks are determined. The scheme of the conceptual model of adaptive management of the human capital reproduction of industrial enterprises is formed.

Based on a formal assessment of the structure and logic of building the model, its essential properties and the link, the conclusion about model verification is scanned.

The practical implementation of the developed proposals allows to provide a quick and targeted response of enterprises to changes in the business environment regarding the adjustment of the characteristics of human capital. Unlike similar well-known models, the proposed format creates the basis for determining adequate directions of transformation of the reproduction process.

Keywords: human capital reproduction, adaptive management, management cycle, management result, conceptual model.

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RESEARCH OF MARKETING ACTIVITY OF AGRARIAN ENTERPRISES IN THE CONTEXT OF DEVELOPMENT OF INNOVATION PROCESSES

page 12–18

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The object of research is the process of innovation management in the marketing activities of agricultural enterprises, including the Phoenix farm (Badalovo village, Zakarpattia region, Ukraine). One of the most problematic places is the low level of legal capacity of the departments of the agricultural enterprise for marketing activities.

In the course of the study, abstract-logical, monographic, computational-constructive, economic-statistical and economic-mathematical methods were used, as well as methods of analysis and synthesis. The research results on the functioning of marketing in agricultural enterprises have shown that the intensification of the development of marketing activities and the transition to more advanced concepts directly depends on the effectiveness of marketing strategies. It is also shown that the solution to the problem of increasing the economic activity of agricultural enterprises in the market is supposed to be through organizational and economic changes aimed at reducing production and ensuring the economic results of marketing activities. It has been established that in conditions when there is a high level of competition in the agricultural market, it is marketing activity that is the determining factor that ensures the presence of competitive advantages. It is determined that the main activities for an innovative agricultural enterprise are:

- conducting market research;
- use of marketing areas to promote innovation;
- building a system of relationships with other participants in the innovation process.

Given the ever-growing interest in innovation, as a key success factor in strengthening the company's position in the market, the authors argue that the innovative and marketing activities of agricultural enterprises are the basic directions for their successful development. They also suggest developing methodological approaches to the formation of management methods based on marketing principles and ways of introducing and improving the marketing management system in agricultural enterprises.

Thanks to the research carried out in the farm, the proposals on the introduction, development and optimization of the No-till system of zero tillage in the «Phoenix» farm are substantiated.

Keywords: innovation process management, innovation marketing, agricultural enterprises, No-till technology, factors of influence on innovative activity.

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INTELLECTUALIZATION OF ENTERPRISE MANAGEMENT USING BUSINESS INTELLIGENCE INSTRUMENTS

page 19–24

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The object of research is the process of management intellectualization in particular the use of the information system of knowledge enterprise management. For the Ukrainian level of economic redistribution, such a process may be considered innovative but necessary. The process of knowledge management is related to the abstract nature of the approach for management of different enterprises and the duration of implementation of its information support system.

The article discusses the preconditions and prospects of business development in the new economic environment, where knowledge, information, rapid response to its processing play a key role, and the Internet provides the development of fierce and large-scale competition. The analysis of the current state of intellectualization management in the Ukrainian market is carried out. The main characteristics of implementation, organization and control of knowledge management at the enterprise are determined. The implementation of the project information system at the enterprise is complicated by the influence of theoretical and methodological uncertainty. During the study, approaches were used to model the enterprise knowledge management process.

The basic requirements for the intellectualization of process management in the enterprise, strengths and weaknesses of using Business-Intelligence-systems in management are studied. The relationship between knowledge processing and business process execution within the enterprise is investigated.

The Intelligent Business Performance Platforms (IBPPs) software package, which includes three components: Business Intelligence (BI), Business Process Management (BPM), and Business Rules Management (BRM), is offered to help implement quality monitoring and control of business, processes and manage the decision-making system, ie implement knowledge management at the enterprise.

The article deals with the phenomena of virtualization of the economy, analyzes the applied possibilities of using the tools of Business Intelligence. Thus, the author concludes that the intellectualization of management is the main condition for conducting effective business at the present stage of society development, conducting a retrospective analysis and finding the optimal tools of Business Intelligence.

Keywords: intellectualization management, Business Process Management, Business Rules Management, knowledge management, Business Intelligence.

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DEVELOPMENT OF PRODUCTIVE FORCES AND REGIONAL ECONOMY

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STRATEGY OF THE DEVELOPMENT OF INDUSTRY 4.0 IN UKRAINE: EVALUATION OF THE REPRESENTATIVES OF VARIOUS ORGANIZATIONS AND COMPANIES OF UKRAINE

page 25–29

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The object of research is the Ukrainian strategy for Industry 4.0. An important step in the development of the Industry 4.0 movement in Ukraine was the presentation of the Ukrainian strategy of Industry 4.0. Therefore, it is extremely important to evaluate representatives of various organizations and companies of Ukraine regarding the priorities of the Industry 4.0 development strategy in Ukraine.

The survey used a questionnaire of several blocks of questions:

- «Necessity of applying approaches to Industry 4.0 in national strategies of Ukraine»;
- «Definition of industries where Ukraine has the best chance of taking a leading position on the development of Industry 4.0 approaches in the international arena»;
- «Key factors for the success of Industry 4.0 strategy in Ukraine»;
- «Main strategic initiatives for the development of Industry 4.0 in Ukraine».

122 respondents participated in the survey. The results of a survey of the views of representatives of various organizations and companies of Ukraine on the development strategy of Industry 4.0 in Ukraine and its seven main strategic initiatives:

- 1) Institutionalizing the development of industrial high-tech segments at the state level;
- 2) Creation of an innovative ecosystem of industrial high-tech;
- 3) Accelerating clustering in Industry 4.0;
- 4) Full digitalization of the key sectors of industry, energy, infrastructure;
- 5) Maximum integration of Industry 4.0 in the strategy of the defense complex and security;
- 6) Launching export programs for industry high tech sectors;
- 7) Internationalization and integration into the global space of Industry 4.0.

Due to this, priority was given to the implementation of the Ukrainian Strategy for Industry 4.0, taking into account the views

of representatives of different stakeholders. In particular, priority activities include enhancing digital skills, standardization, creating an ecosystem, financial incentives, integration programs into the European Union, technology transfer and more.

Keywords: Industry 4.0 in Ukraine, strategic initiatives, key areas of development, priority measures.

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REPORTS ON RESEARCH PROJECTS

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IMPLEMENTATION OF ACCOUNTING IN THE SYSTEM OF INTEGRATED BUSINESS STRUCTURES

page 30–32

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The object of research is the European integration of Ukrainian accounting. One of the most problematic places is the insufficient compliance of Ukrainian accounting with international standards, which prevents Ukraine from integrating into the global financial space.

Empirical research methods (observation, comparison, generalization), theoretical research methods and the analytical method are used.

The paper discusses in detail the differences between the Provision (standard) of accounting of Ukraine and the International standards of financial reporting and accounting of other states. These differences create significant obstacles to doing business and prevent the implementation of accounting in the system of integrated business structures. The necessity of bringing state accounting and the basic principles of its construction with international standards is substantiated. This is necessary for the correct implementation of business integration structures in the system in order to ensure its effective functioning and obtain significant competitive advantages in the modern market environment. Changes in accounting should entail changes in tax and civil law, since the transition of Ukrainian accounting to international standards will become an important link in the integration of the Ukrainian economy into European and world economy.

To justify the need to bring state accounting and the basic principles of its construction with international standards, the author proposed the following steps to solve this problem:

- bringing into compliance the Provision (standard) of accounting of Ukraine with the International standards of financial reporting and accounting of other states;
- ensuring adequate interpretation and compliance with the provisions of the Provision (standard) of accounting in Ukraine;
- obtaining an audit opinion on the compliance of financial statements with the requirements of International Financial Reporting and Accounting Standards of other states.

Keywords: state accounting, integrated business structures, international standards.

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ANALYSIS OF PECULIARITIES DEVELOPMENT OF UKRAINE'S CONSTRUCTION INDUSTRY IN COMPARISON WITH EU AND CIS COUNTRIES

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The objects of research are the indicators of construction industry development of Ukraine in comparison with the European Union and Commonwealth of Independent States countries. Methods of statistical, economic, marketing and comparative analysis, methods of formal logic were used in the course of the study. Within the framework of the conducted research the main aspects of development of Ukraine construction industry are analyzed. The dynamics of estimated indicators of construction industry development of Ukraine for 2014–2018 in comparison with other countries and the dynamics of the structure of construction products production in Ukraine are determined.

The peculiarities of the development of Ukraine construction industry in the context of identifying the problems and benefits of the functioning of the studied area were conducted. The analysis of the indicated direction was made using the author's approach to assess the development state of the construction industry. The results of the evaluation show that the main indicators of the construction industry development are low as compared to similar indicators in the developed and developing countries. As a result of the assessment, a comprehensive picture of the construction industry development in developed and developing countries (including Ukraine) were established. The assessment was carried out using the author's method of estimating the state and tendencies of the construction industry development in developed and developing countries.

The scientific novelty of the method is that the approach to the estimation of the level of construction industry development of the country is proposed through the prism of integrated parameters of the volume of manufactured construction products (completed construction works) by enterprises of the country, population and territory (area) of the country. Thanks to the use of the author's method of express evaluation provides an opportunity to determine the state and problems of the development strategies effectiveness of the Ukraine construction industry, which in turn, in comparison with similar, has the advantage of the possibility of its unified application

to assess the effectiveness of development strategies of enterprises of the Ukraine's construction industry.

Keywords: development strategy, volume of construction products, construction industry index, construction products.

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APPROXIMATIONS AND FORECASTING QUASI-STATIONARY PROCESSES WITH SUDDEN RUNS

page 37–39

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The object of research is heteroskedastic processes in the formation and evaluation of the offset policy of states in international markets, in particular, in the conclusion and execution of offset contracts. The process of concluding and fulfilling the conditions of an offset contract is weakly unsteady, because at its conclusion there

can be a wide variety of sudden events, force majeure circumstances that can't be described and predicted in detail, with acceptable accuracy, in full. It is shown that the term «quasi-stationary process», which has some approximation to the stationary process, is more suitable for describing such processes. The most promising approach to constructing mathematical models of such processes is the use of combined fractal autoregression models and an integrated moving average. During the study, methods of the theory of non-stationary random processes and the theory of runs of random processes were used, it is shown that the combination of a quasi-stationary process with a sequence of random runs is quite satisfactorily modeled by the so-called fractal or self-similar process. As a universal mathematical model of self-similar processes with slowly decreasing dependencies, the model of fractal integrated autoregression and the moving average FARIMA are used. However, this model does not take into account the effect of runs of random processes on the coefficients of the numerator and denominator of the finely rational function, which approximates the process of autoregression and the moving average. Therefore, in the study, the relationship in the parameters of the runs and the coefficients of the approximating function. Mathematical models of discrete time series are considered, which are characterized by quasi-stationary and the presence of sudden runs. It is shown that for approximation of such series, models such as autoregression and moving average are quite suitable, modified to the classes of autoregression models and integrated moving average. And for self-similar (fractal) processes – modified to the classes of models of autoregression and fractal integrated moving average. The relationship between the shear length when calculating autocorrelation coefficients and the total sample length can serve as an acceptable indicator of the correctness of the solution.

Keywords: heteroskedasticity, discrete time series, autoregression, moving average, fractal integrated moving average.

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