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THE FORMATION OF THE DIGITAL ECONOMY IN RUSSIAN REGIONS

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Abstract

Digital organization of effective economy of the Russian regions can be used as a practical part of the methodology of multidimensional regulation of the design process and system modelling of regional economic development, allowing in the changing paradigm of the world order and changes to the rules for the conduct of world economic activity to preserve inviolate the integrity of the regional and national economy. Scientific novelty is the combination of theoretical and methodological principles and practical competence in digital organization. The effective economy of the Russian regions, allowing performing autonomous monitoring of the quality of economic management, is vested with the authority of the power structures in a particular region. The results of the study are: classification of challenges of the digital transformation of the global, national and regional economy; structured causal link unstable state of the economy with the structural shifts and cyclical recession; possibility of elimination of the reasons of the unstable state of economy in Russian regions through the use of digital technology. Scientific and practical significance is determined by the real set of new competencies in managing the regional economy, due to the materialization of the main provisions of the digital organization of an effective regional economy.

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Keywords: Globalization, concept, paradigm, practical competence, Russian regions, digital technology.

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1. Introduction

The digital economy is based on information and communication technologies (ICTs) - the innovative conduct of business through markets via the Internet. In the digital economy, communication infrastructure provides a global platform on which people and organizations develop strategies, interact, communicate, collaborate, and seek information (Nadiri, Nandi, & Akoz, 2018).

The foundation of the digital economy is hyper connectedness, which means the growing interconnectedness of people, organizations and machines, which is the result of the Internet, mobile technology and the Internet of Things (IoT). Internet of things (English internet of things) (IoT) - the concept of a computer network of physical objects ("things") equipped with built-in technologies for interaction with each other or with the external environment, considering the organization of such networks as a phenomenon that can rebuild economic and social processes, eliminating the need for human involvement from parts of operations and operations (Brown et al., 2013).

Business success in the digital economy is determined by the prospect of work, the flexibility of a global enterprise; consumer experience, a convenient way of interacting "business with business" ("Business to business", B2B) and "business with consumers" ("Business-to-consume", B2C); Digital Consumption Networks (IoT); global fusion of the physical and digital world. Each asset consumers, enterprises, devices and processes move into the digital domain, where software dominates (Gretchenko, Gorokhova, & Gretchenko, 2018). Economists are studying how digital technologies are changing economic activity in various areas of the national economy. For example, digitization has reduced a number of economic costs: search, reproduction, transportation, tracking and verification. Changes in economic behavior that result from cost changes inherent in the digital context are not as obvious as underlying economic models.

Digital markets allow agents to jointly invest in common infrastructure and digital utilities without assigning market power to the platform operator and are characterized by increased competition, lower barriers to entry and lower privacy risks (Gretchenko, Demenko, & Gorokhova, 2017).

Blockchain presents a new application of cryptography and ICT to solving the problems of financial accounting. Large players in the financial industry began investing in new technology, and stock exchanges proposed using Blockchain as a method of trading corporate stocks and tracking their ownership (Yermack, 2017).

For the digital organization of an effective economy of the Russian regions, it is necessary to use the criteria for assessing the achievement of strategic and tactical economic goals. These criteria may be KPI indicators. KPI allows you to orient the Russian Federation Corporation towards strategic and tactical goals, and monitor the business activities of its entities. KPI is considered as a key indicator of the result of activity – the degree of achievement and the costs of obtaining the result (Gretchenko, Gorokhova, Demenko, & Gretchenko, 2018).

KPIs are part of a balanced scorecard that establishes a causal relationship between goals (strategy) and indicators (qualitative effects - project performance) (Gretchenko, 2018). The high level of significance of the study is associated with the use of advanced and still not fully explored possibilities of digital technologies in the process of managing the regional economy.

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2. Problem Statement

The problem statement is related to the need to eliminate the consequences of multiple unproductive changes in the economic and mathematical content of monitoring the effectiveness of the regional economy, including by classifying and regulating the design and modelling of the regional development system in the direction of innovation and digitalization of the economy. The set of solutions to the problem is consolidated in the project's task – to quantitatively and qualitatively classify challenges and identify the possibilities of digital organization of an effective economy of the Russian regions through the allocation of KPIs of both authorities and the regional economy.

Evaluation of the effectiveness of regional authorities can be assessed bypassing the subjective performance indicators of individual officials, focusing on the KPI of regional development by goals. Management by goals is a method of managerial activity, which includes: predicting the possible results of activities and planning ways to achieve results. Peter Drucker (Gretchenko & Pskhu, 2019) is the founder of the Office for Goals and the corresponding system for evaluating the achievement of results (goals through KPI).

It is justifiable that there is a need to assess the role of each region in the country reproduction process with hierarchical ranking by KPI level, as well as identifying opportunities to increase the efficiency of economic activity based on the best practices of active regions. This will allow the constitution of typologically stable theoretical and methodological principles and practical competencies of the digital organization of an effective economy of the Russian regions.

3. Research Questions

Given the gap in the existing literature, research questions for this study:

1. To identify the challenges of digital transformation and determine the causes of the cyclical recession, its impact on the global, national and regional economies.

2. To classify the challenges of the digital transformation of the world, national and regional economies and to establish the connection between the problems of structural changes, the cyclical recession and the unstable state of the economy of the Russian regions;

3. To analyze the fundamental principles of the theory of economic development in the region and identify the prerequisites for the expansion of their borders, taking into account the digital transformation of the global, national and regional economies.

4. To identify the causal relationship of an unstable state of the economy as one of the possible components of instability, showing inability or limited ability, to recover in a timely manner and sufficiently fully, to reflect the adverse effects of factors of the internal or external environment.

4. Purpose of the Study

The aim of the study is to classify challenges and identify the possibilities of digital organization of an effective economy of Russian regions. A distinctive feature of the digital organization of an effective economy is the symbiosis of digital technologies (Blockchain, Smart, B2B, B2C, C2C, IoT, etc.) monitoring local businesses -processes and development of management decisions to stimulate them. This

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will optimally adapt the economy of the region to periodic changes caused by the globalization process and the cyclical development of the global economy. The adaptation process is associated with the adoption of rational managerial decisions formulated with the help of Smart assessment of customized criteria embedded in the key performance indicators ("Key Performance Indicators", KPI) of regional authorities (Terziovski & Guerrero, 2014).

5. Research Methods

The theoretical and methodological research platform is the fundamental scientific principles of economic theory, applied provisions of economic and mathematical modelling, system (statistical, cluster, nonparametric, etc.) analysis, as well as the theory of management of economic systems.

In the process of research and in the formation of the basic theoretical, methodological and practical principles of the digital organization of an effective economy of the Russian regions, general scientific methods are used: mental-logical methods, morphological analysis, decomposition, stratification, generalization, typology, synthesis, conceptual and economic-mathematical modelling, descriptive and normative approach, tabular and graphical interpretation of factual information. The set of applied methods allows a systematic approach to classifying challenges and identifying the possibilities of digital organization of an effective economy of the Russian economy through local allocation of "Blockchain", "Smart", "B2B", "B2C", "C2C", "IoT" technologies in the structure of regional business processes, as well as the subsequent formation of an optimal digital organization of an effective economy (Banu, 2018).

Theoretical, methodological and practical methods for quantitative and qualitative classification of challenges and opportunities for digital organization of an effective economy of the Russian regions will allow implementing managerial decisions and adhering to goal-setting through digital organization ("Blockchain", "Smart", "B2B", "B2C", "C2C", "IoT") a set of technologies leading to the formation and improvement of mutually beneficial endogenous and exogenous connections, interconnections and complementarities between elements of the regional economic system, and as well as their compromise and harmonious internal orderliness built in a hierarchical structure to ensure stable economic growth and sustainable development.

The result of the study is the new theoretical, methodological and practical provisions of the digital organization of an effective economy of the Russian regions, taking into account the increment of knowledge in the field of economic theory, digital economy, innovation management, regional and spatial economics. The identified scientific provisions are reliable and feasible in the form of theoretical, methodological and practical knowledge in the field of understanding the processes occurring in society and nature, the development of nature-like technologies, human-machine.

6. Findings

Expected results of the project:

1. The challenges of digital transformation of the global, national and regional economies are revealed. The causes of the cyclical recession and its influence on the world, national and regional economies are determined. Moreover, the manifested instability of the state of the economy of the

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Russian regions in the form of uncontrollability of changes in their reproduction cycle necessitates the classification of challenges and the definition of methods for overcoming them.

2. The challenges of digital transformation of the world, national and regional economies are classified. The relationship between the problems of structural shifts, the cyclical recession and the unstable state of the economy of the Russian regions (Brown et al., 2013; Gretchenko, Gorokhova, Demenko, & Gretchenko, 2018).

3. The analysis of the fundamental principles of the theory of economic development in the region is carried out and the prerequisites for expanding their borders are identified, taking into account the digital transformation of the global, national and regional economies. The economy of the region is considered in the form of a system that preserves the property of integrity as an objective reason and a logical consequence of development, linking the categories of economic efficiency, productive use of the competitive advantages and exclusive value of the region, the functional stability of regional subsystems, thereby expanding the boundaries of theories of economic development in the region.

4. The causal relationship of the unstable state of the economy as one of the possible components of instability, showing the inability or limited ability to recover in a timely and sufficiently complete manner, to reflect the adverse effects of factors of the internal or external environment, is revealed. The unstable state of the economy is the position of the economic system, characterized by the inconstancy of the complex of essential variables (Domínguez, Pére, Rubio, & Zapata, 2019) and the parameters of the interaction of subjects of market relations and not having sufficient stability of reproduction processes.

5. The reasons for the unstable state of the economy of the Russian regions are revealed and their relationship with structural shifts is shown (according to the theory of cycles of the economic situation by N.D. Kondratyev, J. Schumpeter, E. and cyclic recession (Gretchenko, Gorokhova, Demenko, & Gretchenko, 2018).

6. The possibilities of eliminating the causes of the unstable state of the economy of the Russian regions through the use of digital technologies (“Blockchain”, “Smart”, “B2B”, “B2C”, “C2C”, “IoT”) are considered (Yermack, 2017).

7. To ensure the sustainability of the economy of the Russian regions, a new paradigm is proposed. In accordance with generally accepted criteria, allowing to assess the level of production and benefits achieved per capita.

8. Effective use of resources of market forms of self-regulation, including the use of resources for the development of the region’s economy and digital technologies.

9. The analysis of theoretical and methodological provisions and practical competencies. The mathematical model is a one-of-a-kind access to systems. The optimization process is carried out in the form of a hierarchical organization, which in turn is associated with the concept of relative isolation of subsystems of different levels. The basic principle of hierarchical management is to increase the efficiency of all its levels.

Scientific significance is associated with existing scientific research in the field of theory and methodology of economic development. The paradigm and concept of mutually beneficial relations between countries and regions, interdependence and mutual understanding between the principles of agriculture, a compromise internal orderliness built in a hierarchical structure, the complexity and

versatility of the concept of efficiency, due to the lack of a single interpretation, its etymology, materialized essence and opinion in the format of the most perceived socially -economic category. In this context, efficiency models and the hierarchy of its types as applied to the economy of the region.

The practical significance is determined by the real set of new competencies of regional economy management, due to the materialization of the basic provisions of the digital organization of the effective economy of the region, associated with specific guidelines and regulations for the implementation of digital technologies ("Blockchain", "Smart", "B2B", "B2C", "C2C", "IoT") at local levels, including taking into account the classical structure of indicators of regional reproduction processes, within the framework of state (Federal) models of development strategies, planning in conditions of global competition.

7. Conclusion

Thus, the goal has been achieved. It is proved that the scientific and applied need for digital organization of an effective economy of the Russian regions should be closely related to the implementation of the set of requirements set forth in the "Strategy for Economic Security of the Russian Federation until 2030" and international standards "ISO 10006: 2017 Quality management systems - Guidelines for quality management in projects (IDT) "and" ISO 9001: 2015 Quality management systems - Requirements (IDT) ", the implementation of which reduces the negative impact of external calls and internal threats. According to the author, the essence of the scientific idea put forward consists in combining the economic standard "Strategies for the Economic Security of the Russian Federation until 2030" and the technical standards "ISO 10006: 2017 Quality management systems - Guidelines for quality management in projects and ISO 9001: 2015 Quality management systems - Requirements "to develop standardized management decisions, which confirms the findings of foreign researchers (Cai & Jun, 2018; Javorcik & Sawada, 2018).

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