

SCTCMG 2021**International Scientific Conference «Social and Cultural Transformations in the
Context of Modern Globalism»****FACTOR MECHANISMS (BASIS) FOR ENSURING
OUTSTRIPPING DEVELOPMENT**

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Abstract

The many diverse and complex problems that are inherent in the current state of the world economy and social community, the growing competition between countries and emerging centers of confrontation require countries and large companies to seek new forms of development that are adequate to the emerging conditions. A similar form can be a model of outstripping development. Outstripping development should be presented as a purposeful activity, in the process of implementation of which the subject acquires new qualities that allow ensuring economic and technological independence, dynamic development through a set of means that enable effective use of resource and innovation potential, have a high level of functioning of production and social processes. The transition of the country's economy to the outstripping development paradigm will require a change in approaches to the development of human capital, digital renewal of fixed capital, the creation of development institutions and its infrastructure, and a focus on promoting all aspects of the knowledge economy. Such reasons include the high volatility of economic development, the weak reaction of economic entities to the results of scientific research and innovation, the low level of functioning of development institutions, the underdevelopment of logistics and infrastructure systems. Achieving the parameters of outstripping development presupposes a set of measures to reform the economy and should be based on economic theory. The scientific novelty of the research lies in the creation of mechanisms and the use of factors that ensure primacy in socio-economic and technological development.

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1. Introduction

The modern period of development of society and the economy is characterized by the intensive development of new technologies, which began to fundamentally and on a large-scale transform the social space, transform production processes, and create completely new types of activity. The possibilities of their effective use depend on many components, but the most important role is assigned to the factors contributing to the formation and implementation of outstripping development.

According to Steltser (2016), a country that practices outstripping development:

Does not follow a well-known trajectory in order to catch up with the leader in some way, but due to the latest technologies, it seeks to occupy a new place in the world economy in the near future, create and control new markets and preserve high economic growth rate exceeding the growth rate of the leading countries. New technologies and specialization in obtaining new knowledge make the possibility of getting ahead possible (p. 23).

The importance and possibility of implementing outstripping development lies in the fact that there is no conflict of interest, all groups representing society are interested in increasing their well-being, which is planned to be realized through advanced development, while this process will not be carried out at the expense of infringing on the interests of individual groups.

2. Problem Statement

The origins of the outstripping paradigm are laid in the depths of economic development. The realities of the XXI century are such that in the study and in-depth analysis of the features of the current state of economic development, one should take into account the increasing frequency of financial and economic crises, to which social ones (pandemic) were added. At the same time, one should not lose sight of the increasing competition between companies and between countries. The world division of labor, which would be the most optimal option for interaction between countries, is not supported by some of the most developed countries that want to dominate the world economic space. Under the new conditions, the importance of the role of economic theory in its theoretical, methodological and applied functions is significantly increasing, since it becomes necessary to develop a modern model of economic development based on outstripping mechanisms that will help build economic relations in an environment of increased international competition and realize the key needs of society.

The outstripping development model covers different levels (country, regional and economic entities) and a complex of factors (human capital, institutions, technologies, etc.).

With all the variety of existing research works, insufficient attention has been paid to topical problems related to the possibility of developing appropriate mechanisms to ensure outstripping development.

3. Research Questions

The research question is in the assumption that in modern conditions, advanced development can be ensured through the creation of favorable social, technological and institutional conditions.

4. Purpose of the Study

The purpose is to theoretically and methodologically prove the need to consolidate the status of advanced development in economic science as a specific tool and to substantiate its significance and key role in the development and formation of a new model of economic development.

5. Research Methods

The theoretical basis of the research is formed by a number of theories, including the theory of human capital, institutionalism and non-institutional theory, the theory of technological structures. The methodological postulates of the general theory of reforms are used. The method of a systematic approach was used, and the methods of scientific abstraction, analogies and scientific generalizations. The works of Russian and foreign scientists on the problem under consideration were analyzed, statistical and empirical materials prepared in the process of research were used.

6. Findings

Outstripping development is a complex and multifaceted phenomenon. This is indicated by the fact that in the modern world, in conditions of tough competitive confrontation, the economic policy of any country is focused on achieving progressive economic development, creating competitive advantages, and meeting the growing needs of the country's population. The implementation of these goals presupposes the need to preliminarily clearly establish the essence, types, principles and methods with which it is possible to achieve maximum competitive advantages in the global economic space. In this sense, undoubtedly, the primary role is assigned to outstripping development, which is both an objective persistent (constant) process, and a kind of paradigm of the economic system, and a form of functioning of the economy.

The special attention paid to outstripping development is explained by the need to consolidate the political, economic and human potential for the implementation of the opportunities emerging at a certain historical interval, allowing to achieve productive changes in the social, scientific, technological and educational segment.

According to Sukharev, in the course of evolutionary development, the economy goes through all the stages of transformations sequentially, in ascending order, while outstripping development is a progressive, revolutionary path that involves a qualitative leap in all areas of the socio-economic system. Progressive technical and technological transformations occur precisely due to outstripping technological and technical modernization through the accelerated merger of the existing management and technological systems and the updated, professionally trained personnel (Sukharev, 2011).

In this study, we will focus on three most important factors that form the basis or foundation of outstripping development.

The first of these is human capital. Human capital is an economic category that shows the dependence of socio-economic development on the state of a person, their health, knowledge, high-quality and productive labor.

Connecting human capital to the process of economic development significantly improves its efficiency. Different scientific schools from different positions have studied and are now studying the issues of human capital. The general conclusion consists in its decisive role in the formation of the national economy (Becker, 1993; Romer, 1986; Schultz, 1981)

In the context of our research, we will focus on one aspect of human capital—education. The importance of education in outstripping development lies in the fact that it (outstripping development) can be realized if the state and the business community begin to invest in training specialists in the field of high technologies, energy conservation, nanoelectronics, etc. The American economist, Nobel laureate Lucas has convincingly proved that the technologies of the future will become a reality only with intensive investment in education. He noted that “every 10 % increase in the total stock of knowledge capital leads to an increase in total output by more than 10 %” (Lucas, 2002).

At present, it is necessary to invest enough funds in education to meet modern requirements. Let us consider the state of this issue in Russia (Table 01).

Table 1. Dynamics of spending on education in the Russian Federation (RF), (billion rubles)

	2017	2018	2019	2018 to 2017, %	2019 to 2018, %
Preschool education	723.0	840.9	965.1	116.3	114.7
General education	1330.1	1472.1	1642.9	110.6	112.3
Additional education for children	238.1	250.9	267.2	105.3	106.4
Secondary vocational education	211.9	252.0	267.8	118.9	106.5
Professional training, retraining and advanced training	24.1	32.9	42.8	136.5	13.0
Higher education	510.9	553.7	584.9	108.3	105.6
Youth policy	69.1	72.9	80.8	105.4	110.8
Applied research in education	13.0	14.6	14.7	108.1	101.0
Other expenses in the field of education	147.1	179.2	183.5	121.8	102.3
Total	3267.3	3636.4	4049.7	111.2	111.3

Source: Statistics compilation by HSE, Education Indicators, 2020

The data in Table 1 show that while the overall spending on education in general grew, in 2019 the rate of expenditure remained at the level of 2018. This trend can negatively affect the development of the economy in the long run.

The well-known Russian economist Aganbegyan (2017) draws attention to an important drawback that is characteristic of the existing system of personnel training. It lies in the fact that the priority is only to gain knowledge:

Leaving in the background the skills and abilities that require internships in the most highly qualified organizations, on the most advanced equipment, in many cases in different foreign countries. That is why in Russia there is such a large gap between the relatively high level of knowledge, on the one hand, and the low efficiency of their use, on the other (p. 18).

From this small analysis, we can conclude that it is necessary to create the appropriate human capital, which will allow the implementation of outstripping development.

The second aspect that should be addressed is institutions. In the general theoretical interpretation, an institution is a set of well-established rules and norms that ensure interaction between economic agents, the implementation of which is guaranteed by the established mechanism of coercion. The institutes have been investigated by many domestic and foreign scientists, including the Nobel Prize winners Coase (1937), North (1981), Myerson (1982), Williamson, 1985, Ostrom (1990), Ulyamson and others. We should note the works of Polterovich (2012), where he substantiates the role of intermediate institutions, and Shastitko (2017), who considers the design of institutions and their evolution.

Let us also note the role of social institutions in outstripping development, contributing to ensuring economic stability. Social institutions include institutions of power, law, education and science, health care, the institution of private property rights, intellectual rent, etc. They can concentrate the most advanced business practices, including using foreign experience. Social institutions cherish the best traditions, strengthen the advantages of their country at the international level and have the ability to quickly adapt to any conditions, thanks to which they can rapidly adapt to changes and function effectively.

In our study, more attention is paid to development institutions. The activities of such institutions are aimed at stimulating innovation processes, eliminating or preventing “market failures”, creating an infrastructure of the knowledge economy that will facilitate the implementation of access to information and digital products.

The main task of the development institutions is to assist in the organization, development and financing of large projects in the interests of society, to attract additional financing for this purpose, including on the basis of the principles of public-private partnership, to create the necessary infrastructure to increase the access of enterprises to the necessary financial, innovative and information resources (Sidorova & Tatarkin, 2016, p. 511).

The possibility of implementing the proposed mechanisms of outstripping development is determined by regional development institutions and innovative technologies that ensure the balanced functioning of the region's economy.

Table 02 presents a sample of development institutions that contribute to outstripping development.

Table 2. Development institutions contributing to the implementation of outstripping development

Institutional clusters	Types of institutions
Information	- enterprise management as a whole - personnel Management - planning and organizing and searching for information
Knowledge economy	- education - research work - design developments - pilot production
Institutional barriers	- barter - non-payments

Organizational	- tax evasion - corruption - shadow economy - decision rules - technologies - property - education
Macroeconomic institutions	- social politics - market trading - taxation of income - industrial policy

The table was compiled using the source (Popov and Katz, 2003).

Table 02 shows the clusters of development institutions used in various fields. Development institutions play an important role in investing, including private business, in innovation, in priority sectors of the economy and act as a catalyst for outstripping development, create conditions for the formation of an efficiently functioning scientific infrastructure.

In the context of the study, we would like to note that in the implementation of the aspects of outstripping development, an important role is assigned to civil society, in general, and to include it in the process of state innovative development of the economy. Trust in the institutions of state power can arise if they achieve such a level of institutional and functional development, in which the activities of power structures meet the urgent requirements of modern economic development, and the state can realize its potential through various national projects, long-term strategic programs, etc. (Sorokin, 2016). Their performance is assessed by positive changes in the economy and institutional environment.

When civil society reaches a certain level of development and is ready to perceive positive transformations through social activity and initiatives, which are manifested only if the state and society trust each other, an initiative subject of outstripping economic development appears.

The third aspect that needs to be addressed is the role of technology in outstripping development.

Technologies are and remain the main engines of economic and social development. Technological development is the main source of improving production processes. According to Komkov (2014), “technological development is a new scientific direction of research, including forecasting promising development options, their structural analysis, as well as harmonizing the method and its technical implementation, organized labor and management” (p. 8).

Scientific developments, which "give out" new technologies, play an important role in technological development. The results of scientific research depend on many factors, including the amount of funding. (Table 03).

Table 3. Expenditures on research and innovation activities of organizations in the Russian Federation (million rubles)

	2017	2018	2019	2018 to 2017 [%]	2019 to 2018 [%]
Internal R&D costs	1019152.4	1028247.6	1134786.7	100.8	110.3
GDP	74798938.7	84976724.3	n/a	-	-
Cost to GDP [%]	1.3	1.2	-	-0.1	-
Expenditures of organizations for innovations	1404985.3	1472822.3	1954133.3	104.8	132.6
Cost to GDP [%]	1.8	1.7	-	-0.1	-

Source: author's calculations

The indicators in Table 3 inform that domestic spending on research and development shows an increase, but remains low relative to gross domestic product (GDP). For this indicator, 2.5–3 % is optimal, and not 1.2 or 1.3 %.

The positive point is that the costs of innovative activities of organizations are characterized by an increase, which contributes to the technologization of production processes of economic entities. In 2019, these costs were 72.2 % higher than R&D costs.

The implementation of outstripping development can only be based on the use of high technologies. Schwab and Davis (2018) note that to be a technology leader, it is necessary to innovate on an ongoing basis and use corporate research models, “technological leadership will require cooperation with a variety of external partners, from young, dynamic and entrepreneurial companies to scientific institutions and organizations from other sectors offering completely different points of view, approaches and entry into new markets” (p. 103). In the outstripping development of technologies (in a broad sense), they are called upon to ensure an increase in labor productivity, the formation of competitive advantages, the creation of comfortable conditions that will improve the quality of life.

7. Conclusion

An important aspect of the implementation of the outstripping development model is the comprehensive development of human capital, especially education, which acts as a source of knowledge and innovation. Effective mechanisms stimulating advanced development are based on increasing innovative activity, creating new opportunities for economic growth, and gaining competitive advantages for the long term in the areas of high-tech production.

Development institutions are becoming an integral part of outstripping development. Performing a complex of functions, they become conductors of new (digital) technologies, participate in correcting and eliminating market flaws and defects, stimulate interactions and interconnections between participants in the innovation process.

New technologies that will be used to implement outstripping development can be effective if appropriate development institutions are created. Then by “creatively destroying” (Schumpeter, 1942), they will contribute to economic growth and development, have a synergistic effect on all sectors of the economy and social sphere.

The implementation of the proposed mechanisms of outstripping development based on the development of human potential, the creation of effective tools for the use of development institutions, the formation of a new technological structure will allow the economy to function effectively. The possibility of implementing outstripping development mechanisms is also determined by regional development institutions and innovative technologies, which ensure the balanced functioning of the region's economy.

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