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"Global Challenges and Prospects of the Modern Economic Development"****DEVELOPMENT OF PRODUCTION COOPERATION AND  
ENTREPRENEURSHIP IN GLOBAL VALUE CHAINS**

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***Abstract***

The authors considered features of the effective industrial cooperation of enterprises and entrepreneurial activities involved in international reproduction chains. The production of goods and services in any country is drawn into the cross-border core of value creation, organically distributed among enterprises of individual countries according to their economic potentials. The production of components and individual stages of finished products, and the development of increasingly advanced technologies with their subsequent wave-like diffusion are successively carried out in different countries extracting and primary processing raw materials. In the formation and effective functioning of international production cooperation relations, each partner seeks to take the most advantageous position and to enter all stages of joint production of finished products with the highest value added. At the same time, certain imbalances are observed both in income policy and in the scientific and technological development between enterprises located in the core of reproductive relations relative to the periphery. The participation of the former intensifies technological progress along with obtaining additional rents, and the latter leads to accelerated de-industrialization and withdrawal of capital. Reasonable protectionism and a policy regarding international production specialization are required in a certain stage of production of finished products. Russian enterprises participate in global value chains (GVCs) in the fields of mechanical engineering, production automation, pharmaceutical and food industries, and production infrastructure. The positive dynamics of attracting foreign investment, advanced technologies, and competencies are affected by the level of risks, favorable conditions for entrepreneurship, institutional support of the authorities, and infrastructure support.

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**Keywords:** Production cooperation, global value chains, risks, investments, joint ventures, special economic zones.

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## **1. Introduction**

Under formation of pervasive economic ties in global value chains, world leadership is provided by a perfect communication infrastructure instead of the old methods of enriching developed countries by taking resources from less developed ones. In the context of inclusive digitalization, priority is given to global supply chains, infrastructure alliances, transnational ties, metropolitan states, technocratic coordination, highly mobile citizens as a cross-border workforce. Therefore, the geo-economic interests of leading countries are reduced to trade agreements, the formation of supply chains, the desire to control and transfer these chains to their national borders to maximize profits and create high-performance jobs.

In fact, a horizontally distributed world picture has developed in the production of certain goods and consumer values, in which the role of the former higher hierarchies of capitalist production is declining. A vivid example is China which economically integrates the countries of Asia and Africa on account of greater complementarity and independence through the dynamic tension of productive forces in a connected world fragmenting the supply chain. Unlike US power methods, China has built the largest merchant fleet in the world to project its dominance, does not directly conquer and rule foreign states, but forms its economic empire through supply chains. Many antagonistic countries, as they became linked to each other by trade and investment, proved to be much more profitable concentrating on their economic complementarity than fighting. It is no coincidence that Asia has become very developed in most countries, largely due to participation in transnational flows of creating value, mainly through the accelerated formation of special economic zones (SEZs). Asia keeps most of production of industrial goods and an ever-growing part of world GDP in the field of production of goods and services research and development (R&D) and financial centers.

## **2. Problem Statement**

Despite the stable dynamics of foreign economic relations over the past ten years, the relationship of Russian enterprises with global supply chains remains at an extremely low level, which does not correspond to the potential and global weight of the country integrating an alternative liberalistic path of development. Today, countries need to be allowed to protect certain sectors of the economy in order to promote their growth, as part of a sound industrial policy to stimulate the development of high value-added industries and involve them in GVCs. And it is important to apply certain measures to regulate the economy as they move up the value chain: select specific high-tech sectors, attract investments and become key global players in production and entrepreneurship based on high competitiveness.

## **3. Research Questions**

The Russian Federation, having opened its customs borders during market transformations, was faced with large-scale de-industrialization and the loss of many segments of the global market for goods and services. These findings were also confirmed by studies of Stoellinger (2016), conducted for the period 1995-2011. It turned out that production activity in the EU is increasingly concentrated in the Central European production core, which implies various structural changes in the economy in member states. The observed “production gap” in Europe coincides with the deepening of economic integration in

general and the emergence of global value chains. At the same time, members of the production core benefit greatly from participation in GVCs, even from the point of view of positive structural changes in favor of production, while in other European countries participation in GVCs accelerates the process of de-industrialization.

To increase the efficiency of industrial enterprises' participation in global reproduction chains we should consider several aspects. Under current conditions, there are various options for entering the world market, which accordingly determines the presence of various organizational forms of conducting joint economic activities, including the option of public-private partnership. While maintaining dependence on oil and developed agriculture, it is necessary to have an organizational and economic mechanism to redistribute investments in the innovation sphere, and to form a more distributed and diverse economy as a condition for beneficial integration into GVCs. Studies by Wang, Deutz, and Chen (2017) showed the high role of local authorities in working with enterprises, forming a coordination network of industrial cooperation, implementing the theory of institutional capacity-building in the context of the Chinese eco-industrial park.

#### **4. Purpose of the Study**

In the context of regional fragmentation of global value chains, the factors of strengthening national competitiveness need to be considered in order to occupy high positions in new product creation and to ensure priority positions of domestic industrial enterprises and entrepreneurial structures in GVCs. Modern centers of business activity are concentrated around regional production clusters. Therefore, it is necessary to develop a mechanism for integrating domestic enterprises and entrepreneurial structures into GVCs based on their potential and competencies, with the support of government authorities, as the growth of resource productivity is provided through many channels: unlocking the potential of enterprises' competencies in solving the main problems of the production of finished products, access to imported resources, international technology transfer, as well as stimulating the impact of global competition for domestic enterprises. It is also necessary to consider how involvement in GVCs can expose enterprises to new types of risks and affect the sustainability of the national economy, since the shock for one part of the supply chain can spread throughout the production network.

#### **5. Research Methods**

The authors used the following theoretical and methodological methods: the principles of comparative analysis, cross-country comparisons and analogies, analysis of the international input-output database over a long period of time, which allowed the authors to cover a wide range of development dynamics of industry and entrepreneurship of individual countries in the emerging GVCs. A systematic approach was used to determine the key characteristics and state of the economic management mechanism in determining the measures taken to solve the problem of increasing the efficiency of enterprises' participation in value chains with an assessment of their reproductive facilities. The experimental base of the study: state statistics of the national economy and its foreign economic relations,

data on the economic turnover of industrial enterprises, features and various models of business policy and case studies of international organizations on GVC issues.

## 6. Findings

The distribution of value added in global chains obtained by Los, Timmer, and de Vries (2015), using the input-output model in the global economy to analyze 40 countries and 14 product groups, found that the share of value added outside the country of finished products has increased since 1995 in almost all food chains, which suggests a situation of transition from regional production systems to a “world factor”, where all actors involved in production receive benefits cooperation. Terovanesova (2016) introduced a systematic methodology that allows increasing the efficiency of decision-making on the formation, selection and implementation of competitive enterprise development strategies in the context of dynamic processes in existing GVCs.

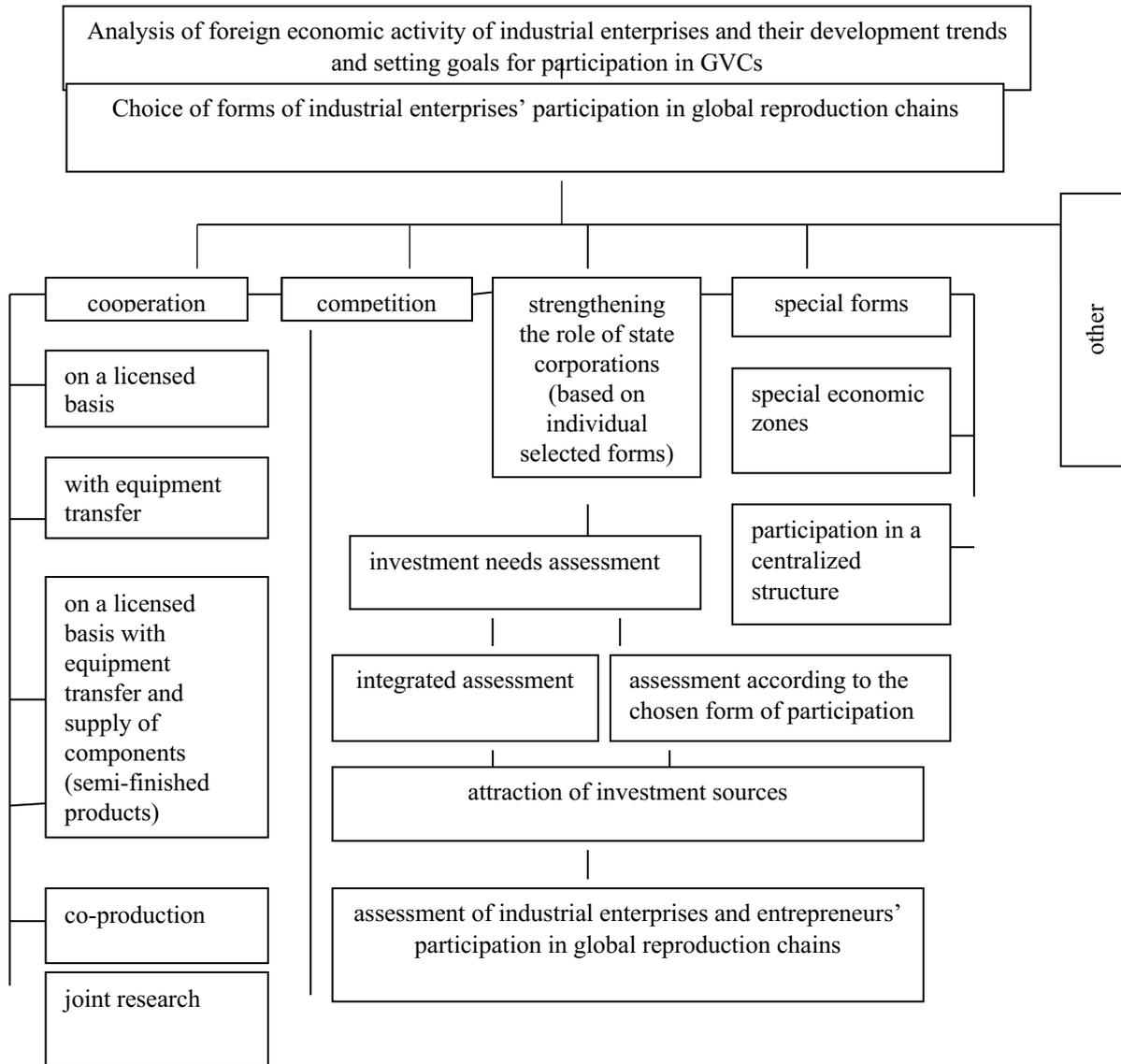
Along with the generally unequal effects for enterprises of different countries from participating in GVCs, we can see the double results of the participation of ASEAN trade and economic bloc countries in interaction with other trade blocs, mainly from North America, East Asia and the European Union. Padilla, Sari, and Handoyo (2017) used the global input-output method to measure the created or absorbed value added in GVCs, and determined that ASEAN enterprises achieved significant success in integration with East Asia, but lost their share in value-added trade with NAFTA and Europe, acting here mainly as suppliers of intermediate goods. This is evidence of the unequal participation of enterprises in less developed countries in globalizing economic processes that are losing revenue relative to enterprises that are higher in the value chain.

It is no coincidence that most GVCs form value added mainly due to innovation, capital and highly skilled labor, which also encourages developing economies to switch to capital-intensive activities. In this regard, Timmer, Erumban, Los, Stehrer, and de Vries (2014) tracked the dynamics of value added of all types of labor and capital included in finished industrial products. There was a growing trend in international fragmentation, as measured by the foreign contribution of value added to the production of consumer goods, which has increased significantly since the early 1990s. Chinese enterprises entered the industry through the acquisition of technology, with a gradual transition to vertical integration and broad cooperation in creating value. Using the example of innovative production of high-tech photovoltaic products, Zhang and Gallagher (2016) decomposed the global value chain of Chinese enterprises and identified the main factors shaping the transfer and diffusion of high technologies: national policy of shaping the global market, international mobilization talents, production flexibility and effective industrial and innovation policy of the government. D.H.A. Tsai (2018) analyzed the dynamics of industrial development and structural changes in global value chains, as well as their impact on sustainable development in Taiwan's manufacturing industry to increase the competitiveness of enterprises.

It turned out that the centers of business activity are concentrated around regional clusters of production. Criscuolo and Timmis (2017) examined communication factors (GVCs) and productivity through the development of international trade in services and activities of multinational companies. The growth of resource productivity is ensured through many channels: unlocking the potential of enterprises'

competencies to solve basic problems, access to imported resources, international technology transfer, as well as stimulating the impact of global competition for enterprises.

It seems correct to implement the global experience of fragmentation and the formation of GVCs to the conditions of the Russian economy, with the involvement of domestic enterprises that form high value added, and this mechanism should include the following main elements (see Fig. 01).



**Figure 01.** The mechanism for increasing enterprises' participation in global reproduction chains

Foreign investment should be an auxiliary tool, and its attraction should be selective, only for certain types of activities and industries. It is necessary to create a comprehensive mechanism, taking into account all the above features, so that domestic enterprises as a whole, and not just the raw materials sector, should be able to effectively participate in global reproduction chains. According to Fig. 01, the initial stage of this mechanism is to analyze the foreign economic activity of industrial enterprises and set goals in terms of their presence in world markets. Further, the most important element is the choice of forms of enterprises' participation in global reproduction chains. It should be borne in mind that it is hardly possible to distinguish one form or another in its pure form. There is their mutual convergence.

For example, within the framework of this mechanism, the strengthening role of state corporations in participating in global reproduction chains can be singled out as an important form. Reason: the most active economic entities in the world market are multinational companies. Only financially and economically powerful structures can oppose them in the global market. In the domestic economy, state corporations can be these structures. However, their participation in global reproductive chains can occur in different ways. They can compete with foreign companies in certain market segments and at the same time, in others, they can cooperate on a cooperative basis.

A special place in this mechanism is occupied by international cooperation. It involves the establishment of long-term economic ties between enterprises of various countries. It seems that this form is most acceptable for domestic enterprises, since the resource and material and technical base of many of them does not allow competing with foreign companies on equal terms. International cooperation, in turn, can be based on a fairly wide range of organizational forms (see Fig. 01). The most promising are joint ventures and joint scientific and technological developments that can increase the participation of domestic industrial enterprises in global reproduction chains. Although, there can be mutual convergence of all forms of cooperation.

We should also mention the “special” forms of increasing the participation of enterprises in global reproduction chains. We are talking about special economic zones of various types and about the participation of enterprises in special centralized structures. The participation of enterprises in global reproduction value chains, especially on the terms of cooperation with firms in developed countries, requires an initial high level of technical and organizational development. In conditions when machinery and equipment make up the bulk of the export of industrialized countries, and to ensure international cooperation of domestic industrial enterprises on an equal footing, appropriate priority development of manufacturing industries is necessary.

The degree of participation of industrial enterprises in foreign economic relations determines the amount of contribution to GVCs. Moreover, their contribution depends on many factors. One of the most significant factors for Russia is the technical level of production and availability of material and energy resources. Evaluation of opportunity costs of manufacturing high-tech products by options: production entirely on their own or with the use of broad international cooperation shows that the import substitution strategy contains an internal dichotomy for industrial enterprises. The implementation of international scientific and industrial cooperation projects allows its participants from a certain country to understand the limits of their competencies in time and not to spray their resources with mixed results; decide where, initially, limited resources should not be wasted; turn to the procurement of finished products, components from leading industry companies. It is noteworthy that the import of machinery and equipment is growing at a steady pace, and in 2018 amounted to 128.2% relative to 2016, accounting for 47.3% of the total import of the Russian Federation. The volume of imports of machinery and equipment is a sign of a high level of economic growth, as it generates demand for investment and intermediate goods.

## **7. Conclusion**

An adequate methodology for the analysis of world reproduction processes is an important starting point in forecast estimates to involve enterprises in existing value chains, which makes it possible to

identify important characteristics of the foreign economic activity of industrial enterprises and entrepreneurial structures, especially the dynamics of exports over a fairly long period of research. To ensure economic growth, attracting foreign direct investment (FDI) is one of the highest priority areas where the authorities of any country intend to invest both forces and funds. It can be predicted that FDI growth in 2019 can reach up to 10%, despite the sanctions and counter-sanctions regime and the existing macroeconomic policy. Therefore, business cooperation with foreign companies from friendly countries, standing on a solid foundation, will continue to develop.

In the context of new world economic relations, the driver of which is the digital transformation, domestic enterprises are to determine the key factors for successful participation in cross-border reproduction chains, and strive to occupy the highest levels in the production of science-intensive products, but not only to supply oil and gas and be among the outsiders of world economic development. Modern digital projects for the production of innovative products, starting within the framework of a single product or within a single region / country, go beyond the framework of the initiating company and involve many actors / countries in a single value chain.

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