

## **DIGITAL TRANSFORMATION AS A TRIGGER FOR HYPERSEGMENTATION OF MARKETS AND TECHNOLOGIES**

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Digital transformation of the economy is based on the results of process automation and consists of end-to-end digitalization of all physical assets and their integration into a digital ecosystem based on a digital platform or complexes of digital platforms. Forms of consumption of products and services are changing dramatically, the use of data intensifies competition and modernizes traditional economic models, digital becomes a value for consumers and businesses. Digital transformation is becoming a new business philosophy, traditional economic relations are being replaced by new business models and processes. The introduction of digital technologies is the most important factor in increasing competitiveness. The transition to an innovative model of economic development, which involves a high concentration of knowledge-intensive production, knowledge, competencies, and technologies, leads to an increase in the competitiveness of business structures.

Digital technologies have the potential to decentralize production and make it more flexible, reducing the role of economies of scale that dominated the «era of mass production». This could lead to «hypersegmentation of markets and technologies». Priority attention is given to such global digital technologies as the Industrial Internet, the Internet of Things, artificial intelligence, cloud computing, robotics, Big Data, 3D printing, wireless high-speed communications, blockchain, augmented (AR) and virtual reality (VR).

The latest ICTs are aimed at creating a comfortable environment for international trade. ICTs help reduce risks in international trade, speed up transaction processes and reduce transaction costs. ICTs for international trade are various systems that allow recognizing QR codes and container numbers, helping to track deliveries, and implementing radio frequency identification. These ICTs are also aimed at adapting document flow, transport, logistics and customs processes to the digital format. Experts are convinced [1-5] that the products created in the process of the fourth technological revolution have a very strong effect. The expert assessment indicates that the total transformative effect of innovative technologies is unprecedented, since reforms can occur within international trade. In this way, a new paradigm of international trade will be formed and implemented, the system of its implementation, the composition of participants and competitiveness will be changed. Blockchain

technology can affect supplies in international trade. These same properties are possessed by data registries distributed within the framework of blockchain technology.

A distinctive feature of blockchain technologies is the ability to accelerate trading in the securities segment. For this purpose, blockchain technology combines two processes – settlement and clearing. For derivative markets, blockchain enables a new level of financial engineering that will improve efficiency, security, and accuracy in risk management.

Artificial intelligence and machine learning, as innovative technologies of recent years, are being applied in the supply chain management system. These technologies are necessary for connecting requests and commercial offers in order to subsequently inform stakeholders. Another segment where digital platforms are actively operating is the provision of services.

In an open economy, the profits from technological progress are concentrated in only a small number of the most developed countries. In this regard, the development and spread of digital technologies creates the risk of concentrating advantages in leading countries. In other words, the digitalization of the global economy has not only advantages, but also some disadvantages. As for the negative aspects, we note that in order to eliminate them, the world community needs to find solutions to many political problems that are caused by the need to overcome the digital divide, minimize risks for society, and develop in general.

Subsystems of the digital economy include: (1) markets and sectors of the economy (areas of activity) in which economic entities (suppliers and consumers of goods, services, etc.) interact; (2) digital platforms and technologies on the basis of which models and automated processes of functioning of digital markets, suppliers and consumers are formed and implemented; (3) digital environment that creates conditions for the development of platforms and technologies, as well as effective market interaction of economic entities and sectors of the economy, providing information infrastructure, regulatory framework, information security. A digital platform is a system of horizontal relationships of a significant number of market participants united by a single information environment, leading to a reduction in transaction costs, due to the use of a package of digital technologies and changes in the division of labor system.

The fourth industrial revolution is unfolding on the basis of the digitalization of production and related processes, which allows the implementation of the concept of a digital enterprise: a digital workplace – digital production and engineering – a digital supply chain – digital products, services and business models – digital management of supply channels and interaction with customers. Digitalization of business leads to the fact that each material object of a real enterprise will correspond to its information virtual twin.

ICT goods exports are highly concentrated, with the top 10 exporters accounting for 99.6% of the total value. Seven of the top 10 economies are in East and Southeast Asia, with China by far the largest exporter at over 30% [6]. By comparison, the EU and US combined accounted for 25%. Computer services accounted for the largest share of ICT employment in total employment in all but three of the top 10 economies. Three of the top 10 were developing countries, and six were European countries. And ICT employment accounted for 2% or less of total employment in the remaining developing and transition countries for which data were available. Within the ICT sector, computer services generally have a higher level of employment than other subsectors. The exceptions are countries where technology manufacturing dominates the ICT sector. However, many employees in ICT manufacturing are also employed in computer services.

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