

## THE IMPACT OF DIGITALIZATION ON A COUNTRY'S ECONOMIC DEVELOPMENT

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Today we can identify the clear impact of digitalization on the socioeconomic sphere. Digitalization has the greatest economic impact on supply chains in all sectors of the economy, including procurement, manufacturing and coordination between operating unit networks, logistics and customer relations. By taking a digital approach, you can strengthen your competitive advantage by improving the customer experience or reducing your environmental footprint.

Digitalization can ensure greater competitiveness in all sectors of the economy, providing many business opportunities and greater access to overseas markets. The development of digital markets offers new export opportunities, including linking domestic companies to global value chains, or creating new markets adapted to specific local conditions (e.g. in sectors such as agriculture, education and health), or opening up new, «niche» sectors, such as in the creative economy (based on intellectual capital).

Specialists of the International Expert Council, functioning within the framework of the Davos Forum, in 2015 identified more than 15 events predicted up to 2025, which can have a significant impact on the life of society [5]. Among the most significant it should be noted: 10% of the world population will wear clothes connected to the Internet, 90% of the population will be able to store information unrestrictedly and for free, there will be 1 trillion touch transmitters connected to the Internet, 10% of reading glasses will be connected to the Internet, 80% of the population will have digital presence in the Internet, the first car using 3D printing technology will be created, the country which will replace the census with data sources will be determined, the first cell phone will appear.

In 2020. The UN published a report [2], in which it presented a vision of the future of the world economy after overcoming the effects of the COVID-19 pandemic.

UN experts identified six models of economic development (which are systemic and global in nature) for the next decade. Among these models, related to the development of technology, are the Exabyte Economy and the Experience Economy. There are several reasons for this: today two-thirds of the world's population use cell phones and more than half have access to the Internet. More and more people (annual growth of 7%) will work online, the transition to online education and medicine will become widespread. 5G-technology will spread

more and more across cities and countries, and the number of connections to IoT (Internet of Things) devices by 2023 is forecasted at 3.5 billion.

The transformation of physical products into digital ones is made possible by:

- full digitalization. For example, in 2014, the global music industry collected more revenue from digital music than from traditional media such as CD/DVD. Other examples include digital navigation replacing paper maps and digital money transactions gradually replacing the use of cash;
- partial digitalization that occurs through software updates. Examples include the Tesla Model S, which in October 2015 updated its software to add autopilot functionality to the car's with autopilot functionality;
- supplementing products with digital programs to provide digital services.

Competition in new export markets today depends on digital technology. As the physical movement of goods and people is limited, digital commerce now plays a crucial role in supporting the flow of trade, from cross-border e-commerce and digital payments to teleconferencing with business partners around the world and replacing physical documents with electronic ones, transactions of goods and services that are supported by digital technology.

Digitalization also affects the logistics system, which is based on flexibility and convenience with a focus on customer preferences:

- Personalized delivery: online retailers are implementing the solution flexibly. Customers can choose the payment method, time and place of delivery or can pick up in person.
- «Intelligent» delivery: with the increasing number of e-commerce transactions, the number of parcels is increasing, creating a need for «intelligent» solutions to prevent congestion and thus reduce pollution. The solution has become large logistical decoupling points: suppliers send parcels to centers from where they are distributed throughout the city, and «smart» software integrates parcels from different shippers.

A promising trend is the digitalization of industrial production methods and the way people and equipment/machines/logistics systems communicate/collaborate. Digitalization of supply chains and the real-time availability of sophisticated information systems allow companies to improve production efficiency. Digital technology promises more flexible production options, allowing you to focus on customer needs.

Digital technology can impact productivity [1]:

- 3D printing can eliminate the need for assembly in some stages of production by printing already assembled mechanisms.
- New sensors, big data analytics, cloud computing, and the IoT can improve the performance of automated machines and intelligent systems.
- By being faster, more accurate, and more consistent than humans, robots can significantly improve productivity levels on industrial assembly lines. Robotics can improve logistics and lower product prices.

– Automatic maintenance scheduling, supported by new sensors, artificial intelligence and machine-to-machine communication, reduces interruptions in production.

An important aspect of using digital technologies will be their gradual and widespread integration into existing physical infrastructure to make the most efficient use of it. Digital technologies can increase the capacity of existing infrastructure, reduce maintenance and operating costs, and improve reliability and security.

Digital technologies can enable suppliers to better understand demand patterns, including real-time consumption data, allowing them to provide the right amount of infrastructure services to meet demand. For example, electricity demand management allows an operator to reduce the overall peak demand by shifting consumption to hours when demand is lower. This will result in lower costs.

Digital lending and financing, such as peer-to-peer lending and crowdfunding platforms, have the potential to fill the gap in bank lending and improve households' access to finance. Among other things, digitalization is characterized by the emergence of new digital payment systems.

Digitalization can extend its potential to improve social well-being. Inequality (people may have different (limited) access to resources and services) can be overcome through the introduction of digital technologies, which will result in access to educational and medical services, air quality monitoring, and interaction between residents and businesses and authorities.

Digital technologies can promote social inclusion, improve access to quality education, and offer new opportunities for skills development, for example by increasing access to knowledge for people with low incomes or from poor neighborhoods, supporting new learning methods with students, facilitating collaboration between teachers and students, and providing faster and more detailed feedback on the learning process [6]. Researchers [4] found that low-income users spend more time online than the average population with better livelihoods. They browse education websites (access to free or low-cost knowledge) and search for information on employment, healthcare and nutrition, as well as use online sales platforms (services that allow consumers to negotiate better prices for products). At the same time, digital technologies have great potential to innovate and improve the quality of teaching [3].

The development of artificial intelligence, the Internet of Things, and big data may change the nature of the relationship between technology and the workplace. Thanks to digitalization, a large number of tasks may be performed by machines in the near future, and the goals of professions may become digital and endangered, leading to increased unemployment. However, there are a number of opinions that are less skeptical of the digitalization process. In particular, research shows that information and communication technologies (ICT) do not lead to higher unemployment. If implemented successfully through organizational change and good management practices, ICTs can help increase

productivity, which gradually leads to lower prices and/or the introduction of new products, higher demand, and increased employment, thereby offsetting the initial displacement of jobs. In addition, with increased productivity and technology adoption, new and additional jobs are likely to be created.

Another benefit of digital technology is minimizing the negative environmental impacts of manufacturing, operating, and disposing of products. Making a new computer will require far more resources than a new RAM installed on an existing computer. Digital technology, on the other hand, compensates for this disadvantage.

Part of the measurement of digital transformation can be tracked by indicators in education, innovation, and trade. Accordingly, only a limited number of indicators can be tracked, but they are not detailed enough to reflect the changing dynamics of digital transformation.

Progress in this area today is limited by a lack of data. Increased data sharing is an opportunity to improve the efficiency of operations in manufacturing, services, and finance. The shared purpose and interdisciplinary nature of certain digital technologies underscores the need to agree on a policy framework to define them, monitor their development, disseminate them, and quantify their economic and social impacts.

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