The Impact Of Digitalization On Reducing The Shadow Economy

Maftuna Amanova
PhD Student, National University Of Uzbekistan

ABSTRACT

This article reviews the segments of digitalization and the insights of the steps of becoming a country with digitalized economy. According to researched practices of turning into a digital economy with its advantages and disadvantages especially in the field of employment and shadow economy. In accordance with the stastics for Uzbekistan there are given policy implications for the reduction of shadow economy and its risks in this country.

KEYWORDS

Digitalization, digital economy, shadow economy, labor force, robotics, digital shadow economy.

INTRODUCTION

Digitalization of the economy is a serious and large-scale step towards economic development. Not so long ago, digitalization meant only access to the Internet and the presence of personal computers. Today, the routine of the above gives rise to a new look at the digital economy, which includes the Internet of Things, augmented and virtual reality, cloud computing, blockchain, robotization, automated manufacturing,

autonomous vehicles and artificial intelligence (AI). Innovative and technological change in the field of information technology and computer engineering completely introduces traditional manufacturing, market, business and management into a digital environment. The indisputable dynamics of the digital economy, which requires not only finances and time, but also ready-made governments, people and, accordingly, specialists.
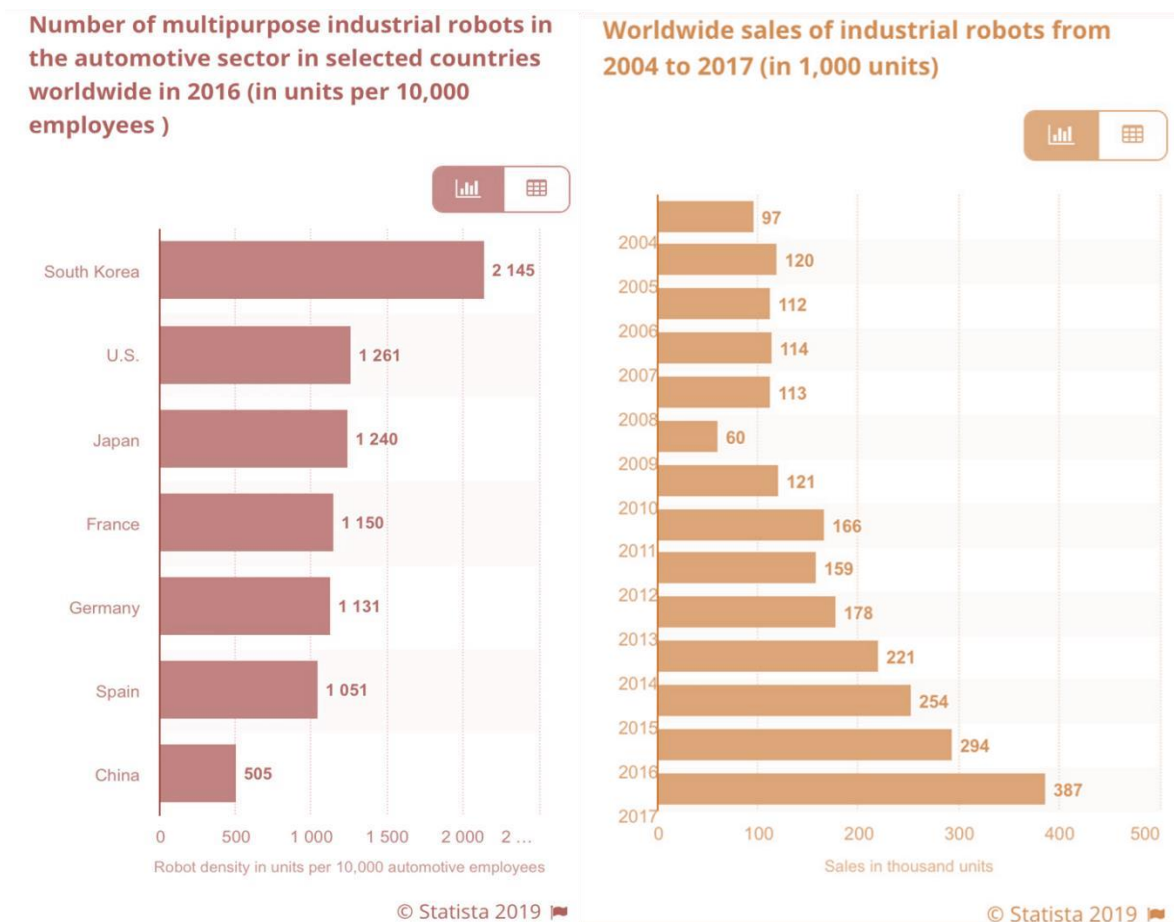
Misha Ketchell, editor of the online magazine The Conversation [1], argues that there are three segments of the digital economy: digital core, digital providers, and digital applications. Explaining in primitive economic language, we can say that the "digital core" is raw materials (physical technology and infrastructure), while "digital providers" and "digital applications" are producers of digital "good" and consumers of the digital market, respectively. It is difficult to have all three "elements" of the digital market in one state, especially in developing countries. However, having all of them significantly reduces transport costs, labor and saves time. For example, mobile banking and digital financial services save time on document collection, processing and transportation, instead of a physical visit to carry out certain banking transactions and services. Automation and robotization of the production process also allow you to minimize the cost of workers in production, although this requires a large investment at the start of the application of robotization / automation and specialists capable of working with advanced technologies and applications.

The level of robotization and automation in the world is not as global as the Internet, given the lack of specialists and resources, as well as the growing experience of using technological innovations, it is difficult to paint a picture of the prevalence of digitalization. There are several approaches to assessing technological progress. McKinsey's report [2] On Labor Force Transitions During Automation estimates this phenomenon as a percentage of the number of

work hours that will be automated. However, in particular, technological development is defined as technological unemployment, where the difference between labor productivity and productivity per hour is taken. The Bartik-style measure [3] is also one of the well-known methods of calculation, which takes into account the progress in robots and the basic shares of the industry in the local market (for 19 industries), the so-called "exposure to robots". The International Federation of Robotics (IFR) data used in Acemoglu and Restrepo [4] measure a specific class of robots defined as defining "industrial robots" (automatically controlled, reprogrammed and multi-purpose [machine]) according to a thousand workers. No matter how sad the fate of people who are among the unemployed due to technological progress develops, digitalization in many areas brings positive changes.

In the near future, Berlin begins to use artificial intelligence in public administration to combat corruption by monitoring payments and transactions, unusual orders that were difficult for auditors of corruption to recognize [5]. Associate Professor Zeger van der Waal and Ph.D. Yifei Yang [6] from the National University of Singapore argue that the problem of government decision-making based on emotions can be solved by using "robots" (robotic government) as the ability of "robots" to make rational decisions and avoid corruption is an advantage over many current government leaders. Overall, even if this idea does not seem to complete the effective use of AI and technology in "high-stakes public decision-making" such as sports, has already proven its worth during the 2018 World Cup. According to Statista.com for the year 2019 industrial robots' amount sold between 2004 and 2017 increased by four times and for the year 2016 among selected countries South Korea is in the first place with 2145 robots installed per 10,000 automotive employees (Figures 1,2).

Figure 1 and 2. Industrial robots' statistics.

Number of multipurpose industrial robots in the automotive sector in selected countries worldwide in 2016 (in units per 10,000 employees)

Worldwide sales of industrial robots from 2004 to 2017 (in 1,000 units)

The importance of using digitalization to reduce the shadow economy was determined by the following statistics. In the world, the share of the "shadow" economy by 2020 amounted to 22.1% of world GDP [7], in particular in developed countries the share of the shadow economy is 7.5% of GDP [8]. Despite various targeted government programs and a high level of economic development, in some countries with emerging (Russia, Ukraine) and developing (Brazil, Pakistan) countries with market economies, the share of the shadow sector in the world economy is 39-45%. The data of the UN Office on Drugs and Crime, published in 2020, show that the amount of money laundering in the world is from 2 to 5% of total GDP, and according to the IMF report, 5-7%. At the same time, with the increase in the volume of "illegal" money in the world, countermeasures against this phenomenon are also intensified.

World experience in achieving a reduction in the level of the shadow economy is reflected in the creation of working groups and strategic plans by international financial organizations, for example ISO standards, UN reports and studies, IMF, Office for Democratic Institutions and Human Rights, Organization for Security and Cooperation in Europe, Council of Europe Group of States Anti-Corruption, OECD Foreign

Bribery Working Group, OECD Eastern Europe and Central Asia Anti-Corruption Network, Financial Action Task Force on Money Laundering and Anti-Corruption Plan for 2019-2021 adopted by the leaders of the G20. In particular, Transparency International and non-governmental international organizations conduct a systematic collection of data, carry out intensive scientific research and monitor the priority areas of the fight against the shadow economy.

In the context of deepening economic reforms in Uzbekistan, a lot of work is being done to combat corruption and legalize the shadow economy. According to the results of a household survey of the Ministry of Employment and Labor Relations of the Republic of Uzbekistan, employment in the informal sector at the beginning of 2019 is almost 8 million people. [9] According to the State Committee of the Republic of Uzbekistan on Statistics, the share of the informal economy in the household sector of the country ranges from 30% to 35%. At the same time, the size of the shadow economy in entrepreneurial activity amounted to 16.7% of the country's GDP. [10] According to the UNDP in 2019, the scale of the shadow economy in Uzbekistan varies between 40% -50% in relation to the country's GDP. It should be noted that in order to implement a set of measures aimed at reducing the shadow economy, a phased transition to the legalization of unofficial and illegal activities by preliminary testing in large cities is necessary. In this case, digitalization can serve as an advantage in combating the shadow economy and increasing the efficiency of state institutions.

Digitalization is a phenomenon that is taken for granted and necessary for the development of the economy. The boundaries between digital and traditional are blurring as technological change permeates every aspect of modern life. We all need to understand the nature of this change in order to be able to respond at all levels: social, state and personal. Like all phenomena, they have a positive and negative connotation, and the digital economy is no exception. The abundance of technology and digitalization in general, as well as actions and machinations in the digital world and the rapid growth of their number, are shaping the definition of the digital shadow economy. Aspects of this phenomenon are of the most varied nature. By the definition of many scientists, one common feature of the shadow economy is any undocumented action. It is this type of action that can be carried out in the vastness of the digital world without any evidence and fixation either in the real or in the virtual space.

Based on the above, we can conclude that the digital economy is fueled by a voluminous amount of information and a database, which in turn raises the issue of not only accounting, recording and storing personal consumption data or financial transactions, but also the problem of protecting them from being used for personal gain and applications in the shadow digital world. This issue gives rise to the study of a completely new sector of the shadow economy and creates the fourth segment of the digital economy, which would ensure the security of digital life.

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