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THE IMPACT OF DIGITALIZATION ON EMPLOYMENT TRANSFORMATION IN COUNTRIES WITH DIFFERENT INCOME LEVELS

Abstract. It has been substantiated that digitalization is a driver of the transformation of employment in different countries. The degree of formation of the digitalized labor market by groups of countries with different levels of per capita income has been studied. It is proved that the use of digital technologies by the vast majority of companies and the economically active population simplifies the procedure of job creation, giving the opportunity to work via the Internet within the so-called “on-demand economy”. With the high degree of implementation of digital, information and communication technologies, the share of employees in the service sector is growing in the majority of countries. It is stated that the degree of digitalization of the labor market is uneven in the world. The introduction of modern technologies in high-income countries allows the population to fully realize the intellectual and creative potential, finding a job in the most efficient sector of the economy – the high-tech and knowledge-intensive services. Despite the rapid spread of digital technologies and the rapid growth of employment in the service sector in the upper-middle-income countries, the level of digital transformation of the labor market is much lower than in the high-income countries. Nowadays, there is a digital divide between these groups of countries, although, with the effective policies of governments in the upper-middle-income countries, there is a high probability of achievement of indicators of countries that are digital leaders. The trend of gradual digitalization of the services sector is also observed in the lower-middle-income countries. It is noted that the low prevalence of information and communication

technologies in low-income countries makes it impossible for the population of these countries to join the global digitalized labor market. A set of measures has been systematized to harmonize the policies of governments of different countries in the field of labor relations, which are being transformed under the influence of global digitalization.

Keywords: digital technologies, digitalization, employment, global digitalized labor market, high-income countries, lower-middle-income countries, low-income countries, upper-middle-income countries.

JEL Classification F66, J24, J40, O33

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ВПЛИВ ДІДЖИТАЛІЗАЦІЇ НА ТРАНСФОРМАЦІЮ СФЕРИ ЗАЙНЯТОСТІ У КРАЇНАХ ІЗ РІЗНИМ РІВНЕМ ДОХОДІВ

Анотація. Обґрунтовано, що діджиталізація виступає драйвером трансформації сфери зайнятості в різних країнах світу. Досліджено ступінь сформованості діджиталізованого ринку праці за групами країн з різним рівнем доходів на душу населення. Доведено, що використання цифрових технологій переважною більшістю компаній та економічно активним населенням спрощує процедуру створення робочих місць, даючи можливість виконувати роботу через мережу «Інтернет» у рамках так званої «економіки вільного заробітку». За високого ступеня впровадження цифрових інформаційно-комунікаційних технологій частка зайнятих у сфері послуг зростає в більшості країн світу. Констатовано, що ступінь діджиталізації ринку праці є нерівномірним у світі. Упровадження сучасних технологій у країнах із високим рівнем доходів дозволяє населенню повною мірою реалізовувати інтелектуальний і креативний потенціал, працевлаштовуючись у найефективнішому секторі економіки — сфері високотехнологічних і наукомістких послуг. Попри швидкі темпи поширення цифрових технологій і стрімке зростання частки зайнятих

у сфері послуг, у групі країн із рівнем доходів вище від середнього показники є значно нижчими, порівняно з групою країн із високим рівнем доходів. Нині прослідковується цифровий розрив між цими групами країн, хоча за ефективної політики урядів держав, що включені до групи з рівнем доходів вище від середнього, існує висока вірогідність наближення до показників країн — цифрових лідерів. Тенденція поступової діджиталізації сфери послуг також спостерігається у країнах із рівнем доходів нижче від середнього. Зазначено, що низький ступінь поширення інформаційно-комунікаційних технологій у країнах із низьким рівнем доходів унеможливує приєднання населення цих країн до світового діджиталізованого ринку праці. Систематизовано комплекс заходів для узгодження політик урядів різних країн світу у сфері трудових відносин, які трансформуються під впливом глобальної діджиталізації.

Ключові слова: цифрові технології, діджиталізація, зайнятість, світовий діджиталізований ринок праці, країни з високим рівнем доходів, країни з рівнем доходів вище від середнього, країни з рівнем доходів нижче від середнього, країни з низьким рівнем доходів.

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Introduction. Digitalization is one of the most complex, integrated and little-studied processes of the global economic transformation. The active use of digital technologies for processing, storage and transmission of information contributes to the digitalization of business operations, the spread of international e-commerce, the creation of e-government structures and the formation of a digitalized global labor market. The phenomenon of digitalization pertains not only to digital devices but also to the work of people actively involved in the interaction with digital technologies. At the same time, the ambiguity of the processes taking place in the global economy is noted. Simultaneously with the strengthening of universalization, integration and unification — processes that are spreading throughout the world as a result of digitalization — the manifestations of asymmetries are growing in economic and social life. This is due to the unevenly distributed access to the opportunities that the Internet provides. With particular clarity, the economic and social aspects of asymmetry are manifested in the labor market, which acquires signs of globality, while remaining heterogeneous and contradictory. Due to the fact that the massive use of digital technologies is rapidly changing traditional labor models, it becomes necessary to assess the level of digitalization of the labor market in various groups of countries. Since the effective development of the digitalized labor market, which is accompanied by an increase in the number of people employed in knowledge-intensive industries and services, is the key to the stable functioning of the country's economy.

Analysis of recent research and statement of the problem. The term «digitalization» is widely used in modern research, although the exact definition is the subject of much debate. Gartner, a consulting firm specializing in marketing research in the field of information technology, understands «digitalization» as the process of transition to digital business based on the use of digital technology aimed at changing the business model to provide new opportunities for generating profit and creating values [1]. The Organization for Economic Co-operation and Development defines the term «digitalization» as the process of interconnected use of data and digital technologies that contributes to the emergence of new activities or change in the existing ones [2]. A study by the International Monetary Fund notes that digitalization encompasses a wide range of new ways of applying information technology in business models that transform the economy and society [3]. Ochs T. and Riemann U. A. consider digitalization as the integration of digital technologies into everyday life by transferring to digital format everything that can be digitalized [4]. Scuotto V., Serravalle F., Murray A. and Viassone M. define the concept of «digitalization» as the process of implementing digital technologies to change the business model in order to benefit from the use of new, advanced technologies that process the huge digital flow of information within a dynamic digital network [5]. Modern works of Ukrainian scientists [6; 7] reflect the importance of digitalization in research activity, namely using digital tools in practice for

analyzing the information asymmetry of financial interaction between a potential investor and small business, as well as assessing the results of Ukrainian reforms and programs for sustainable economic development. Current research of experts from the International Labor Organization [8], the World Bank Group [9], the Organization for Economic Co-operation and Development [10], and the European Commission [11] show that the exponential growth of new technologies together with an increase in the self-employed population lead to the transformation of the global labor market. Berg J., Furrer M., Harmon E., Rani U. and Silberman M. [12], Chinoracký R. and Čorejová T. [13], Huws U., Spencer N. H., Syrdal D. S. and Holts K. [14], Schmidt F. A. [15], Storrie D. [16] made a significant contribution to the study of the labor market transformation in the digital era. However, the analysis of scientific research on this matter shows that the issue of the labor market transformation in the context of digitalization is relevant, but only partially studied.

The purpose of the research is to determine the impact of modern technologies on the formation of the digital labor market in different countries.

Methodology and research methods. The study used multifactor regression analysis to assess the dependence of the share of employees in the service sector on the level of digital technology use in countries grouped by per capita income. The systematization of countries by the level of gross national income (GNI) per capita, which is followed by the World Bank Group, was applied. To the group of high-income economies the World Bank Group experts include countries with GNI per capita 12,536 USD and above; to the group of upper-middle-income economies — countries with GNI per capita from 4,046 to 12,535 USD; to the group of lower-middle-income economies – countries with GNI per capita from 1,036 to 4,045 USD; to the group of low-income economies – countries with GNI per capita 1,035 USD or less. To build multifactor regression models for four groups of countries, it was used a data set that allows to assess the degree of digitalization of the labor market in different countries, namely: employment in services (% of total employment); mobile-cellular telephone subscriptions per 100 inhabitants; fixed-broadband subscriptions per 100 inhabitants; percentage of individuals using the Internet, %; export of digitally-deliverable services (% of total trade in services). The data was selected for the period from 2010 to 2018. The choice of such time limits of the study is due to the presence of the generally required set of data for four groups of countries only for 2018 inclusive. To build a model, the standardization of initial data was implemented (1):

$$I = \frac{X_n - X_{\min}}{X_{\max} - X_{\min}}, \quad (1)$$

where X_n is the value of the indicator for the n th year;

$X_{\min}$ — the minimum value of the indicator for the analyzed period;

$X_{\max}$ — the maximum value of the indicator for the analyzed period.

The standardization of indicators is due to the fact that most of them are presented in the original data in different units, which contradicts the rules of constructing regression models.

Results of the study. Rapid spread of digital communication devices, as well as the development of digital information processing through the use of artificial intelligence technologies contributes to the digitalization of the labor market around the world, as well as to the spread of atypical forms of employment [17; 18]. The consequence of technical progress is the direct creation of jobs in high-tech sectors of the world economy (especially in the field of knowledge-intensive services). Smartphones, tablets and other portable electronic devices are increasingly used in work by a large proportion of the working population. The world is actively creating interactive online resources that promote this megatrend. New technologies are blurring the traditional geographical boundaries of national and regional labor markets, forming global pools of employers and employees.

Digitalization is one of the determining factors in the transformation of the global labor market. The use of digital technologies in business operations changes the forms and ways of employment, leads to the emergence of new professions and occupations, promotes the interests of both employees and employers, expanding the pool of highly qualified professionals through freelance or crowdsourcing platforms. Digitalization of the labor market creates a positive

economic effect, reducing socially needed time and saving resources, as well as helping to solve socially significant problems, such as lowering unemployment, creating jobs, relieving social tensions in depressed regions of different countries and so forth [19, p. 43].

However, the impact of digital technologies on job transformation and emergence of new professions is uneven. The degree of labor digitalization depends on the level of the country development, the structure of its economy, the quality of the workforce education and the ability to quickly adapt to changes in the modern world labor market.

The results of our study confirm the hypothesis that the use of digital technologies by the vast majority of companies and the economically active population simplifies the procedure of job creation, allowing to work via the Internet in the so-called «gig economy», «on-demand economy» or «sharing economy». World practice has shown that with a high degree of implementation of digital information and communication technologies, the share of employees in the service sector is growing in most countries.

However, the degree of digitalization of the labor market is manifested in the world unevenly, so there is a need to study the formation of the digitalized labor market by groups of countries with different income levels.

Based on the constructed multifactor regression model (2), it was proved that in high-income countries an increase in the mobile-cellular telephone subscriptions per 100 inhabitants (x_1), the number of subscriptions for the use of fixed broadband Internet access per 100 people (x_2), the share of export of digitally-deliverable services in % of the total volume of trade in services (x_3) will lead to an increase in the employment in services (y).

$$y = 0,175x_1 + 0,835x_2 + 0,344x_3 - 0,271x_4 - 0,033, \quad (2)$$

where y — employment in services, % of total employment;

x_1 — mobile-cellular telephone subscriptions per 100 inhabitants;

x_2 — fixed-broadband subscriptions per 100 inhabitants;

x_3 — export of digitally-deliverable services, % of total trade in services;

x_4 — percentage of individuals using the Internet, %.

On average, in 2018, 132 mobile-cellular telephone subscriptions were registered per 100 inhabitants in the group of high-income countries. As of 2018, the largest number of mobile communication users were in Macau (345 per 100 inhabitants), Hong Kong (270 per 100 inhabitants), the United Arab Emirates (209 per 100 inhabitants), the Republic of Seychelles (184 per 100 inhabitants), Antigua and Barbuda (176 per 100 inhabitants), Kuwait (172 per 100 inhabitants), Lithuania (164 per 100 inhabitants), Mauritius (151 per 100 inhabitants), Uruguay (150 per 100 inhabitants), Singapore (149 per 100 inhabitants).

In 2018, there was an increase in the number of fixed-broadband subscriptions per 100 inhabitants by 32.20 % compared to 2010, which was an average of 30 subscriptions per 100 people in the group of high-income countries. The share of digitally-deliverable services exports in % of total trade in services by the group of countries in 2018 exceeded 50.00 % and amounted to 53.51 %, which is 6.03 % more than in 2010 (50.47 %).

This result indicates that the introduction of modern technologies in high-income countries allows people to fully realize their intellectual and creative potential, finding employment in the most efficient sector of the economy — high-tech and knowledge-intensive services. As of 2018, an average of 74.20 % of the population of high-income countries worked in the service sector, which is 1.64% more than in 2010.

As our calculations show, the increase in the number of people employed in the sector of high-tech and knowledge-intensive services will further lead to the development of the digital economy and digitalization of the labor market (*Fig. 1*).

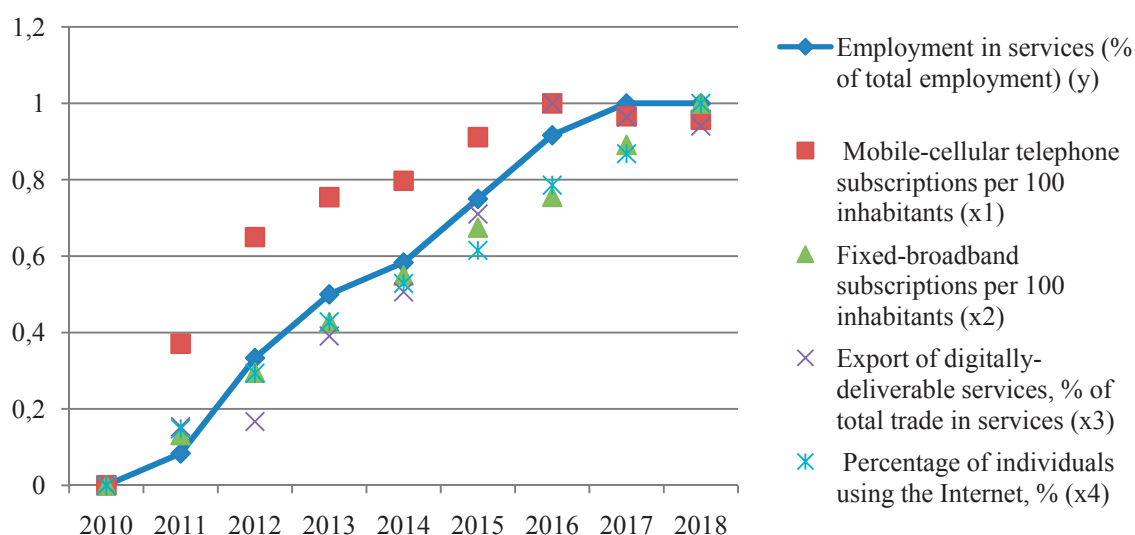


Fig. 1. **Dependence of the share of employees in the service sector on the level and results of the use of digital technologies in high-income countries, 2010–2018**

Source: Calculated and developed by the authors based on data from the ITU [21–23], ILO [24], UNCTAD [25].

At the same time, as the share of individuals using the Internet decreases (x_4), the share of the individuals employed in services (y) will increase. First, this is due to the slowdown in the process of connecting new subscribers who have mobile and fixed broadband Internet access, as these countries have the highest connection rate among the four study groups of countries (86.33 %) and the market for these services is approaching saturation. According to the Measuring the Information Society Report [20], the population of the high-income group is a subscriber of both mobile and fixed Internet access. Improving the capabilities of mobile networks has also played an important role in this trend. The transition from 3G to 4G and to high-quality networks capable of efficient delivery of Internet services (5G) allows the population of high-income countries to use mobile Internet as well. Secondly, this trend is explained by the extensive structure of the service sector of the high-income group, as well as the employment of the population of these countries in the service sector, which does not involve active Internet use (food services, hotel services, hairdressing and beauty services). Third, the digitalization of the world labor market results in the automation of certain types of services (logistics, financial, and medical ones), which will lead to the release of economically active population that has not adapted to new working conditions and does not participate in complex knowledge-intensive processes.

Despite the rapid spread of digital technologies and the high growth of the share of employment in services in upper-middle-income countries, the average indicators are much lower than in the group of high-income countries. Nowadays, there is a digital divide between these groups of countries, although with the effective policies of governments of upper-middle-income countries, there is a high probability of approaching the figures of the digital leading countries. The multifactor regression model (3), built for upper-middle-income countries, shows that with the increase in mobile-cellular telephone subscriptions per 100 inhabitants (x_1), the share of export of digitally-deliverable services in % of the total volume of trade in services (x_3), as well as the percentage of individuals using the Internet (x_4), there will be an increase in the share of people employed in services (y).

$$y = 0,146x_1 - 2,228x_2 + 0,175x_3 + 3,000x_4 - 0,041. \quad (3)$$

On average, in 2018 in the group of upper-middle-income countries, there were 113 mobile-cellular telephone subscriptions per 100 inhabitants, an increase by 15.59 % compared to 2010. As of 2018, the largest number of mobile communication users were in the following ten countries: Montenegro (181 subscriptions per 100 inhabitants), Thailand (180 subscriptions per 100 inhabitants), Turkmenistan (179 subscriptions per 100 inhabitants), Costa Rica (170 subscriptions per 100 inhabitants), Maldives (166 subscriptions per 100 inhabitants), South Africa

(160 subscriptions per 100 inhabitants), Russia (157 subscriptions per 100 inhabitants), Botswana (150 subscriptions per 100 inhabitants), Kazakhstan (142 subscriptions per 100 inhabitants) and Gabon (138 subscriptions per 100 inhabitants). In 2010–2018, in the group of upper-middle-income countries, the share of the population using the Internet increased by 114.87 % from 28.68 % to 61.63 %. As of 2018, the following countries had the highest share of Internet users: the Lebanese Republic (87.67 %), Malaysia (81.20 %), the Russian Federation (80.86 %), the Republic of Azerbaijan (79.80 %), Argentina (79.77 %), the Republic of North Macedonia (79.17 %), the Republic of Belarus (79.13 %), the Republic of Kazakhstan (78.90 %), the Republic of Armenia (75.12 %), the Bolivarian Republic of Venezuela (75.12 %). The share of export of digitally-deliverable services in % of total trade in services by group of countries in 2010–2018 increased by 19.11 % from 27.80 % to 33.12 %. This result indicates that the rapid spread and use of digital technologies in upper-middle-income countries contributes to the digitalization of services, and therefore, as a result, there is an increase in employment in services. As of 2018, on average, 52.30 % of the population of upper-middle-income countries worked in the services sector, which is 19.13 % more than in 2010.

Based on the constructed model, it was determined that with a decrease in the number of fixed-broadband subscriptions per 100 inhabitants (x_2) in upper-middle-income countries, the share of employment in services (y) will increase due to the transition to use of mobile broadband Internet access as opposed to fixed network access (Fig. 2). The transition to the use of mobile Internet is due to lower costs of these services. According to our calculations, based on the Measuring Digital Development: ICT Price Trends 2019 report [26], the average cost of 1 GB of mobile broadband Internet access in the group of countries was 5.52 USD per month in 2018. The lowest prices for 1 GB were in Kazakhstan (0.86 USD / month), Russia (0.88 USD / month), Belarus (1.03 USD / month), Indonesia (1.20 USD / month), Serbia (1.40 USD / month), Peru (1.42 USD / month), Turkey (1.43 USD / month), Georgia (1.47 USD / month), Malaysia (1.48 USD / month). The highest prices were in the countries with the least developed digital infrastructure: Iraq (10.55 USD / month), Namibia (11.87 USD / month), Lebanon (11.94 USD / month), Paraguay (12.20 USD / month), South Africa (12.53 USD / month), Dominica (13.60 USD / month), Jamaica (15.53 USD / month), Turkmenistan (31.40 USD / month).

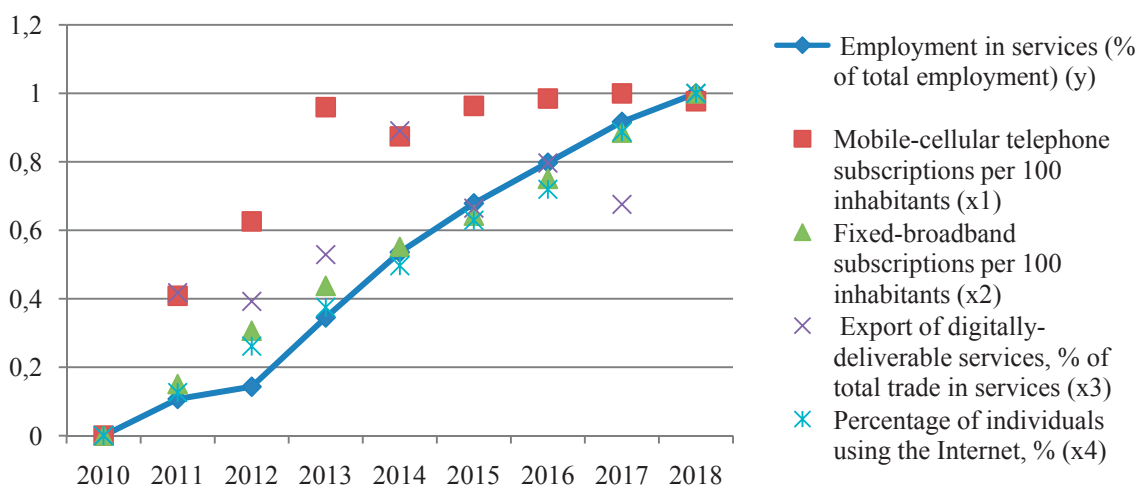


Fig. 2. Dependence of the share of employees in the service sector on the level and results of the use of digital technologies in upper-middle-income countries, 2010–2018

Source: Calculated and developed by the authors based on data from the ITU [21–23], ILO [24], UNCTAD [25].

The multifactor regression model (4), developed for lower-middle-income countries, shows that an increase in mobile-cellular telephone subscriptions per 100 inhabitants (x_1), fixed-broadband subscriptions per 100 inhabitants (x_2), export of digitally-deliverable services, % of total trade in services (x_3) and the share of individuals using the Internet (x_4) leads to an increase in the share of the individuals employed in services (y).

$$y = 0,234x_1 + 0,607x_2 + 0,027x_3 + 0,145x_4 + 0,003. \quad (4)$$

As of 2018, in the group of lower-middle-income countries there were, on average, 98 mobile-cellular telephone subscriptions per 100 inhabitants, which showed an increase by 50.78 % compared to 2010. In 2018, ten countries had the largest number of mobile communication users: Vietnam (147 subscriptions per 100 inhabitants), El Salvador (147 subscriptions per 100 inhabitants), Sri Lanka (143 subscriptions per 100 inhabitants), Nepal (139 subscriptions per 100 inhabitants), Kyrgyzstan (139 subscriptions per 100 inhabitants), Ghana (138 subscriptions per 100 inhabitants), Ivory Coast (135 subscriptions per 100 inhabitants), Mongolia (133 subscriptions per 100 inhabitants), Lesotho (131 subscriptions per 100 inhabitants), Ukraine (128 subscriptions per 100 inhabitants). In 2018, there was an increase in the number of fixed-broadband subscriptions per 100 inhabitants by 209.23 % compared to 2010, which was on average 3 subscriptions per 100 people in the group of lower-middle-income countries. The following countries of this group had the largest number of subscriptions: Moldova (15 per 100 inhabitants), Vietnam (14 per 100 inhabitants), Ukraine (13 per 100 inhabitants), Uzbekistan (13 per 100 inhabitants), Mongolia (10 per 100 inhabitants), Tunisia (9 per 100 inhabitants), El Salvador (8 per 100 inhabitants), Sri Lanka (7 per 100 inhabitants), Algeria (7 per 100 inhabitants), Egypt (7 per 100 inhabitants). In 2010—2018, the share of the population using the Internet increased by 199.10 % from 12.13 % to 36.29 % in the group of lower-middle-income countries. As of 2018, the largest share of Internet users had the following countries: Moldova (86.87 %), Vietnam (70.35 %), Morocco (64.80 %), Tunisia (64.19 %), the Philippines 62.72 %, Ukraine (62.55 %), Cape Verde (57.10 %), Uzbekistan (55.20 %), Bhutan (52.83 %), Algeria (49.04 %). The impact of the x_4 factor is due to an increase in the use of mobile broadband Internet access in lower-middle-income countries in contrast to the fixed one, which occurs due to lower prices for mobile Internet in these countries. The share of export of digitally-deliverable services in % of total trade in services in the group of countries increased by 0.68 % from 46.18 % to 46.49 % in 2010—2018. A significant share of these services in the total volume of trade in services is explained by the fact that the vast majority of countries in this group are leaders in outsourcing and freelancing in the global digitalized labor market. The results of the study reflect the trend of gradual digitalization of the service sector in lower-middle-income countries. In 2010—2018 there was an increase in the share of employment in the service sector from 34.20 % to 39.20 %, i.e. by 14.62 % (Fig. 3).

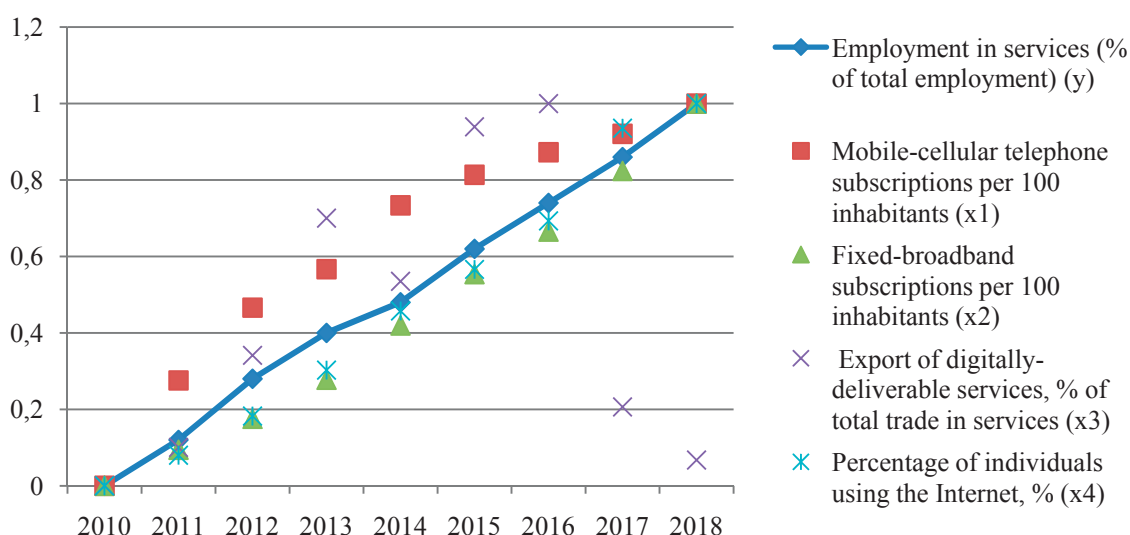


Fig. 3. Dependence of the share of employees in the service sector on the level and results of the use of digital technologies in lower-middle-income countries, 2010–2018

Source: Calculated and developed by the authors based on data from the ITU [21–23], ILO [24], UNCTAD [25].

Based on the constructed multifactor regression model (5), it is substantiated that in low-income countries with an increase in the number of mobile-cellular telephone subscriptions per 100

inhabitants (x_1), the number of fixed-broadband Internet subscriptions per 100 inhabitants (x_2), the share of export of digitally-deliverable services in % of total trade in services (x_3) and the share of the population using the Internet (x_4) leads to the increase in the share of the individuals employed in services (y).

$$y = 0,186x_1 + 0,563x_2 + 0,127x_3 + 0,182x_4 - 0,004. \quad (5)$$

On average, in the group of low-income countries in 2018, 66 mobile cellular subscriptions were registered per 100 people, which is 88.28 % more than in 2010. As of 2018, the following countries had the largest number of mobile communication users: The Gambia (140 subscriptions per 100 inhabitants), Tajikistan (117 subscriptions per 100 inhabitants), Mali (115 subscriptions per 100 inhabitants), the Syrian Arab Republic (101 subscriptions per 100 inhabitants), and Burkina Faso (98 subscriptions per 100 inhabitants). Though the number of subscribers using fixed broadband Internet access in low-income countries is the lowest of the four groups of countries (approximately 1 subscriber per 100 inhabitants), the growth rate is the highest (in 2010—2018, an increase of 559.00 %). In 2018, there was an increase in the share of the population using the Internet by 199.41 % compared to 2010, which was an average of 15.24 % in the group of low-income countries. As of 2018, in 13 countries the share of Internet users exceeded the average by group: the Syrian Arab Republic (35.84 %), Haiti (32.47 %), Yemen (29.51 %), Sudan (27.18 %), Uganda (24.18 %), Tajikistan (23.44 %), Rwanda (23.13 %), The Gambia (21.38 %), Ethiopia (20.56 %), Burkina Faso (18.65 %), Mozambique (17.02 %), Liberia (16.47 %), Guinea (16.01 %). As of 2018, the share of export of digitally-deliverable services in % of total trade in services an average in the group of countries was only 17.63 %. This is due to the fact that the vast majority of the population of low-income countries work in service sectors that are not high-tech and export-oriented. In 2010–2018, there was an increase of 15.32 % in the share of individuals employed in the service sector, which as of 2018 averaged 28.60 % per group, but the indicator is the lowest among the studied groups of countries (*Fig. 4*). The results show that the low prevalence of ICT and digital technologies in low-income countries makes it impossible for the population of these countries to join the global digitalized labor market.

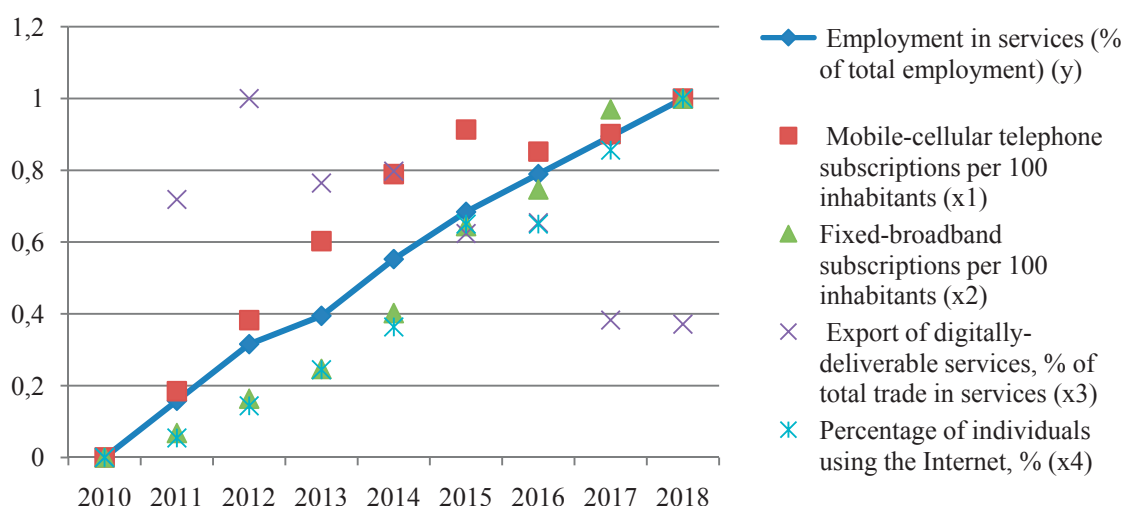


Fig. 4. Dependence of the share of employees in the service sector on the level and results of the use of digital technologies in low-income countries, 2010–2018

Source: Calculated and developed by the authors based on data from the ITU [21–23], ILO [24], UNCTAD [25].

Given the acceleration of the processes of world's economies digitalization and the formation of a single digitalized labor market in the future, the main task of governments is to harmonize policies in the field of labor legislation. When developing national reforms aimed at transforming labor relations in the digitalized labor market, governments of different countries should implement a set of measures defined in the documents of the Global Commission on the Future of Work and the World Bank Group. The measures have been systematized by us as follows:

1. To ensure the development of an effective lifelong learning ecosystem that combines the acquisition of the basic, socio-cognitive, digital skills and competences needed for specific jobs, occupations and sectors of the economy. Modern education system requires the formation of a qualitatively new training based on flexible online training programs, which should be implemented provided mass interactive participation through e-learning technologies with an open access via the Internet is encouraged.

2. To assess the regulatory framework governing labor relations. To introduce amendments to labor legislation determining the legal status of an employee who performs work in atypical forms and methods of employment, establishing general labor guarantees for employees regardless of the employment type, strengthening strict control over compliance with working hours, approving digital workplace characteristics, unification of atypical employment agreements that take into account the peculiarities of the modern labor market, use of technology to ensure decent working conditions. These steps are necessary to formalize labor relations, reduce inequality and poverty among the working population, increase stability and protect the rights of workers in the context of digitalization of the labor market.

3. To develop a system for regulating atypical forms and methods of employment through online labor platforms, which will oblige owners and their clients to comply with the rights and obligations defined by labor legislation. Employees must be guaranteed decent working conditions regardless of their employment status: wages for the task performed, maximum working time limits, the right to disconnect, which allows employees not to participate in work-related electronic communications during non-working hours, as well as occupational safety and health care during work in the premises of clients. Employers must be guaranteed the quality and timeliness of the task completion. Owners of online labor platforms have the right to charge for the provision of intermediary services in the process of concluding agreements between the employer and the employee, as well as the obligation to make tax deductions to the state executive authorities of the home country.

4. To create a reliable cyberspace for the functioning of the digitalized labor market. In the field of labor legislation there is a need to develop a regulatory framework that controls the use of electronic personal data and determines the degree of responsibility for unauthorized access to it. Governments around the world need to ensure the adoption of policies to protect electronic personal data of both employees and employers when filling out profiles (accounts) on online labor platforms, concluding electronic employment contracts and invoices, using electronic signatures, keeping up electronic business correspondence, electronic financial and settlement transactions, etc.

At the same time, developers of national labor reforms need to strive to strike a balance between guaranteeing employment and the flexibility of labor legislation, as tight regulation of the digitalized labor market will lead to its stagnation. The results of the World Bank Group study confirm the fact that in countries with a strict regulatory framework in terms of employment, the volume of activities in technology-intensive sectors is much lower, because strict legislation makes it difficult for technology startups to enter the market, where employees often use atypical forms and methods of employment.

Conclusion. Currently, the degree of digitalization of the labor market is uneven in the world. The introduction of modern technologies in high-income countries allows the population to fully realize the intellectual and creative potential, finding employment in the most efficient sector of the economy — the field of high-tech and knowledge-intensive services. Despite the rapid spread of digital technologies and high growth of employment in the service sector, in the group of upper-middle-income countries indicators are much lower than in the group of countries with high incomes. There is now a digital divide between these groups of countries, although, with the effective policies of governments in the upper-middle-income countries, there is a high probability of approaching the figures of digital leaders. The trend of gradual digitalization of the service sector is also observed in lower-middle-income countries. It is noted that the low prevalence of ICT and digital technologies in low-income countries makes it impossible for the population of these countries to join the global digitalized labor market.

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