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Digital Transformation Management Of Ukraine's Economy

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Abstract

Over the last decades, we have been able to witness a real information revolution, a radical transformation of society, when not only the technical characteristics of goods and services but also the models of interaction and relations between people, as well as new values and patterns of their behaviour are formed. The main value instead of natural resources is the information which, unlike the minerals, which are limited and constantly decreasing, has unique characteristics for its own conservation and multiplication. The more a society works with information, uses it, the faster it accumulates, and the greater value is given to humanity, which, under the influence and accumulation of that information, continues to transform itself from an industrial to an information society.

The economic basis for the formation of this information society is digital capital embodied in relevant technologies, human skills, databases, computing power, and computational algorithms. In Ukraine, all this is, but at the same time, there is an unresolved problem of its effective use, which requires a proper understanding by economists in close collaboration with the digital sphere, which is understood in the modern technological trends, as well as sociologists, political scientists and philosophers who are oriented in modern social transformation. This is very important, given that the revolution is not only ample opportunity but also a variety of risks and threats, both man-made and humanitarian. Therefore, their timely identification and localization are only possible through the fruitful cooperation of the entire scientific community.

Keywords: *Digital Transformation, Global Market, Digital Platforms, Global Technological Trends, Digitalization Catalysts, Modern Technological Trends, Innovations, Innovative Resources, The Potential of Digitalization.*

INTRODUCTION

According to some estimates, the share of the global information economy is now 22.5% of the world economy, taking into account digital skills and digital capital. But digitization, unfortunately, is still largely bypassing Ukraine, making it impossible to comprehensively receive additional "digital" dividends for the population, business and government. Unlike economically developed countries, the industrial age-oriented structure of Ukraine's economy does not allow the creation of sufficient high-tech goods and services that would be a competitive and in-demand global market. As a result, high-tech exports of goods are declining, traditional sectors of the economy have been losing ground in recent decades, and economically active people are seeking employment opportunities outside Ukraine. The system of education and reproduction of human capital, while remaining focused on the existing morally outdated sectors of the economy, also "preserve" the structural and technological backwardness.

REVIEW OF LITERATURE

Expanding the share of the digital or information economy (hereinafter referred to as terms synonymous with us) and accelerating GDP growth through digitalization is among the priority problems of the global scale and are actively studied not only by leading economists in Ukraine and the world, but also by governments developed countries, reputable international organizations, transnational corporations including World Bank, World Economic Forum, McKinsey Global

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Institute), The Boston Consulting Group, AT&T, Cisco, Citi, PwC and SAP, and more. According to an analysis by the Boston Consulting Group, "digitization is a key driver of GDP growth".

Research on problems of digitization of the economy of Ukraine is rather limited. For example, in the leading economic journal Economy of Ukraine out of 75 articles published in 2017, only 3 publications indirectly relate to current trends in digitalization of the economy and address the prospects and problems of the smart industry, the problems of e-commerce development in Ukraine and the role mass open online courses in today's "educational landscape". But all these studies only touch on the individual components of the digital economy without considering it as a whole.

The list of professional publications also lacks scientific one's magazines related to the information, digital or e-economy, as well as platforms. Also, the dominance of outdated thinking paradigms over progressive paradigms clearly demonstrate Google search results in the book category. So the search for "digital economy" yields 4 470 results 85, the search query "agriculture" – 286 000 results, "coal industry" – 44 300 results. Thus, the number of publications related to outdated technology is significantly dominating the digital world.

RESEARCH METHODOLOGY

The article explores trends in the development of the digital economy, which is constantly increasing in the GDP structure of the world's leading economies. It is proved that the modern processes of the digital transformation of the economy are connected with the development of business models that use digital platforms. In fact, platforms have been revolutionizing over the last decade. A feature of digital platforms is the integration of different groups of consumers, manufacturers, owners of resources in one virtual platform. The digital platform typically uses the digital platform's users rather than its own resources, rather than its own resources, which determines its dominance over traditional business models.

In Ukraine, the basis of the economy is physical capital, which is concentrated in mining, metallurgy, fuel, energy and agro-industrial complexes. Domestic digital capital is in the process of being formed, but there are already a number of positive examples. Opportunities for the development of the digital economy in Ukraine are related to the increased use of digital platforms, which are the growth points of the modern information economy. It is emphasized that blockchain technology is a promising direction for the development of digital platforms, and in Ukraine, there is already significant potential for development in this direction.

RESULTS

The situation and change of the state of Ukraine in the coordinate system the "digitization index of the economy" and "GDP per capita" testify to two negative aspects. On the one hand, Ukraine is lagging behind in terms of digitalization of the economy not only from developed countries but also from developing countries, including our geographical neighbours and CIS member countries. On the other hand, it is easy to see that the slope of the trajectory of change in Ukraine is almost parallel to the axis of the "digitization index of the economy". This means that the development of digital technologies in Ukraine does not translate into an increase in the output of goods and services, that is, does not lead to an increase in digital value-added and therefore GDP. The reason for this situation is the "digitization of consumption" (due to high-tech imports and digital services), rather than its own production of goods and services related to the digital economy. (IDI), which includes three sub-indexes: access to ICT (hereinafter called ICT), ICT use and ICT skills.

Despite the fact that the dynamics of the index for Ukraine is positive and there is an increase in its value from 5.21 to 5.33, but relative to other countries during 2015-2016 there is no progress, Ukraine is consistently ranked 76 position102 of 175 participating countries in this rating. However, an in-depth analysis of the sub-indices shows that Ukraine's calculated position may be too optimistic than

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the current state of affairs. The first two sub-indexes do not cause remarks. According to the ICT Access sub-index – 71 positions (value 6.48), and the ICT usage sub-index – 114 positions (value 2.57). But the ICT Skills sub-index is ranked 11th (8, 57) higher than in Germany, the United Kingdom or Sweden. However, the number of secondary education years and the prevalence of secondary and tertiary education do not always translate into high-quality ICT use, which subsequently becomes a barrier to the development of the digital economy.

Unlike the global trends, according to which the largest companies in the world are building their business on an information (digital) basis, in Ukraine, private companies belonging to the mining, metallurgical and fuel-energy complexes dominate in capitalization, and in recent year's representatives of the agro-industrial complex will also join.

As a result, the industrial-oriented economy structure of Ukraine does not meet the requirements of modern times, which causes negative tendencies that undermine the competitiveness of the domestic economy. Domestic investments (own funds of enterprises) are mainly channelled into traditional ones and the education system continues to train the professionals required by these industries, which in turn self-replicates and reinforces technological backlogs and slows down digitization processes. At the same time, there is no use of global cooperation, which in the context of digital ecosystems is creating additional opportunities for all producers and consumers worldwide beyond geography. Looking for mechanisms to change Ukraine's dominant vertically integrated business model based solely on tangible assets to a digital business model based on digital platforms, requires exploring the potential of digital platforms already operating in Ukraine.

The development of digital platforms in Ukraine is no exception to global socio-economic and technological trends, therefore, there are numerous examples of domestic digital platforms. The positive factors for the proliferation of digital platforms in Ukraine are the growth of Internet experience; mobile number expansion devices that have Internet access; the growth of the younger generation, for whom the Internet and digital technologies are a daily occurrence.

The most successful example of a domestic platform in B2G is the implementation and development of the ProZorro public e-procurement system. Its structure provides for two levels: the ProZorro, which is a database repository and processing centre for auctions and e-commerce sites owned by private owners and their number is potentially unlimited.

The purchase price is determined by the results of the downward auction, which allows us to determine the estimated economic efficiency of the site by comparing the opening and closing prices. As of the beginning of 2018, the state budget of Ukraine in the amount of over UAH 38 billion is declared. But there are a number of claims to this methodology of cost-effectiveness and non-transparent procurement. Meanwhile, there are additional positives to its use. No less important factor than "pure" economic efficiency is the constant increase in the number of bidders (bidders) and bidders (potential suppliers) whose number is already is about 30 thousand and about 150 thousand respectively. Thus, there is widespread involvement of both business and governmental entities in the use of digital platforms. And that leads to the development of digital culture and skills.

Successful activity of the ProZorro digital platform promoted the B2B model of commercial procurement. Since 2016, an open system of commercial procurement "Rialto", which brings together a group of private marketplaces.

The B2C model in Ukraine is being implemented in the activities of numerous online stores, of which Rozetka plays a leading role. There are a number of issues involved in implementing this model to determine a fair price for online shoppers.

Households within the C2B model offer workforce through the "Work.ua" and "Rabota.ua" sites.

Households also actively submit electronic petitions to the authorities and identify priority public projects (C2G model) through online voting. An example of the implementation of the C2C model in Ukraine is the all-Ukrainian "Plyushkin" commodity exchange network. The government accepts

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some reports from the Internet businesses and provides a range of online services to the public (G2B and G2C models). At the same time, work is underway to create e-government that embodies the G2G model.

Thus, almost all of the above "universal" models have examples of implementation in Ukraine.

But none of the platforms created in Ukraine at this time could become a global digital platform. Our analysis of the TOP – 50 sites by traffic in Ukraine shows that only half of the sites are of national origin. And only one Ukrainian site is included in the TOP – 10. Ukr.net, which represents the News & Media area, meanwhile, the most visited sites from the TOP – 10 groups belong to the circle of search engines (Google, Yandex), social networks (vk.com, facebook.com, ok.com). In the second ten (TOP 20) already 50% of sites have Ukrainian origin, and in the third – 80%. That is, the dominance of foreign platforms is observed.

It should also be noted that not every site is a digital online platform, but every global digital online platform is a website (that is, it has a web interface). The platforms bring together either different categories of users123 that create value (value-sharing) benefits to one another or a set of services, products, etc. and their consumers. For example, the Zakupki.prom.ua site is a digital platform that combines the interests of manufacturers and customers of goods and services. And ordinary business card sites are not platforms.

On this basis, all sites in the TOP-50 group are digital platforms, though some are limited. For example, news portals are less functional than social networks because they do not have personalized transactions.

Among the top 50 most visited sites, the following categories are dominated by news and media (20%), search engines (18%), social networks (14%), purchases (14%), ads (10 %), entertainment (8%). Other categories occupy less than 5%. Among the sites that are of Ukrainian origin, the representatives of the category "news and media" (36%), "purchases" (20%) and "Ads" (16%). But sites in this category are predominantly based on local content and have little potential globally.

Foreign sites are dominated by "search engine systems" (32%), "social networks" (28%), entertainment (12%). In the case of foreign sites, most of the traffic is generated outside their country of origin. For example, on Facebook.com, only 17.4% of traffic is generated in the United States, meaning over 80% of traffic is off-site.

Instead, the most popular domestic digital boards are forms account for more than 90% of user traffic in Ukraine. For example, Ukr.net receives 91% of the traffic from Ukraine.

Summarizing the activities of digital platforms in Ukraine, their distribution should be considered in relation to previously defined models of interaction between business, consumers (households) and the government. Most sites operate according to the Business to Consumer (B2C) model, at 44% or 88%. The next model by a number of sites that use it is Business to Business (B2B). This model is distributed on 25 sites with TOP-50 that is 50%.

Almost the same number of sites use the model "Consumer for Business" and "Consumer for Consumer" – 15 and 14 sites respectively (30% and 28% respectively). It is also possible to conditionally attribute 5 sites to the Government Consumer Model (G2C). These are mainly social networks through which official officials inform citizens about plans of activity of state bodies and information about the work done.

Four models at a time ("Business to Government" (B2G), "Consumers for Government" (C2G), "Government for Business" (G2B), "Government for Government" (G2G)) have no implementation among the Top 50 sites.

Generalizing this analysis, it is possible to form a "land-Shafts" of digital platforms in Ukraine according to the basic communication models.

Thus, the underdevelopment of digital platforms in the field of digital government formation and government provision for consumers and businesses is being traced.

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It should also be noted that there are platforms on which up to 5 models at a time. For example, this is typical of social networks where consumers, businesses and government officials actively interact. But there is no platform where all models are implemented. This indicates the possibility of forming a nationwide platform where all 9 models of interaction between the population, business and government would be implemented.

Blockchain technologies in recent years are increasingly seizing the information space in Ukraine, and a professional community is emerging on these issues. The number of blockchain technology and crypto-currency events is steadily increasing. Blockchain Conference Kyiv is held on an ongoing basis.

Five conferences have already been held since 2015. The last of the conferences, held on September 7, 2017, was devoted to the following issues: anonymous cryptocurrencies (based on CryptoNote); Blockchain solutions for the political lobbying market; the Ethereum platform; Japan's crypto-economy; experience in conducting, reputation management and marketing of ISO; cryptocurrency trading and trading; use of Blockchain technology in the media; Blockchain in banking and financial sector; blockchain of business processes and transition to Industry 4.0; decentralized trading venues.

A massive blockchain will take place in March 2018 – a forum on NSC "Olympic" Ukrainian Blockchain Day 2018, where among the speakers is known in the cryptocurrency trader and analyst Ton Weiss, former JP Vice President Morgan Chase.

In Kyiv, Kharkiv, Dnipro, Lviv, Odesa there are meetings on blockchain technology and cryptocurrencies (Bitcoin Meetup Kyiv, Bitcoin Meetup Kharkiv, etc.). Simultaneously with the activities of the professional and business community, progressive ideas are being disseminated and implemented at the state level. In this regard, 2017 has become a major breakthrough. In April 2017, the Ministry of Justice of Ukraine signed a memorandum with the global technology company Bitfuri Group on the placement of a wide range of government data on the blockchain platform, including the transition to the Blockchain e-commerce system of seized property "SETAM" and the real estate register of interest.

In September 2017, blockchain technology was implemented in the e-commerce system of seized property of OpenMarket. Thus, the "Setam Electronic Arrested Trading System" conducted the world's first electronic auctions using the most up-to-date blockchain data storage and protection technology and changed its name to OpenMarket. During the presentation, Deputy Minister of Justice S. Petukhov said: "The transition to Blockchain is another step towards making the system of electronic trading of seized property as honest and safe as possible. In this case, information about the auction will be accessible to all, so that citizens will no longer have reason to be afraid of possible manipulation of information.

In November 2017, "the Ministry of Agrarian Policy and Food of Ukraine, together with the State Agency for Electronic Governance and Transparency International Ukraine, presented an updated State Land Cadastre, which will now operate on Blockchain technology".

The authorities have shown increasing interest in regulating the cryptocurrency market. Deputies of the Verkhovna Rada of Ukraine have registered the Draft Law on the Circulation of Crypto-currency in Ukraine (№7183 dated 06.10.2017), which contains definitions of "crypto-currency", "cryptocurrency exchange", "blockchain system", "user of blockchain system", "owner of crypto-currency", "miner", "mining", "reward of the blockchain system", "block of transactions", etc., as well as problems of the state guarantee, mining and use of cryptocurrency, activities of the crypto-currency exchange are covered.

The content of some of the proposed in this bill is the values need refinement and refinement. Thus, the blockchain system is defined as a decentralized public register of all crypto-currency transactions conducted by the subject of crypto-currency transactions. But tying blockchain exclusively to crypto-

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currencies is a false approach, as it is a universal technology and its use is not limited to crypto-currencies.

While legislative and executive representatives authorities are exploring the possibility of regulating the cryptocurrency market in Ukraine, the crypto-currency Karbowanec (KRB) has been traded on the international cryptocurrency exchanges since May 30, 2016, the capitalization of which as of January 15, 2018, is $ 8.2 million. USA. The crypto ruble exchange rate increased 152 times in 2017 from $ 0.01 up to $ 1.56 USA.

Thus, blockchain technologies in Ukraine are not only discussed but also implemented despite a certain legal vacuum. The professional community is expanding, there is interest from the business.

CONCLUSIONS

Information modernization of the economy through its "digitization" is a global phenomenon that affects the modernization of all sectors of national economies in the world. Ukraine is lagging behind the leading economies and many developing countries, not only in terms of GDP per capita but also in terms of the share of the information-digital economy in GDP. In most developed countries, GDP growth is in harmony with the development of the digital economy.

In Ukraine, progress has been made in implementing digital technologies does not lead to disruptive economic results, and the increased use of ICT does not have a significant impact on GDP growth. It can be said that there is digitization of consumption, but there is not sufficient digitization of production.

The development of formation and use is observed by digital platforms. Digital platform-based businesses are formed in multidimensional virtual space and then expand in real space, becoming the core of global information business ecosystems. Thus, potential growth points for the national economy are shifting from real (offline) space to multidimensional virtual (online) space.

A business that is digital from the start instead of classic models of using own tangible assets, the platform usually has more potential and speed of growth.

In the process of activity and development, digital platforms are being transformed into information-digital business ecosystems that provide global cooperation and bring together hundreds of thousands of companies within a single ecosystem. The top 3 companies in the world by market capitalization (Apple, Alphabet (Google) and Microsoft) are not only digital platforms, but also information-digital business ecosystems. Due to the lack of developed digital platforms on a global scale, Ukraine also lacks digital ecosystems.

In today's context, every business and authority faces the challenge of (A) joining existing digital platforms and (B) creating new platforms (in non-occupied market niches or niches more effective than existing ones). For households, the main task is to access and effectively use existing platforms. Given the weakness of domestic platforms, in fact, Ukrainians are strengthening foreign platforms.

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