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TRENDS OF THE DIGITAL ECONOMY: OPPORTUNITIES AND CHALLENGES

***Summary.** The process of formation of the digital economy in the world and Ukraine is researched. The possibilities and risks of introducing digital technologies are considered. The necessity of strengthening motivation and responsibility in developing and implementing the concept of digital economy development is emphasized.*

***Key words:** digital economy, globalization, engineer, strategy, quality of life.*

Introduction. 1958 year. On the screens there was a film "The case was in Penkovo". One of the fragments is a remotely operated tractor. In the 60s this was perceived as a fantasy, although the filmmakers had predicted a "bright future" in 20 years. After 60 years, science fiction becomes reality. In the test fields in England, they sow, grow and harvest wheat without the direct participation of the machine operator. On the Ryazan expands the unmanned tractor "Agro-bot" with a trailing device is being tested, sowing the field with winter wheat. On the experimental field, instead of ten machine operators, two dispatchers are involved. The payback period is 3 years. Unmanned equipment in the agro-industrial complex is not only a promising direction for the development of science and technology, business, but also an important component of the country's food security. Information and communication technologies (ICT) are gaining momentum from the idea (novations) to innovations, that is, the practical embodiment of the most incredible ideas in many spheres of human existence. The economy of knowledge, the raw material economy, the economy of industry, etc. it is not replaced, according to many researchers, but continues (replenished) by the digital economy (DE). In our opinion, DE should find its own special place in the chain of components: pure morality — classical education — strong science — powerful industry — developed economy — quality of life — sustainable development.

Problem statement (goal). The purpose of the research is to summarize the world and domestic experience of applying digital technologies (CTs) in different spheres of life, identifying new opportunities for their use, as well as the risks accompanying this process, developing proposals for methodological and practical guidance on the formation and successful implementation of the strategy of digitization of the economy to improve the quality of life of citizens, as well as to increase the level of competitiveness of organizations, the state as a whole in a context of weakening globalization challenges and obvious manifestations of protectionist sentiment.

Results. Cluster approach to determining the level of development of the digital economy. In our research on the problems of the development of the world economy, on the problems of industrial development and a number of other problems, we proceed from the premise that each country and its leaders set two main goals: raising the level of citizens' welfare and protecting their interests. The DE should also "work" for these purposes. The cluster approach to determining the level of development of the digital economy quite objectively reflects the state of culture, education, science, industry and the quality of life in each country.

A group of scientists at the School of Law and Diplomacy Fletcher at Tufts University in cooperation with Mastercard Company presented the Digital Evolution Index. The analysis of the state and the pace of development of the digital economy in 60 countries were carried out based on the interaction of four main factors using 170 indicators.

The method of rating the digital competitiveness allowed evaluating the place of each of 60 countries on a number of criteria. First, the level of supply was assessed: the access infrastructure, the infrastructure for monetary operations and the execution infrastructure. Secondly, the demand for digital technologies was studied: how much consumers are involved in the digital economy, are they able and willing to make online purchases, are electronic payment methods used, how often do they use digital devices available to them, mobile communication, age gap among users, its availability and size, etc. Thirdly, the institutional environment was examined: the legal protection of intellectual property and the protection of investors, the use of digital technologies by the government, as well as financial transparency, the rule of law and the quality of lawmaking. Fourthly, the state of the innovation climate was considered: investments (financing options, staff turnover and startup productivity), the process (the complexity of the organization of business processes of companies, the level of costs in

R & D) and the return (the level of interconnection, which helps to promote new products, ideas and business model).

The competitiveness of the DE of each country was determined also by the current state of its development (statics) and the dynamics of development during 2008-2017. Countries on the map of the "digital planet" are divided into 4 groups (clusters): leaders, countries with a slowing growth rate, promising and problematic. Some countries are located on the borders of these regions.

Among the 5 most characteristic features of the modern digital landscape: DHs continue to spread; digital trading has not yet won cash; digital markets are not equal; a huge market power is, first of all, the major players (lead countries, TNCs); DT will change the future of work (up to 50%) [1].

State and prospects of development and introduction of digital technologies in Ukraine. On the map of the "digital planet" there was no place for Ukraine. It is pertinent to note at the same time that the origins of the development of DT are directly connected with Ukraine. In 1947, the Laboratory of Modeling and Computer Engineering was established at the Institute of Electrical Engineering of the Academy of Sciences of the Ukrainian SSR. Here in 1948-1950 under the guidance of Academician S.A. Lebedev developed the first in the USSR and continental Europe Small Electronic Counting Machine (MESM). Under the guidance of the director of the Institute of Cybernetics of the Academy of Sciences of the Ukrainian SSR, Academician V.M. Glushkova in 1966. For the first time in the USSR, the personal computer "MIR-1" was designed. V.M. Glushkov became the initiator and main ideologist of the development and creation of the State Automated System for Accounting and Information Processing (OGAS), intended for automated management of the entire economy of the USSR as a whole. V.M. Glushkov was an adviser to the UN Secretary-General for Cybernetics.

After many decades, the issues of automation, digitalization and artificial intelligence acquire a new sound. This issue has become one of the topical topics of discussions at the Davos Economic Summit in 2015-2018. At the recent Eastern Partnership Summit, President of Ukraine stressed: we are working on a single digital market with the EU. Indeed, it is in the digital economy that many new opportunities can be realized for the country, business and society and individual citizens. As they say: financial markets are located in the USA / Europe, production is in China, talents are in Ukraine.

According to the first vice-premier S. Kubiva, we regularly get to the ratings of the best specialists of information and communication

technologies of Europe and the world. But only 17% of Ukrainian industries use innovations, whereas in the EU this figure is about 49%. Unfortunately, today in Ukraine there is no single vision of the transition to the digital economy. And this is the main reason for the multi-directional efforts and low effectiveness of Ukraine in the digital sphere.

There are separate projects, solutions and technologies. The government, government agencies, representatives of individual organizations and companies work on them: 4G, "ProZorro", smart cities, electronic customs, e-health card, e-government, etc. A common strategy of the digital economy is needed to sharpen the focus and focus efforts on key priorities, based on needs, taking into account the available opportunities, analysis of strengths and weaknesses [2].

17.01.2018 the Government approved the Concept for the Development of the Digital Economy and Society of Ukraine for 2018-2020. This document provides for a transition from the raw type of the economy, consumption of natural resources to high-tech industries and efficient processes through IT technologies and communications. It is important at the same time to form an effective mechanism for managing the implementation of plans, ensure their implementation with the necessary resources and establish the moral and material responsibility of each performer for the assigned work [3].

Conclusions. The digital economy at an accelerated pace covers various systems of production, distribution, exchange and consumption of goods and services. Some firms and countries occupy the leading position on the world "digitalization map" in this process, while others are satisfied with the place of outsiders. Ukraine is at the initial stage of introducing digital technologies. The Government's Concept for the Development of the Digital Economy for 2018-2020 is designed to stop the brain drain and create the conditions for the effective use of digital technologies in many spheres of life.

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ЭФФЕКТИВНОЕ НАПРАВЛЕНИЕ РАЗВИТИЯ МАЛОГО И СРЕДНЕГО БИЗНЕСА В ГРУЗИИ

Аннотация. Работа сосредоточена на актуальных вопросах поддержки и развития малого и среднего бизнеса. Ведущую роль в цифровизации функционирования СМБ должны играть университеты. Поддержка государством предпринимательской деятельности должна осуществляться через и посредством образовательно-научной сферы. Главными звеньями в этих процессах должны быть университеты.

Ключевые слова: цифровизация, интеллектуальные данные, малый и средний бизнес, модель „четырёхкратная спираль”, трудовые ресурсы.

Вступление. Всесторонняя цифровизация и создание сети объединения предпринимательских процессов приводит к принципиальным изменениям и трудностям адаптации ко всему этому в трудовых ресурсах. Соединение предпринимательских и маркетинговых процессов с соответствующим сервисом, требует систематический сбор актуальных данных, их оцифровывание и превращение в интеллектуальные данные (Smart Data). Кроме того, учитывая скорость изменений в современном мире и в связи с этими переменами наступившие как трудности так и возможности которые возникнут в экономическом и социальном развитии Грузии мы полагаем что создание квалифицированных трудовых ресурсов по специальностям Био-Нано-Информационных и других новейших технологий будет единственно правильным реше-