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Using Foreign Experience in the Development of Digital Technologies in Uzbekistan

Makhmudjon Ikramov, PhD

Department of E-Commerce and Digital Economy, Tashkent Institute of Finance, Uzbekistan

Zamira Davlatova

*Senior Lecturer, Department of E-Commerce and Digital Economy, Tashkent Institute of Finance,
Uzbekistan*

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ANNOTATION

The article discusses foreign experience in the development of digital technologies. The analyzed trends in the development of digital technologies in Uzbekistan, in modern conditions, the latest technologies make it possible to increase the efficiency of production business processes. Traditional approaches and ways of working are changing as new technologies penetrate into new industries and areas of life. Now in Uzbekistan, investment in IT accounts for only 6.5% of total private investment, which is about two times less than the average for Western European countries, and four times less than in the United States. It is concluded that the share of Uzbekistan in the global consumption of ICT in the corporate sector is 1%, while the same indicator for the UK is 7%, China - 6%, and Germany - 5%.

KEYWORDS: professional communication, professional discourse, professional communication, institutional type, semiotic system, communicative interaction.

Introduction

The rapid changes taking place in the global economy have opened up significant development opportunities for small and medium-sized enterprises. The Internet has made it possible to radically reduce the costs of advertising and promotion, making them affordable not only for large companies, but also for small and medium-sized businesses. Social media has become a new channel of communication with the consumer, in many cases more effective than traditional ones.

The growing global demand for Industry 4.0 technologies is driving supply development in technology markets, where companies from the United States, Germany and Japan occupy the leading positions. American companies dominate the markets for solutions for the Internet of things (GE, Intel), its security (Symantec, IBM, Intel), augmented and virtual reality systems (Facebook, AMD, Google, Microsoft). Japanese companies are leaders in the industrial robot and CNC machine tool markets, and German

companies are also among the leaders in a number of areas. China leads in the number of patents in the field of artificial intelligence - it accounts for 53% of all patents in this area, the US - 27%, Japan - 6%.

One of the basic areas that have an impact on the industry and the formation of the concept of digitalization in industry is the e-commerce cluster. In 2017, the volume of sales of global online stores amounted to 2.5 trillion US dollars, (more than 3% of the global economy). Within the EAEU, the e-commerce market is \$20 billion (1% of the Union's economy). Certain segments of the industry (electronics and household appliances, light industry, auto parts, food products, household chemicals and other goods, mainly oriented to the end consumer) are already being significantly affected by e-commerce.

Literature review

World experience shows that the study of the digital economy has a significant level of development of business processes. The results of the analysis of the concepts used in international statistics when defining the digital economy as an object of measurement. The approaches used in international practice to the structuring of the digital segment of the national economy (2018)[9] are given. According to the UNCTAD Digital Economy Report released in 2019, seven digital companies (Microsoft, Apple, Amazon, Google, Facebook, Alibaba and Tencent) account for 2/3 of the total global market capitalization. Almost 40% of the added value created in the global sector of information and communication technologies falls on the USA and China [10]. The existing technological possibilities of interpersonal and business communication, the increasing requirements for the level of service and the speed of providing the required services dictate the need for fundamental changes in approaches to building a business. Therefore, more and more companies are coming to understand the need to introduce digital technologies and transform existing business models [10]. All countries are analyzing integration processes with other sectors for the development of this sector [11]. Today there is a potential in Uzbekistan for the development of "Industry 4.0". Moreover, the need for mass replacement of obsolete equipment at most industrial enterprises in the country makes it possible, in principle, to start re-industrialization immediately from a high point, taking into account global trends in the development of "Industry 4.0". [1] If the initial stage of digital transformation - "Primary digitalization" - was associated with the widespread creation of an infrastructure for accessing the Internet with sufficient bandwidth, now in large cities of emerging markets, issues of the quality of use of this infrastructure are coming to the fore.

Model and research hypotheses

In addition to digitalization, the catalyst for the development of small and medium enterprises was the reduction of transaction costs, simplification of access to international logistics, and the reduction of transnational trade barriers. A new stage of development was the emergence of "small transnational companies", actively engaged in international trade with their own staff of up to 250 people.

Small business companies such as software, organic food, cosmetics and others are now operating in the global marketplace. Tools such as Ebay or AliExpress solve a whole range of problems for them with finding customers, delivery, payments, etc. A new generation of digital technologies, primarily blockchain and smart contracts, in the future will further simplify the work of small and medium-sized businesses on international markets.

In Russia, the use of such tools, relying on the export orientation of newly created companies, can become one of the main sources of qualitative growth of SMEs, increasing their share in the national economy. The digitalization of the economy opens up opportunities for using new business models and business structuring

tools. The key competitive advantage is direct contact with customers, the most complete understanding of preferences, decision factors, consumer behavior [2].

Industrialization 4.0 technologies open up to small businesses wide opportunities for the production of complex and high-tech products that were previously available only to large corporations. Combined with the D2C approach and mechanisms, this greatly expands the potential markets for SMEs.

World experience shows that start-ups based on modern business models and production technologies can be very successful, and are also highly attractive as an investment object.

Research methodology

The study examined and analyzed the impact of digital technologies on business entities operating on the basis of information and communication technologies, the work of foreign and domestic scientists in this field.

The article effectively uses such methods as theoretical observation, a systematic approach, observation, generalization, analysis, synthesis, as well as conclusions and recommendations on the problems of global trends in the development of digital technologies for the real sector and ways to solve them.

Analysis and results

Over the past years, software exports have been rapidly increasing in Uzbekistan: the average annual growth rate of this indicator in 2010–2015 was . was 15%. This was facilitated, first of all, by the rapid development of the global software market. According to IDC, this sector will grow by an average of 7% per year until 2020, which is twice the forecast for other global IT markets (hardware - 1.6%, IT infrastructure - 5.7%, IT - services - 3.1%, telecommunication services - 1.5%) [3]. The main part of Uzbekistan's exports of software development services (SW) falls not on licensed software, but on individual solutions, mainly for large foreign companies that receive the lion's share of profits from the sale of final products and services. Unfortunately, this is a rather narrow niche in the digital market, which limits the ability of Russian developers to scale up IT exports. According to a survey of Uzbek software companies, software exports are still poorly differentiated geographically: more than 70% of its volume falls on the United States, Canada and Western European countries. As a result, despite relatively high growth rates, Russian software exports account for only 5–7% of India, the leader in this respect. In Uzbekistan, Russian software is mainly used, despite the fact that Russia is inferior to other fast-growing software exporters, such as Israel and Poland, both in terms of export volume and in terms of its growth rate. There are also negative trends, expressed in the fact that large IT companies are moving their head offices to other jurisdictions because of the desire to be closer to sales markets and partners, as well as to gain access to funding and personnel with skills that are scarce in the Uzbek market and experience.

The transfer of digital skills for small and medium-sized businesses based on the experience of implementing pilot projects is one of the key and most successful activities in the framework of European targeted programs. Such pilot projects are implemented taking into account industry specifics, allow identifying the most effective approaches to the implementation of digital technologies in small and medium-sized businesses, and receive prompt feedback from both companies and their customers.

In the automotive industry, the implementation of pilot projects has focused on:

- inclusion of small and medium-sized businesses in supply chains from manufacturers. The main focus was to build an appropriate communication platform;

- providing small and medium-sized businesses operating in the spare parts market with authorized supplies from large manufacturers.

More than 170 Spanish small and medium-sized companies became participants in the pilot project. As the most significant results, the following were noted: acceleration and greater transparency of business processes, reduction of errors, elimination of manual data entry, improvement in the quality of customer service due to greater speed and accuracy of order processing, and reduction in communication costs.

An important trend in the modern digital economy is the development of technologies that allow small companies to produce technically complex products that were previously available only to well-equipped large enterprises. In particular, 3D printing, computer design and modeling can become a driver for the development of SMEs in Uzbekistan. As world practice shows, an important element of the SME support infrastructure is technology parks that provide their residents with access to modern production equipment (multi-axis machining centers, etc.) [4].

The concept of digital production is of great interest to Russian industrial companies, but real implementation examples are still rare, and existing ones are mostly local in nature, due to the lack of systematization of implemented solutions and insufficient understanding of the practical implementation of integrated approaches in digital production. In general, automation of production sites and business processes in Russian companies has no common links, which means that it is impossible to organize information communications at all levels of the production process, from design and preparation from production to product logistics and distribution management. This gap between industrial automation and IT automation limits the creation of a continuous information environment that covers all levels of the company's production and logistics processes necessary for organizing digital production. Bridging this gap is a priority for the digitalization of the Uzbek industry.

Uzbek and Russian companies are actively integrating into international alliances that set technological standards for the coming years. This makes it possible to synchronize digital solutions that stimulate the emergence of associations interested in qualitatively different technological solutions. The systematic digitalization of all aspects of the economy is an important step towards the conscious growth and development of the country. It is important that the need for this stage be equally recognized by the company and the state, cooperate and synchronize achievements.

Today, e-commerce is one of the key retail growth drivers. Thus, in China over the past year, growth was 52%, in South Korea - 41%. E-commerce is also actively growing in developed countries: Great Britain +8%, France +7%, USA and Japan +5%. A feature of the global retail market is its high concentration: the TOP-10 companies account for 30% of the total turnover (according to the TOP-250), while 7 out of 10 companies come from the USA.

Conclusion and suggestions

The introduction of modern technologies can significantly improve the performance of enterprises in a number of areas. Industries 4.0 can help streamline and automate key manufacturing and management business processes, improve equipment utilization by processing real-time datasets and uncover hidden dependencies, and improve raw material planning and scheduling of finished products. In the field of equipment maintenance, modern technologies make it possible to build a preventive maintenance system based on predictive models using real-time data that helps to assess the real need for equipment maintenance

and repair and optimize these processes. Digitalization opens up interesting prospects for companies to increase efficiency in the field of inventory management and logistics processes of the enterprise.

In world practice, such structures are already operating. So, for example, in Germany it is a network of 15 "competence centers" (Kompetenzzentren) and 4 regional offices. The roadmap for implementing digital change includes 5 main stages[6]:

1. Informing. What is Industry 4.0? What does this mean for my company? At this stage, employees of digital competence centers hold meetings and presentations, organize the work of experts, conferences and seminars, analyze the possibilities of introducing innovations, etc. The purpose of the stage is to motivate the management and employees of the company to implement digital changes.
2. Demonstration. How does it work in practice? Visits are organized to enterprises that have successful experience in implementing new generation digital technologies, acquaintance with the best industry practices, technology developers, and companies. The purpose of the stage is to provide an opportunity to evaluate the practical effect of the introduction of digital changes;
3. Analysis and learning. What skills do companies and staff need to digitalize their business? Trainings, seminars, master classes, consultations, brainstorming sessions, internships and other forms of education are conducted. The purpose of the stage is to develop an understanding of the digitalization strategy of their business among key employees of the company, as well as the most important skills and competencies;
4. Develop a plan for digital change. How ready is the company for digitalization? What specific steps should be taken? Development of a business digitalization strategy and a plan for implementing this strategy. The purpose of the stage is a clear understanding at all levels of the company of its goals and objectives, key indicators for implementing the business digitalization strategy;
5. Implementation. At this stage, the developed digitalization plan is implemented, the results are evaluated and the necessary adjustments are made.

Effective management of the changes necessary for the digitalization of business, the introduction of a set of technologies of the "fourth industrial revolution" is one of the main tasks of the emerging integrated system for the development of small and medium-sized businesses in Uzbekistan.

Thus, with the growing involvement of small and medium-sized businesses in the digital economy, the issue of ensuring information security, protecting data from unauthorized use, virus attacks, and various options for cyber fraud comes to the fore. A high level of skills in the field of business information security, knowledge of the most relevant risks and threats is one of the key components of technology leadership. Comprehensive state support in this area can have a significant multiplier effect, increasing the attractiveness of small and medium-sized businesses in Uzbekistan.

Although the current macroeconomic situation imposes certain limitations, there are prospects for the development of the venture capital financing market in Uzbekistan, which is based on a significant amount of untapped potential, it is important to accelerate the pace of digitalization and achieve the ambitious, but quite realistic goal of tripling the size of the digital economy by 2025.

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