Enterprise competitiveness in the digital economy

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Abstract. Digital economy is the direction of innovation, competitiveness and economic development of corporate structures. The rapid development of digital technology covers all areas of socio-economic activity. On the basis of digital technologies, new digital business models are being created, existing operational models are being transformed, and fundamentally new types of business are being formed. Digital capital becomes a factor in business competitiveness. The main factor of economic development is associated with the digital economy. Digital economy contributes to the formation of new business models.

According to the World Economic Forum, in 2015 the share of the digital economy in the global economy exceeded 20% and is growing rapidly. The digital economy acts as the accelerator of the socio-economic life of society in the modern world, as capable of rapidly increasing the GDP of the country. Successful experience proves the effect of integrated digital economy development at 20% of GDP over five years, while the ROI of digital conversion investment reaches 500%.

Real gross domestic product of Ukraine (GDP) in 2018 grew by 3.3%, after increasing it in 2017 by 2.5 % and in 2016 by 2.4%. Further acceleration of economic and social development is associated with digital transformations [1].

The development of the digital economy is a priority for Ukraine. Ukraine has adopted a digitalization program. Digital transformation of existing and creation of new conditions for the formation of new industries is central to solving the problem of ensuring sustainable development of the economy, increasing its growth rates with potential growth in labor productivity.

The share of the digital economy is increasing, giving significant business benefits. Large-scale digitalization of all sectors of the economy provides for maximizing investment in the development of digital infrastructure, innovation and modern technology.

Modern economy is innovative, it is economy of knowledge, competence and network interaction. The main factor of economic development is associated with the digital economy. The emergence of new technologies is indicative of a new stage in the development of an innovative economy. Digital technologies are the most acknowledged among the innovative directions of transformation.

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They are a powerful tool for transforming the activities of companies and entire industries, encouraging market players to fundamentally rebuild their usual business processes.

According to Global Human Capital Trends 2017, 90% of surveyed executives from all over the world (from 10,000 people in 140 countries) believe that their company is confronted with destructive changes driven by digital technologies, 70% say their organization has no adaptation skills. Scale and pace of digital transformation are key indicators of a country's development.

Information and communication technologies are used to ensure optimal interaction between business partners and create an integrated value chain.

Digital business develops new business models combining the physical and digital realms. Digital business transformation involves optimizing business processes through information and communication technologies, as well as developing new ideas and business models.

Digital maturity goes beyond technology - a matter of synchronizing talent, culture and organizational structure with the digital environment.

The development of digital technologies is based on information transformations and processes of globalization. Digital transformation, digital culture are important in the modern activities of entrepreneurial structures.

Digital transformation realizes the company's transition to digital business through changing the organization's culture, introducing new information technologies, expanding the boundaries of the organization, and also allows it to create its own ecosystem. The EU has introduced an updated Digital Competence framework (DigComp 2.0), consisting of 21 competencies. According to estimates, companies that are able to restructure their business models for growth in the context of the disappearance of borders between industries will win.

The identified processes involve the introduction of fundamentally new business models and technologies, including digital platforms, digital ecosystems, in-depth analytics of larger data sets.

The basis for a more effective policy of growth and welfare in the digital era, the idea of the state of digital transformation provides a measure of digital transformation. Thus, the digital conversion can be made visible.

In the digital economy, the efforts of independent businesses are consolidating, and the business models of each partner are transformed.

International cooperation in the business of micromultinational companies by organizing an optimal supply chain from independent producers and managing it on the basis of operatively obtained information provided a significant scale of activity for small and mobile companies, which can be implemented by various enterprises of various industries in modern conditions in the form of outsourcing model. Modern business representatives in this field are already working in the B2C-services market, and new businesses of this type are now actively emerging in the B2B segment.

In digital models, the client is actively involved. The product model transforms to the service model; information is used as a commercial entity. In terms of new business models, the service model is undoubtedly central to the digital economy. Such a model as Product as a Service is widely used in the transport industry, heavy industry, is used by the most advanced manufacturers of railway rolling stock and commercial vehicles. In accordance with it, the world's leading companies do not sell, but actually rent out their products to the operating companies for an indefinite term.

The competition of manufacturers occurs at the level of aspirations to provide the user with the final result.

In the situation of using the Product as a Service model, in an effort to sell the result, of course, various forms of interaction with the customer become much stronger. The key is the knowledge of how the customer uses the service or product. Companies are moving from a product development policy to a policy of improving its operation, which leads to a transformation of the business model.

The Product as A Service scheme leads to maximizing product utilization.

There is a change in the business ecosystem and the corresponding changes in business models of enterprises. In a digital economy, the business model extends to multiple partners from other industries.

Technology and innovation can activate the economy and even change some of its sectors. Innovative early stage companies (startups) are temporary organizations whose main goal is to find a replicable business model that can be scaled. The accelerator business model involves investments in leading projects and industry teams that show results in technology and business. Business accelerators are recognized as one of the most effective ways to select and grow innovative projects in the early stages, acceleration programs can significantly accelerate the growth of start-ups and help in finding a scalable business model.

The platform economy is also one of the most important areas of digital technology development, the scope of application of platform business models is beyond information technology. Business models are becoming more flexible and adaptive, stimulating the search for new sources of competitive advantages. In the era of digital business transformation, “platform” business models have become widespread in a number of ways due to the use of the latest scientific achievements. The main goal of the platforms is the spread of technology, leading to cost reduction. The conditions of their development determine the high share of technology in the cost of goods, a high level of competition, the network effect of the bilateral market, a high degree of infrastructure development. The ability to quickly launch new products on the market, high adaptability to customer needs meets modern requirements for the high cost of a time resource. Increasing the possibility of creating value through the involvement of various players in networks with a high degree of development is complemented by the formation of mutually beneficial advantages for users who create added value for each other. The development of networks is provided by the possibility of interaction in the following areas: work, movement, separation, cooperation.

The platform solution ensures the rapid growth of companies (e.g., startups grown in the company), mastering ways to create added value from outside, scaling business models and making profit in the long tail of the distribution schedule, facilitating the process of creating a unique value proposition by combining approaches from different areas. The advantage updated business models is the speed of change, decision making, the interaction of a huge number of participants. The creation of innovative platforms that provide a technological environment for independent developers should provide the opportunity to use specific solutions without the need for independent development or acquisition of patents. An innovative process was the active development of multilateral platforms, organizations with infrastructure that allows combining and coordinating actions of participants, where the process of creating value is directly dependent on the result of the interaction.

Platform firms exhibit high values of competitive advantages. Ecosystem business models, providing the use of external resources (ideas, information, customers, labor, etc.) with minimal costs, provide a new dimension of business openness, and in addition, a new dimension of competition and corporate strategy. Business leaders seek to incorporate digital platforms into their traditional business models. On the basis of computing resources, modern cloud technologies, effective digital platforms can be created. Digital

platforms for outsourcing are a new way to assess the effectiveness and analyze the stages of business processes.

Digital transformations is among the key strategic priorities of many enterprises. Now many companies are set to drastic changes related to the development of digital technologies, aimed at transforming the businesses in order to adapt to new digital realities. Digital transformation are seen as an opportunity to increase enterprise productivity, reduce the time it takes for a product to enter the market based on the introduction of new business models based on the latest technologies. Improving business results acts as an incentive for digital transformation. For these purposes, new business models are also being developed and new technologies are being introduced. The success of the transformation process is associated with the ability to innovate, increase the income of the enterprise and reduce costs, the ability to form a system of interconnection of employees, business processes and technologies. According to research Boston Consulting Group (BCG), digital transformation can reduce costs by 30% and increase revenue by 20%.

Investment transformation and development using different formats for the consideration of proposals and different rationales should facilitate the introduction of fundamental changes. Business transformation is built on a culture of innovation. Transformation processes affect almost all aspects of activity, are implemented in flexible structures, based on trial and error, and should contribute to customer-oriented behavior. Making change everywhere involves strategic partnership and coherence. Modern companies producing high-tech products, along with the use of customer relationship management systems, are actively implementing stakeholder relationship management systems (SRM).

Digital transformation is mostly incompatible with existing processes and structures. Many businesses are already striving to enter the digital world, but not all have a digital transformation strategy.

Digital economy contributes to the formation of new business models. Digital economy determines the development of innovation processes, investment, knowledge sharing and the implementation of innovative ideas. Digital innovation creates competitive advantage. Most large, medium and small enterprises are lagging behind in digital innovations and associate the existing difficulties with their implementation with the rapid changes in digital technologies.

Stimulating private investment in digital innovation in all industrial sectors is the main task at various levels. The development of digital innovation centers will provide access to the latest technology to accelerate innovation. Cooperation with the participation of stakeholders throughout the value chain, the pooling of resources can ensure the development of digital technologies and platforms of lagging sectors, high performance cloud infrastructure for science and innovation. High digital readiness is determined by the formation of digital competencies, access to centers of competence and digital clusters are important for industrial modernization. Business access to the latest digital technologies, synergies between digital and other key technologies provides a network of digital innovation centers [2].

Digitalization changes the way business is organized and run, providing business with resources, production and transaction costs, the manifestation of a network effect and a scale effect.

According to a survey ESG and Dell EMC "IT Transformation Maturity", 71% of enterprises admitted that they lose competitiveness without digital transformation, 95% agreed that they lose out in businesses to competitors who have passed the IT transformation stage. Successfully transformed companies are 7 times more likely to call information technology a competitive advantage and source of benefits.

Depending on the stage of the IT transformation cycle, enterprises are subdivided into using outdated information technologies, developing, progressing and transformed, i.e. those that conduct timely digital transformation and such enterprises are only 5%. Transformed organizations have noted their progress in introducing innovations, bringing products to the market, in automating “manual” processes and tasks, managing IT as a center for increasing profits, not costs.

Business leaders have noted a serious lag in the pace of transformation around the world. Digital transformation is a meaningful, strategically controlled process of change in business, a set of transformations through the introduction of an innovative culture in a company, the adaptation of business models, widespread use of data, customer centricity and value management. The main areas of digital transformation are: customer –centricity, partnership and collaboration, use of data, search and implementation of innovations, value proposition, HR-strategy and digital culture.

The vision and the specific long-term plan for achieving the goals are determined by the strategy. Digital strategy is in the system of business strategy, marketing and communication strategy.

Stages of strategy development include setting digital goals, analyzing, defining the target audience and its values, formulating insights, studying the key consumer needs, building a communication model defining relationships and consistency, determining the KPI setting indicators that measure goals, and as a result the whole creative process.

In the digital economy, there is a change in competition. Intensified competition generates tendencies of in-depth relation with the buyer, a sensitive reaction to the change in his preferences. Competition from costs cutting moves into creativity. Competitors can become partners by integrating on the basis of digital platforms and sharing [3].

The emergence of competitive advantages in a beginner becomes possible due to a start-up or access to global digital platforms for research, development, distribution sales. Such companies overtake the leaders in speed, cost and quality of services. Competitive superiority is provided by digital technologies due to the ability to cross the boundaries of regions, the possibilities at the interdisciplinary level to use client bases, infrastructures and technologies. Enterprise size can also be a competitive advantage. Changes are also influenced by market demand. Digital technologies create transparency by defining new models of consumer behavior based on access to mobile networks and data.

The spread of complex innovations based on a combination of different technologies in new ways determines new forms and methods of business that form the opportunities for creating value in new market segments or developing new centers for creating value in former industries. Competition makes enterprises be constantly innovative, constantly restructured and changed. Integration of opportunities helps create new value. Collaborative innovation is a form of business collaboration in the digital economy. Digital technologies radically change operating models, making them mobile. The new operating model involving sharing is the platform. Digital platform brings together producers and consumers.

References

1. *World Bank. World Development Indicators: 2018 Edition: [sayt]. URL: <http://wdi.worldbank.org>* (2018)
2. *Word Economic Report. System Initiatives. Digital Transformation of Industries. February. URL: <https://www.weforum.org/reports/ditital-transformation-of-industries>* (2016)

3. *The Global Competitiveness Report, 2018* : <https://www.weforum.org/reports/the-global-competitiveness-report-2018> (2018)