

## FORMATION OF THE COMPANY'S DIGITAL COMPETITIVE ADVANTAGES

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*Digital transformation is reshaping the way business companies compete in the market. It requires companies to actively utilize digital technologies to form competitive advantages. The article covers the main theoretical and practical aspects of the formation of competitive advantages of digital companies in the face of uncertainty and risk. The article explores how companies can utilize digital technologies to create competitive advantages. In the course of the study, the sources of digital competitive advantages of the company in the digital economy system were identified. The sequence of formation of new competitive advantages, consisting of four stages, has been determined. The necessity of creating integrated system for the formation and support of the company's competitive advantages, including a set of constantly implemented innovative, investment, marketing, organizational and managerial, personnel and social events, is underlined. The focus is on information technologies and systems, their development, and the impact on the performance of enterprises. The process of forming digital competitive advantages of enterprise is systematized depending on different approaches to the interpretation of competitiveness. The technology of searching for competitive advantages in the context of digitalization is generalized. It is noted that in all aspects of the Company's activities, changes should be made to increase the number of competitive advantages. The key competitive advantages that companies gain as a result of digital transformation are identified. Therefore, based on the above, today any company, regardless of its size and industry, that wants to remain competitive, must integrate a digital strategy into its corporate strategy.*

**Key words:** digitalization, competitive advantage, competitiveness, e-business, digital competitive advantage.

**JEL Classification:** M210

**Formulation of the problem.** Digital transformation is changing business models, production and distribution methods, and the way companies compete. Digitization has reduced the costs of expanding production, advertising, and distribution to new entrants. The availability of cloud computing services gives companies the flexibility to access massive computing power without investing in physical infrastructure. More broadly, major digital products can be reproduced at minimal additional cost. This allows innovative start-ups to grow rapidly and gain market share by reducing the required number of employees and tangible assets.

Thus, digital transformation stimulates competition and contributes to obtaining significant benefits for consumers. In addition, business models based on online platforms (Airbnb, Uber, Amazon, eBay, etc.) have also increased competition in some traditional markets, such as rental

housing, transportation services or retail sales, where online and offline businesses models compete.

In the face of fierce competition and a rapidly changing market situation, companies must pay significant attention to the formation and retention of competitive advantages, strategic and unique, and also have a high level of sustainability.

### Analysis of recent research and publications.

The formation of competitive advantages is the methodological basis for ensuring the competitiveness of the enterprise. The very same category of "competitive advantage" is one of the main ones in the theory of competitive relations. To date, there are fundamentally different approaches to the interpretation of its content. M. Porter identified a set of factors that determine the success or lack thereof in the activities of enterprises during competition and recognized competitive advantages

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as a positive difference in the productivity of resource use [1]. A. Vovchak, R. Kamyshnikov provided characteristics and properties that provide the enterprise with superiority over direct competitors [2]. Porfirenko V. and Hrebelnyk M. considered the economic essence of competitive advantages, which manifests itself through specific characteristics, with the help of which an enterprise can maintain a more stable position in the market than competitors, and effectively manage the processes of formation and development of qualitative and quantitative indicators of an enterprise's activity [3]. O. Mykytyuk defined the direction of realization of competitive advantages as cooperative relations of economic entities [4]. But there is still no single approach to the formation of competitive advantages of a company based on digitalization.

**The purpose of the study** is to characterize the process of formation of digital competitive advantages of a company under conditions of uncertainty and risk.

**Presentation of the main research material.** Today, enterprises define the property of competitive advantages as their most important activity since their success in the market depends on them.

When forming and implementing competitive advantages, it is necessary to take into account their properties, among which are the following:

- comparative and relative character;
- dependence on specific conditions and reasons (geographical, temporal, etc.);

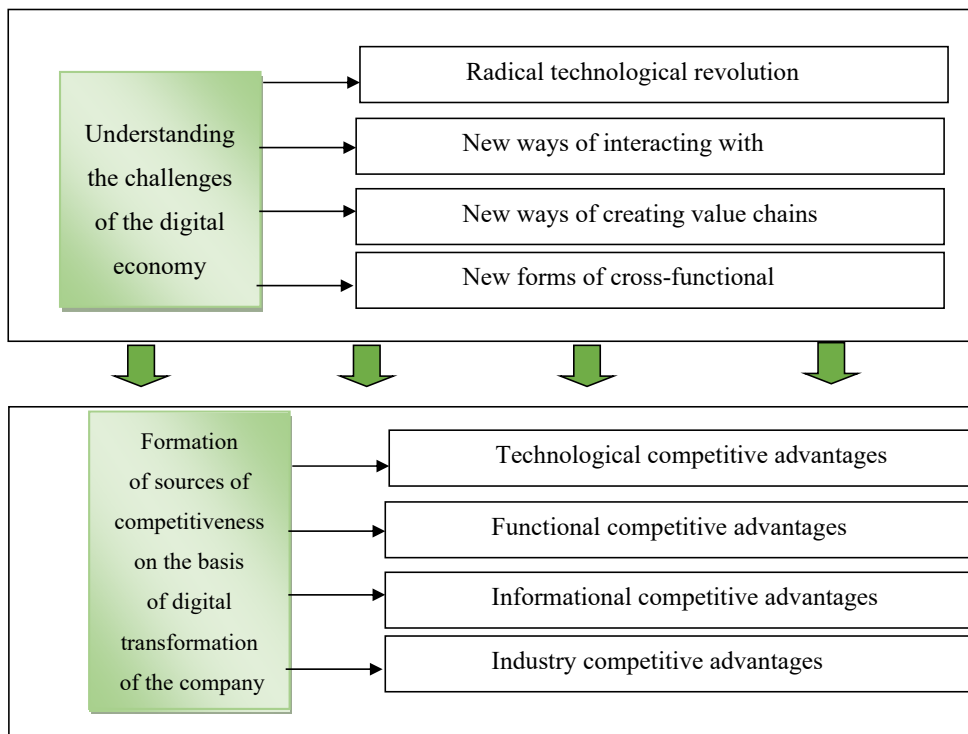
- dynamism [5].

The components of the competitive advantages of manufacturing organizations are influenced by the industry to which they belong. If organization is a high-tech one, then its competitive advantage will be based on technological innovation. If the organization is characterized by a mass type of production, then its competitive advantages will be low costs, territorial location, brand popularity, etc.

Therefore, in order to maintain its market position, the company must maintain the previously created competitive advantages. At the same time, the competitive advantages of the company should act as strategic success factors and meet the following requirements [5]:

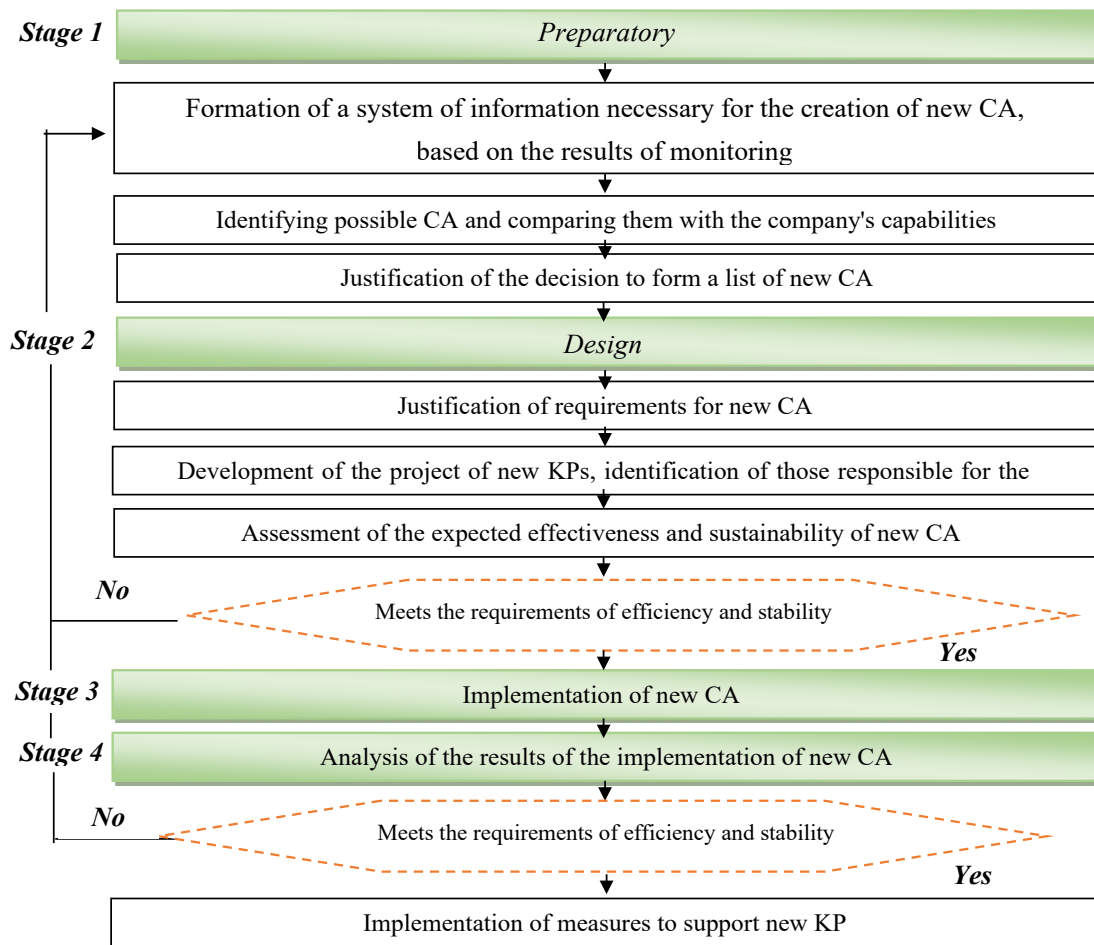
- be significant in terms of competition in a particular industry;
- take into account the specific needs of the client;
- ensure the uniqueness of its brand over a long period compared to competing brands;
- take into account the specific capabilities and resources of the company, which are difficult or impossible to imitate, etc.

The process of formation and development of the company's competitive advantages in conditions of uncertainty should be focused on all its activities. As a result of this, changes will be made in all aspects of the enterprise's activities, contributing to an increase in the number of sources of digital competitive advantages (Fig. 1).



**Figure 1 – Sources of the company's digital competitive advantages in the system of the digital economy**

Source: generated by the authors based on [6]



**Figure 2 – Sequence of Stages of formation of new Competitive advantages (CP)**

Source: generated by the authors on the basis of [5; 7]

In order to form competitive advantages and strengthen the market position of each company, it is necessary to make the right choice of priorities and develop a competitive strategy. Such a strategy is developed in accordance with the stages: preparatory, design, implementation, and analysis of the results of new competitive advantages (Fig. 2). When developing a strategy for the formation of new competitive advantages, it is necessary to monitor the level of compliance with the effectiveness and sustainability of the developed competitive advantages.

In the case when new competitive advantages do not achieve their goals, one should return to the first preparatory stage of developing a strategy for the formation of new competitive advantages.

Any competitive strategy aims to provide the company with such a market position that it will be best protected from the influence of competitive forces or itself will be able to influence them [8]. A competitive strategy should be as responsive as possible to market conditions, make the best use of the company's strengths, provide long-term competitive advantage, and include both offensive and defensive actions. Which competitive strategy a company chooses depends largely on what competitive advantages

it wants to secure for itself and for how long it wants to keep them.

Based on this, the key conditions for the formation of the company's competitive advantages are systematized (Fig. 3).

In modern economic conditions, there is a need to create an integrated system for the formation and support of the company's competitive advantages, including a set of constantly implemented innovative, investment, marketing, organizational and managerial, personnel and social events. Such a system should have clearly defined goals, take into account changes in market conditions, be adaptive and provide opportunities for quick and flexible adoption of effective management decisions (Table 1).

Companies with high digital maturity stand a better chance than their peers and have experienced significant sales growth over the past three years. In the current pandemic, the most enterprising organizations have a significant competitive advantage, which means they will benefit from this.

The introduction of digital technologies was initially seen as a way to increase the efficiency of existing business models and business processes by, for example,

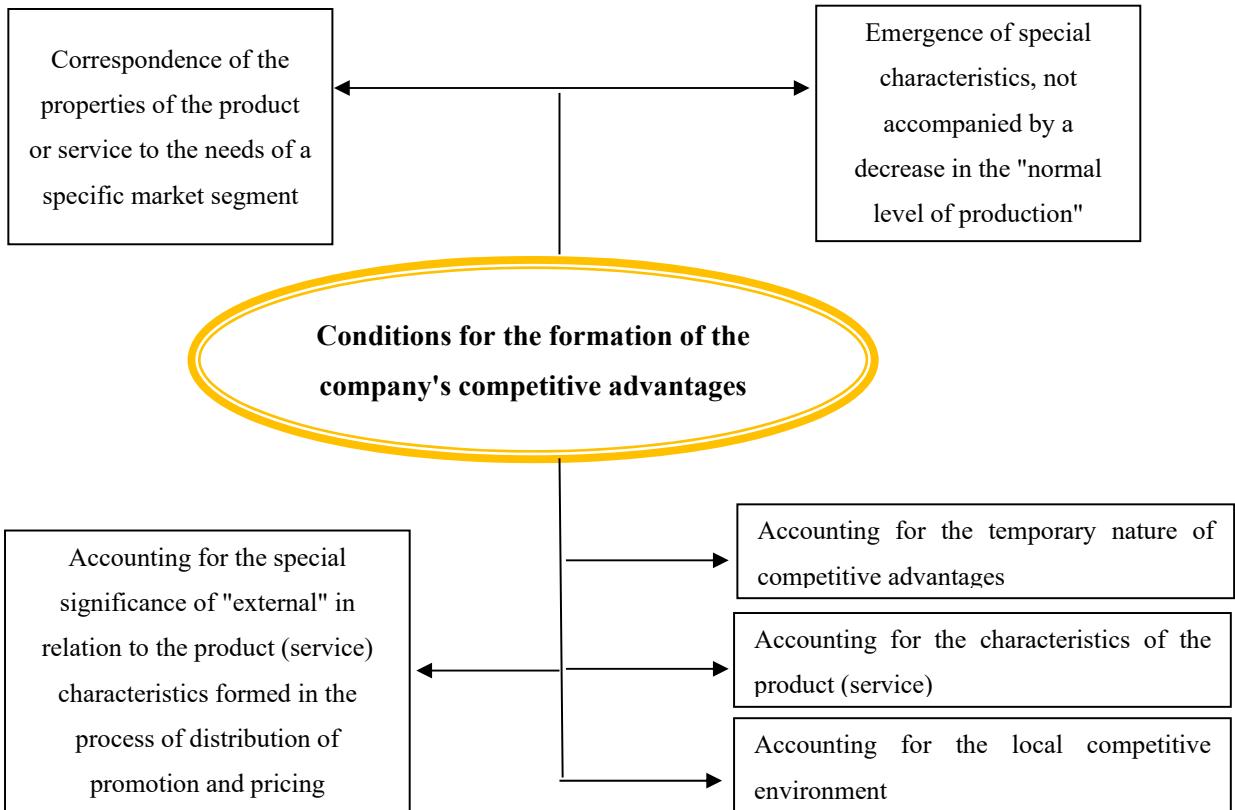


Figure 3 – Conditions for the formation of competitive advantages

Source: generated by the authors based on [9]

Table 1 – Formation of digital competitive advantages of an enterprise depending on different approaches to the interpretation of competitiveness

Approach	Elements of the value chain			
	Development	Production	Marketing	Service
Resource		Application of digital technologies in provision and calculation of resource efficiency assessment; productivity and profitability		
Innovative	Application of digital technologies in the development and implementation of innovations; the fate of patents and know-how			
Market			Application of digital technologies in the study of consumers, activation of sales, study of the effectiveness of communications	
Investment	Application of digital technologies as a tool of investment attractiveness; in calculations of payback, profitability of investments			
Analytical	Development of large complex information systems, low costs of modernization	Constant quality control, remote service	New consumer "interfaces", new methods of segmentation and individualization of consumer needs	Remote maintenance, preventive maintenance, new services

Source: generated by the authors on the basis of: [6; 9; 10]

reducing costs, improving product quality, improving convenience and reducing delivery times. Today, digital technologies have evolved to a point where the implications for competition and competitive outcomes are much more fundamental. Increasing digitalization can fundamentally change market structures, for example by changing the height of entry and mobility barriers, changing key competitive parameters in the market, and paving the way for the creation of new competitors and new substitutes.

In addition, digitalization allows the creation of more complex (digital) ecosystems. In such ecosystems, value is created by combining several heterogeneous and complementary digital technologies owned by different firms (and other types of participants). The resources and capabilities associated with these digital technologies are determinants of the role that firms play in such an ecosystem, ranging from a host firm to an easily replaceable complement. The position of companies and the role they play in changing market structures and ecosystems is largely determined by how increased digitalization affects the competitiveness of resources and capabilities. Increasing digitalization makes some resources and capabilities less important, while increasing the competitiveness of others [6; 11].

Although it is clear that the accelerated pace of digitalization is affecting competitive dynamics and competitive outcomes. One view is that increased digitalization means that hyper-competition will become the new normal and competitive advantage will be much harder to maintain over time. Increasing access to

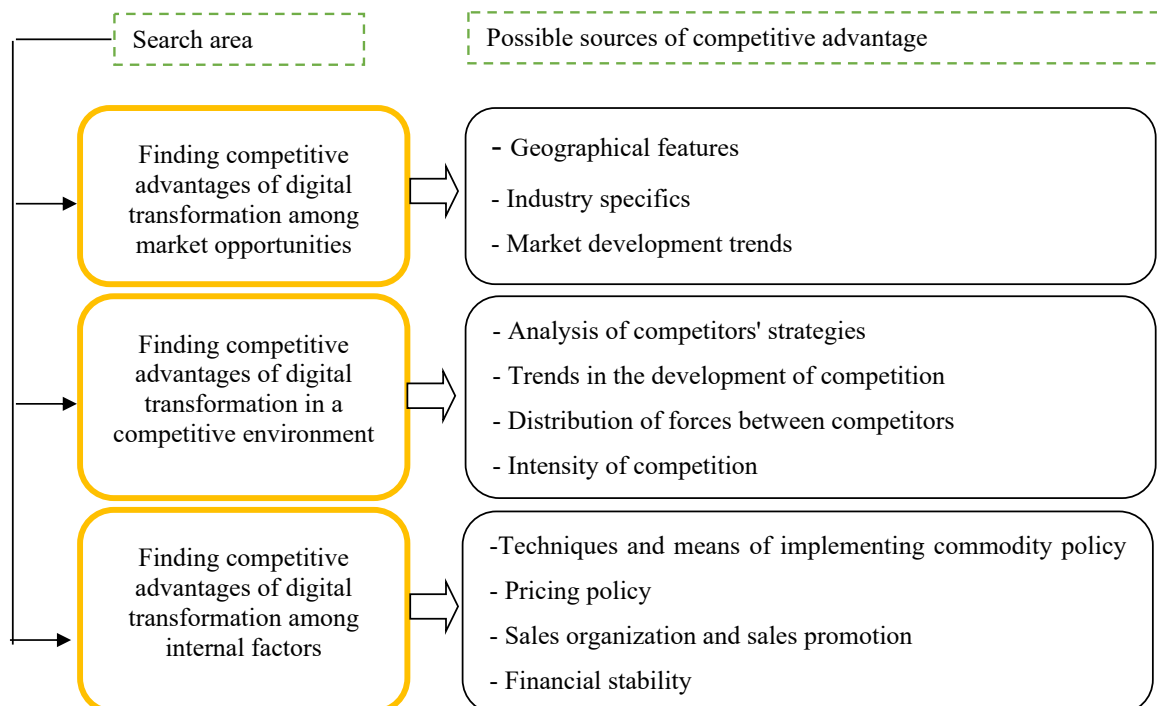
cheaper, standardized, and modular digital technologies (often offered as a service) will reduce barriers to entry in a number of markets, leading to increased price competition and the creation of new substitute markets for existing products and services. These technological changes can also cause a firm's previously valuable resources and capabilities to depreciate (or become wasted) as more shared, cheaper, and equally accessible resources take their place at the heart of leading business models.

A completely different point of view is that competitive advantage becomes more sustainable as digitalization intensifies [11]. The gist of it is that increased digitalization is creating a winner-take-all dynamic where tech giants use both supply-side and demand-side advantages of scale to create unreachable positions in their markets and beyond.

Consider the technology of searching for competitive advantages in the context of digitalization (Fig. 4).

Let's explore in more detail the areas of business where companies can develop their digital competitive advantages. E-business is expanding into new markets and sectors, and e-commerce is experiencing consistent record growth. This effect has intensified during the COVID-19 pandemic. Online shopping is safer and more economical. There is no need to rent a shop space, hire sales staff or have a stocked warehouse.

Therefore, more and more companies, including those that previously worked only offline, are choosing this model of work. To start working in the e-commerce sector, an appropriate ICT (information and communication



**Figure 4 – Generalized technology for finding competitive advantages in the conditions of digitalization**

Source: generated by the authors based on [6]

technology) infrastructure is sufficient – telecommunications and an online store in the cloud [6].

The example of the successful implementation of digitalization in its business processes is the Fozzy Group, which launched the Silpo and Fora mobile applications. This made it easier for customers to participate in loyalty programs, manage offers, easily place an online order, and even pay using the application. Interaction with the consumer has become fast and convenient. 2020, with the beginning of a long lockdown, Fozzy Group was able to launch an online store and its own delivery in five weeks in the cities where Silpo operates, which demonstrates their digital competitive advantage among other large retail chains [12].

Robotization of business processes is one of the examples of automation and involves the introduction of software robots into the process. Their task is to perform repetitive operations with little or no human intervention. Therefore, robotization is the replacement of human work with work, and the robot is software that does not require changes to the systems already used in the company. The robot itself has no intelligence but mimics the work of an office worker by downloading data, processing it, or entering it into the system. To do this, the robot uses different programs and uses already existing programs such as: MS Excel, ERP systems or databases and console programs. More and more devices used in businesses as well as households can be connected to the Internet. This gives great opportunities in terms of monitoring their work, avoiding failures, and also allows you to identify business processes carried out using these devices. At the same time, they collect huge amounts of data that can be used in IT systems from Data Mining [13].

Companies receive large amounts of data as part of their own business activities. This data is stored in IT systems such as ERP – Enterprise Resource Planning, CRM – Customer Relationship Management, MRP – Material Requirements Planning or Data Warehouses. However, they are often not fully used in decision-making processes in organizations [6]. Sometimes it happens that each organizational unit of the company has its own reports and results, which differ significantly from the data presented in the financial and accounting systems. Therefore, managing the available data and information and standardizing it appropriately is a big challenge. Only then the company is managed on the basis of reliable data, allowing to make fast and accurate business decisions, which gives the company a competitive advantage.

**Conclusions.** As a result of the study, the process of forming a company's digital competitive advantages under conditions of uncertainty and risk was characterized. It should be noted that digital transformation is a way of functioning and a direction of development since it affects the strategy and organizational culture of companies. The process of forming the company's competitive advantages is quite complex and time-consuming, it requires taking into account all sources of competitive advantages and factors influencing their formation. At the same time, in all aspects of the company's activities, changes should be made to increase the number of competitive advantages. The process of formation and development of the company's competitive advantages should apply to all its activities. As a result, changes will be made in all aspects of the enterprise's activities that will increase the number of sources of digital competitive advantages.

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## ФОРМУВАННЯ ЦИФРОВИХ КОНКУРЕНТНИХ ПЕРЕВАГ КОМПАНІЇ

Дмитро Олександрович Барабась<sup>1</sup>, Олександра Олександрівна Панасюк<sup>2</sup>,  
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*Цифрова трансформація супроводжується збільшенням конкуренції і конкурентних результатів. Посилення цифровізації призводить до гіперконкуренції і зменшення стійкості конкурентної переваги. У статті розглянуто основні теоретичні та практичні аспекти формування цифрових конкурентних переваг компаній в умовах невизначеності та ризику. У центрі уваги даної статті сфери бізнесу, де компанії можуть розвивати свої цифрові конкурентні переваги. У ході дослідження було виокремлено джерела цифрових конкурентних переваг компанії в системі цифрової економіки. Визначено послідовність формування нових конкурентних переваг, яка складається з чотирьох етапів. Зазначено необхідність у створенні комплексної системи формування та підтримки конкурентних переваг компанії, що включає в себе сукупність постійно здійснюваних інноваційних, інвестиційних, маркетингових, організаційно-управлінських, кадрових та соціальних заходів. Зроблено акцент на інформаційних технологіях і системах, їх розвитку та впливі на ефективність діяльності підприємств. Систематизовано процес формування цифрових конкурентних переваг підприємства залежно від різних підходів до трактування конкурентоспроможності. Узагальнено технологію пошуку конкурентних переваг в умовах цифровізації. Зазначено, що в усіх аспектах діяльності компанії повинні здійснюватися зміни, що сприяють збільшенню кількості конкурентних переваг. Роботизація бізнес-процесів є ще одним напрямом цифрової трансформації, який дозволяє автоматизувати повторювані операції за допомогою програмних роботів. Це допомагає збільшити продуктивність та ефективність роботи компанії. Збір та аналіз великих обсягів даних також грають важливу роль у формуванні конкурентних переваг. Оптимальне використання даних дозволяє приймати швидкі та точні бізнес-рішення. Визначено ключові конкурентні переваги, що набувають компанії в результаті цифрової трансформації. Отже, виходячи з вищесказаного, сьогодні будь-яка компанія, незалежно від її розміру і галузі, яка бажає залишатися конкурентоспроможною, повинна інтегрувати цифрову стратегію в свою корпоративну стратегію. Автор аргументує, що цифрова трансформація сприяє змінам в конкурентній ситуації на ринках. Компаніям необхідно активно впроваджувати цифрові технології, щоб забезпечити свою конкурентоспроможність. Використання електронного бізнесу, роботизація бізнес-процесів та аналіз даних стають ключовими факторами успіху.*

**Ключові слова:** цифровізація, конкурентна перевага, конкурентоспроможність, електронний бізнес, цифрова конкурентна перевага.

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