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## **E-BUSINESS TECHNOLOGIES AS A TOOL OF COMPETITION IN MODERN SOCIETY**

**In the article, it has been grounded that the development of the world economy has been inextricably linked with the spread of the Internet and the digitalization of business processes. Using the electronic means of communication is becoming one of the key conditions for the companies' survival in conditions of fierce competition. The article deals with approaches to defining the „e-business”. The concept of e-business structure has been proposed. In the paper, has been justified that innovation is an integral part of e-business and e-commerce, but Ukrainian businesses have little experience in using the innovative capabilities of e-business and, as a result, lose in the competition. The main advantages of e-business and trends in e-commerce have been proposed.**

**Keywords:** e-business; innovation; management; digitalization; competitiveness; e-commerce

Formulation of scientific problem and its significance. In recent decades, the development of the world economy has been inextricably linked with the spread of the Internet and the digitalization of business processes. Thus, the situation in the modern market of goods and services changes very quickly under the influence of macro factors in a very short period of time, and this requires a rapid response and the creation of new approaches to business. In order to maintain supremacy in such conditions, it is necessary to constantly change and adapt management approaches, study and improve existing business processes and methods of doing business.

Using the electronic means of communication is becoming one of the key conditions for the companies' survival in conditions of fierce competition. In the modern economic space, it is not so much the right to own a resource that is perspective, but the availability of information on the possibility of its rapid use in social production. In this way, the company begins to develop in accordance with the new focus, which is

based on advanced methods of using digital technologies. That is why the importance of e-business development is increasing.

Analysis of recent research and publications. Research in the field of e-business in recent years has been conducted by such scientists as Chaffey Dave, Vynogradova O., Drokina N., Hemphill Tanya, Edmundson-Bird David, Shaleva O., etc. Despite the significant number of works devoted to the formation of theoretical and practical aspects of e-business development, dynamic and rapid changes in this area of the economy require detailed research and generalization, the study of mechanisms and features of the influence of various factors on e-business trends in modern development.

**The purpose of the article** is to study the factors influencing the e-business' development, to research its main technologies and tools, as well as to study the benefits of using e-business in competitiveness' increasing.

**Presentation of the main material.** The field of e-business in Ukraine is in the developing stage. Domestic businesses have little experience in using the innovative capabilities of e-business and, as a result, lose in the competition. Therefore, organizations and businesses need developments that could help them use the Internet to improve their efficiency and, as a result, increase their competitiveness.

Today, e-business technology is one of the important tools of modern competition. The impact of e-business is changing all forms of activity of large and small enterprises – from product development to the sale of goods on the market. The main source of market power is intelligence, embodied in the organizational structures of research and market corporations, which create new IT and maintain control over them. E-commerce, which has emerged in the last decade in most developed countries, has today become a powerful factor in the growth of the world economy, as well as the rise of national economies. At the present stage of world economic development, the following key areas of using Internet tools in entrepreneurship should be highlighted (Fig. 1).

There are several approaches to e-business defining. In accordance with one of the approaches, the authors interpret e-business as an entrepreneurial activity that is carried out only with Internet use. E-business is a type of economic activity of international companies that uses computer networks, in particular the Internet, for the purpose of making a profit [2].

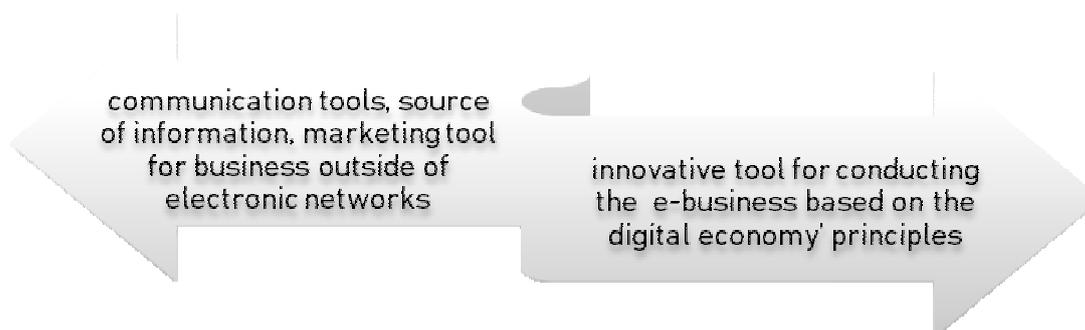


Fig. 1. The main directions of using the Internet tools in entrepreneurship (developed by the author using [1])

Another approach is more universal. It combines the views of the authors on e-business as modern business processes that are carried out using information and telecommunication technologies [3].

The third approach' authors do not focus on the means and technologies of business. They interpret e-business as a combination of e-commerce, business analytics, customer relationship management, logistics and sales management, and a planning information system [1].

So, in a broad sense, electronic business is differentiated, depending on understanding the term "electronic environment". Some authors understand this concept only as an Internet space, the other part also adds private networks – Electronic Data Interchange.

Thus, Internet technologies and innovations in e-business are not its primary components but are important as an element of the competitive advantage formation strategy. E-business is a special economic phenomenon, a type of entrepreneurial activity associated with the implementation of any transactions using information and communication technologies in order to make a profit and achieve goals.

In general, e-business includes the following components: electronic document management; electronic payment system; e-commerce. E-business is based on the following important technologies: network technologies; Internet technologies; IT production; decision support systems; artificial intelligence technologies etc.

The study of the global information technology and telecommunications market, make it possible to identify the following stages of companies' digital transformation:

1) companies that "resisting" digital transformation (digital initiatives are fragmented, as a result, business is developing poorly);

2) "researchers of digital opportunities" (companies have the need to develop digital business strategies focused on the customer, but so

far at the level of individual projects, as a result, progress is not predictable);

3) "digital players" (business and information technology activities are coordinated throughout the enterprise and are aimed at developing the digital products and interacting with customers, but are not yet aimed at realizing the revolutionary potential of digital initiatives, as a result, the company offers standard digital products, services and interactions);

4) "transformers" (due to integrated business and information technology management, the company produces products and services based on digital technologies, as a result, the company leads its market, working at the level of world standards);

5) "digital revolutionaries" (actively using the latest digital technologies and business models, the company affects the markets: it changes existing and creates new markets in its own interests) [4].

Thus, if the modern business cannot adapt to the new requirements of the digital economy, it risks becoming uncompetitive and being forced out of its market. The management of enterprises should work out well business strategies based on the use of information technology, interaction with customers should also be based on digital technologies, business operations themselves should contain digital links between process participants, business structures should respond to changes in the IT environment and be able to use them to increase their competitiveness.

Based on the analysis of modern literature, it is possible to identify the main elements of the digital market that form the e-business, which allows optimizing the company's business processes (Fig. 2).

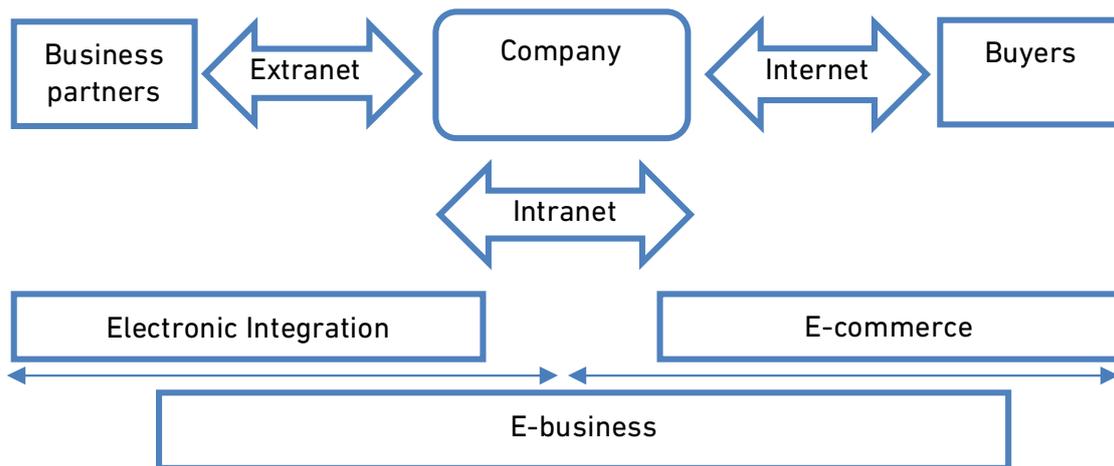


Fig 2. The e-business structure [5]

The e-business structure consists of the following elements:



- Intranet (internal tools for electronic data interchange) – includes all internal programs for optimizing business activities (e.g, 1C, online banking, messaging services);

- Extranet (external tools for electronic data exchange with partners) – tools for exchanging data and messages with external sources;

- the Internet (e-commerce) – includes two vectors of cooperation: B2B and B2C, as well as their extended forms. This element also reflects data on the activities of the B2G, G2B, and G2G sectors.

In practice, the influence of innovative technologies on the development of electronic business is traced. For example, the “single window” system is being actively implemented all over the world, i.e. a mechanism that allows trading and transport companies to provide information and documents related to the fulfillment of the requirements of all regulatory authorities regarding the import, export, and transit, only once, to one agency and in a standard format. This is mainly about the ability to receive services from regulatory authorities online, which undoubtedly has a positive impact on the functioning of e-business, eliminating burdensome time and material costs.

Of course, the development of "single window" systems is only a small aspect of the transformations that affect the development of e-business. There are many other examples: new opportunities in the financial sector thanks to modern blockchain technology, employment prospects due to the development of IT technologies, a new approach to the provision of logistics and transport services in connection with the digital transformation in this area, ranging from elementary electronic document management systems to smart online cargo control systems and the use of drones for parcel delivery.

The e-economy has opened up opportunities for businesses to generate new insights based on operational business intelligence analysis and provide rapid customer feedback, enabling companies to react reactively to the innovative expectations of potential customers. This is how new markets were formed: instant messengers, online search, online advertising, online commerce, e-coaching, e-learning, etc.

At the same time, it is impossible not to notice that, thanks to the possibilities of the Internet and information technologies, the life cycle of innovative products began to shorten, which gave rise to a race of popular manufacturers and developers to bring to the market new

models of smartphones, computers, new mobile applications, new versions of computer games, etc.

As a result of the 2020's events, which entailed significant economic shocks and transformations, the growth trend of the e-business and e-commerce market has increased many times. The vigorous movement of businesses towards their brand' development on the network has become even more active as a result of the pandemic. Because, firstly, the restrictions that have arisen related to preventing the spread of COVID-19 have put many companies in a position in which online trading has become the only possible option for their survival. And, secondly, the pandemic also had an impact on the behavioral activity of the consumer, who began to visit the usual offline trading platforms less, preferring online stores to them.

These and other factors lead experts to predict significant growth in the online market in the near future. According to some estimates, by 2023, online sales are expected to approach \$6.5 trillion dollars, while in 2019 online sales were 3.5 trillion dollars [6].

Currently, the 10 largest countries and markets of e-commerce in the world can be identified: China, USA, UK, Japan, Germany, France, South Korea, Canada, Russia, and Brazil [7]. Today, China is the world's largest e-commerce market, led by subsidiaries of the Alibaba Group, namely Taobao, Alibaba.com, Tmall, and others. With 35% annual growth, China is also one of the fastest-growing e-commerce markets.

Innovation is an integral part of e-business and e-commerce. The implementation of social media, online payment systems, and mobile applications in e-commerce optimizes this process for both sellers and buyers, increasing sales. The use of the latest tools such as chatbots, artificial intelligence, voice assistant, and virtual reality technologies form new forms of communication between seller and buyer, as well as business process models both in the global market and directly in the Ukrainian market [26–28].

The benefits of developing e-business both are obvious. The main advantages of e-business are:

- 1) reduction of prices due to reduction of logistics costs, which in turn contributes to the development of small businesses;
- 2) cost savings – in the field of e-business there are no physical stores, making e-business more cost-effective;
- 3) obtaining greater profits due to the reduction of the cost of processing the purchase, less time is spent on choosing a purchase, respectively, more control over all transactions;



4) faster and better customer service, which allows the latter to save money and time;

5) the ability to quickly compare prices and goods: a significant advantage for sellers who compare prices in pricing, and for buyers who want to buy cheaper and better;

6) increase in productivity due to reduced time for customer service – all Internet users around the world have access to Internet sites;

7) convenient exchange and management of information: with the help of e-commerce improves the exchange of information between customers and sellers, products move faster, which is the main driving force for development in various industries.

The accelerated growth of the e-commerce market will lead to the development and consolidation of new trends. Among them:

1. Transition to D2C. There is a development of a fundamentally different scheme of commercial relations between buyers and producers. B2B and B2C are among the most common areas in business. In the first case, a business sells services or goods to a business, and in the second, to an individual. Today, some manufacturers operating in the B2B segment are abandoning this model, moving to sales of products without intermediaries in the form of retailers, distributors, and dealers. Such a system is called Direct-to-Consumer (D2C).

2. Distribution of CDP. Companies are trying to collect more and more data about their current customers, including their online behavior and all channels of communication with the store. CRM systems that are widely used today do not allow taking into account the online activity of consumers, while CDP (customer data platform) platforms provide such an opportunity. They were originally designed specifically for processing and storing the digital footprint of users. The main purpose of the CDP is to provide aggregated information to help drive marketing strategy, segment audiences, and create personalized offers for customers.

3. Video consultations. Pandemic-related restrictions have given impetus to the proliferation of online consultations provided via video links from physical points of sale.

4. Instant delivery. The issue of logistics amid the pandemic has become extremely relevant because fast delivery has become a serious competitive advantage. The fact is that, according to statistics, about 45% of users refuse to purchase, preferring to place an order

elsewhere if the site offers an inconvenient delivery method or indicates it is too long.

5. AR – augmented reality technologies. They help online customers understand how the product will look in reality, and not in the photo. With the help of AR, a 3D model of popular brand products is created, then a QR code is placed in the product card for their detailed study.

Conclusions. Thus, global e-business is a promising area of doing business that can increase the level of competitiveness of both individual enterprises, industries, and entire countries. In the age of accelerated development of information and communication technologies, the economy is constantly undergoing significant transformations, gradually moving from "real" to "electronic". Global e-business has good prospects; its further development requires a coordinated policy of the business and public sectors of the economy in various countries, as well as the development of innovative approaches to improve the efficiency of electronic platforms and marketing solutions, taking into account the use of the successful experience of leading countries in the development of electronic business.

Despite the fact that in Ukraine there is a positive trend in the development of e-commerce, there are a number of problems that prevent it from revealing its full potential in the global market. The development of an effective strategy for the development of the e-commerce market, the solution of technical issues, increasing public confidence in online commerce, optimizing the mechanisms of logistics and the efficiency of postal services, as well as payment systems will increase the level of development of the domestic e-business market. The processes of development of e-business in the world and in Ukraine, in particular, reflect a steady trend towards the transition of business entities to the electronic environment.

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## ТЕХНОЛОГІЇ ЕЛЕКТРОННОГО БІЗНЕСУ ЯК ІНСТРУМЕНТ КОНКУРЕНЦІЇ В СУЧАСНОМУ СУСПІЛЬСТВІ

У статті обґрунтовано, що розвиток світової економіки нерозривно пов'язаний із поширенням Інтернету та цифровізацією бізнес-процесів. Використання електронних засобів зв'язку стає однією з ключових умов виживання компаній в умовах жорсткої конкуренції. У статті розглядаються підходи до визначення поняття «електронний бізнес». Відповідно до одного з підходів, автори трактують електронний бізнес як підприємницьку діяльність, яка здійснюється лише з використанням Інтернету. Інший підхід більш універсальний. У ньому поєднано погляди авторів на електронний бізнес як сучасні бізнес-процеси, що здійснюються за допомогою інформаційно-телекомунікаційних технологій. Запропоновано концепцію структури електронного бізнесу, який складається з таких елементів: Інтранет (внутрішні інструменти для

електронного обміну даними); Екстранет (зовнішні інструменти для електронного обміну даними з партнерами); Інтернет (електронна комерція). У роботі обґрунтовується, що інновації є невід'ємною частиною електронного бізнесу та електронної комерції, але український бізнес має незначний досвід використання інноваційних можливостей електронного бізнесу і, як наслідок, програє в конкурентній боротьбі. В роботі встановлено, що електронна економіка відкрила для бізнесу можливості генерувати нові ідеї на основі оперативного аналізу бізнес-аналітики та швидкого зворотного зв'язку з клієнтами, дозволяючи компаніям реагувати на інноваційні очікування потенційних клієнтів. Так сформувалися нові ринки: месенджери, онлайн-пошук, онлайн-реклама, онлайн-комерція, електронний коучинг, електронне навчання тощо. В статті розкрито основні переваги електронного бізнесу та тенденції в електронній комерції.

**Ключові слова:** електронний бізнес; інновації; управління; цифровізація; конкурентоспроможність; електронна комерція.

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## **ТЕХНОЛОГИИ ЭЛЕКТРОННОГО БИЗНЕСА КАК ИНСТРУМЕНТ КОНКУРЕНЦИИ В СОВРЕМЕННОМ ОБЩЕСТВЕ**

В статье обосновано, что развитие мировой экономики неразрывно связано с распространением Интернета и цифровизацией бизнес-процессов. Использование электронных средств связи становится одним из ключевых условий выживания компаний в условиях жесткой конкуренции. В статье рассматриваются подходы к определению понятия «электронный бизнес». Предложена концепция структуры электронного бизнеса. В статье обосновано, что инновации являются неотъемлемой частью электронного бизнеса и электронной коммерции, но украинские предприятия имеют мало опыта использования инновационных возможностей электронного бизнеса и, как следствие, проигрывают в конкурентной борьбе. Предложены основные преимущества электронного бизнеса и тенденции развития электронной коммерции.

**Ключевые слова:** электронный бизнес; инновации; управление; цифровизация; конкурентоспособность; электронная коммерция.

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