

The Development of E-commerce in the Context of the Digitalization of the Economy

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Abstract: The development of e-commerce is an integral part of the modern market for goods and services, and against the background of the digitalization of companies, the introduction of sales of goods and promotion of services through online channels creates additional conditions for the development of new markets and strengthening its position in existing ones. After the COVID-19 pandemic, the promotion of products and services through the Internet became an opportunity to maintain an audience and ensure stable sales even in the face of a lockdown. According to many scholars, partly due to e-commerce, markets were able to recover from the quarantine restrictions fairly quickly. Given the importance of the problem in question, the purpose of this article is to define the role of e-commerce in the process of digitalization of business based on the analysis of its development trends. The study is built in the context of consideration of the peculiarities of e-commerce organization for both the B2B and B2C segments, focusing on determining the differences between these two types and the specifics of the use of e-commerce for each of these areas. The study also realized an analysis of statistical material which proves the extreme importance and steady growth of sales of goods and services with the use of electronic commerce. In addition, it is found that the main players in the market of digital sales of goods and services are China and the United States, as these are the countries where powerful sales platforms are registered and operate, viz: AliExpress and Amazon. As a result of the systematization of scientists' views on the prospects of e-commerce development, promising directions were formed and trends of development of this sphere in Ukraine in the period of post-war recovery were outlined, the advantages received by manufacturers and trade intermediaries in case of using e-commerce were concretized.

Keywords: E-commerce, Online sales, Digitalization of the economy, Social networks, Online platforms.

JEL Classification: C33, F32, F36.

INTRODUCTION

The reality of today's goods and services market is that almost any product can be sold online, using the Internet, a variety of online sales platforms, social networks, and marketplaces. In this context, modern commerce is no longer based on classic stores or markets, but on the Internet. From

the consumer's perspective, many consumers today can no longer imagine their lives without online shopping because it saves them time and resources. As a result, e-commerce has penetrated most spheres of daily life, especially facilitated by the lockdown associated with the onset of the COVID-19 pandemic. The active use of e-commerce is characteristic not only for the sphere of goods and services for individuals (B2C) but also for goods and services provided to businesses (B2B).

It should be noted that largely due to e-commerce, the COVID-19 pandemic did not provoke a devastating crisis around the world and the economy was able to recover

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quickly. Manufacturers and distributors of goods online trading in a certain sense made life easier and led to an increase in sales, but at the same time forced to build internal processes depending on the market situation and be prepared for rapid changes in the rules of the game in the online market. After the COVID-19 pandemic in 2021-2022, the basic market trends remain, therefore, e-commerce continues to evolve, but trends are changing, while it is no longer enough for manufacturers and distributors to present their goods in the electronic space, they need to make them as competitive and attractive to the consumer as possible.

Diving into the question of applying e-commerce to improve business results, it should be emphasized that e-commerce is a universal tool that can be used to develop a sales system for almost any kind of business, because it involves the use of a very wide range of online tools. In general, the sphere of e-commerce is very diverse: in addition to the online sales system itself, it includes a wide range of online banking, which deals with online transactions, and Internet marketing, which includes advertising and actions aimed at increasing awareness of products or the company in general. The technical basis on which to build e-commerce is simple enough and does not require the maintenance of a large staff of specialists who support the system to promote products over the Internet. The technical content includes, according to the construction of an e-commerce system: a website or an online store, a database with products, a system of inventory control, a CRM-system, a system of delivery of goods to the buyer and more. Of course, this is a very simplified model, because each of these categories can be described separately, but the most important part of these will be well-functioning and competently built server, because it depends on the speed of loading the site.

According to the above, it is difficult to imagine a modern business, which in one way or another has not used e-commerce, because this direction of promotion and the formation of a positive image is a requirement of time.

MATERIALS AND METHODOLOGY

The paper analyzes the essence of e-commerce and proves its importance for the development of not only trading companies, but virtually all businesses in today's realities. For the majority of economic entities today, the promotion of their products and services via the Internet has become an opportunity to maintain an audience during the pandemic and economic recovery after it, but also to discover new markets, which previously were more difficult to master.

Separate attention in the work is devoted to the peculiarities of e-commerce organization in the field of B2B and B2C, the differences between the two types and the features of e-commerce for each of these areas have been identified.

The analysis of statistical data, which confirms the growth trends of sales of various groups of products through the Internet and identified the main international and Ukrainian sites for e-commerce.

The analysis of scientific literature determined that social networks today are becoming a platform for e-commerce and become the basis for business development without renting an office or store.

The importance of e-commerce for the development of small and medium-sized businesses was determined and it was identified how entrepreneurs can minimize the financial costs of product promotion in the case of active use of e-commerce tools and the active implementation of modern digital tools. The positive impact of the implementation of digitalization processes on the financial results obtained by the business has been proved.

PURPOSE OF THE ARTICLE

Given the proven relevance of the problem of implementation and development of e-commerce, the purpose of this article is to define the role of e-commerce in the process of digitalization of business based on the analysis of trends in its development.

LITERATURE REVIEW

With the development of digitalization and e-commerce, scientists began to pay attention to how these processes infuse financial results and generally how to use properly and effectively a fairly new, but very effective tool of online commerce.

The process of digitalization of the economy has been going on for a long time and creates many opportunities for economic development. Thus, some researchers (Battisti et al., 2020; Endres et al., 2020) focus on the fact that the active implementation of digital technologies leads to a change in the business model of the enterprise and if successfully implemented will improve the organizational and financial structure of the business. Undoubtedly, digitalization affects the business financing environment and capital opportunities, both at the microeconomic level (Hallikainen et al., 2019) and at the large-scale impact of digital technology implementation in business at the state level (Mentsiev et al., 2020). Undoubtedly, the effectiveness of digital technology implementation depends on proper planning and the rationality of spending resources on its implementation (Keiningham et al., 2020).

With the development of social networks and the active spread of the Internet, e-commerce, which involves the sale of goods and services through online stores, marketplaces, and social networks, has emerged and is rapidly developing. The first researchers of e-commerce (Gajewska et al., 2019; Huang et al., 2019) determined that in some areas it can completely replace offline commerce in the future for a number of reasons:

consumers have the opportunity to buy products in different countries from different manufacturers, without having to visit stores in other countries (Hanninen et al., 2018);

for some groups of goods and services, it is not necessary to spend time visiting a classic store; many household goods can be ordered using time-saving e-commerce (Lin et al., 2020);

using online stores, a shopper can quickly compare retailer prices and choose the best value option for them (Roy et al., 2017);

With e-commerce, shoppers can make more informed and deliberate purchases because they can read reviews from

other shoppers about the desired product and make an informed decision about whether or not to buy it (Sun et al., 2020).

The issue of e-commerce is particularly important for retailers (Aversa et al., 2021) since they are primarily interested in being able to reach as large an audience as possible and to avoid a decline in sales. Therefore, retailers are investing heavily in researching digitalization processes and exploring the potential development of e-commerce tools (Lamba et al., 2020). At the same time, the balanced use of digital technology also has a positive impact on a company's reputation and its ability to build its own unique corporate culture (Khan et al., 2021).

Of course, along with the positive features of the digitalization of the economy and the development of e-commerce, scholars also draw attention to the negative features of these processes. First, companies that move commerce online become more vulnerable to competitors as a result of discovering a significant amount of information about their own products (Raguseo, 2018). Second, digitalization may require a business to incur additional costs at certain stages to develop optimal digital tools for a particular company, as well as to support and maintain them (Hrynchyshyn, 2021). Third, digital adoption and the active implementation of e-commerce requires hiring or training appropriate professionals internally, so staffing changes are inevitable (Oliynyk et al., 2021), in addition, a company may be forced to downsize and lay off employees as a result of abandoning offline stores (Alexander et al., 2020; Grewal et al., 2020). It should also be noted that in the process of active digitalization of the economy, companies need significant funding, so while the digital architecture is being actively built, other projects in the enterprise may be suspended (Aleksieienko et al., 2020).

In general, most researchers agree that digitalization and e-commerce for the modern enterprise offers huge prospects and, subject to reasonable and rational implementation, can significantly improve the financial condition and financial performance of the enterprise, and modern channels to promote products through social networks and generally through the Internet reduce the dependence of sellers on market conditions and the economic situation.

RESULTS

E-commerce started actively developing about ten years ago, but the real boom occurred during the COVID-19 pandemic. The practice of researching the specifics of an e-commerce application allows us to highlight its basic characteristics, in particular, it is a business associated with the purchase and sale of goods and services via the Internet. Customers can make purchases using various means of access to the Internet: computers, smartphones, smart watches, and digital assistants. E-commerce is booming in both the business-to-consumer (B2C) segment (Ashok, 2018) and the business-to-business (B2B) segment (Acharya et al., 2018). In the B2C segment, a retailer or other company sells directly to end customers. In the B2B segment, a company sells goods to another company. In both cases, the goal of most companies is to enable customers to buy what they want at any time from any location using any digital device.

Obviously, for businesses, e-commerce offers many benefits that can have a positive impact on a company's financial performance:

1. Creation of conditions for the automation of the sales process. The e-commerce system will automate daily tasks:

placing customers' orders thanks to a personal account where customers can place orders at their convenience (Bezrukova et al., 2022);

providing customers with the most complete information about the range of products and services through automated marketing tools (e.g., automatic mailing of catalogs to email and price lists) (Kovaliuk et al., 2020);

tracking and updating inventory information through the integration of e-commerce systems with accounting programs (Bollweg et al., 2020; Gavrilina et al., 2021);

using social media to promote products as well as to receive feedback from customers (Gong et al., 2021; Oberoi et al., 2017);

agreeing and signing documents accompanying an agreement through electronic digital signatures (Riera et al., 2019);

freeing up a significant amount of sales managers' work time by reducing the time for communication with customers and face-to-face meetings (Nitsenko et al., 2020; Pan et al., 2021);

the possibility of automatic generation of reports on the results of sales via the Internet (Salvador et al., 2020).

2. Increased quality of service. By automating a large number of all processes related to sales and increasing the amount of managers' time to communicate with customers, errors are minimized, and the speed of order fulfillment increases, as standard orders can be processed automatically. However, there is a need to provide technical support to users and form a separate staff for technical maintenance of sales.

3. Performing in-depth analysis of sales and marketing results. B2B e-commerce systems allow you to quickly download reports and analytical data from the site at any time on the volume of sales by category, customer, and period, on the demand for each individual group of goods and services, customer activity, and the number of orders. This information allows you to make decisions on changes in the assortment, pricing policy, marketing tools, ways to further promote products (Kovalenko-Marchenkova et al., 2022).

4. Reduction of risks typical for offline sales. The company's sales automation system will ensure the reduction of risks associated with delivery disruptions, delivery time, and as a result of decreased customer loyalty. For example, the ability to see the availability of goods in stock online allows the customer to reserve the necessary items in time while they are available. And integration with payment systems significantly speeds up order processing, since there is no need to wait for additional confirmation from the manager about the receipt of funds.

For B2B and B2C, companies need a powerful, flexible, and scalable e-commerce platform to meet the needs of custom-

Table 1. Comparison of Positive Aspects and Risks of using Different e-commerce Platforms.

Characteristics of the Sales Concept	Advantages of E-commerce Applications	Potential Risks from the Use of e-Commerce
The versatility of e-commerce for B2B and B2C spheres	If the company operates in both segments, the platform used should support B2B and B2C sales, while ensuring that the platform can be deployed using a hybrid cloud or other models	The use of a universal platform for B2B and B2C areas can complicate the process of technical support and create conditions for confusion when processing applications, but in the process of operation the technical experts should eliminate this confusion.
Reducing the cost of the sales process	Software-as-a-Service-for-sale subscription models are more cost-effective than local platforms, which typically require large and ongoing infrastructure and site architecture costs for online stores	The company should plan for a fairly large one-time cost during the transition to e-commerce, but the ongoing maintenance costs will be negligible
User-buyer convenience	An e-commerce platform should be user-friendly so that users can work with it, and companies should be able to customize it to their needs. The user interface should be simple and straightforward so that even employees without a technical background can add pages and functions without problems, which will make staff work easier.	Most platforms can be non-unique, and it sometimes becomes difficult for customers to identify the platform with a particular merchant, making it difficult to maintain a unique company face, which is easier to achieve when you can plan an offline store design.
Easy integration of e-commerce platform into the enterprise sales system	To optimize costs, companies need to be able to easily integrate their existing technology with an e-commerce platform to reduce integration time and take advantage of investments already made.	The company's own and customers' data protection systems should be developed and integrated
Adaptability to the design and brand image	The platform should be flexible and easily adaptable to a recognizable design, a unique interface on the company website, etc.	To develop and implement a unique design should invest more money than might be necessary with standard e-commerce templates
High speed of order placement and processing	The company needs platforms with a self-service architecture and standards-based structure that are easy to implement, easy to deploy, and easy to add programs and features to as needed	The number of such platforms is limited to specialized ones that focus specifically on the development of online store profiles, while promotion through social networks and groups in messengers does not provide such an opportunity.
Convenience and ease of use of the platform without special knowledge and skills	For optimal performance, e-commerce platforms must be easy to maintain and monitor with automatic updates, instant access to the most relevant features, and real-time monitoring of performance metrics across the company.	The adaptability of the platform is typical for classic companies for the mass sale of consumer goods (clothing, food, technology), but for specific products with a branched nomenclature, such as radio or electronics, standard platforms will need to adapt to the specifics of the goods.
Achieving a high level of data protection	E-commerce platforms must provide the latest comprehensive security measures, as well as ensure compliance with the Payment Card Industry Data Security Standard, General Regulations for the Protection of Personal Data, and other regulatory requirements, as customers not only choose goods on the companies' website but also make payments and disclose their financial data, requiring maximum protection	Potential loss of customer confidence if financial data cannot be adequately protected
The ability of platforms to grow in parallel with business development	One of the requirements for platforms is the ability to scale quickly so that there are no delays in order service, even in high-demand conditions or during peak hours on the platform.	It is desirable to have a reserve in the form of a hotline in case the platform cannot quickly adjust to the rapid growth of the load on the platform

Authors' development.

ers today and in the future (Buriak et al., 2022). However, it should be understood that along with the positive characteristics of e-commerce, it also poses additional risks for actively used companies. A comparison of the positives and risks of using different e-commerce platforms is shown in Table 1.

So, as the systematization of the positive aspects of the use of various platforms for online sales shows, with proper planning of actions for the development of e-commerce, companies that use it can be quite effective and have the potential to develop and grow sales. In this context, it is logical to proceed to the prospects of the use of e-commerce by Ukrainian companies, with special emphasis on the use of

this modern type of trade by small and medium-sized businesses, as it forms the basis of the Ukrainian economy at war because it is more flexible and allows to create jobs. jobs at the expense of faster updates than large enterprises.

Of course, e-commerce during and after martial law will be more popular than offline stores because it does not require renting retail space, which should be especially noted because there is a lot of destroyed real estate in eastern parts of Ukraine, therefore it is harder to find space to rent offline stores. In addition, with regular air raids and a lack of power supply, it is more convenient for customers to shop online at their convenience. In view of this, e-commerce in Ukraine

Table 2. General Trends and Prospects for the Development of Electronic Commerce in Ukraine.

E-commerce Development Trend	Feature
A full-fledged alternative to online shopping	The transition of some classic store sales to e-commerce, which can be considered a development of the marketing and organizational component of the business
Opportunities to develop new markets	The e-commerce sector is growing worldwide, and companies are competing with each other for millions of new customers in emerging and developed markets. There are more and more opportunities for Ukrainian companies to enter European and global markets, especially against the backdrop of increased respect for the war in Ukraine.
Focusing on high personalization	Buyers and customers are always interested in personalized approaches, such as wanting discounts and special offers on related products based on their purchase history. E-commerce platforms allow you to offer personalized loyalty programs, resulting in more accurate purchase predictions and recommendations. A well-designed loyalty program can have a qualitative impact on audience retention
Ensuring fast order processing and delivery	Delivery within a day or even an hour through various courier and shipping companies and other means will become increasingly popular, forcing companies to optimize their supply chains and speed up delivery to stay competitive.
Setting up regular purchases	Providing opportunities to buy recurring consumer products (food, household chemicals, household goods) and other products by subscription, where select products will be supplied to demanding customers, is likely to attract an increasing number of customers
Individual approach to the client	Smartphones are becoming a part of life, and as a result, shoppers will increasingly shop via phones, digital assistants, and other digital devices, and online retailers will need to be able to provide the same high-quality experience across all touchpoints, and the site interface must be displaying well. It is also desirable to have its own mobile app for convenient commerce.
Introducing chatbots for fast customer feedback	As commerce moves aggressively into social media and messengers, digital assistants, and other chatbots will become even more technically advanced, allowing customers to communicate with them in a conversational mode thanks to artificial intelligence capabilities, which will accelerate the interaction between buyer and seller.
Stores of impressions parallel to classic entertainment	Customers need to experience positive emotions from shopping and integrate as much as possible into the product selection process. With this in mind, traditional online stores will offer more experiences and opportunities with the effect of presence and attract customers with digital kiosks, touch mirrors, virtual reality functions, and organize in-store training. A positive point could be the opportunity, for example, to try on clothes for your type of figure.
Using different ways of visualization	Online merchants will use virtual reality, 3D imaging tools, augmented reality, and other technologies to replicate for shoppers the hands-on experience available only in conventional stores.
Using social networks to share experiences among customers and build communities of interest	Sellers may be interested in creating a community of their customers, there themselves to build an audience of loyal customers who are guaranteed to come back to buy, which will provide a more stable income for the company

also opens up opportunities for the development of related areas, such as information technology, technical support, cloud technology, etc.

General trends and prospects for e-commerce in Ukraine are presented in Table 2.

Consequently, a company's use of e-commerce offers it prospects for development and audience expansion, but it should also be understood that there are additional risks and the need for associated costs required by the transition to electronic sales of its products. However, analysis of global experience indicates that e-commerce sales will grow.

DISCUSSION AND RESULTS

Economic and political challenges to the world economy in recent years require businesses to create and implement the latest trade technologies to sell goods and services, regardless of pandemics, hostilities, relocation of producers and consumers, etc. In addition, trends toward globalization and the integration of Ukrainian enterprises in international markets also stimulate the use of modern technologies to ensure the possibility of shopping from anywhere in the world that is possible with the use of e-commerce. The paper proves that to date, e-commerce is a powerful tool for the development of not only trading companies, but also producers, as it reduces the number of intermediaries and the sale directly

from producer to buyer. It was also found that e-commerce is part of the digitalization process for B2B and B2C segments, while in both areas it is effective and has significant prospects for further development.

The article focuses on the opportunities offered by the use of e-commerce, modern companies. As in any other sphere, e-commerce has its advantages and disadvantages. The obvious advantages for business are the following characteristics:

1. Reducing the amount of monetary costs. E-commerce makes many processes simpler - it is no longer necessary to rent space, look for employees, and arrange for shipping to open a sales floor. All the aforementioned can be organized online, as a result the costs of selling products become lower, so that the company has reserves for development and accumulation of funds.
2. The dynamic growth of e-commerce. The international e-commerce market is growing every year. Users gradually get used to making purchases on the Internet, more and more services aimed at improving the efficiency of businessmen appear, as a result of which online shopping is becoming an integral part of most consumers' lives.
3. Wide coverage of the audience, without reference to the borders of countries. Through e-commerce, it is easier to enter international markets. If a company sells physical goods, it is only necessary to plan how the product will be

delivered to the buyer, namely, to determine the carrier company and offer different delivery options to the buyer.

4. Reducing the number of intermediaries. You can contact directly with the manufacturer of the goods, completely eliminating the involvement of third parties.

5. Visible analytics and tracking. Business and possibilities of its promotion are completely under control of e-commerce specialists.

While there are unconditional advantages, e-commerce also has disadvantages, certainly debatable, but it is worth pointing them out.

1. Technological dependence. Various malfunctions in technology or difficulties with access to the Internet will have a negative impact on the results of e-commerce.

2. The necessity to take into consideration the specifics of working with payment systems. For fast money transfer, it is necessary to choose a reliable bank and provide high protection characteristics of the financial information.

3. The need to ensure high characteristics of client data security. The requirements of the modern market for companies, which promote products using e-commerce approaches, are one of the priorities of information protection and privacy of buyers. Otherwise, the company may not only lose its reputation, but may attract the attention of regulatory authorities.

In the course of the study, an analysis of statistical material was conducted, which proves that e-commerce will continue to develop, and the potential for its expansion should be used in favor of trade and manufacturing companies. Also, a comparison of the positive aspects and risks of using different e-commerce platforms was made, proving that the introduction of e-commerce requires competent preparation and having a balanced plan of action.

The general trends and prospects of e-commerce development in Ukraine in the context of economic recovery after active hostilities and on the way to further European integration were also identified.

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