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HOW COVID-19 PANDEMIC BOOSTS THE EUROPEAN AND UKRAINIAN ELECTRONIC COMMERCE

ЯК ПАНДЕМІЯ COVID-19 СТИМУЮЄ ЄВРОПЕЙСКУ ТА УКРАЇНСЬКУ ЕЛЕКТРОННУ КОМЕРЦІЮ

Mazorenko Oksana

Simon Kuznets Kharkiv National University of Economics

ORCID: <https://orcid.org/0000-0003-1784-697X>

Мазоренко Оксана Володимирівна

кандидат економічних наук, доцент,

Харківський національний економічний університет імені Семена Кузнеця

The article is devoted to current problems of e-commerce development in modern conditions. Today, e-commerce has become not only one of the main areas of the economy, but also an integral part of people's economic and social activities. The article identifies the key drivers of e-commerce – technological, political, social and economic factors. The benefits of electronic commerce were considered as to affect three major stakeholders: organizations, consumers and society. Also, the e-commerce features were defined: non-cash payment; 24/7 service availability; advertising and marketing; improved sales; support; inventory management; communication improvement. It is impossible to discuss 2020–2021 in e-commerce without discussing the topic of the COVID-19 pandemic. The COVID-19 pushed world's e-commerce sphere to the next level, Europe and Ukraine are no exception. The analysis of statistical information identifies trends in the development of e-commerce in Europe and Ukraine. The article says that European consumers estimate that they have spent 717 billion euros shopping online in 2020, while Ukrainian e-commerce market amounted to about 107 billion UAH. The most popular products purchased online in Europe are clothing and footwear, home electronics and books. The largest segments in Ukrainian e-commerce is electronics and media, fashion, furniture and appliances. The article identifies the global reasons for the growth of e-commerce. Particular attention is paid to the study of the impact of the COVID-19 pandemic on the development of e-commerce, which allowed to identify new trends in e-commerce, to investigate changes caused by the pandemic and quarantine in the behavior of consumers and entrepreneurs. In 2021, and in post-COVID-19 times, consumer purchasing habits will persist. It is worth noting that the habit of buying online what was previously bought offline will continue to grow, as e-commerce will continue to be the safest type of retail. At the same time, the list of categories of goods purchased online will expand. These trends will allow retailers to create a stable market and consumers to meet their needs through a wide selection of products and unique offers.

Keywords: e-commerce, COVID-19, pandemic, online trade, internet penetration, Ukraine, Europe.

Стаття присвячена актуальним проблемам розвитку електронної комерції в сучасних умовах. В статті визначено основні особливості, драйвери та переваги електронної комерції перед традиційною. На основі аналізу статистичної інформації визначено тенденції розвитку електронної комерції в Європі та Україні. В статті визначено глобальні причини зростання електронної комерції. Особливу увагу приділено дослідженню впливу пандемії COVID-19 на розвиток електронної комерції, що дозволило визначити нові тенденції розвитку електронної комерції, дослідити зміни, викликані пандемією та карантинном, в поведінці споживачів та підприємців. Визначені тенденції дозволять торговцям створити стабільний ринок, а споживачам задовольняти свої потреби завдяки широкому вибору товарів та унікальних пропозицій.

Ключові слова: електронна комерція, COVID-19, пандемія, онлайн торгівля, проникнення інтернету, Україна, Європа.

Статья посвящена актуальным проблемам развития электронной коммерции в современных условиях. В статье определены основные особенности, драйверы и преимущества электронной коммерции перед традиционной. На основе анализа статистической информации определены тенденции развития электронной коммерции в Европе и Украине. В статье определены глобальные причины роста электронной коммерции. Особое внимание уделено исследованию влияния пандемии COVID-19 на развитие электронной коммерции, что позволило определить новые тенденции развития электронной коммерции, исследовать изменения, вы-

званые пандемией и карантином, в поведении потребителей и предпринимателей. Выявленные тенденции позволят торговцам создать стабильный рынок, а потребителям удовлетворять свои потребности посредством широкого выбора товаров и уникальных предложений.

Ключевые слова: электронная коммерция, COVID-19, пандемия, онлайн торговля, проникновение интернета, Украина, Европа.

Problem statement. In the process of rapid development of information technologies, the volumes of the electronic commerce (e-commerce) are growing at a significant pace. Today, e-commerce has become not only one of the main areas of the economy, but also an integral part of people's economic and social activities. In Ukraine, there is a positive dynamic of growth of e-commerce in recent years, which indicates a significant potential for its development. Despite the positive dynamics, until some time the share of e-commerce in retail in Ukraine was insignificant.

But the COVID-19 pandemic and quarantine restrictions have made significant adjustments to the way retailers operate, as well as consumers' attitudes towards online shopping. Therefore, the study of the impact of the pandemic and trends in the development of e-commerce is relevant today.

Analysis of recent research and publications. The concept and features of e-commerce were investigated by local and foreign scientists and practitioners such as M. Kutz, G. Schneider, S. Didenko and others. M. Kutz defined e-commerce as buying and selling goods and services over the Internet [1]. E-commerce enables the comprehensive digital execution of business processes between the suppliers and their customers via global public and private networks.

Statistics on the development of e-commerce are presented to a greater extent in European reports such as Europe 2020: Ecommerce Region Report, Statista, E-commerce in Europe 2020, Euromonitor International etc. [2–5]. Statistical data on the development of e-commerce in Ukraine are not sufficiently represented, they are more often found in individual studies of scientists and practitioners [6; 7] and on statistical resources [3; 8].

Selection of previously unsolved parts of the overall problem. The above sources make it possible to compare the dynamics of the development of e-commerce in Europe and Ukraine, to determine the key factors of influence and the possibilities for its further development.

To date, the study of the impact of COVID-19 on the state of e-commerce remains not sufficiently researched. It is also advisable to identify the main trends, changes in consumer behavior caused by the pandemic.

Formulation of the goals of the article (task statement). The purpose of the research is theoretical justification of e-commerce features and distinguish trends and development opportunities of e-commerce in Europe and Ukraine due to the pandemic COVID-19.

The main material of research. The key drivers of e-commerce to allow a comparison between different countries. These key drivers can be measured by a number of criteria that can highlight the stages of advancement of e-commerce in each country. The criteria that can determine the level of advancement of e-commerce are summarized in Table 1 and can be categorized as [9]:

1. Technological factors – the degree of advancement of the telecommunications infrastructure which provides access to the new technology for business and consumers.

2. Political factors – including the role of government in creating government legislation, initiatives and funding to support the use and development of e-commerce and information technology.

3. Social factors – incorporating the level and advancement in IT education and training which will enable both potential buyers and the workforce to understand and use the new technology.

4. Economic factors – including the general wealth and commercial health of the nation and the elements that contribute to it.

All the advantages of e-commerce for business were summarized by Schneider G. [10] in one statement: e-commerce can increase sales and decrease costs.

The benefits of e-commerce can be seen to affect three major stakeholders: organizations, consumers and society.

In general, as E-commerce tutorials [11] states, e-commerce provides the following features: non-cash payment; 24/7 service availability; advertising and marketing; improved sales; support; inventory management; communication improvement.

It is impossible to discuss 2020–2021 in e-commerce without discussing the topic of the COVID-19 pandemic. The COVID-19 pushed world's e-commerce sphere to the next level, Europe and Ukraine are no exception. The pandemic has pushed companies into a quarantine reality. While some offices and shops had to close, others managed to adapt to tough conditions and show significant growth. It forced sellers to be very

Table 1

Key drivers of E-commerce

Key drivers	Measurement criteria
Technological factors	Telecommunications infrastructure: Backbone infrastructure and architecture Industry players and competition Pricing Internet service providers Range of services available (e.g. ADSL, ISDN) Ownership (private or public sector) – Access to new technology developments – Bandwidth – Speed of development and implementation of new technology by industry sector
Political factors	– Number and type of government incentives and programmes to support the use and development of new technology – Legislation – number and type of supportive or restrictive laws and policies that govern electronic data, contacts and financial transactions. – Public policies – whether government supports the growth of electronic transactions and processes. For example, filing tax returns to the Inland – Revenue electronically, the national education curriculum and training
Social factors	– Skills of workforce – Number of users on-line – Penetration rate of PCs – Level of education; computer literacy and IT skills – Culture of technophilia – a willingness and ability to adopt new technology and the speed at which technology achieves critical mass as in Japan
Economic factors	– Economic growth – GDP – Average income – Cost of technology (hardware and software) – Cost of access to telecommunications infrastructure – pricing structures and rates – Commercial infrastructure – advancement of banking sector; payment systems – Innovative business models.

Source: [9]

Table 2

Benefits of e-commerce

Benefits to organisation	Benefits to customer	Benefits to society
International marketplace	24/7 access.	Enables more flexible working practices
Operational cost savings.	More choices.	Connects people.
Mass customisation.	Price comparisons.	Facilitates delivery of public services.
Enables reduced inventories and overheads	Improved delivery processes.	
Lower telecommunications cost.	An environment of competition	
Digitisation of products and processes.		
No more 24-hour-time constraints.		

Source: [9]

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flexible in many angles. According to statistics, at a time when business activity in ordinary physical locations stopped, the number of online orders for home and kitchen appliances, groceries, personal care products, toys, clothes and hobby products increased by one and a half times [7].

According to Europe 2020: Ecommerce Region Report [2] European consumers estimate that they have spent 717 billion euros

shopping online in 2020. That would mean an increase of 12,7% compared to the situation last. Share of respondents in European countries who shopped online more often due to the coronavirus pandemic in 2020 vary from 19% in Denmark, to 30% in UK and to 44% in Spain [3].

The most popular products purchased online in Europe are clothing and footwear, home electronics and books.

1. Clothing and footwear	2. Home electronics	3. Books/Audio books
4. Cosmetics, skincare and haircare	5. Home furnishings	6. Sports and leisure products
7. Children's items	8. Toys	9. Food
10. Movies	11. Car accessories	12. Dietary supplements and similar

Figure 1. Top product categories bought online by Europeans

Source: [9]

During coronavirus pandemic many consumers have done more online shopping. They also shop for different types of products. The product categories that customers state that they bought online most because of the pandemic include fashion, groceries and pharmacy goods. While shopping for fashion products online has always been very popular, grocery and pharmacy products have become two notable newcomers. Food in particular has very high sales figures in certain countries. In Spain, as many as 30% say they shopped online for groceries because of the pandemic, followed by France (22%), the United Kingdom (20%), and Italy (20%). Common to all these countries is that they are relatively hard hit by the pandemic [4].

Selling online can help business reach new markets and increase its sales and revenues. If company is interested in selling to other businesses, it can use the Internet to find sales leads, announce calls for tender and offer products for sale either through its own website or through an e-marketplace site. Organization can use the Internet to find new suppliers, post buying requests or search for products and services. Online trading networks can also be used to support efficient information exchange between buyers and sellers.

The growth rate of e-commerce turnover in Ukraine is one of the highest in the world, as is the rate of mastering advanced digital payment technologies. Three key drivers stimulate these processes: the continued migration of classic retail to online, the rise in Internet penetration, and the active promotion of digital secure payments [12].

In 2020, the e-commerce market in Ukraine grew by 40% and amounted to about 107 billion UAH. The pandemic has significantly adjusted the expectations of business and analysts. Many new players began to trade via the Internet – from mini-factories to cafes. Large online and offline stores and marketplaces have strengthened their positions to a greater extent. Now almost 9% of all purchases in Ukraine take place online – on marketplaces, online stores and social networks. It

should be noted that in 2019 the share of e-commerce in retail in Ukraine was estimated at 7%, and then the market grew by 17% per year [6].

The share of e-commerce in Eastern Europe in 2020 amounted to 10% of total retail sales, which is 36% more compared to 2019, while Ukraine recorded the highest growth rate, by about 45%, to 8% of total retail sales in the country, follows from a study by Euromonitor International [5].

There are two global reasons, besides COVID-19, for the rapid increase in the cash turnover of Ukrainian e-commerce. This is the transition from classic retail to online and an increase in the number of Internet users in the country (such an indicator as Internet penetration).

As for Internet penetration, this indicator is low in Ukraine, only 52% (Table 3).

Table 3

Internet penetration in Ukraine and European countries

Country	Internet penetration rate, %
Ukraine	93
Norway	98
Austria	88
Poland	78
Russia	81
Italy	92
Spain	93
France	92
Germany	96
United Kingdom	95

Source: [13]

The largest segment in Ukrainian e-commerce is Electronics and Media. It generates 28% of the ecommerce revenue in Ukraine. Then comes Fashion with 26%. It is following by Furniture and Appliances with 20% of ecommerce revenue. The last two, Toys, Hobby with 15% and Food and Personal Care with 10% [14]. Leaders ranking by e-commerce net sales in 2019 is given in Table 4.

Table 4
**TOP online the e-commerce market stores
 in Ukraine by e-commerce net sales**

№	Online Store	Net sales in 2020, million USD
1	apple.com	87
2	makeup.com.ua	78
3	apteka911.com.ua	76
4	comfy.ua	46
5	kasta.ua	36

Source: [14]

For Ukrainian consumers, price is the main determining factor. They are also interested in foreign-made goods, which are considered to be of better quality and more difficult to obtain. The main difference between foreign companies and Ukrainian ones is the availability and quality of after-sales service. In Ukraine, for example, the return of goods is very rare, which significantly affects the perception of domestic brands and stores.

The growth of e-commerce can be explained by quarantine – online has become an outlet for many businesses that have lost their usual earning opportunities.

Conclusions. As a result of research [3; 4; 6–8], the following trends in the development of e-commerce in the era of COVID-19 were determined:

1. A lot of companies and individual entrepreneurs have appeared who actually had to engage in online trade.

2. A tremendous increase in the number of people who buy online. During 2020, the num-

ber of online shoppers exceeded 2 billion people, which is more than a quarter of the world's population. For those who have not used online shopping before, this has become commonplace during the quarantine period.

3. Unconventional new habits in e-commerce. These habits include buying fruits and vegetables online, traveling online, visiting theaters, museums, etc.

4. Developed delivery ecosystems. Now companies deliver everything without exception and in a wide variety of ways. New players appear in this market, and retailers create their own delivery services.

In 2021, and in post-COVID-19 times, consumer purchasing habits will persist.

It is worth noting that the habit of buying online what was previously bought offline will continue to grow, as e-commerce will continue to be the safest type of retail. At the same time, the list of categories of goods purchased online will expand.

Also, high-quality service will become an extremely important part of any business. Consumers are not ready to put up with low-quality service, they will simply go to competitors.

The competition itself online will become tougher, so companies should prepare special offers and services in order to attract consumers.

Quarantine has also taught consumers how to make rational purchases, so responsible consumption will become an important habit in consumer behavior.

The above trends will allow retailers to create a stable market, but consumers get a huge selection of products and unique offerings.

REFERENCES:

1. Kutz M. (2016) Introduction to E-commerce: Combining Business and Information Technology. The Bookboon Company, 209 p.
2. Europe 2020: Ecommerce Region Report. Available at: <https://internetretailing.net/retailx-country-reports/retailx-country-reports/europe-2020-ecommerce-region-report#form> (accessed 26 April 2021).
3. Statista. Available at: <https://www.statista.com/> (accessed 24 April 2021).
4. E-commerce in Europe 2020 (2020) Stockholm: PostNord, 62 p.
5. Euromonitor International. Available at: <https://www.euromonitor.com/> (accessed 26 April 2021).
6. Didenko S. (2020) Rynok e-commerce v Ukraine v 2020 god : priznaki perehoda i prognoz rosta v 2021 [E-commerce market in Ukraine in 2020: signs of transition and growth forecast in 2021]. Available at: <https://ua.news/ru/rynok-e-commerce-v-ukrayne-v-2020-godu-pryznaky-perehoda-y-prognoz-rosta-v-2021/> (accessed 27 April 2021).
7. Syrovatko I. Trendy-2021 dlya predprinimateley: kak lokdaun mozhет drayvit' biznes [Trends-2021 for Entrepreneurs: How Lockdown Can Drive Business]. Available at: <https://ain.ua/2021/01/20/trendy-2021-dlya-predprinimatelej-kak-lokdaun-mozhet-drayvit-vash-biznes/> (accessed 27 April 2021).
8. The eCommerce market in Ukraine. Available at: <https://ecommercedb.com/en/markets/ua/all> (accessed 27 April 2021).
9. Introduction to E-commerce Learning Objectives. Available at: <https://www.semanticscholar.org/paper/Introduction-to-E-commerce-Learning-Objectives/173c819ce3fccafdc4f64af71fd6868e815580ad?p2df> (accessed 20 January 2019).

10. Schneider G. (2015) Electronic Commerce. 11th edition. Cengage Learning, 627 p.
11. E-commerce. Copyright 2014 by Tutorials Point (I) Pvt. Ltd. Available at: https://www.tutorialspoint.com/e-commerce/e_commerce_tutorial.pdf (accessed 1 February 2019).
12. Obzor rynku e-commerce Ukrainy. Associaciya Retejlerov Ukrainy [Review of the e-commerce market in Ukraine. Association of Retailers of Ukraine]. Available at: <http://rau.ua/news/obzor-rynka-e-commerce-ukrainy> (accessed 3 February 2019).
13. Internet Words Stats. Usage and population statistics. Available at: <https://www.internetworldstats.com/> (accessed 26 April 2021).
14. Kinga E. European Ecommerce Overview. Available at: <https://ecommercegermany.com/blog/european-ecommerce-overview-ukraine> (accessed 27 April 2021).

СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ:

1. Kutz M. Introduction to E-commerce: Combining Business and Information Technology. The Bookboon Company. 2016. 209 p.
2. Europe 2020: Ecommerce Region Report. URL: <https://internetretailing.net/retailx-country-reports/retailx-country-reports/europe-2020-ecommerce-region-report#form> (accessed 26 April 2021).
3. Statista. URL: <https://www.statista.com/> (accessed 24 April 2021).
4. E-commerce in Europe 2020. Stockholm : PostNord, 2020. 62 p.
5. Euromonitor International. URL: <https://www.euromonitor.com/> (accessed 26 April 2021).
6. Діденко С. Рынок e-commerce в Украине в 2020 году: признаки перехода и прогноз роста в 2021. URL: <https://ua.news.ru/rynok-e-commerce-v-ukrayne-v-2020-godu-pryznaky-perehoda-y-prognoz-rosta-v-2021/> (дата звернення: 27.04.2021).
7. Сыроватко И. Тренды-2021 для предпринимателей: как локдаун может драйвить бизнес. URL: <https://ain.ua/2021/01/20/trendy-2021-dlya-predprinimatelej-kak-lokdaun-mozhet-drajvit-vash-biznes/> (дата звернення: 27.04.2021).
8. The eCommerce market in Ukraine. URL: <https://ecommercedb.com/en/markets/ua/all> (accessed 27 April 2021).
9. Introduction to E-commerce Learning Objectives. URL: <https://www.semanticscholar.org/paper/Introduction-to-E-commerce-Learning-Objectives/173c819ce3fccafdc4f64af71fd6868e815580ad?p2df> (accessed 20 January 2019).
10. Schneider G. Electronic Commerce. 11th edition. Cengage Learning, 2015. 627 p.
11. E-commerce. Copyright 2014 by Tutorials Point (I) Pvt. Ltd. URL: https://www.tutorialspoint.com/e-commerce/e_commerce_tutorial.pdf (accessed 1 February 2019).
12. Обзор рынка e-commerce Украины. Ассоциация Ритейлеров Украины. URL: <http://rau.ua/news/obzor-rynka-e-commerce-ukrainy> (accessed 3 February 2019).
13. Internet Words Stats. Usage and population statistics. URL: <https://www.internetworldstats.com/> (accessed 26 April 2021).
14. Kinga E. European Ecommerce Overview. URL: <https://ecommercegermany.com/blog/european-ecommerce-overview-ukraine> (accessed 27 April 2021).