DEVELOPMENT MANAGEMENT

Transforming of traditional commerce into e-commerce: Trends in the world and in Ukraine

Vitalii Gvozdytskyi*

PhD in Economics, Associate Professor
Simon Kuznets Kharkiv National University of Economics
61166, 9A Nauka Ave., Kharkiv, Ukraine
https://orcid.org/0000-0003-4686-267X

Abstract. Given the current circumstances of the late 2010s-early 2020s (pandemic, war) in Ukraine, e-commerce has received a stable basis for even greater growth rates, so the implementation of e-commerce tools in businesses of all levels is especially relevant. The goal of the study was the analysis of the development of commerce in the world and Ukraine and analysis of the current state of e-commerce. To achieve the goal, the methods of analysis, synthesis, projection, expert opinions were used. So, the evolutionary nature of transformational processes in commerce in the world is substantiated, the importance of introduction of e-commerce tools in businesses of all levels is proved. A comprehensive analysis of the latest research on the development of e-commerce, dedicated to the improvement of all stages of online commerce is performed. Reasons for the current formation of global world commerce are identified and structured by social, economic and technological nature, the trend of further development of the trade, namely the growing share of online commerce, is highlighted and substantiated. The assessment of the results of impact of COVID-19 pandemic shock on the state of both traditional and e-commerce is carried out, a forecasted state of commerce in the coming years after the pandemic and the perspective tools to be used in e-commerce are projected. The main factors and features of global processes of transformation of traditional commerce into e-commerce are determined. A comparative analysis of the state of e-commerce in the world and in Ukraine, as well as in different product categories, is carried out. Trends in the development of commerce in the South Korean cosmetics market have been identified on the example of the Ukrainian company Lovely Bunny Group LLC. The functional up-to-date trends which allow increase of traffic and sales are described. The advisability of implementation of innovative tools in e-commerce marketing is substantiated. Study results may be interesting for the businesses of different levels to significantly increase sales efficiency in both the short and medium terms

Keywords: analysis; marketing trends; development of commerce; COVID-19 impact; innovative information technologies

● INTRODUCTION

Evolutionary processes inherent in all spheres of human life can be observed throughout history. Theory and practice in the long run are always improving. Primarily it concerns economy. In the field of economics, it has always been as a special feature that businesses are forced to operate in conditions of uncertainty and risk and to adapt to a world and environment that is constantly changing. Now innovations and modern information technologies have covered all areas. New tools to attract customers, artificial intelligence and genetic algorithms to find the right service or product, machine learning algorithms to find a future buyer, big data science to analyse, verify and process

any phenomenon, etc.: today it all already looks not so unique. And given this, it may come as a surprise that in the late 2000s and even early 2010s, buying something in an online store was considered as a risky idea.

Now the situation has completely changed. In report "Key Figures of E-Commerce" (E-Commerce..., 2022) the growth rate of the volumes of electronic (including mobile) commerce is impressive, especially in recent years. It should be noted that with the growth of sales, competition in electronic commerce is growing as well. And, most importantly, this competition extends to the marketing in e-commerce: although the "places" to spread online

*Corresponding author

marketing are relatively limited, the competition among sellers for getting a "click" is very fierce, not to mention the banners on the main pages of marketplaces or, for example, getting a respected "Amazon choice", which will increase sales there tenfold, as Z. Yang (2022) noted in his research.

It should also be noted that competition in e-commerce marketing leads to the evolutionary development of commerce itself: for example, competition forces online platforms to provide potential buyers with a more personalised experience that would improve trade efficiency, conversion rates and, as a result, optimise marketing costs.

In recent years, the spread of online commerce has been particularly noticeable. As mentioned above, business always operates in conditions of uncertainty, and in 2020-2021 the spread of electronic commerce arose primarily due to the adaptation of business to unforeseen circumstances and changes in operating conditions due to the shock of COVID-19. Ch. Wang *et al.* (2020) pointed that a sufficient part of people worldwide is forced to stay at home to avoid spreading of the virus, and not to visit usual stores and supermarkets. Therefore, online purchases became an advisable alternative for customers. The coronavirus pandemic has been going on for more than three years, and predictions about its continuation and how the relevant business situation will change are still unclear. Accordingly, it is not clear how customers' buying behaviour will be changed too. Thus, it can be argued that the trend of increasing the share of e-commerce in total retail trade will continue for a long time. However, the transformation of traditional commerce into e-commerce has not completed yet, and that is why the question of how and in what direction this transformation will develop is relevant for both local and global economy as a whole.

The goal of this study was to determine the direction of e-commerce development in the world and in Ukraine and the direction of relevant further research based on the consolidated analysis of the reasons for the modern formation of online trade and the comparison of different approaches used in different regional and category markets.

● LITERATURE REVIEW

In the mid-2000s economic scientists and experts began to pay close attention to new approaches to global commerce, namely the spread of online commerce as a new sustainable trend. For almost two decades traditional and e-commerce have undergone significant transformations, and recent works and publications (Treiblmaier & Sillaber, 2021; Micol Policarpo *et al.*, 2021; Esmeli *et al.*, 2022) are often devoted to the innovations that are beginning to be used in trade.

Studies (Shareef *et al.*, 2021; Orji *et al.*, 2022; Bhatia *et al.*, 2022) mostly pay attention to the point how trade has changed since the COVID-19 pandemic. All the authors note that after some slippage in 2020, the growth of the share of e-commerce in 2021-2022 will gain momentum (Verdon, 2021). Moreover, I.J. Orji *et al.* (2022) on the example of logistics firms identified that e-commerce has the biggest impact on the effectiveness of the firm and the mediating role of pandemic shock response strategies, and pointed out which tools during the pandemic have the greatest impact on the effectiveness of firms.

R. Esmeli *et al.* (2022) pay attention to modern tools that allow you to get a transaction from potential buyers as early as possible. Researchers provide advice on increasing customer loyalty and appropriate marketing strategies based on previous user purchase forecasts. R.M. Fuller *et al.* (2022) investigate how e-commerce capabilities have differently affected performance outcomes based on observations from major online retailers over the past seven years. The works (Jannach & Jugovac, 2019; Treiblmaier & Sillaber, 2021; Micol Policarpo *et al.*, 2021) are devoted to the review of the latest developments and trends in the use of machine learning, recommendation systems, in order to optimise marketing budgets and to increase the level of conversions of online stores.

Zh. Zhu & S.-F. Lin (2019) are focused on entrepreneur; they highlight the role of entrepreneurial perceptions which allow reaching higher efficiency and new ways of growth just as a response to the transformation of traditional commerce into electronic.

P. Patil *et al.* (2020) arise the topic of growing tendency in the use of mobile payments on example of Indian market and consumers. By implementing of Meta-UTAUT model, they underlined the most significant factors which impact consumer's behaviour and its change under conditions of transforming economy.

G.A. Lucas *et al.* (2023) emphasise the importance of research on m-commerce (mobile commerce), as one of the most promising forms of e-commerce. The investigation highlights the factors which influence consumer's selection of online platform for purchase (traditional electronic or mobile) the most and recommends appropriate practical implications for retailers.

Similarly, the study (Dastane *et al.*, 2023) substantiates that existing customer perceived value scales for traditional retail should be improved according to the current stage of business transformation and adoption to m-commerce. Considering the essential differences between different forms of commerce, the authors propose a multidimensional scale which helps to increase the efficiency of m-commerce.

However, it should be noted that in general, among the current works there are no works to summarise, compare and analyse all the trends in the transition from traditional commerce to e-commerce, especially given the speed of progress in this area. Regional and categorical differences in approaches to online trade are also not taken into account.

● MATERIALS AND METHODS

In the process of research, the following scientific methods were used: analysis, synthesis, projection. So, method of projection was used for consolidation of a necessary data for the further comprehensive analysis. The analysis, as the main method of the research, was carried out for solving the tasks needed for reaching the main goals of the study. Those goals were as following: review of the world economy, its dynamics; an assessment of the impact of shocks from the COVID-19 pandemic; an estimation of the shares of e-commerce and retail trade in terms of countries and an assessment of changes in trends in online trade, taking into account the different stages of development of commerce in different countries, etc.

Also, to expand the analysis and comparison of the state and trends of e-commerce in Ukraine and in the world, including different goods categories, by the methods of synthesis and analysis the assessment of Ukrainian

company "Lovely Bunny Group LLC" (Kharkiv) that imports and distributes Korean cosmetics in Ukrainian market (Online-store..., n.d.) was carried out.

Methods of synthesis and projection were used for highlighting the trends in the process of transforming traditional commerce into e-commerce, for estimation of potential rates of growth and theoretical forecast of sales shares, for defining the expedient directions of further researches in the field of e-commerce in various categories and the countries with use of the newest economic and mathematical methods and models, such as fuzzy neural networks, big data science methods, auto-regressive models.

● RESULTS AND DISCUSSION

First of all, it should be noted that the global economy as a whole is growing from year to year. However, the growth rate is slowing down: according to the IMF from 5.9% growth in 2021 it will change to 3.8% in 2023, and in developed countries the growth rate will fall almost twice (World economic outlook update, 2022). As for retail trade, this segment of the economy has suffered the most due to the shock of COVID-19. Thus, in 2020 (the first year with quarantine restrictions) the volume of retail trade fell by

2.9%. At the same time, for this reason, in 2020 the share of online trade in total retail increased the most: from 13.8% to 17.8%, and in monetary terms – from 3.35 to 4.28 trillion US dollars (Verdon, 2021). As mentioned above, a decade ago, very few people used online shopping. According to a study (Chaffey, 2021) until March 2020 (when the first restrictions were massively introduced), about 9% of Americans and 15% of Britons have never bought anything online. Therefore, it can be assumed that the basis for further rapid growth of online sales is very large.

Indeed, these volumes form a steady linear upward trend. As noted in (E-Commerce..., 2022), the number of online consumers is growing significantly every year, and reached 2 billion customers in 2020. Moreover, it showed a growth rate of over 25%. Based on data (Verdon, 2021), the total volume of retail sales of e-commerce since 2014 (with forecasts for 2022-2025) are shown in Figure 1.

Thus, as can be seen from Figure 1, there is a constant very high rate of growth in electronic commerce. For 11 years, the average annual rate is an impressive 46.0%.

A similar trend is in the share of e-commerce in general retail. The dynamics of the growth of e-commerce share in the total retail for 2009-2021 and the forecast values of the share until 2025 are shown in Figure 2.
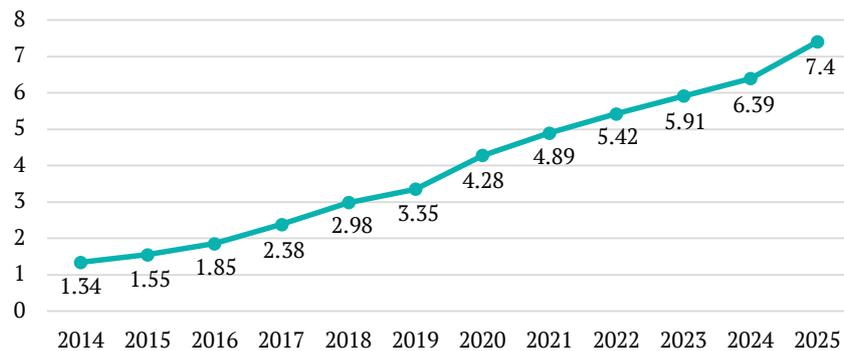

Figure 1. Retail sales of e-commerce in 2014-2025, trillion US dollars

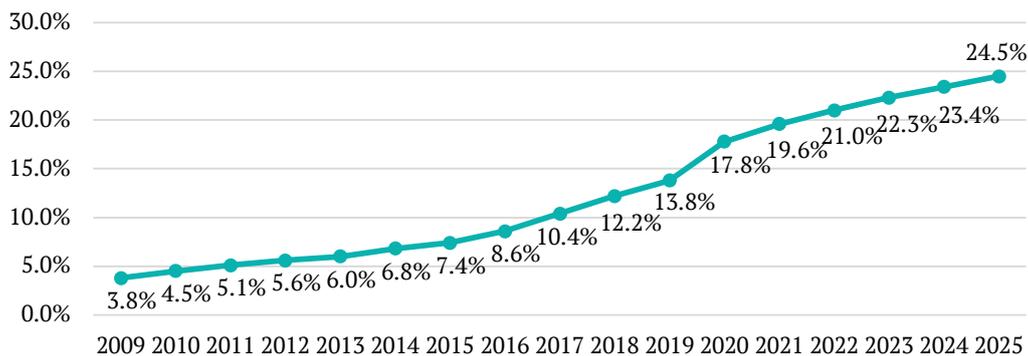**Source:** compiled by the author based on J. Verdon (2021)

Figure 2. The share of e-commerce in total retail trade in the world in 2009-2025

Source: compiled by the author based on D. Chaffey (2021)

As can be seen from Figure 2, in 2020 there was the greatest growth of e-commerce. At the same time, we can say that both before (during 2009-2019) and after (2021-2025) the trend was growing linearly. In 2012, the average

share in the United States was 9.7%, in the United Kingdom – 10.6%, and in the European Union – 4.8% (the lowest share). By many aspects, the leading country in e-commerce is still the United States (which has almost a quarter of the

total sales), and, as shown in research (Chaffey, 2021), in the 1st quarter of 2021, the growth of e-commerce in the US market was 39% compared to 2020, with a growth of 38% worldwide. In the USA the share of e-commerce sales is also growing every year and, by forecast, will reach 23.6% by 2025, as shown in Figure 3.
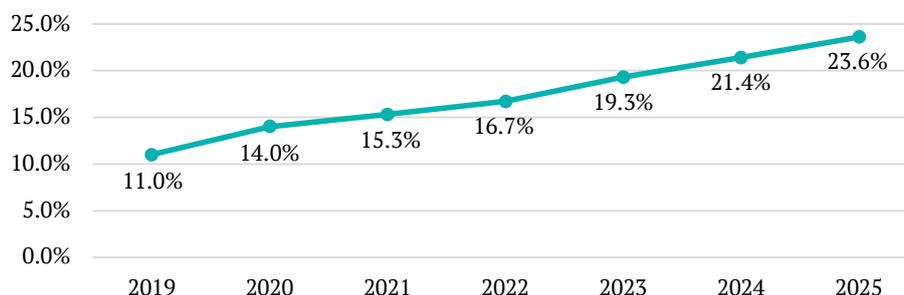

Figure 3. Forecast values of the share of e-commerce sales in the United States in 2019-2025
Source: compiled by the author based on D. Chaffey (2021)

In other words, at the beginning of the online sales era (2000-2010), the share of e-commerce in the United States was much higher than the world average, and in the last decade the figures have been roughly comparable, but the United States still accounts for about a quarter of all volumes of e-commerce, and it is projected that in 2022 for the first time the volume of e-commerce in the United States will exceed 1 trillion US dollars. In general, the growth rate in 2022-2025 is projected with some decline, but it will be at least 10% annually (Chaffey, 2021), and in the coming years the share of e-commerce will reach 25% of total retail sales. European countries (excluding the United Kingdom) show a smaller share (in 2019 it was only 10.1% in the EU), but have higher growth rates (from 4.8% in 2012, i.e. growth of 15.7% annually) (Gvozdytskyi, 2022).

All the above information allows us to conclude that the global retail economy is changing rapidly. And the COVID-19 pandemic was not a trigger, but another (and global, importantly) reason for all companies to pay the most attention to e-commerce. And in recent years, the leaders of the global e-commerce market (Amazon and Alibaba, which have more than 5 billion unique users each month) entered the TOP of the world's largest companies (Yang, 2022).

The author believes that the main reason for the trend of high rates of growth of e-commerce in all spheres is the total informatisation in the world, in particular: rapid expansion of Internet access in the world with the addition of space technology (hundreds of new satellites each year); rapid development of the mobile sector, so that all people cannot imagine life without a smartphone; sufficient growth of information and digital technologies, which allows users to choose from a variety of online platforms (to view, compare and purchase any goods and services), etc.

Also, according to the author, at the beginning of the era of online sales, one of the reasons for the rapid growth in the number of digital buyers and sellers was the creation, development and distribution of PayPal digital payment platform. After all, PayPal solved one of the biggest problems that was common among online stores at that time: potential buyers did not use online stores because they were afraid that: purchased goods or services will not suit them, because before buying they physically "did not test them"; after the transaction, the seller will simply disappear. And PayPal made a 100% guarantee of all payments and was completely on the side of the buyer, that is why it quickly gained an excellent reputation (Preibusch *et al.*, 2016).

Thus, today PayPal is still one of the leading mobile payment platforms worldwide and ranks third after credit and debit cards and ahead of all other payment methods. Volumes of transactions through PayPal in 2014-2021 are shown in Figure 4.

Figure 4. Dynamics of transactions through PayPal in 2014-2021, billion US dollars
Source: compiled by the author based on E-Commerce... (2022)

Thus, we can see that every year the total volume of transactions through the PayPal system increases significantly (average growth rate – 66.4%). In 2021, the total number of transactions was more than 16 billion, and at the end of 2021 the number of active users was 426 million (E-Commerce…, 2022).

For the reasons mentioned above, the Asia-Pacific region is constantly showing the greatest growth in e-commerce, especially India and China (Patil *et al.*, 2020). These are two countries that account for almost a third of the world's population, they are among the largest in area, and until recently in many areas there was no good quality access to the Internet. Nowadays in these countries the availability of cheap mobile broadband networks brings the largest number of new digital buyers worldwide.

It should also be noted that if at the beginning of the transformation of traditional commerce into e-commerce (early 2000s) the change of purchasing for the buyer was the use of desktops, now the transformation of e-commerce involves using a smartphone instead of a desktop computer. And in some countries in the Asia-Pacific region, the share of purchases via smartphone reaches 75% (E-Commerce…, 2022; Nofrizal *et al.*, 2023).

And it can be argued that currently one of the most noticeable trends in the world of e-commerce is the growing use of mobile devices. For example, in 2021, smartphones accounted for almost 70% of all retail website visits worldwide, although visits to desktops and tablets led to higher conversion rates in 2020 (E-Commerce…, 2022). It should be noted that the average cost of online shopping orders via smartphones and tablets still lags behind traditional online orders via desktops, but the innovative component of mobile devices is constantly progressing altogether with combining improved site usability and annual increase in average smartphone screen sizes. So, we can conclude that in the future there will be a steady trend of increasing the share of purchases via mobile devices and the level of conversion through them.

Speaking about the trends of commerce in Ukraine, it should be noted that in general the country has noticeable global trends: the ever-increasing share of e-commerce, the share of smartphone use (although it is lower than the world average), the leading role of marketplaces and more. Thus, in 2020: the share of e-commerce in retail trade was 8.8% (in 2019 – 7.0%); sales were 4 billion US dollars (in 2019 – 3.3 billion); the share of mobile devices is 51% (Omelchuk, 2021). Following these indicators, it can be seen that e-commerce in Ukraine lags far behind the world average (for example, this share of e-commerce was the world average in 2017).

Another trend in Ukrainian e-commerce is the transformation of traditional online stores into multi-category marketplaces (Gvozdytskyi, 2022). Bright examples are Rozetka, Epicentr, Allo stores, which are the leaders in online trade. If at first these sites worked according to the usual scheme of the online store (minimal own stock of the goods; the biggest part of sales was got after receiving confirmation from suppliers; limited number of product categories (for example, Epicentr had only construction products, etc.), now they are full-fledged large-format marketplaces, where you can buy almost any product or even service. Together with other leaders of online sales in Ukraine (Prom, Bigl, Zakupka, etc.) in general in Ukraine 82.6% of online sales are marketplaces (E-commerce in the total turnover…, 2021).

Online electronics stores account for about 14.8% of sales (the largest ones are: Foxtrot, Eldorado, Comfy, Moyo, etc.). And it should be noted that historically, the largest share of sales in e-commerce in Ukraine was occupied by electronics, and this status was maintained in 2022. Other leading categories are clothing, cosmetics, toys, etc.

Below the analysis of e-commerce in Ukraine in the one of the most dynamically progressing category of "cosmetics" is presented. In general, this category has similar trends with others: the largest offline players are actively developing their own online stores, but still in cosmetics, these players pay less attention to e-commerce. Thus, the largest online sales sites for cosmetics in Ukraine are: Make-Up (focus only on cosmetics and perfumes, only online), Eva and Prostor (the largest offline networks), Rozetka (the largest online store in Ukraine in all categories in general), Prom (one of the largest marketplaces), Parfums, etc.

Among all sub-segments of the "cosmetics" category in Ukraine, cosmetics from South Korea have shown the highest growth rates in recent years. These cosmetics combine all the advantages of modern technology and are very popular both among the younger generation because of its innovation and among older people because of its functionality.

A characteristic feature of this market in Ukraine is that, unlike many others, the formation of the Korean cosmetics market in Ukraine began with e-commerce. And in traditional commerce until 2019, these products were not presented in the largest chain networks.

Therefore, it should be interesting to have a look at an example of one of the leaders in the Ukrainian market of Korean cosmetics – Lovely Bunny Group LLC, which began operations in 2014 and sells these products in their own online and offline stores, and through marketplaces and wholesale distribution.

The shares in sales of traditional and e-commerce of the company for the period 2014-2022 are presented in Table 1.

Table 1. The share of e-commerce of "Lovely Bunny Group" in 2014-2022

Year	E-commerce		Offline trade
	Total online	including marketplaces	
2014	100.00%	0.00%	0.00%
2015	100.00%	0.00%	0.00%
2016	89.29%	0.00%	10.71%
2017	81.71%	0.00%	18.29%
2018	71.30%	0.00%	28.70%

Year	E-commerce		Offline trade
	Total online	**including marketplaces**	
2019	80.95%	0.09%	19.05%
2020	72.02%	3.93%	27.98%
2021	67.19%	44.28%	32.81%
2022	88.63%	53.25%	11.37%

Source: compiled by the author based on Online-store… (n.d.)

As can be seen from Table 1, trends in the sales channels of Korean cosmetics in Ukraine differ from other categories: for example, having started offline sales in 2016, their share in total volumes has been constantly increasing (except in 2019). And the most rapid is the growth of sales through marketplaces: from 3.93% in 2020 to 44.28% in 2021. It can be assumed that offline growth is due to the relative youth of this market in Ukraine with the general predominance of traditional commerce in Ukraine and very low representation of this segment offline. And the growth of marketplaces is due to the above reasons (pandemic, the general mood of commerce for the transformation into e-commerce). But it should be noted that despite the overall trends, sufficient decline in offline share in 2022 is related with Russian aggression and start of the war against Ukraine, because the company, based in Kharkiv, had to move its business.

In general, it should be noted that e-commerce does not only mean that the consumer buys a product or service not in a traditional store, but online. In e-commerce there is also a transformation of the rules of such trade: first of all, marketing strategies of sellers and behaviour before and at purchase by consumer.

Regarding marketing: search traffic provides the most users in e-commerce stores (about two thirds in total – 75% in the example of "Lovely Bunny Group"), and around 30% of the traffic is generated from contextual advertising. An interesting feature: every second potential buyer firstly tries to find and evaluate the necessary product on the largest sites (Amazon – in the US, Rozetka – in Ukraine), and then begins to actively look for it in different stores, to compare prices and other properties (73% of buyers use several channels in the process of search and purchase) (Harte, 2022). It is also difficult to overestimate the role of an electronic word of mouth and of the feedbacks: the same number of customers need an average of 6 real reviews from other customers, and for 64% of users the probability of buying increases if there is a video-feedback or video review (Gregoriades & Pampaka, 2020).

Social networks are very important now. In addition to their own huge traffic and the fact that they often already have a built-in marketplace, for other e-commerce sites, they act as both traffic generation and targeted advertising. They are also aimed at "facilitating" the whole purchase process. For example, in recent years, the buyer often has not been in need to register as a buyer in the online store – this uses the signing in through social networks.

In turn, brands use social networks to promote their products through influential bloggers (because social evidence from influencers increases sales easily), and video hosting (such as YouTube) actively disseminates not traditional blog reviews about the product, but more original product placements. In addition, "real-time sales" technologies have been increasingly used as marketing in recent times, when watching a live broadcast, the buyer can make a purchase at the same time (Milne, 2022; Liu & Wang, 2023).

As mentioned above, such a rapid spread of e-commerce is due primarily to innovative information technology. On the one hand, these technologies are aimed at attracting a potential buyer "to the trap", having previously fully studied it, and on the other – greatly facilitate and even make the buying process non-routine. For example, the e-commerce of the biggest giants uses Metauniverse, augmented realities, gaming platforms. And search services now allow you to find where to buy the desired product, simply by providing a photo of this product to a service.

It should be noted that other, more traditional technologies still have a significant impact in e-commerce. Although search traffic takes up more than two-thirds, loyal customers are always highly valued, so loyalty programs remain and are modernised. They are often combined with an individual approach and personal consultations. J. Ferreira *et al.* (2023) try to direct the businesses' focus on their ability to implement new digital features; they substantiate that in modern circumstances the company's competitiveness strengthens with implementing the innovative information technologies and digitalisation.

Although the share of e-commerce in trade is becoming more sufficient every year, offline stores still show huge volumes of sales. Results of the research (Higueras-Castillo *et al.*, 2023) present similar conclusions, especially noting the differences in shopping behaviours not only between online & offline purchasing but also between different countries and countries' cultures. That's why, as the authors conclude, it is of a high importance to analyse the most valuable factors which impact the intent to make purchase via e-commerce instead of an incentive to continue buying in physical stores.

At the same time, it should be noted, that digital transformation and e-commerce evolution requires the development of appropriate education of existing and potential entrepreneurs (Ho & Chen, 2023). Such education must provide up-to-date e-commerce competencies which contribute the performance the most. The author considers this area as a promising one for future research.

As it was mentioned above in the analysis of the reasons of formation of the current state of electronic commerce, commerce transformation is an evolutionary process, it develops under changing conditions. And researches R. Nicewicz & B. Bilska (2021), S. Modgil *et al.* (2022) confirm the results that changing conditions bring both obstacles for the development but the new opportunities for the

businesses as well. In the work (Nicewicz & Bilska, 2021) on an example of different market (food products in Poland) it is shown that long-term success of a business is related with the presence of business' ability to adapt, in terms of e-commerce – adaptation to the change in consumer's habits and behaviour during COVID-19 pandemic.

To reach this, the authors D. Koehn *et al.* (2020), Y. Xiao *et al.* (2023) propose to implement new algorithms for analysis of consumer's behaviour. Based on clickstream data, it is possible to model the influence trends and to create appropriate marketing campaigns. Moreover, improved campaigns should be based on the forecast of future engagement behaviour, which may increase the revenues significantly.

As it was mentioned above, one of the marketing trends in e-commerce is the use of livestreaming commerce. But the factors which impact on customer engagement behavior and purchase intention have not been studied deeply yet. L. Liu *et al.* (2023) highlight the importance of individual competencies of streamers for reaching higher sales performance by deep learning method and developing an econometric model to analyse the effects of the streamer's appearance on sales.

The work (Li & Wang, 2023) extends the research of the impact of individual competencies on e-commerce efficiency by studying the role of chatbots language style. The authors substantiate the high importance of chatbots especially in cases when customer is not familiar with the brand. They conclude that chatbot language style has a significant influence on consumer's continuance of interaction and on the attitude to the brand, which should be useful for developing optimal marketing strategies.

Thus, it can be summarized that being a modern trend in trade, e-commerce requires implementation of up-to-date methods as well. And a very big part of recent works (Leung *et al.*, 2019; Zhang *et al.*, 2021; Salamanis *et al.*, 2021) is devoted exactly to the usage of different technologies for evaluation and making appropriate managerial decision in e-commerce. Y. Xiao *et al.* (2023) substantiate the biggest role of artificial intelligence in commerce. On an example of such an option of e-commerce as fulfilment centres, they discuss a system of different features and resources which must be "orchestrated" by both information technologies and human, to be able to generate strong capabilities, such as learning, forecasting and decision support. Paper (Salamanis *et al.*, 2021) studies a traffic forecast by auto-regressive modelling and the use sparse least squares method; authors indicate that these methods allow to make faster models with remained balanced accuracy.

The study (Leung *et al.*, 2019) arises a relevant topic of the complexity of e-commerce logistics. Speed of order processing, its handling and delivery becomes a must-have for every business, and due to this it is important to create and implement an appropriate decision support system, with forecasting of e-commerce order arrivals and their further grouping into batches. For this purpose, the authors propose to use a set of econometric models, based on adaptive neuro fuzzy method, ARIMA-models, auto-regressive models and a hybrid model.

The work (Cai *et al.*, 2023) investigate the most valuable factors which have the biggest influence on the sales. Using partial least squares structural equation modelling, it has been concluded that product description informativeness and richness impacts on sales the most. S. Zhang *et al.* (2021) analyse the market planning in e-commerce. To achieve this task, they recommend to perform transaction trend forecasts using different models based on enhanced whale optimisation algorithm with support vector machine.

Thus, it can be concluded that a promising area for research in the field of e-commerce is a development of a set of economic and mathematical models, which allow to select the factors which influence the sales performance the most, to forecast different marketing indicators of commerce, to simulate different scenarios, to support decision making.

● CONCLUSION

The comprehensive analysis of a modern stage of commerce development, which is stated as a study's goal of this work, has been carried out. It can be concluded that today the biggest players in the world economy have started their e-commerce. And the progress in this area is tremendous. The main reason for the growth of online commerce is significant progress in digitalization and implementation of innovative information technologies in the world. The role of e-commerce during the coronavirus pandemic, which has had a huge impact on consumer behaviour and has become a real security card for global business, is particularly significant. However, the transformation of traditional commerce has not completed yet, and a comparative analysis of the state of e-commerce in the world and in Ukraine, as well as in various product categories proved that for both micro and macro levels, local and segmental features should be taken into account, and an optimal balance should be found.

In general, global e-commerce traffic has a fixed growth trend. Therefore, for all types of business a short-term priority is the rapid development and implementation of new technologies for the promotion and selling of products on the Internet in all online channels. First of all, e-commerce marketing tools should be aimed at providing potential buyers with a more personalised experience that would improve the efficiency of trade and the level of conversions. Such state-of-the-art tools should be used through the implementation of neural network technologies, machine learning, recommendation systems based on artificial intelligence, big data science methods and auto-regressive models. That is why in order to increase the effectiveness of e-commerce, it is advisable to perform further research aimed at forecasting marketing indicators of e-commerce using methods of economic and mathematical modelling and modern models of socio-economic forecasting.

● CONFLICT OF INTEREST

The author declares no conflict of interest.

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Трансформація традиційної комерції в е-комерцію: тренди у світі та в Україні

Віталій Сергійович Гвоздицький

Кандидат економічних наук, доцент
Харківський національний економічний університет імені Семена Кузнеця
61166, просп. Науки, 9А, м. Харків, Україна
https://orcid.org/0000-0003-4686-267X

Анотація. Зважаючи на сучасні обставини в Україні кінця 2010-х – початку 2020-х років (пандемія, війна), е-комерція отримала стійке підґрунтя для ще більших темпів зростання, тому впровадження інструментів електронної комерції в бізнеси будь-яких рівнів є особливо актуальним. Метою статті був аналіз питання розвитку комерції в світі та Україні та аналіз причин актуального стану е-комерції. Для досягнення мети методи аналізу, синтезу, проекції, експертних думок були використані. Було обґрунтовано еволюційний характер трансформаційних процесів у комерції в світі, доведено значущість впровадження інструментів електронної комерції в бізнеси будь-яких рівнів. Проведено комплексний аналіз останніх досліджень із питань розвитку е-комерції, присвячених удосконаленню всіх стадій онлайн-торгівлі. Виявлено та структуровано причини сучасного формування глобальної світової торгівлі за соціальними, економічними та технологічними чинниками, виділено та обґрунтовано тенденцію подальшого розвитку торгівлі, а саме зростання частки онлайн-торгівлі. Проведено оцінку результатів впливу шоку від пандемії COVID-19 на стан як традиційної, так і електронної комерції, зроблено теоретичний прогноз щодо стану комерції в найближчі роки після пандемії та перспективні інструменти для використання в електронній комерції. Визначені основні чинники та особливості глобальних процесів трансформації традиційної комерції в електронну. Проведено порівняльний аналіз стану е-комерції в світі та в Україні, а також у різних товарних категоріях. Визначені тренди розвитку комерції на ринку південнокорейської косметики на прикладі української компанії ТОВ «Лавлі Банні Груп». Описано функціональні сучасні тенденції, які дозволяють збільшити трафік і продажі. Обґрунтовано доцільність впровадження інноваційних інструментів маркетингу електронної комерції. Результати дослідження можуть бути цікаві для бізнесу різних рівнів з метою значно підвищити ефективність продажів як у короткостроковому, так і в середньостроковому періодах

Ключові слова: аналіз; маркетингові тенденції; розвиток комерції; вплив COVID-19; інноваційні інформаційні технології