

# THE SYMBIOSIS BETWEEN E-COMMERCE AND COURIER SERVICES IN MODERN CONDITIONS

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*Abstract:* The purpose of this paper is to trace the contemporary condition and mutual dependence of e-commerce and courier services, as well as perspectives for their development. Thus, it is necessary to examine the current state of e-commerce and courier companies faced with the challenge of working together to achieve high market shares and satisfy customer requirements, both in terms of products exchanged with sellers and services provided by couriers. Based on research carried out for the 2014–2024 period, we reach the conclusion that the trends for both e-commerce and courier services have been positive, with trade ahead in its development. The main prospects we associate with the future of courier services concern a reduction of human participation in delivery processes under the influence of technological developments in the form of robotics, artificial intelligence, big data and analytics, transport management systems, etc.

*Keywords:* e-commerce; courier services; symbiosis

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## Introduction

The actuality of the topic stems from the fact that in recent years e-commerce has taken a significant market share, and its permanent imposition as an alternative to conventional trade is directly related to the development of courier services, which have usurped the role of the trader in terms of direct contact with the client, of the type "face to face". This made it necessary to deepen the partnership between e-tailers and couriers to achieve the common goal of complete satisfaction of their customers, who, on the one hand, buy the product and on the other use the delivery service.

The purpose of the present paper is, based on a theoretical overview and empirical

research, to trace the state and mutual dependence of e-commerce and courier services in modern conditions and, on this basis, to outline prospects for their development.

The tasks that should be solved to achieve the goal thus formulated can be reduced to the following more important:

1. To provide a theoretical overview of the relationship between e-commerce and courier services.
2. To analyse the state and development on a global scale of e-commerce and courier, express and parcel services during the period 2014–2024.
3. To outline development prospects for e-commerce and courier services.

The object of research interest is e-commerce and courier services, and the subject of research is their development and mutual influence during the selected period. For the purpose of analysis, the dynamics in the development of the size of the courier services market are measured using empirical data for courier, express and parcel services (CEP services).

The period of the current study is limited between 2014 and 2024 and includes a number of events directly and indirectly affecting the development of e-commerce and the delivery of courier services. During this period, Crimea was annexed by Russia (2014), a global health crisis broke out (2020–2021), the European Commission proposed the first regulatory framework for artificial intelligence (2021), Russia invaded Ukraine (2022), inflation rose (2022–2023), the military conflict between Israel and Hamas (2023) broke out, etc., which reflected in a number of serious economic and social consequences that led to changes in all sectors of the economy, including e-commerce and courier services.

The chosen topic allows for studies with practical-applied significance to be made, which will follow the state and development of e-commerce and courier services using an appropriate set of scientific methods.

## **1. Theoretical foundations of the relationship between e-commerce and courier services and methodology of analysis**

Many authors representing different scientific schools come to the conclusion that the relationship between courier services and e-commerce is very close and it will continue to deepen under the influence of various factors of a health, economic, geopolitical and social nature. According to Karcz and Ślusarczyk, the courier service market is booming worldwide and especially in developing countries, driven by the increasing penetration of the Internet and the popularity of online commerce, accompanied by an increasing population belonging to the middle class, prosperity and improved living

standards (Karcz & Ślusarczyk, 2016). The authors highlight economic and demographic factors, which are seen as a serious mechanism pushing courier companies to success. Other researchers, such as Ejdys and Gulc, also examine the increasing popularity of online shopping and its transformation into one of the main driving forces for the development of courier services in recent years. According to them, a few years ago, courier companies were not interested in cooperating with e-commerce, due to the low scale of Internet sales, high fragmentation of supplies and the unique needs of individual customers (Ejdys & Gulc, 2020). Therefore, the authors notice that the relationship between the two sectors is the basis for the development of e-commerce, and it is this that attracts couriers to cooperate with online merchants. Bulgarian authors also explore these issues and come to the conclusion that "E-commerce is one of the main drivers of the global courier service industry" (Otsetova & Dudin, 2017). Dragomirov examines the main areas of interaction of e-stores with courier organisations in our country and concludes that "with regard to the organization of deliveries in Bulgaria, there are significant opportunities for the integration of electronic stores with courier organizations" (Dragomirov, 2020).

The influence of commerce on the development of courier services is of paramount importance, but the efforts made by couriers to seriously expand their portfolios of services should not be ignored, thus giving serious support to e-commerce as well. One such example is cited by Izzah, Rifai, and Yao, who point out that Logistic Service Providers (LSPs) are starting to offer Cash on Delivery (CoD) in e-commerce activities to support their customers (Izzah et al., 2016). The emphasis here is not so much on the specific service, but on the desire of the couriers to develop, and they do so in many directions, thereby contributing to the achievement of the general goals of the trade. At the moment, it is noticed that couriers are relatively quick to adapt to new technologies by expanding the variety of services they offer, for example: PUDO – Pick Up Drop Off point or this is a delivery point close to home, they actively use drones or robots as couriers, find a serious application field of ICT, mobile applications, the ability to manage shipment tracking, the ability to generate reports, the constant contact with the client, etc. (Gulc, 2017).

The authors' thesis is that e-commerce and courier services are interrelated in capturing new market shares, with trade playing a leading role.

Content analysis will be used to prove the thesis in the course of development, which will allow to establish connections and dependencies between the objects of research; correlation analysis to estimate the strength of the relationship between e-retail sales and the size of the courier, express and parcel services market; dynamic statistical analysis to track trends and regularities in the market processes being studied; graphical method, in order to visually present the empirical information; a

comparative method that will make it possible to compare the development of e-commerce and courier, express and parcel services; deductive method that will be applied to examine the information on the development of the markets for the two economic activities.

The indicators that will be tracked dynamically are the following: Retail e-commerce sales worldwide; Courier, express and parcel (CEP) market size worldwide; Growth rate (increase or decrease) of retail e-commerce sales worldwide; Growth rate (increase or decrease) of CEP market size.

The information array on which analyses of the state and development of e-commerce and courier services are based is provided by Statista and the Communications Regulatory Commission Reports.

The limitations accompanying the development are primarily related to the insufficient variety of available up-to-date information on the issues under consideration, which does not reflect on the quality of the analyses.

## **2. Status and development of e-commerce and courier express and parcel services during the period 2014–2024**

Changes in the environment in recent years have led to a number of challenges for businesses and to the deepening of cooperation between e-commerce and courier services in search of adequate market positioning. The objective circumstances, mainly related to the health crisis and the packages of measures that accompanied its overcoming, contributed to the permanent reorientation of many consumers towards purchases in an electronic environment. As a result, there is considerable interest in this distribution channel given its advantages, which provide it with a significant market share. A special role in the realisation of sales on the Internet is played by the providers of courier, express and parcel services, which mediate a very large part of the transactions concluded between merchants and their customers.

It is important to note the fact that these business activities are in a symbiosis, which, at least at the moment, has no serious alternative, except for the organization of its own delivery service by the e-merchant itself, and their development is interrelated, from where they should be analysed in the context of their combined influence on the purchase decision, order fulfilment and customer satisfaction with both the product and the service. The complex decisions made by e-tailers and their partners in the face of courier companies arise from the need to combine products and services that meet the expectations and requirements of the end user.

Market conditions and customer needs are changing, which requires businesses to respond adequately by offering solutions in response to new requirements. As a result

of the efforts of companies and changes in the environment, an acceleration in the development dynamics of both e-commerce and courier services is noticed, which reflects on the size of their market, outlining an upward trend that is expected to be maintained in the short-term period (see Table 1).

The closeness of the relationship between e-commerce retail sales and CEP market size over the period 2014–2024 was assessed using Pearson's correlation coefficient. The obtained estimate of the correlation coefficient is  $R = 0.9967$ , which indicates that there is a direct in direction and very strong relationship between CEP market size and retail sales of e-tailers. The coefficient of determination ( $R^2$ ) of 0.993 indicates that over 99.3% of the changes in CEP market size can be explained by changes occurring in e-commerce retail sales during the period studied and vice versa.

Table 1. Dynamics in the development of retail e-commerce sales and the courier, express and parcel market size worldwide in the period 2014–2024

Years	Retail e-commerce sales	CEP market size	Growth rate (increase or decrease) of retail e-commerce sales (%)	Growth rate (increase or decrease) of CEP market size (%)
	1	2	3	4
	Billion USD	Billion EUR	chained	chained
2014	1,336	221.29	-	-
2015	1,548	237.74	15.87	7.43
2016	1,845	257.61	19.19	8.36
2017	2,382	282.32	29.11	9.59
2018	2,982	306.18	25.19	8.45
2019	3,351	342.61	12.37	11.90
2020	4,248	375.50	26.77	9.60
2021	5,211	403.61	22.67	7.49
2022	5,717	433.82	9.71	7.49
2023	6,310	466.30	10.37	7.49
2024	6,913	501.20	9.56	7.48

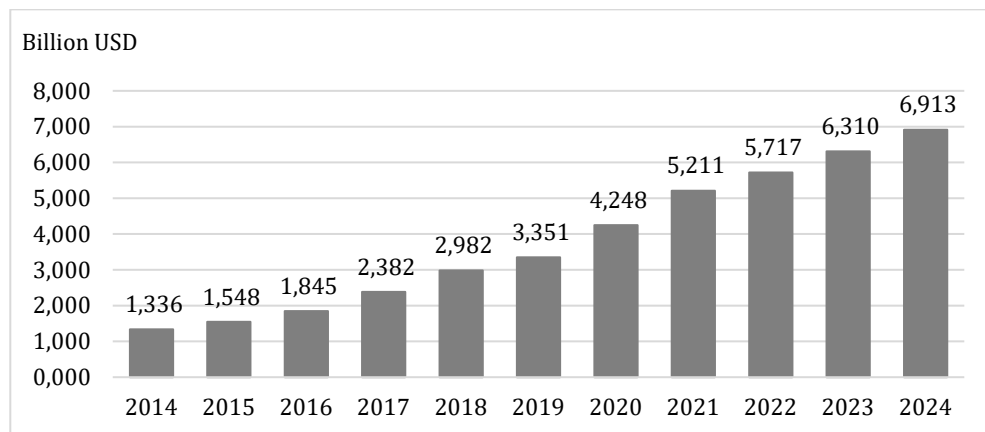
Source: Author's calculations based on a database from Statista (2023a; 2023b).

The influence of all factors other than those used to obtain the estimate is negligible, as indeterminacy is estimated at levels below 1%. In order to establish the statistical significance and confidence intervals of the calculated correlation coefficient, the estimate of the control variable  $t_{\text{emp.}} = 36.8938$ , which we compare with the theoretical

value for initial data  $\alpha = 0.05$  and  $k = 9$ , and we find that  $t_{\text{theory}} = 2.262$ . With a risk of error of  $\alpha = 0.05$ , we reject the null hypothesis as untenable, since the empirical characteristic is greater in absolute value than the derived theoretical value by Student's test ( $36.8938 > 2.262$ ) and this allows us to state that the calculated correlation coefficient is statistically significant, that is, the investigated relationship between CEP market size and e-commerce retail sales is statistically significant.

As can be seen from the data in Table 1, it is an indisputable fact that e-commerce has the leading role in this partnership, and courier companies perform supporting functions in the delivery of the customer's chosen product. However, we should not forget that the customer expects both the product to meet his expectations in the process of operation and to be delivered in accordance with the agreed terms, place, price, condition, etc. Therefore, although secondary at first glance, it is the role of couriers; in practice, the quality of their services depends on the selected product being handed over to the customer when he needs it and in a form suitable for use.

On a global scale, e-retailing of consumer goods is developing quite intensively, with each passing year, the value of online sales is steadily increasing, and in 2021 it will reach 5,211 billion USD (see Figure 1). For the period 2014–2021, realised products by electronic means increased by 3,875 billion USD or 3.9 times, which is a serious growth against the background of a 1.4 times increase in total retail sales in the world during the same period (Statista, 2023c). This confirms e-commerce as a dominant non-store form of commercial exchange, applying modern information and communication technologies that significantly facilitate the realisation of transactions.



Source: Statista (2023a).

Figure 1. Dynamics in the development of retail e-commerce sales worldwide in the period 2014–2024

One of the main factors for the success of e-commerce is the safety and facility of payments in an electronic environment, which are constantly being improved and guarantee buyers a fast and secure transfer of funds in the conditions of the Internet. "Increase in the procedure of online payment for the purpose of online shopping is increasing the rate of sales as this method is very effective for the people to save time and is a convenient way of making any payment and shopping" (Alzoubi et al., 2022). At the same time, the rapid growth of online sales in recent years is primarily related to an increase in the number of Internet users worldwide and the availability of more and more end devices, allowing easier access to the electronic market. Within the period under study, people worldwide who use the global network increased from 2,750 million people in 2014 to 4,901 million in 2021, or they represent 59.5% of the world's population (Statista, 2023d).

This means that 6 out of every 10 people on Earth are potential e-shoppers. On the other hand, one should take into account the significant popularity of virtual merchants and the growing trust in them, both among older people, who increasingly shop online, and among young people, who grew up with the Internet and accept it as an inseparable part of their everyday life.

Global e-retail sales have seen significant growth during the coronavirus pandemic, which has affected populations in all countries around the world. The largest absolute increase in e-sales is available within the period 2020-2021, when their value increases from 4,248 billion USD to 5,211 billion USD for one year. As a result of the introduced restrictions and the need for social distancing, more and more users are reorienting themselves to purchasing part of the necessary products electronically, which directly reflects on the realised volume of Internet sales. "During the lockdown, online purchases and home delivery have experienced an unprecedented rise; as a result, some companies have transformed the COVID-19 outbreak threat into an opportunity by increasing their business volume" (Paraschiv et al., 2022). However, this involves overcoming a number of difficulties and limitations. For electronic agents of exchange during the pandemic period, they refer to difficulties with the supply of some goods, the high demand of which causes a state of shortage in the market, problems with the transportation of orders, mainly in cross-border e-sales, a shortage of human resources to fulfil the excessive number of requested orders, etc. In this regard, it should be noted that the extremely important role of courier companies, especially during the coronavirus crisis, is contributing to timely delivery and meeting the needs of customers. At the same time, the health of the buyers is protected due to their lower attendance at physical retail outlets.

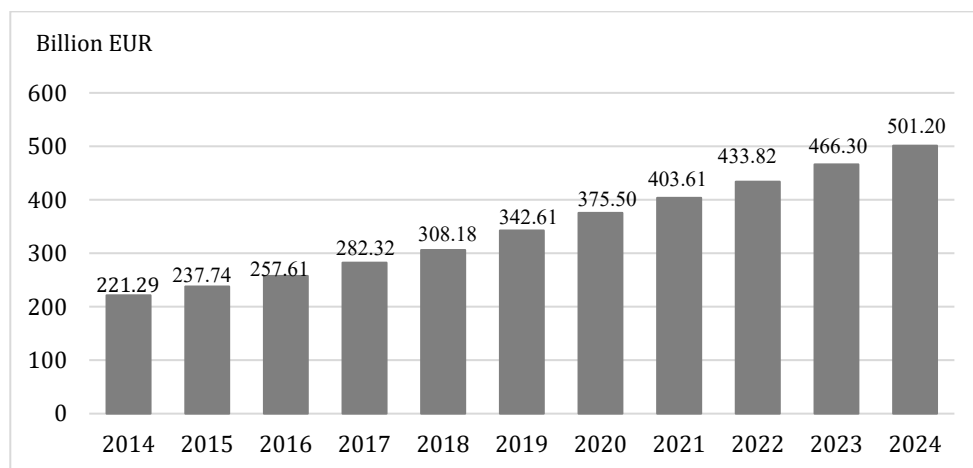
Over the next few years, forecasts show that global online retail sales will continue to grow, reaching 6,913 billion USD in 2024 (Figure 1). These values are indicative of the

continuous positive development of e-commerce, its rapid growth and establishment as an increasingly preferred form of exchange. This implies the occurrence of a number of changes in the behaviour of e-merchants and customers in the future regarding the applied business models, as well as the user path followed.

In today's conditions, one of the scarcest resources is time, which can also be defined as a factor that has a great influence on the use of couriers in establishing the relationship between seller and buyer. The interest in the portfolio of services offered by courier operators stems from the main specific feature of these services, which is related to the most important criterion for their evaluation – the speed of delivery.

There are many factors that shape the delivery time, but the most important of them are: distance, direction of movement (in the direction of rotation of the earth's axis or vice versa), business activity of the destination, the logistics network of the company and the quality of its transport fleet, weather conditions, traffic conditions, delays in flight schedules, customs checks for international deliveries, etc. (Logistika, 2011).

It is observed that during the period 2014–2024, the growth of the courier, express and parcel services market on a global scale amounts to 279.91 billion EUR, which registers a more than twofold increase in the size of this market (Figure 2).



Source: Statista (2023b).

Figure 2. Dynamics in the development of the CEP market size worldwide in the period 2014–2024

It is noteworthy that there are no years marked by growth that is much greater compared to previous years, even during the pandemic years 2020–2021, the relatively uniform increase is maintained. Therefore, customers' interest is not dictated by force



majeure circumstances with short-term impact, but by cardinal changes in their consumer practices and appreciation of the benefits they receive when purchasing from e-stores. These advantages are the ability to choose and make purchases 24/7, the option to compare prices and product characteristics between different manufacturers and merchants, the huge selection of goods, both in width and depth of the product assortment, and many others.

Obviously, the experience that virtual space and communication technology-mediated contact with sales staff or an automated operator from the chatbot family provides is fully satisfying for more and more people. Their wishes and needs are satisfied with minimal physical effort and in a relatively short period of time, for which the main role is played by couriers. The period of execution of the order does not depend unilaterally on the conditions of the courier company, but mainly on the agreements reached by the two parties. Very often, e-tailers put couriers in competitive positions by providing their customers with options to choose between more than one supplier, as well as the possibility to order the product online and receive it in the physical store, when a hybrid form of supply is applied, in the omnichannel commercial business.

Globally, there are clear leaders in this market who compete with national operators of these services in local markets. According to Statista data, in 2018, DHL, FedEx and UPS accounted for 91% of the market share of courier services worldwide. Of the world leaders in the Bulgarian market, only DHL operates in the person of "DHL Bulgaria" with a 7.4% market share, which competes in 2021 with established participants such as "Econt Express" with 37.1%, "Speedy" with 30.8% and "Bulgarian Post" with 6.2% (Komisiya za regulirane na saobshteniyata, 2021). The data of the Communications Regulatory Commission shows that 81.5% of the Bulgarian market is concentrated in four market participants, which is in line with global trends. The leader in Bulgaria is obviously "Ekont Express". It is noteworthy that at the end of 2014, the revenues realised by the market leaders ("DHL Bulgaria", "Econt Express", "In Time", "MIBM Express" and "Speedy") formed 69% of the non-universal postal services market, indicating an increase in concentration of 12.5% within eight years. During these years, the positions of "DHL Bulgaria", "Econt Express" and "Speedy" are preserved, which steadily accumulate revenues from the provision of courier services.

E-commerce and courier services pursue their common economic goals and achieve serious results from their joint activity, which will continue to develop, influenced by global trends in technology and artificial intelligence. The digitalisation and globalisation of these businesses contribute to the rational use of available resources and the increase of income, as from the resulting synergistic effect in the process of the joint functioning of online commerce and courier, express and parcel services, consumers can also fully benefit, receiving more great added value and satisfaction.

### **3. Prospects for the joint development of e-commerce and courier services**

Modern information and communication technologies, which are constantly developing and improving, stimulate the innovative behaviour of electronic traders, which is expressed in the creation of an improved user experience, personalisation and automation, application of the forms of fast and voice commerce, showing responsibility towards the environment, etc. It should be borne in mind that to a certain extent, some of the mentioned innovations in e-commerce are directly or indirectly linked to the level of courier, express and parcel services offered.

The increase of digital consumers on a global scale and their active drive to shop on the Internet allows marketers to collect and process large amounts of data on customer product preferences, payment and delivery methods, purchase size, etc. The availability of this information enables online sellers to make an individual product offer to the customer, reflecting to the greatest extent their requirements regarding product characteristics, price level and service, including those related to the delivery of the goods. In connection with this condition of the transaction, the trend is emerging that electronic stores usually offer several options for receiving the parcel – at a pre-specified address (home or work), at a post office or courier office (Parcel drop-off point), from the most the nearest physical store (Click & collect) or from automated parcel terminals. This, on the one hand, provides an alternative choice to the buyer, but on the other hand, requires the e-merchant to cooperate and communicate with various operators providing courier and postal services.

The symbiosis between e-commerce and courier services has deepened over the last ten years, as these services have become an integral part of the electronic commerce process. Their connecting role between the trader and the buyer is increasingly significant, because it is they who carry out the direct communication with the end customer and to a very large extent, from this personal contact, an essential part of the image of the trader himself is built. For this reason, the choice of partners for the delivery of the goods to the consumer is becoming an increasingly important task; the correct decision of which in terms of the parameters, prices, terms, territorial scope, speed, flexibility, application of information and communication technologies, etc., can both attract and repel customers.

E-commerce merchants and courier service providers collaborate through a series of essential processes that ensure the smooth and timely delivery of goods to end customers. These processes include selecting the appropriate courier, preparing and handing over shipments, tracking deliveries, managing returns, processing cash-on-delivery transactions, and collecting customer feedback to improve overall service quality.

The technologies used in these processes include cloud solutions, artificial intelligence, integration with courier services, etc., all of which significantly enhance the efficiency and accuracy of operations.

Some of the solutions implemented by courier companies in their collaboration with e-retailers, aimed at jointly executing specific processes during the course of online sales, include:

- Big Data and Analytics play a crucial role in the process of selecting a courier. The amount of data in supply chains is rising. The competition is becoming fiercer and the customers often expect integrated services (Jintana et al., 2021). In this digital period, courier companies are offering online services via applications and web servers where digital technologies are adequate to handle data management and ease of access-related issues (Aniedi et al., 2023). Courier companies, which manage the flow of goods in many transactions, annually receive data on delivery time, origin and destination, size, weight, types of goods and place of delivery. On this basis, through platforms that provide integration between partners (e-tailers and couriers), an option is offered for automatic selection of the most suitable courier individually for each order based on a combination of parameters such as weight, price and destination. In this way, online stores achieve a higher degree of personalisation and are able to offer time- and cost-efficient solutions to consumers, with a strong emphasis on rapid information exchange and the execution of optimal selection. This integrated approach is a source of new competitive advantage and helps reduce the final retail price and improve the level of service for e-commerce retailers.
- The preparation of shipments is increasingly incorporating robotisation and automation. Robots in commerce and logistics, in this case in e-commerce and courier activities, are of the service robot type, which does not produce anything. A service robot is a programmable actuator on two or more axes, moving in its environment to perform useful tasks for people or equipment, with the exception of industrial automation applications (International Federation of Robotics, 2025). To overcome the main disadvantage of consumers when shopping online – waiting for days to receive purchased goods, accelerated flying courier robots or drones are being developed that deliver orders within hours (Gramatikova, 2020).

Automated sorting systems also contribute to accelerating processes. They use technologies for measuring, weighing, and scanning parcels in motion. Such solutions can process thousands of parcels per hour, and the entire suite of intelligent sorting systems is essential for reducing sorting errors, increasing efficiency, lowering labour

costs, enabling big data storage, and performing other functions – all of which support the rapid growth of e-commerce (Hanlin Yin, 2020).

Some of the solutions implemented by courier companies are related to automated order management using platforms that offer automatic generation of waybills and synchronisation with courier services. These platforms facilitate fully electronic documentation and archiving processes, eliminating the need for physical office supplies and thereby enhancing the environmental sustainability of both e-commerce operations and courier logistics. At the same time, the goal is to reduce order processing time and minimise human errors by removing the necessity for manual data entry. As a result, e-commerce platforms are able to generate more accurate delivery time estimates, calculated automatically in accordance with the capacity and workload of courier partners. Concurrently, such systems enable the efficient handling and fulfilment of increased order volumes without compromising service quality. These systems also enable the automatic classification of orders by priority, delivery method, and customer preferences, which speeds up the fulfilment process and contributes to a higher level of service. This, in turn, has a positive impact on the reputation of both courier companies and e-commerce retailers.

- Transport Management Systems (TMS) facilitate shipment tracking capabilities accessible to both merchants and customers. A TMS is a logistics system that uses technology to help logistics businesses plan, execute, and optimise the physical movement of goods and ensure that shipments meet their stated reliability (Taranenko, 2020). A TMS offers courier companies capabilities such as route planning, real-time courier location tracking, and automatic order assignment. These systems use optimisation algorithms that reduce delivery time and improve efficiency, while also enabling a quick and adequate response in case of issues. Therefore, this approach not only increases customer satisfaction with courier services due to greater accuracy and shorter delivery times, but also leads to cost optimisation. This serves as an indicator of a successful partnership between the e-commerce retailer and the courier company, contributing to faster delivery processes, reduced expenses, and improved customer service levels.
- In processing cash-on-delivery payments, e-commerce merchants and courier companies frequently integrate this data directly with ERP systems. This approach is logical, given that ERP systems are recognised as comprehensive solutions designed to enhance the efficiency and functionality of logistics, financial, human resources, sales, and other operational processes within an organisation (Turlakova & Stanimirova, 2006). The implementation of ERP systems strengthens the symbiosis between e-commerce retailers and courier

companies, contributing to cost reduction, process standardisation, improved company image, and more.

- Artificial intelligence is also becoming an important factor in modern economic activity, which by definition is „the ability of machines to communicate with humans (using electronic output devices) without revealing the identity that they are not humans, where the essential judgment criterion is binary“ (Jiang et al., 2022). According to M. Stojanov, "The most visible element of the use of artificial intelligence technology is its use in chatbots, ... which can provide the client with information ... " (Stojanov, 2024), both for courier services and online offers. With their ability to respond instantly (Orlowska, 2024), chatbots can significantly enhance the quality of customer service – typically defined as the effort to meet customer needs and preferences. However, this is not the only way to achieve success. Effective service should not only meet customer expectations, but also anticipate and exceed them (Motowidlak et al., 2024). The key is the element of surprise, which is capable of evoking stronger reactions than simple satisfaction, leading to a greater impact on financial results and added value (Kowalik, Klimecka-Tatar, 2018).

Artificial intelligence, in the form of chatbots, is becoming a key point of contact with the end customer – both at the pre-sale stage, when the customer needs information about the product or the parameters of the courier service, and at the post-sale stage, when additional information may be required regarding the product, courier service, returns, and more. The application of chatbots on online platforms leads to an increase in customer lifetime value (CLTV), defined as “the net present value of future profit generated by a given customer” (Stanimirov, 2010), which contributes to enhancing corporate profitability. In addition to improving economic efficiency, intelligent systems also exert a positive impact on the social effectiveness of commercial activities by fostering a comprehensive customer experience and greater consumer satisfaction. The joint efforts of e-commerce retailers and courier companies in training artificial intelligence can contribute to achieving a higher level of comprehensiveness in customer service.

It is expected that the role of courier companies will be preserved in the coming years as business units operating together with e-tailers, but these services will be strongly influenced by the entry of modern technologies, such as artificial intelligence, big data and analytics, transport management systems, etc. Technological progress will completely reformat the supply chains, and this will affect to a very large extent the organisation of the processes that take place in the delivery of the final product. Logically, expectations are related to the reduction of the subjective factor that arises from human intervention, and this will happen in the operation of robots, as well as in

the mass entry of chatbots in communication with customers, the improvement of artificial intelligence used by humans in search of information and its quick and easy transformation into ready solutions. Regardless of the expansion of technology and the reduction of human involvement, the role of couriers as a link in the so-called last mile will remain, but will continue to be digitised in response to customer expectations.

The only more serious threat to couriers could be expected in cases where traders consider it more economically advantageous to offer their customers a non-courier service. One option is for merchants to fulfil orders themselves, which can be implemented as a long-term strategy by large retailers with sufficient financial resources. However, most small online stores cannot insource these services, as this requires investments in transport vehicles, staff, software, management, synchronisation with a number of policies in the field of courier services and online commerce in the EU and regulatory requirements, including those related to pricing, quality of service and data protection, etc.

There are also alternative delivery options that exclude the involvement of courier operators. The most prominent market participants in this category are postal services, which provide a universal postal service. According to Bulgarian legislation, this is defined as “a service that is provided continuously within specified working hours, with quality at affordable prices and accessible to every user across the country, regardless of their geographical location” (Zakon za poshtenskite uslugi, chl. 32). This service is mainly characterised by slower delivery compared to courier services.

Another market participant is the freight forwarder, who, based on a forwarding contract, undertakes, in return for remuneration, to conclude a contract of carriage for goods in their own name but on behalf of the principal (Targovski zakon, chl. 361). In addition to its transport function, the freight forwarder also performs other functions: warehousing, preparation of transport documents, and accompanying (additional) operations.

Key stakeholders in customer service who support the transition from the offline to the online environment include e-commerce retailers and courier companies, both of which are continually evolving and adapting to shifts in the external environment.

## **Conclusion**

In conclusion, it can be summarised that e-commerce and courier services are interconnected in terms of their development and conquest of new market shares, which we can judge from the dynamics of the studied indicators in the period 2014–2024. The main environmental factors that support this symbiosis during the

considered period are mainly economic, demographic, health and technological in nature. Expectations for these two business activities are that they will continue their rise, which is predicted to be at a higher rate for e-commerce compared to their courier partners, as it has been until now.

Regarding the prospects for their development, assumptions can be made that technological factors will have the strongest influence, given the enormous progress that humanity has achieved in this direction. Drawing upon recent experience, it is imperative to approach projections with caution, as environmental variables exhibit a degree of volatility that frequently defies predictive modeling – even within short-term temporal frameworks – thereby undermining the reliability of logically derived forecasts.

## Conflicts of Interest

The authors have no conflicts of interest to declare.

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