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E-Commerce Taxation Challenges and Opportunities: From Clicks to Conversions in Fast-Moving Consumer Goods

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ABSTRACT

The modern world is becoming more and more technologically advanced, and people spend more time working, so there is no time left to do classic shopping in standard stores and supermarkets, but there are opportunities to purchase various goods and services online. This state of affairs is the reason why e-commerce has emerged and is actively developing. Today, e-commerce is no longer just online sales, but a complete system of doing business without classic offices and conservative stores. In recent years, e-commerce has been actively promoted in the service sector, including financial services. Such active development of this area leads to the need to pay special attention to the taxation of transactions involving the electronic sale of goods and services. With this in mind, the purpose of the article is to determine the specifics of the development and peculiarities of taxation of e-commerce transactions. As a result of the study and achievement of the objective of the work, the author has obtained a result which indicates that, in general, e-commerce transactions are taxed under standard taxation schemes, although there are peculiarities of accounting for electronic money and taking into account the fact of transfer of ownership of the product. In general, it is proved that e-commerce has great prospects and will gain more and more market shares of goods and services for various purposes.

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Introduction

E-commerce has long been a familiar part of our lives, but consumer interest in it is growing every year. This is not surprising, as selling, promoting, and buying goods online is often much easier and more profitable than offline.

E-commerce is a branch of the digital economy associated with building commercial and other business processes through electronic channels. Contrary to popular belief, e-commerce is not just about selling goods online. Examples of e-commerce industries are much broader: insurance, electronic document management systems, banking services, capital flow, marketing services, trading, procurement and other trading activities, and electronic money.

In simple terms, e-commerce is any business that uses the Internet as the main channel for attracting customers, selling products, or promoting goods.

Thus, E-Commerce is a branch of the economy in which advertising, product promotion, trade transactions, and financial transactions are carried out directly on the Internet. From the point of view of manufacturers and suppliers, e-commerce is the promotion and provision of their goods or services via the Internet. And from the point of view of buyers (customers), it means browsing trade offers, choosing, ordering, and paying directly online.

Literature review

The main types of e-commerce

The literature distinguishes six main types of e-commerce, the main difference between which is the parties that interact: supplier, consumer, and administration. It is advisable to consider each of them in more detail - Table 1.

Table 1.

Types of e-commerce

Type of e-commerce	Characteristics
B2B - e-commerce for business	This is a type of e-commerce that operates on a business-to-business basis. That is, when one company provides its services or goods to another company, not to a retail consumer. A striking example is the cooperation between Sony Corp and Apple. Sony produces camera modules for the iPhone and iPad, selling them directly to Apple. Similarly, Intel used to supply its own processors until it switched to its own chips
B2C - e-commerce for consumers	B2C is the main type of e-commerce when a company provides its goods, services, and products directly to a retail consumer. For example, Nike sells its sneakers directly on the official website. Any user can order a pair directly from the manufacturer, which is a pure B2C model.
C2C - consumer-to-consumer e-commerce	C2C is e-commerce on the Internet, when one consumer sells goods directly to another, although they do not produce them themselves. You can see how e-commerce works on the example of the Ukrainian portal OLX. Here, users can put up almost any product for sale, find buyers, and close deals. The manufacturer is not involved in the process
C2B - consumer-to-business e-commerce	In fact, this is the exact opposite of B2C, as in this case, the consumer provides something to the business. The simplest example: a person makes leather goods (wallets, purses, etc.), but sells them not directly to customers, but to an online store. The latter immediately pays him money for each product, and then interacts with customers. Or another example, a family-owned small handmade business that sells handmade cosmetics in batches to an online cosmetics store, which then sells them to the end consumer

B2A - business administration	B2A is e-commerce, which covers online transactions conducted by companies and government agencies. B2A is used in fiscal and social security, when working with various legal documents, etc. For example, it can include public procurement via the Internet
C2A - e-commerce between consumers and administration	The type of e-commerce that includes transactions between consumers and government agencies is not yet very popular. For example, making an appointment with a doctor and paying for medical services, filing tax returns and making payments, distance learning, etc.

Compiled by the author based on (Kardes et al., 2020; Ma et al., 2018; Ritter et al., 2020; Xiao & Zhang, 2022)

In general, e-commerce includes the following main types of trade and transactions (Aleksieienko et al., 2020; Battisti & Brem, 2021):
Electronic Data Interchange (EDI);
Electronic Funds Transfer (EFS);
electronic trading (e-trade);
electronic money (e-cash);
electronic marketing (e-marketing);
electronic banking (e-banking);
electronic insurance services (e-insurance).

Of course, this is not an exhaustive list of e-commerce transactions, but most of them can be classified as one type or another.

Basic business processes for e-commerce planning

E-commerce business processes are similar to those of any offline or retail business. The main functions are accepting an order, processing order information, and sending the product to the customer (Buriak et al., 2022). Understanding business processes in the field of e-commerce allows you to manage them efficiently and correctly tax transactions related to it. To understand business processes in the field of e-commerce, it is logical to analyse a real-life scenario using the example of a company that sells a product on its own website (Gregory et al., 2019).

1. A customer uses a computer or mobile phone to search for a product of interest.
2. He finds the website with the product he is interested in. From a technical point of view, the browser connects to the web server that serves the site.
3. The customer orders the product they are interested in. The web server receives the customer's order and passes it to the manager.
4. The manager makes a request to the database via the program interface to check the availability of the order in the warehouse.
5. The product inventory database system goes through the process of confirming the customer's order or canceling it if it is out of stock. After confirming that the item is available, the system shows the expected delivery date. If the item is not available, the database system orders new deliveries from manufacturers or wholesalers.
6. The customer of the store sends payment information with his/her bank card details using a special page or form on the website.
7. The user's data is checked, and then the banking system confirms that there are sufficient funds in the account. At this point, a confirmation for the transaction is received. The funds are fully debited from the account in just a few days.

8. The manager transmits information about the successful transaction through the software interface, and this information is sent to the web server. At this stage, the fact of the sale of products occurs, and accordingly, an event occurs that must be taken into account from a tax point of view
9. The web server reports the successful transaction to the client: they see a page that shows the order confirmation and details of the transaction processing.
10. The order management system requests the warehouse system to initiate the shipment of goods to the customer.
11. The company's dispatch system collects goods (usually for several customers at once), and they are sent on their way.

After the goods have been shipped, the warehouse computer system sends a notification to the customer that their order has been successfully sent. This notification can be sent by e-mail or by phone number - SMS or messengers. At the end of this chain, the goods are delivered to the customer's address.

Accordingly, the algorithm for selling products via the Internet is very similar to offline sales, but there are specifics related to the need for data protection and the need to maintain a website to provide customers with information about the available range of goods and offers.

Presentation of the main material

Statistics on the use of e-commerce

In 2022, e-commerce sales grew to $870 million, and that's just in the United States. This is 14.2% more than in 2021 and 50.5% more than in 2020. Experts predict that by the end of 2023, e-commerce sales will account for 5% of global retail sales. Some analysts say that e-commerce sales will even exceed USD 257 billion worldwide. By 2025, conversion rates are expected to increase even more, accelerated by the changes caused by the pandemic back in 2020. Studies show that by 2075, e-commerce sales will reach $2025 trillion (Battisti & Brem, 2021).

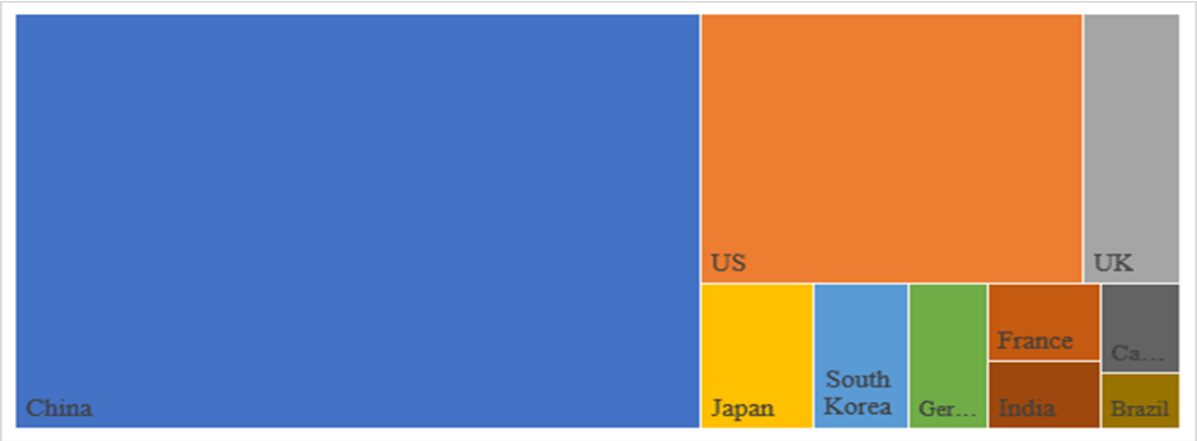
There is a lot of room for retailers in e-commerce today. It is believed that retail sales will continue to grow for quite some time. It is projected that by the end of 2023, e-commerce retail sales will account for about 20.8% of all retail transactions (Didace, 2022). This shows the continued strength of e-commerce growth. E-commerce revenues are growing globally as consumers from different markets abandon in-store purchases in favor of online and mobile purchases.

Global e-commerce statistics indicate that the volume of this type of trade is growing rapidly, with China and the United States leading the way (Fig. 1).

It is quite logical that the market leaders are China and the United States of America with the Aliexpress and Amazon platforms, and it is also worth considering that the population of these countries is quite large and historically more progressive in terms of e-sales (Bouncken et al., 2021).

Figure 1.

E-commerce market leaders in the world in 2022

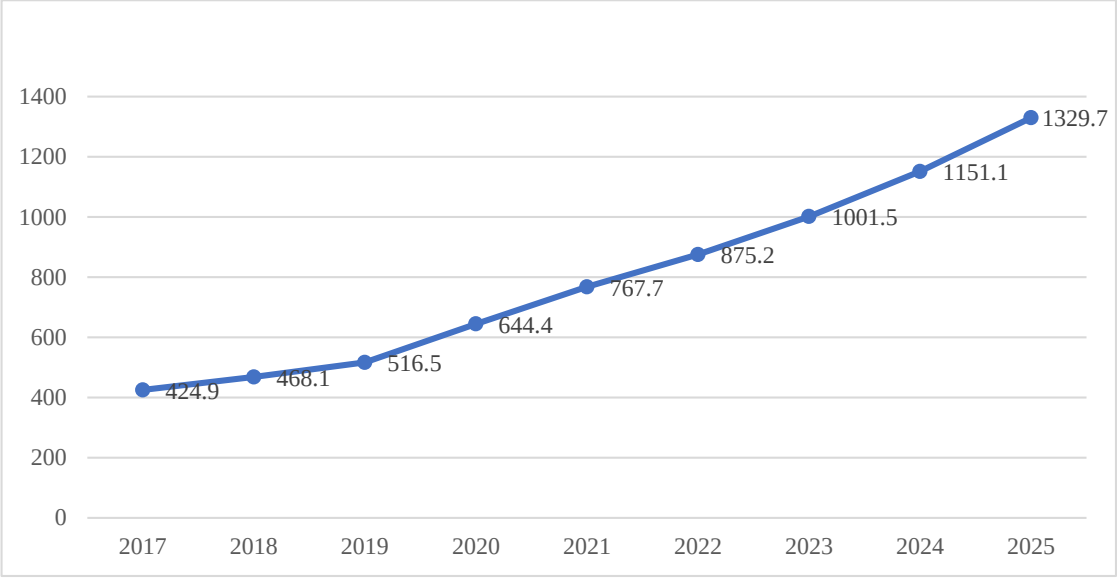


Compiled by the author based on (Ha, 2022)

Nevertheless, the basis of e-commerce for finding and purchasing quality goods is the Amazon platform, which accounts for 49% of all online sales in North America and about 5% of total retail sales in the world (Bouncken & Barwinski, 2020). Sales on the Amazon platform with a forecast of its development until 2025 are shown in Fig. 2.

Figure 2.

Sales volumes on the Amazon platform with a forecast of its development until 2025 (USD billion)



Compiled by the author based on (Bacon, 2023)

Given the rapid growth of e-commerce and the further development of this area of trade, it is logical to suggest that companies use the experience of successful online sales platforms and adapt it to their realities.

There is no industry that has not been affected by online shopping. Whether an entrepreneur is in healthcare, auto parts, or food and beverage, some customers (at least 21% of the market) want to shop online. In fact, 87% of shoppers will do some kind of research before making an

online purchase (Hrynchyshyn, 2021). This type of research can include comparing prices, reading blog posts, checking reviews, and asking people on forums about their experiences with products.

Creating an online store is not always a sufficient step to sell products. It is a step to create additional content, such as user manuals, blog posts, comparison materials, and tutorials. It's also important to activate customer reviews on the website, as consumers like to see what other people have to say. Finally, you need to do everything possible to get your products featured in various publications, on forums, and even among opinion leaders on social media.

Specifics of taxation of e-commerce transactions

E-commerce in the legal sense has a broad interpretation and covers issues arising in connection with all commercial relations, which include mainly such transactions (Wolfe, 2019):

Purchase and sale, supply, a production-sharing agreement, a sales office or agency, factoring, leasing, design, consulting, engineering, investment contracts, insurance, operation and concession agreements, banking services, joint ventures and other forms of industrial and business cooperation, transportation of goods or passengers by air, sea, or rail.

E-commerce participants (especially retail and corporate e-commerce) need to know what requirements the law imposes on the form of an electronic transaction (since non-compliance with formal requirements entails invalidity of the transaction and, as a result, ineffectiveness of e-commerce mechanisms from a legal point of view).

In global practice, VAT is levied on almost any service sold online: advertising, app sales, games, website hosting, music, movies (Georgallis et al., 2021; Bińczak et al., 2018; Muñoz-Villamizar et al., 2021).

Among the leaders of e-commerce (the United States, China, the United Kingdom, Germany, etc.), most countries have introduced the practice of taxing cross-border e-services.

In addition to the key goal of replenishing the state budget through taxes levied on foreign sellers of services to local citizens, it is important to note that this will protect the interests of national businesses. Thus, according to e-commerce experts, the introduction of taxation of electronic services of foreign entities will allow national e-commerce to develop.

Ensuring effective tax administration in this area helps to protect the interests of society from illegal business activities through the use of the Internet, including e-commerce and financial services.

The experience of a number of countries shows that it is advisable to allow foreign e-commerce entities to voluntarily apply for tax registration, calculate and pay VAT on such transactions on their own.

At the same time, however, changes in traditional economic relations raise issues related to the uncertainty of tax and customs legislation for this area of economic life, difficulties in controlling transactions, and abuse by taxpayers and e-commerce market participants.

Currently, the global community has not developed a common approach to e-commerce taxation, and different countries approach this issue in different ways, which creates certain difficulties for both taxpayers and tax administrations.

Since online commerce is often cross-border and one of its key features is the absence of physical borders, i.e., the purchase and delivery of goods/services are not tied to any particular

place/state, but can take place anywhere in the world, the lack of a common approach is a serious problem.

E-commerce taxation issues arise both in terms of direct tax administration, usually related to the definition of a permanent establishment and in terms of indirect taxes, mainly related to the calculation and payment of VAT.

The problems of determining a permanent establishment in the course of commercial activities in the digital space are caused by the impossibility of applying a general approach.

For example, a permanent establishment, according to the generally accepted concept developed by the OECD, requires a fixed place of business. Such a place of business also requires a physical presence in the country. Traditionally, organizations have had a physical presence in any country through the existence of an office or point of sale, which made it easy to identify their presence by a specific geographical location, but as noted earlier, organizations operating in the digital space do not necessarily need to open an office to conduct business in a foreign country.

For a long time, the international community has been discussing the question of whether a website through which a taxpayer conducts business is a permanent establishment.

In 2000, the OECD issued amendments to the OECD Model Tax Convention, according to which the mere presence of a web page on a server does not lead to the establishment of a permanent establishment (Jean & Tan, 2019). A permanent establishment is formed only if, in addition to the server in this country, the taxpayer also has specialized equipment that is used to maintain the online store. This position is due to the fact that the taxpayer has a permanent place of business.

However, this approach is not always fair, as the location of the server and its maintenance equipment may be determined solely by the purpose of saving on the maintenance of the facility, while the main profits are generated in other jurisdictions.

Nevertheless, this approach has been adopted by the European Union (EU) and the United States of America (Jean et al., 2020).

The second problem related to the collection of income tax is determining the nature of income. If the transaction gives the buyer the right to use the goods only for personal use, the seller is obliged to pay tax on the profit from this transaction, but if the sold goods give the buyer the opportunity to use them for commercial activities, the profit from this transaction is reclassified as royalties and the buyer will have to pay the tax.

The main problems with VAT administration in the field of electronic services are related to the taxation of cross-border transactions in the B2C segment, i.e., the supply of goods/services from an organization to an individual. These problems are mainly related to the determination of the jurisdiction to which the tax should be paid and the identification of the taxable transaction.

According to the rules introduced in 2002 in the EU, all transactions carried out in the digital space are equated to services and are subject to taxation at the buyer's location. B2B supplies are taxed in the place where the customer has registered his or her business or receives a fixed income. The place of supply of a service for non-taxable persons (B2C supplies) is the place where the customer has a permanent place of registration (Dost & Maier, 2018; Kim et al., 2019; Roy et al., 2017). The destination principle means that the supply and invoicing requirements are governed by the VAT laws of the customer's country. To properly account for

VAT, suppliers need to know the status of the customer (whether they are a taxable or non-taxable person) and the location of the customer.

The reverse charge mechanism is applied to cross-border B2B supplies to the EU. This means that the VAT liability is transferred to the consumer, the supplier issues an invoice excluding VAT, and the consumer takes into account the VAT on the amount of the supply in his VAT return (Anic et al., 2019; Hofstetter et al., 2021).

The EU VAT regulations set a number of requirements to help determine the location of a customer (Janow & Mavroidis, 2019; Kovaliuk et al., 2020). For example, for services provided via mobile networks, the customer's location is supposed to be determined by the country code in the phone number used to receive the desired service. If the provision of digital services requires the physical presence of the recipient (e.g., a Wi-Fi point), such services will be taxed at the place where the recipient uses them (place of effective use).

The evidence used to determine the location of the customer must be distinct and not duplicate each other. For example, the fact that a customer provides his or her bank details and this data is confirmed by the payment service provider is considered one point of proof. The supplier must verify the correctness of the data collected through normal commercial security measures, such as verification of identity or payment data. Since the correct determination of the place of delivery is the responsibility of the supplier, verifications by third parties (e.g., payment systems) do not relieve the supplier of liability in the event of misuse or irregularities.

To simplify VAT tax administration, in 2015, the EU introduced a special mechanism called Mini one Stop Shop (MOSS), which allows taxpayers conducting cross-border transactions within the EU not to register in each jurisdiction but to report VAT in only one state where they have a permanent office (Katsikeas et al., 2019).

In addition, the new rules oblige non-EU taxpayers to pay VAT in the EU if the consumer of the goods sold is located in the EU. It is worth noting that non-EU suppliers may not be fully aware of their VAT obligations in the EU member states where their customer is located. For example, in the US, sales tax liability arises if a supplier has a physical presence in the US. However, in the EU, the VAT obligation arises if an EU customer downloads something from a US website and makes a payment for the downloaded service. It does not matter that the US business is not connected to an EU member state and does not have a physical presence there (Kraus et al., 2019; Nitsenko et al., 2020; Oliinyk et al., 2021).

The main objective of the MOSS is to reduce the administrative burden on taxpayers, but this mechanism is not currently fully operational. This is due to the fact that this mechanism is not mandatory, not all EU member states use it or have not adopted all of its provisions. Thus, for example, during an audit, a taxpayer may still receive requests from different Member States, and the requests will be in different languages.

In addition, VAT audit rules are not harmonized in the European Union. This creates a risk of double taxation if the national tax authorities disagree on certain points.

Conclusions

One of the characteristic features of the “new economy” as a modern development model based on business globalization and the information technology revolution is the rapid growth of e-commerce. The main difference of e-commerce is the distance of sales in the global computer network, i.e. The seller and the buyer enter into a transaction for the sale of an information

product based on virtual anonymous contact, being at a remote distance from each other. The remoteness of sales in the field of e-commerce allows us to distinguish a special group of sellers - the so-called distance sellers - who accept orders and deliver their products to consumers via Internet communications based on formalized impersonal virtual contact with the buyer during the transaction.

The virtual nature of communications in the e-commerce sector raises significant problems in the taxation of sellers and buyers of digital information products, especially if they are residents of different tax jurisdictions. Each jurisdiction has the right to claim tax on the income generated by an electronic transaction. The impact of the development of e-commerce and the Internet economy on national tax systems is manifested in the following issues: taxation of transactions for the sale and purchase of digital information products; improvement of the system of tax treaties; intercompany pricing in international companies (use of transfer prices in transactions with digital products); tax administration.

Thus, the development of e-commerce requires the unification of taxation rules in the global computer network (interpretation of transactions and forms of income, the nature of the taxes applied and their amount, non-discrimination in taxation, etc.), and this affects all national tax systems without exception (at least, the tax systems of those countries whose citizens and companies are not deprived of the possibility of access to the Internet). Thus, it is no exaggeration to say that the development of e-commerce is a kind of catalyst for the convergence of national tax systems through the appropriate coordination of national tax policies at the global level.

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Not applicable.

Ethics Approval

Not applicable.

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