
Growth Global Market of E-Commerce Cross Border: The Case of Poland

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Abstract:

Purpose: The aim of the article is to present the essence of cross-border e-commerce and its participation in global e-commerce by regions and countries. Particular attention was paid to Poland by identifying the directions of expansion of Polish e-commerce companies and directions for cross-border shopping for e-commerce.

Design/Methodology/Approach: The research method was the analysis of literature, reports, and statistical data concerning cross-border e-commerce as well as proprietary surveys conducted among Polish respondents (internet companies, customers of online stores).

Findings: Global sales on the internet have been growing dynamically for several years. The increase in value of the e-commerce market in the world is unquestionable, with the yearly average increase being around 20%. The highest annual growth dynamics in the world in 2019 was recorded by e-commerce in Asia and the Pacific, but in the terms of the annual global jump, Mexico was the record holder with 35% increase. Polish e-commerce is one of the most dynamically growing European markets.

Practical Implications: Assuming that the dynamics of e-commerce growth in the world will continue, it is necessary to observe global trends, focusing especially on developing markets which are the most promising e-commerce markets for cross border e-commerce, as indicated in this research. Identification of the trends is desirable from the point of view of e-commerce market participants: both regions, countries, companies and individual customers.

Originality/Value: The study covers an important aspect of international exchange on the e-commerce market, presenting trends, dynamics and determinants of cross border e-commerce in individual countries, as well as indicating the most promising e-commerce markets in the world for cross border e-commerce. It focuses on the aspects which create cross border e-commerce in Poland regarding buying abroad and selling.

Keywords: E-commerce, cross border e-commerce, global market.

JEL codes: D12, F14, L81, M21.

Paper type: Research article.

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1. Introduction

Cross-border e-commerce has gained a large momentum due to customers buying products from other countries. There are many reasons why consumers would choose to buy from another country. Some of the reasons are shipping options, payment methods, product quality, and more. Since online customers can choose their sellers anywhere on the globe, brands and retailers have felt the need to exhibit their products to a worldwide market.

Cross-border e-commerce is when a consumer trades online with a business based in a different country. This is usually a brand or wholesaler who uses an inventory management system, to deliver outside of their own nation. It may also be when a business or brand trades with a consumer or when two private individuals trade, through channels like electronic auction platform.

The sudden increase of cross-border e-commerce is due to the growth of a young, metropolitan population who rely heavily on technology. Forrester, a research firm, reports that the value of cross-border e-commerce is likely to rise to \$627 billion by 2022, making it a total of 20% of e-commerce as a whole.

This article presents the essence of cross-border e-commerce, presents its origins and development in particular geographical areas of the world, as well as prospects for the future. The authors focused in particular on the aspects that create cross-border e-commerce in Poland, both from the point of view of buying abroad and selling.

2. The Essence and Forms of E-Commerce

E-commerce or electronic commerce generally speaking, in recent years is rapidly growing distribution channel. For many companies, it turns from a side or additional way of selling goods and services into the main source of access to customers.

Currently, there is no single official definition of e-commerce, although the most popular is the one developed in the OECD (OECD, 2011), which has been accepted by Eurostat and the Polish GUS (Statistical Office). According to it e-commerce a transaction i.e. purchase and sale of products, goods as well as material carried out on-line through networks based on the IP protocol and other computer networks where payments and deliveries of the subject of the transaction are made online or offline.

As for the transaction parties, these can involve companies, private individuals, governmental, as well as other public and private organizations. The transactions by phone, fax, e-mail are not elements of e-commerce (GUS).The presented definition is used in Polish official statistics.

As for the definition of cross-border e-commerce given by international organizations, the proposal prepared by the United Nations (Department of Statistics) can be a good example, it refers in particular to the issue of registration of trade turnover for statistical purpose. UN Statistics Department has introduced a definition of goods in e-commerce, i.e. the goods which physically cross countries' borders of electronically conducted transactions including both export and import (United Nations, 2011).

E-commerce affects three main stakeholders, namely the economy, entrepreneurs and customers. To understand e-commerce, it is important to identify all areas of the economy that are affected and not just focus on the seller-customer relationship. These include the flow of information and products in the procurement, transport and distribution process, as well as reliability and safety issues, as well as access costs, social divide and difficulties in controlling the Internet (Shahriari *et al.*, 2015).

The use of the Internet, and in particular the integration of its information, marketing, distribution and transaction functions, gave an impetus to the dynamic development of e-commerce. Among other phenomena are:

- acceleration of the development of information technologies and digitization, as well as the possibility of constant communication between people and mobile devices,
- implementing digital products and new types of services that were previously defined as non-commercial goods into the international market,
- support for cross-border development by states' governments and international organizations (change of regulations in the EU, or concessions offered in China).

Contemporary electronic commerce can be classified into two categories. The first category is business based on types of goods sold (involves everything from ordering "digital" content for immediate online consumption, to ordering conventional goods and services, to "meta" services to facilitate other types of electronic commerce). The second category is based on the nature of the participant (B2B, B2C, C2B and C2C) (Khurana, 2019).

An increasingly common phenomenon in the development of electronic commerce in the international dimension is the expansion of B2C trade, which has recently been purely domestic.

The main sources of electronic sales to individual consumers are understood to be online stores, online auctions, platforms promoting group purchases, contextual advertising, affiliate programs (Wienclaw, 2013). This wide group is also joined by telephone applications and social media with increasing power. Modern electronic commerce typically uses the World Wide Web for at least one part of the

transaction's life cycle although it may also use other technologies such as e-mail (Clement, 2020).

In the area of B2B trading uses e-procurement, sometimes also known as supplier exchange, a consisting of buying and selling consumables, works and services over the Internet, as well as other information and network systems, such as electronic data interchange and enterprise resource planning (Nasrun *et al.*, 2016). The e-procurement value chain consists of indent management, e-Informing, e-Tendering, e-Auctioning, vendor management, catalogue management, Purchase Order Integration, Order Status, Ship Notice, e-invoicing, e-payment, and contract management. Indent management is the workflow involved in the preparation of tenders. This part of the value chain is optional, with individual procuring departments defining their indenting process. In works procurement, administrative approval and technical sanction are obtained in electronic format (Pop Sitar, 2011).

E-commerce allows customers to overcome geographical barriers and allows them to purchase products anytime and from anywhere. E-commerce brings convenience for customers as they do not have to leave home and only need to browse website online, especially for buying the products which are not sold in nearby shops. It could help customers buy wider range of products and save customers' time. Consumers also gain power through online shopping. They are able to research products and compare prices among retailers. Also, online shopping often provides sales promotion or discounts code, thus it is more price effective for customers.

Moreover, e-commerce provides products' detailed information, even the in-store staff cannot offer such detailed explanation. Customers can also review and track the order history online.

E-commerce technologies cut transaction costs by allowing both manufactures and consumers to skip through the intermediaries. This is achieved through by extending the search area best price deals and by group purchase. The success of e-commerce in urban, regional and global levels depend on how the local firms and consumers have adopted to e-commerce (Evans, 2002).

Technology is no longer an option, it is essential in virtually all aspects of our lives. The biggest changes were introduced in the way of communicating and buying. E-commerce shopping is no longer a one-time experiment, it is slowly becoming commonplace, as evidenced by the growing percentage of online buyers among both individual customers and entrepreneurs.

Online and traditional markets have different strategies for conducting business. Traditional retailers offer fewer assortment of products because of shelf space where, online retailers often hold no inventory but send customer orders directly to the manufacture. The pricing strategies are also different for traditional and online

retailers. Traditional retailers base their prices on store traffic and the cost to keep inventory. Online retailers base prices on the speed of delivery.

There are two ways for marketers to conduct business through e-commerce: fully online or online along with a brick and mortar store. Online marketers can offer lower prices, greater product selection, and high efficiency rates. Many customers prefer online markets if the products can be delivered quickly at relatively low price.

However, online retailers cannot offer the physical experience that traditional retailers can. It can be difficult to judge the quality of a product without the physical experience, which may cause customers to experience product or seller uncertainty. Another issue regarding the online market is concerns about the security of online transactions (Li, 2015). This is a primary problem for e-commerce in developed and developing countries. E-commerce security is protecting business' websites and customers from unauthorized access, use, alteration, or destruction. The type of threats include: malicious codes, unwanted programs (ad ware, spyware), phishing, hacking, and cyber vandalism. E-commerce websites use different tools to avert security threats. These tools include firewalls, encryption software, digital certificates, and passwords.

Several studies confirm that long delivery times and high delivery costs are one of the main barriers to cross-border e-commerce, making logistics a crucial aspect of an e-commerce initiative (Giuffrida *et al.*, 2017).

It cannot be forgotten that the foundation of e-commerce is efficient logistics. The speed of shipping is the main priority for both new and existing e-stores. Shops are trying to outdo each other in terms of delivery, offering more and more often 24-hour shipment of purchased goods. Hence, the entire e-commerce industry is very much focused on the proper functioning of logistics. Customer satisfaction depends to a large extent on the well-run logistics of the store. E-commerce logistics is significantly different from logistics in traditional stores. A specific product pallet is ordered to the warehouse, from which a lot of packages come out to customers. Time matters most here.

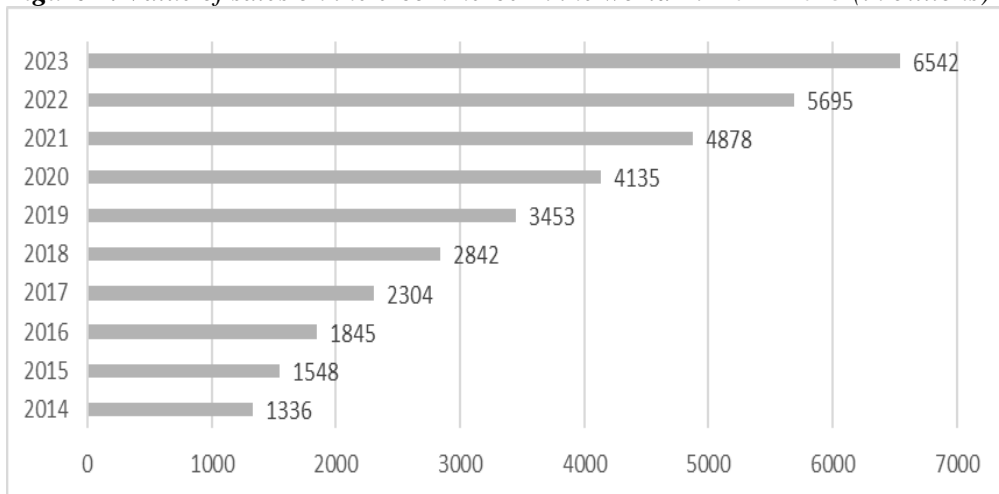
Therefore, it is not difficult to make a mistake in issuing the correct address on the package, preparing the goods in line with the order, issuing the appropriate invoice, etc. mistakes are made, and the customer more and more often complains or returns. All these problems can adversely affect the brand image and also cause significant financial losses. Well-managed warehouse logistics in the e-commerce industry is an investment that also requires proper preparation. Problems faced by companies in this area can be easily overcome by using appropriate tools. These tools are specific IT solutions that will help you automate many activities and, for example, streamline the shipment of goods (Kawa, 2017). Small companies usually control their own logistic operation because they do not have the ability to hire an outside company.

Most large companies hire a fulfillment service that takes care of a company's logistic needs.

3. Cross-Border E-Commerce Services Market - Global Trends

The success of global e-commerce expansion in the recent is undoubtedly the result of the freezing of many economies as a result of the prevailing pandemic. However, it should be emphasized, that global sales on the Internet have been growing dynamically for several years. The increase in value of the e-commerce market in the world is unquestionable, with the yearly average increase being around 20% (Statista, a). In 2014, e-commerce retail sales worldwide amounted to \$ 1,336 billion, in whereas in 2020 they reached over \$ 4,135 billion. Given the anticipated growth, retail sales revenues are expected to reach 6,542 billion in 2023 (Figure 1).

Figure 1. Value of sales on the e-commerce In the world In 2014-2023 (in billions)

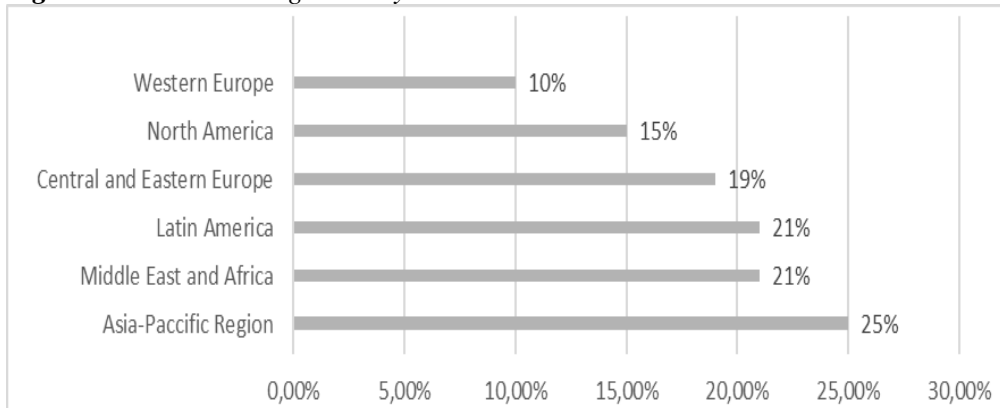


Source: Statista (a), <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>.

Also, if we take into account its share In global e-commerce, we can see a steady growth, which is at the level of over 15% year-on-year. In 2014, this share accounted for 6.3%, in 2018 it was at the level of 11.9%, whereas it is expected that in 2021 it will increase up to 17.5% (Statista, a).

As can be seen from the chart above, the highest annual growth dynamics In the world In 2019 was recorded in the Asia-Pacific region (25%). At this point it should be emphasized that not only China but also Hong Kong, Singapore and South Korea contributed to this success. The second ex aequo position was taken by Latin America, the Middle East and Africa - 21%, Central and Eastern Europe were placed in the third position - 19%. The next places were taken by North America -15% and Western Europe - 10% (Figure 2).

Figure 2. E-commerce growth dynamics in the world in 2019.

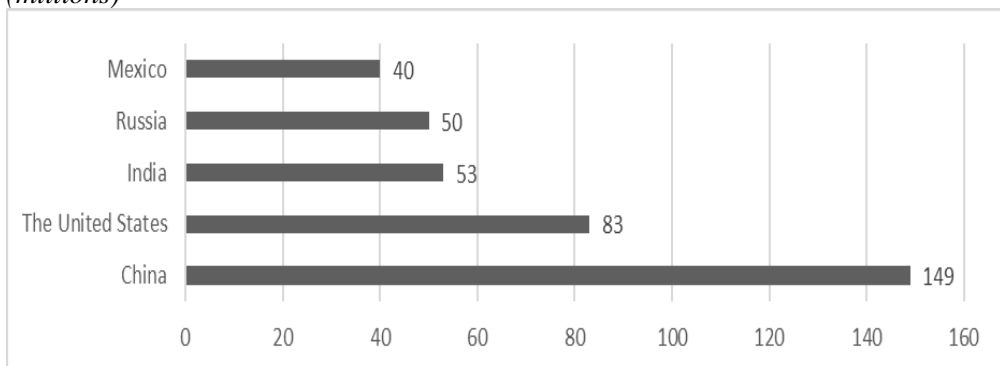


Source: Postnord, *Ecommerce in Europe 2020*, p. 6

Summarizing, the highest annual growth dynamics in the world in 2019 was recorded by e-commerce in Asia and the Pacific, but in the terms of the annual global jump, Mexico was the record holder with 35% increase (Cisielski, 2020).

Research confirms that the difference between the developed and the developing countries is getting smaller. The booming economies of such countries as India, Brazil and Mexico are emerging as the most promising e-commerce market for cross-border e-commerce in the world.

Figure 3. E-buyers of cross boarder e-commerce. The lar gest markets In the world (millions)



Source: E-shop World. *Global e-commerce. Market Ranking 2019*, p. 13

Among the largest e-commerce cross-border market In the Word, India and Mexico were In the top five. India takes third position with 50 million e-buyers (the high-growth region of Southeast Asia has been triggered by increased logistics and broadband infrastructure), Mexico the fifth with 40 million e-buyers (the cost of internet has dropped over the past several years and free public internet access has expanded across the country, also Mexico’s expedited customs process for imports

under \$50 has made it easier for cross-border merchants and shoppers). Growing internet users mean these countries are ideal markets for foreign brands to sell into. China still remains the leader (Figure 3).

Among emerging economies, China's e-commerce presence continues to expand every year. With 668 million Internet users, China's online shopping sales reached \$253 billion in the first half of 2015, accounting for 10% of total Chinese consumer retail sales in that period (Birtwhistle, 2017). The Chinese retailers have been able to help consumers feel more comfortable shopping online. E-commerce transactions between China and other countries increased 32% to 2.3 trillion yuan (\$375.8 billion) in 2012 and accounted for 9.6% of China's total international trade. In 2013, Alibaba had an e-commerce market share of 80% in China.

In 2014, there were 600 million Internet users in China (twice as many as in the US), and in 2019 1000 million, making it the world's biggest online market (Gracie, 2014). China is also the largest e-commerce market in the world by value of sales, with an estimated \$636 billion in 2019. The United States came second (US \$505 billion), followed by Japan (US \$104 billion). The fourth and fifth places were taken by European countries, The United Kingdom (US \$86 billion) and Germany (US \$70 billion) (E-shop World, 2019).

By analyzing individual e-commerce cross-border markets, in the e-consumer group, people in North America and Western Europe make less cross-border purchases than their counterparts in South America, Eastern Europe, Asia and Australia - 14% and 15% of their total online purchases respectively. This result should not come as a surprise as both markets are very mature and the most popular products can already be sourced at competitive prices in the countries of residence.

Imports of products from outside Asia averages 21% - although it varies considerably from country to country. In Hong Kong, Singapore and Vietnam, cross-border purchases account for 31%, 43% and 55% of online purchases respectively. In turn, for Indonesians, Japanese and Indians it is only 12%. China, with 20% of online cross-border purchases from outside Asia, is in the middle of the ranking. In Australia and New Zealand, 35% of online purchases are imported from outside the region, with 25% of e-purchases from North America and Europe. The regions where consumers most often shop internationally online are Eastern Europe and Russia (43%), South America (44%), and Africa and the Middle East (50%).

Particular attention should be paid to e-consumers from the United Arab Emirates - as much as 58% of online transactions made by them concern purchases in online stores from other regions, i.e. Asia, North America and Western Europe. In Eastern Europe and Russia, most products are ordered from Asia (15%), Western Europe (13%) and North America (8%). In South America, nearly 60% of products purchased online come from North America (KPMG, 2017).

In Europe, two-thirds of the value of cross-border e-commerce trade intra-EU trade, and only one-third stands for the purchases from the outside of the UE (Cisielski, 2020). Among the countries which are the determinants of e-commerce cross-border are:

- Chines buyers expect better quality of the purchased foods, also they highlight the need to purchase a product not available in their country;
- Americans expect a lower price or their decision is by the unavailability of the product in the United States;
- Europeans buy because of a Lower price or promotions (i.e. free shipping, taxes, second product at a bargain price, etc.).

4. Electronic Cross-Border Shopping in Poland

There are over 38 million people living in Poland, of which 77 percent can be seen as internet users. And in 2020, 80 percent of internet users shopped online. Based on research from Gemius, the most purchased products in the Polish ecommerce sector were clothing and accessories, books, CDs, films, and multimedia. According to data from yStats.com the most widely offered product categories were home/garden, followed by sports/hobbies and clothing/shoes.

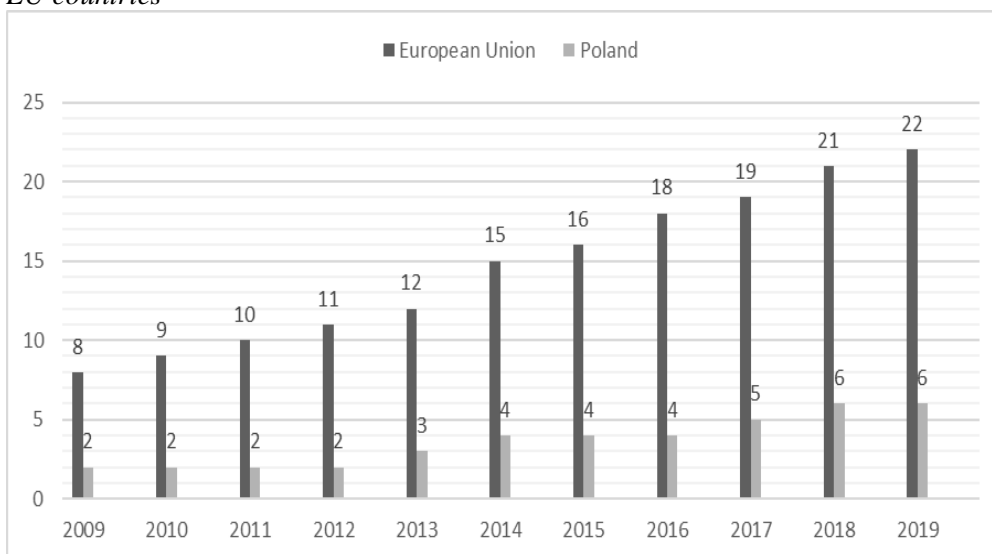
Ecommerce in Poland accounted for approximately 8 percent of all retail sales in the country. Data from Ecommerce Foundation shows that the Polish ecommerce industry was worth 9.31 billion euros in 2018 and was expected to increase by 25 percent to 11.64 billion euros at the end of 2019. One year later, ecommerce in Poland was expected to be worth almost 22 billion euros. In 2020, about 11,000 new ecommerce websites and online stores were launched in Poland. A very popular shopping site in Poland is that of mass merchant Allegro.pl.

Polish e-consumers more and more often visit foreign stores offering shipment of products to Poland. Although relatively few Poles buy in foreign e-shops (Figure 4) compared to other European countries, their openness to cross-border shopping has tripled over the last 10 years and this trend can be expected to continue, especially due to the pandemic.

In order to look at the detailed reasons why both individual customers and enterprises in Poland decide to buy online abroad, the author conducted two surveys in July and August 2019. 2,048 customers of online stores participated in the first survey. The link to the survey questionnaire was published on the Facebook social network. The selection of respondents for the research sample was random, the so-called comfortable. In addition to the size of the sample, the key aspect determining its quality is its representativeness, therefore the structure of the sample was adjusted using an analytical weight to match the structure of Polish society in terms of key features related to the subject of the study.

When constructing the weight, socio-demographic variables such as gender and age were taken into account. As for the age of the respondent, the division was made according to the criterion of dividing the generation into generations of Veterans, Baby Boomers, X, Y, Z.

Figure 4. Individuals using the internet for ordering goods or services from other EU countries



Source: Eurostat.

The survey of e-shops was also conducted by means of an electronic questionnaire, and the invitations to the survey were sent by e-mail. Due to the limited possibility of sending e-mails with invitations, a quota selection was made according to the voivodship criterion, and the sample size in each study was determined at 25% of the population. A total of 10,827 were sent, 121 correctly completed questionnaires were received.

Database of entrepreneurs with the number PKD 47.91.Z - Retail sales conducted by mail order houses or the Internet, was obtained from APM Grupa spółka z o.o. These are data of active companies and entrepreneurs, disclosed to the public, not constituting personal data and are exempt from registration with GIODO. As of July 31, 2019, there were 43 307 registered entities.

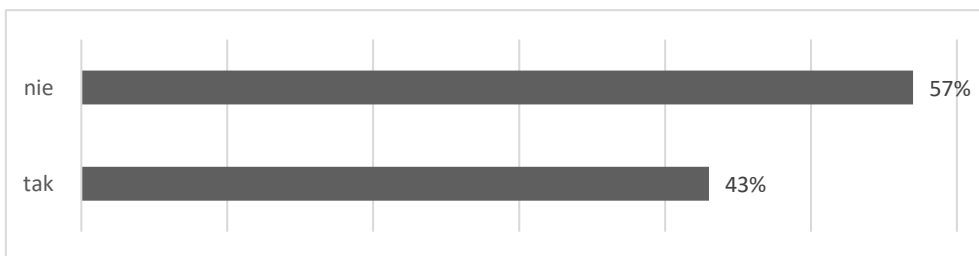
The research results obtained in this way are not representative for the entire population, but they provide an overview of the problem and constitute the basis for drawing significant conclusions.

The price and availability of goods are the main attributes that create value in the case of purchases in foreign online stores, which, as can be seen in Figure 5, were used by 43% of respondents. 45% of those asked as the reason why they bought

abroad subjected the product to a lower price compared to Polish e-shops, another 42% indicated that the product they needed was unavailable on the Polish market.

Other reasons why the respondents made purchases in foreign e-stores include: curiosity (5%), being temporarily or permanently abroad (4%), and better value for money (4%). Out of 57% of respondents who had never bought abroad, 84% declared that there was no such need, because similar products are available on the Polish market, another 11% expressed a lack of confidence in the seller, and 5% were afraid of a long waiting time for the shipment and high costs of handling the shipment itself (Figure 5).

Figure 5. Using online shopping in foreign stores by individual customers

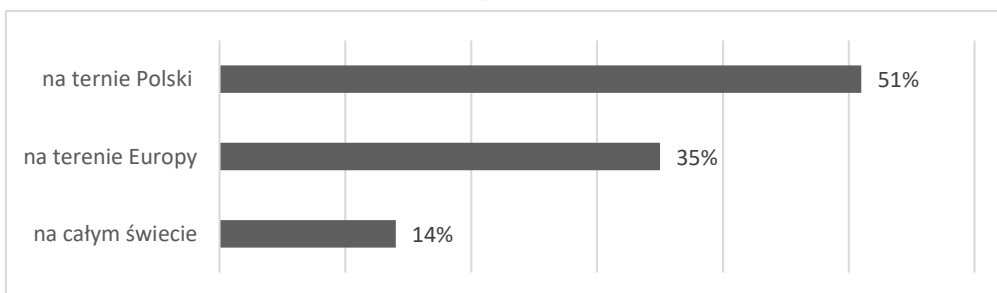


Source: Own research

The residents of cities with more than 100,000 people most often buy in foreign e-stores. residents - 47.6%, and only 21.4% of rural residents. There were no such differences in terms of gender or age of the respondents.

Poles are eager to look for goods abroad, but the fact that Polish online stores use the market development strategy and offer their products abroad should also be assessed positively. This is understandable as electronic commerce can definitely be defined as borderless sales. Every third e-shop addresses its offer to residents of all European countries, and 14.3% allows them to purchase their products all over the world (Figure 6).

Figure 6. Markets served by Polish e-shops.



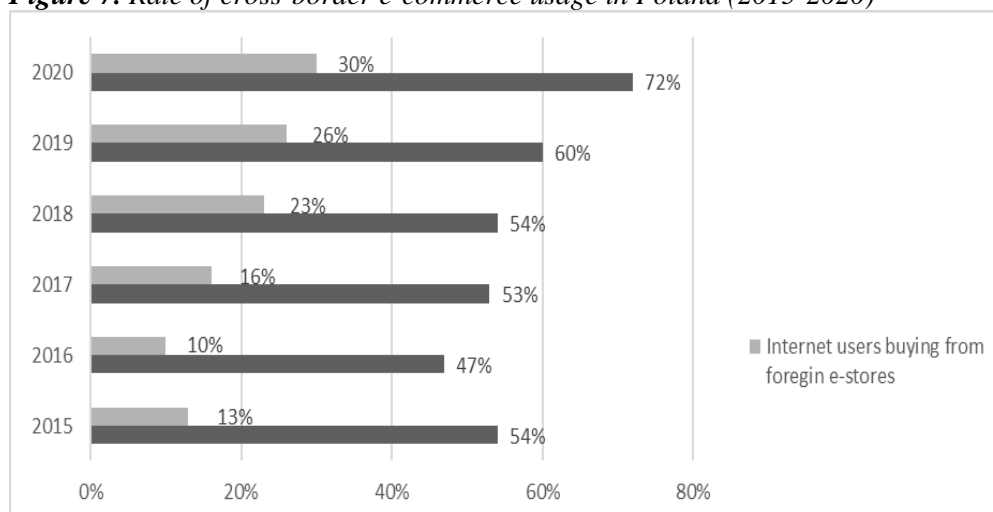
Source: Own research.

The directions of expansion of Poland e-commerce companies indicated In the study are the German market and the United Kingdom market.

Expanding activities beyond the borders of the home country is an opportunity to provide value for compatriots living or staying abroad, by enabling them to purchase Polish products. When it comes to purchases in e-commerce abroad by companies, in 2019 this supply channel was used by 9% of respondents. In this way, entrepreneurs most often purchased raw materials for production or goods for further sale on the home market. The second group of products includes primarily electronics and office supplies.

The most frequently chosen destinations for cross-border shopping In e-commerce by Poles are: Germany, China and the United States. This trend has not changed since 2016, which is confirmed by research by Gemius and Poczta Polska (Gemius, Poczta Polska, 2016). According to the 2020 “E-commerce report for Poland, Gemius for e-commerce Poland” (Gemius, 2020), shopping on foreign websites is still gaining popularity. In 2020, one-third of buyers used foreign e-commerce servers. Compared to 2019, this value increased by 4%, from 26% to 30%. For comparison, the percentage of buyers on Polish websites was 72% in 2020 and 60% in 2019. Currently, Polish e-commerce is one of the most dynamically growing European markets (Figure 7).

Figure 7. Rate of cross-border e-commerce usage in Poland (2015-2020)



Source: Statista (b), <http://www.statista.com/statistics/955395/Poland-cross-border-e-commerce/>.

The further development of cross-border e-commerce in Poland will undoubtedly be influenced by EU law, which will change in July 2021. The harmonization of regulations will give many companies an opportunity to sell throughout the EU.

These are the directives related to the creation of the Digital Single Market for e-commerce and related payments.

5. Conclusion

In 2019, 19% of the total online sales were made on non-domestic websites, most often in US and China. Cross-border e-commerce trade between Europe and Asia is worthy of attention, as products made in China are highly desired by consumers in the West. This is due to their bargain prices and diverse range, which encompasses everything from electronics to fashion.

Chinese cross-border e-commerce has a value of \$149 billion. However, it could be adversely affected by legislation. It has attracted government intervention because brands use cross-border e-commerce to avoid the rules of their products with local agencies.

Cross-border e-commerce permits Chinese shoppers to purchase products online that are manufactured overseas and evade the laws. Confronted with pressure from retailers and the loss of tax revenue, the government has decided to mend the inconsistencies.

Since March 2016, the Chinese authorities have issued a string of orders. They're broadly aimed at increasing normal import tariffs and statutory demands for goods imported to China through cross-border e-commerce channels. However, this new system caused an adverse reaction among cross-border traders both in China and overseas.

Cross-border e-commerce retailers hope that goods bought from abroad will continue to profit from the low tariffs and be exempt from regulatory demands.

Europe has high mobile usage. Over 54% of retailers predict mobile to be the primary source for placing orders by cross-border e-commerce shoppers. Polish e-business will send more and more goods to foreign customers. At the same time, competition on the domestic market will increase as more and more companies from neighboring countries - and from afar - launch e-stores in local versions, friendly to Polish consumers on the web. For Polish e-stores, this means increased competition, therefore an important step in their expansion should be as soon as possible to start selling to customers in other countries.

Taking your e-commerce business cross-border does pose some risks. The benefits for both consumers and traders, though, often outweigh the challenges. Consumers are able to purchase from the comfort of their mobiles from their favourite global sellers and at their preferred prices. Brands and wholesalers can pride themselves in their growing international presence. It is for these reasons that cross-border e-commerce is in the future of many online retailers.

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