
Development of the Polish E-Commerce Market in Comparison to Selected EU Countries

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Abstract:

Purpose: The purpose of this article is to analyse the development of the Polish e-commerce market in the context of changes in consumer behaviour, the popularity of the main platforms and to compare its growth dynamics with selected European markets.

Design/Methodology/Approach: The study is based on an analysis of available statistical data from industry reports (Statista, Gemius, WirtualMedia) on the popularity of platforms, consumers' shopping preferences and the turnover dynamics and number of entities operating on the e-commerce market. A comparative analysis of e-commerce indicators in Poland and selected EU countries was used. The results are presented in the form of charts, showing both current data and forecasts.

Findings: The Polish e-commerce market is characterised by rapid growth in the number of players and turnover, especially in the context of the rapid growth during the COVID-19 pandemic. Major platforms, such as Allegro, remain dominant in terms of the number of users. Consumer behaviour in Poland shows a strong preference for online shopping, driven by 24-hour accessibility and a wide product range. Compared to other EU countries, Poland is experiencing higher growth in turnover dynamics, highlighting the importance of this market against the European background.

Practical Implications: the results of the study provide valuable information for both e-commerce businesses and policy makers. They can help to better understand consumer behaviour and identify key areas to support the further development of the sector.

Originality/Value: The article presents an analysis of the Polish e-commerce market on the basis of the latest available data, comparing its development with selected European markets. Special attention is given to the market structure, consumer patterns and growth dynamics.

Keywords: E-commerce, Poland, EU countries, consumer behaviour, market structure.

JEL Classification: L81, M21, O33.

Paper type: Research article.

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1. Introduction

As a result of digitalisation, globalisation and unprecedented communication opportunities, a fundamental change is taking place in the area of previous understanding of the economy and the market (Dejnaka, 2023). Businesses around the world are gaining access to new tools and platforms that enable them not only to expand globally, but also to adapt dynamically to changing consumer needs (Mayer, 2009).

E-commerce has become one of the main pillars of this transformation, redefining the ways in which products and services are delivered, sold and consumed (Szpringer, 2022). This phenomenon is not limited to the biggest players such as Amazon or Alibaba - local markets, including Poland, are playing an increasingly important role in shaping the global digital economy (Malakhova *et al.*, 2018).

The changing market structure, driven by the development of information and communication technologies, creates new opportunities for entrepreneurs while requiring them to be flexible and innovative. The rise of e-commerce is closely linked to increasing consumer expectations of convenience, speed and personalisation of the shopping experience (Kim *et al.*, 2023). As a result, not only the way in which business is conducted is changing, but also the entire dynamics of the relationship between businesses and their customers. In this context, of particular interest is the development of e-commerce in Poland, which stands out from other European markets for its dynamism and innovation (Żurakowska-Sawa *et al.*, 2021).

The development of electronic commerce has become a key phenomenon in the global economy, contributing to the transformation of traditional business models and consumer behaviour (Bhanu Murthy *et al.*, 2021). In recent years, Poland, which is one of the more dynamically developing e-commerce markets in Europe, has seen significant growth in terms of both turnover value and the number of market players (e-Chamber, 2023).

The article aims to provide a detailed analysis of the development of the Polish e-commerce market against the background of selected EU countries. It will present key indicators such as turnover, number of companies, as well as an analysis of consumer behaviour, which have a direct impact on the structure and dynamics of this market. The article is based on available industry reports and statistical data, including those from Statista, Gemius and WirtualMedia, which allows for a comprehensive assessment of the phenomenon in question.

2. Literature Review

E-commerce plays a key role in today's digital economy, and its adoption in developing countries faces specific challenges and benefits. According to Hendricks and Mwapwele (2024), the growth of e-commerce in these countries is constrained

by problems with technological infrastructure, payment security and low levels of consumer confidence. In developing countries, these barriers also include the high cost of technology implementation and insufficient government support in creating regulations that favour e-commerce.

However, research indicates that e-commerce adoption can bring numerous benefits, such as increased access to new markets, reduced transaction costs and improved business productivity, which consequently contributes to economic growth.

In the literature on e-commerce in developed countries, there are many studies showing the impact of modern technology on increasing sales and improving firm productivity (Alyoubi, 2015; Lekmat, 2018). However, in the context of developing countries, e-commerce adoption has been much slower due to issues such as inadequate internet infrastructure, lack of online payment systems and limited technological skills of entrepreneurs (Mthembu *et al.*, 2018).

In addition, low levels of consumer confidence in online shopping remain an issue, which limits their engagement in online transactions (Guo *et al.*, 2020; Xiao *et al.*, 2021).

The growth of e-commerce in Poland can be linked to global digitisation trends also observed in other developing countries. As Sheikh, Iqmar and Norazirawati (2018) point out, the development of e-commerce contributes to digital inclusion, enabling access to new services and markets for communities previously excluded from the digital economy.

Similar phenomena are evident in Poland, where the development of platforms such as Allegro or OLX allows users from different regions of the country, including rural areas, to access services online. This expansion of market access also improves consumer confidence in online transactions, which encourages further growth in this sector of the economy (Bredzel-Skowera *et al.*, 2015).

In contrast, the UNCTAD (2022) report highlights that the COVID-19 pandemic accelerated e-commerce adoption in developing countries, including Poland. The impact of the pandemic contributed to an increase in online transactions, which strengthened the position of e-commerce as a key economic sector, providing access to products and services at a time of sanitary constraints.

Interesting research also relates to the customers themselves and their preferences, e.g., regarding the choice of product delivery in the e-commerce market. A sample of 302 respondents found that the e-commerce market is not only about already operating and dynamically emerging new online shops, but also about a well-prepared delivery system to the customer. The logistical aspects have to be planned and implemented with special care, as this is of great importance for the efficiency

of order handling and, consequently, for customer satisfaction (Lemanowicz *et al.*, 2022).

3. General Overview of the Polish E-Commerce Situation

Based on public data and industry reports, 2022 was a very good year for the European e-commerce (B2C) market, with a total turnover of approximately EUR 547.8 billion, although this was EUR 8.8 billion less than the previous year. In the domestic e-commerce market, the turnover of domestic e-commerce in 2022 was approximately PLN 109 billion and in 2023 already PLN 124 billion.

From the point of view of 2021, the 2022 value was higher by 9% y-o-y, i.e. PLN 9 billion. Thus, while the turnover values of the European e-commerce market declined, the domestic market continued to grow. Unsurprisingly, the number of entities present on this market was also growing dynamically. In 2022, there were 57,900 companies with an e-commerce profile on the market, i.e. companies engaged only in online trading activities.

The largest e-commerce entity on the Polish market in 2022 and 2023 was Allegro. Allegro was valued at PLN 34.576 million in 2023, while the second most valuable entity (STS) was valued at PLN 3.177 million and the third (CCC) at PLN 2.455 million. The discrepancy is therefore very large.

Allegro, in terms of choice of where to shop, dominates the marketplace category. However, in terms of the highest turnover in the online shop category, the first place in 2023 was taken by mediaexpert.pl, followed closely by euro.com.pl. There is a similar situation in the e-commerce sector, where the largest in 2023 generated more than twice as much turnover as the entity right behind it in the ranking.

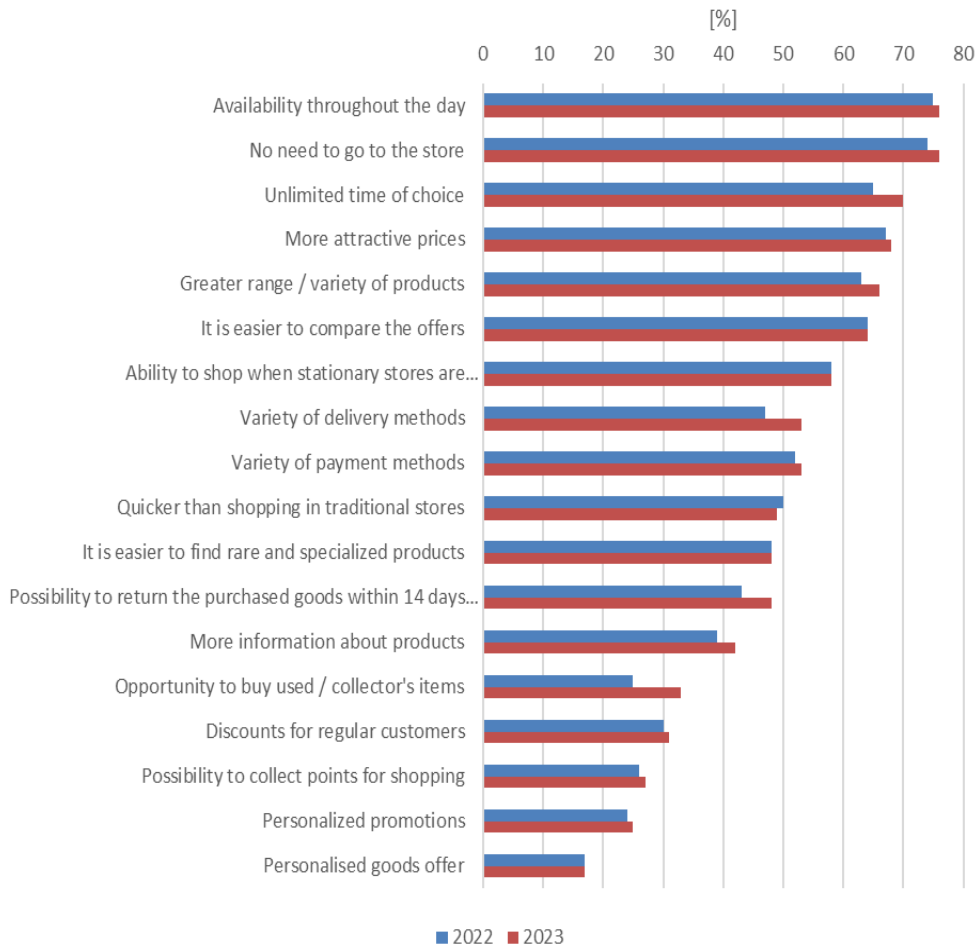
In terms of popularity in 2023, Allegro again leads the way. It held the largest share of the total number of active users of e-shops and shopping e-platforms. Allegro gathered more than 19% of active users. This means that it is characterised by good (better than competitors) user retention and effectiveness in attracting new users.

The Polish e-commerce market is also a strongly localised market. In 2022 75% of internet users made purchases in domestic e-shops, while only 32 per cent declared that they also shopped in foreign ones.

The number of people using e-commerce is also growing. By 2023, the number of online consumers has risen to 64.3% (of all consumers). It is therefore worth examining consumer motivations in more detail (Figure 1). In first place as a motive for online shopping was: availability throughout the day. This was immediately followed by not having to physically go to a shop to buy the products. In third place was unlimited time to make a choice. All the motives mentioned in 2023 were indicated by more than 70% of the respondents.

This clearly shows that the main motives associated with online shopping for Polish Internet users are related to the main features of online shops.

Figure 1. Main reasons for shopping online (Poland 2022-2023)



Source: Own elaboration based on Polish Internet Research; Gemius, September 2023.

Further down the hierarchy of motives for online shopping by Polish Internet users are: more attractive product prices (products at more attractive prices than in stationary shops) - 67%/68%; a large selection of products - 63%/66%; ease of comparing offers - 64%/64% or variety of delivery methods - 47%/53%. This last reason seems to gain in importance in 2023. The last group are the motives that scored below 50% and include: ease of finding specialised and rare products - 48%/48%; more product information (rich descriptions) - 39%/42%; opportunity to collect points for purchases (loyalty programmes) - 26%/27% or personalised product offers - 17%/17%.

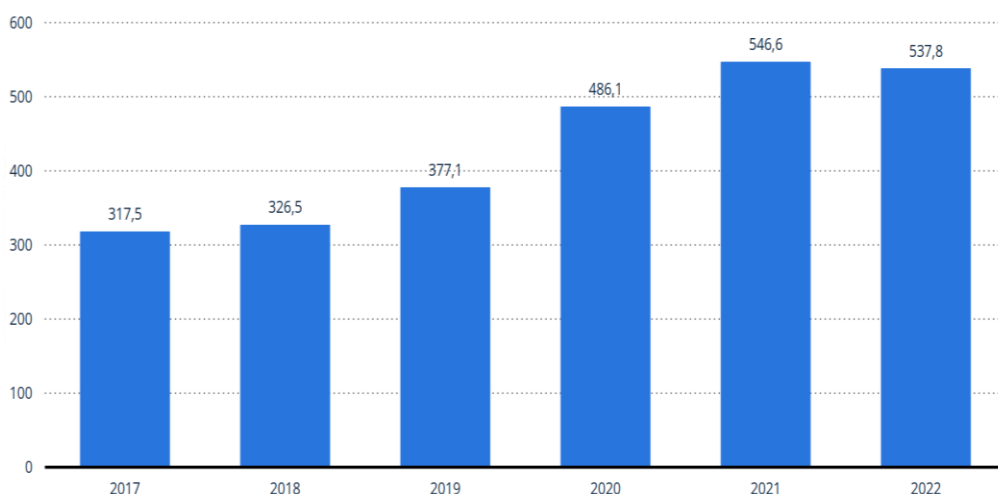
The last element characterising Polish e-commerce is the structure of average spending on online shopping. It turns out that in 2022, e-commerce customers spend the most on average on household appliances (white goods) - PLN 1,362 (PLN 1,323 in 2023). In second place are phones and tablets – 966 PLN (1,272 PLN in 2023). In third place is furniture and furnishings - 1,172 PLN (933 PLN in 2023).

While the top 3 is not surprising, as these products tend to be expensive, the fact that grocery shopping came in fourth place – 213 PLN (405 PLN in 2023) is somewhat surprising (and the fact that the average amount spent on this has almost doubled in 2023). This is followed by footwear (172 PLN/ 275 PLN in 2023); clothing and accessories (213 PLN / 270 PLN in 2023) and cosmetics (140 PLN / 130 PLN in 2023).

4. E-Commerce Market Dynamics in Poland and Selected EU Countries 2017-2022

As mentioned in the previous chapter, 2022 was a very good year for the European e-commerce market. Total turnover amounted to approximately EUR 547.8 billion, an increase of approximately 41% compared to 2017 (in 2017, turnover contributed EUR 317.5 billion). According to forecasts, the upward trend is expected to continue in the following years, with the turnover value of the B2C market in 2027 projected to be around USD 751 billion.

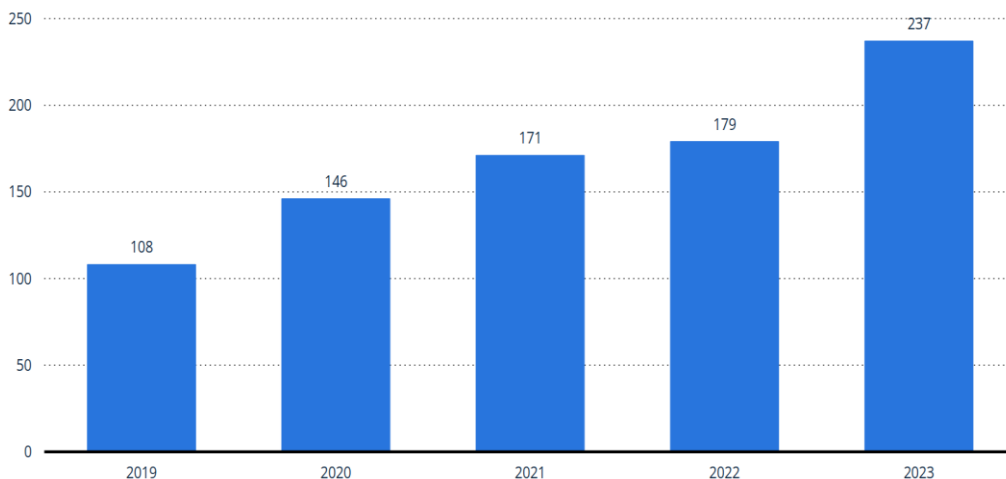
Figure 2. European B2C e-commerce market trading



Source: Statista "Digital & trends. E-commerce in Europe".

The value of cross-border e-commerce is also developing dynamically (Figure 3), essentially following the trend of the overall market, with the difference that it continued to grow in 2022 and reached EUR 237 billion in 2023.

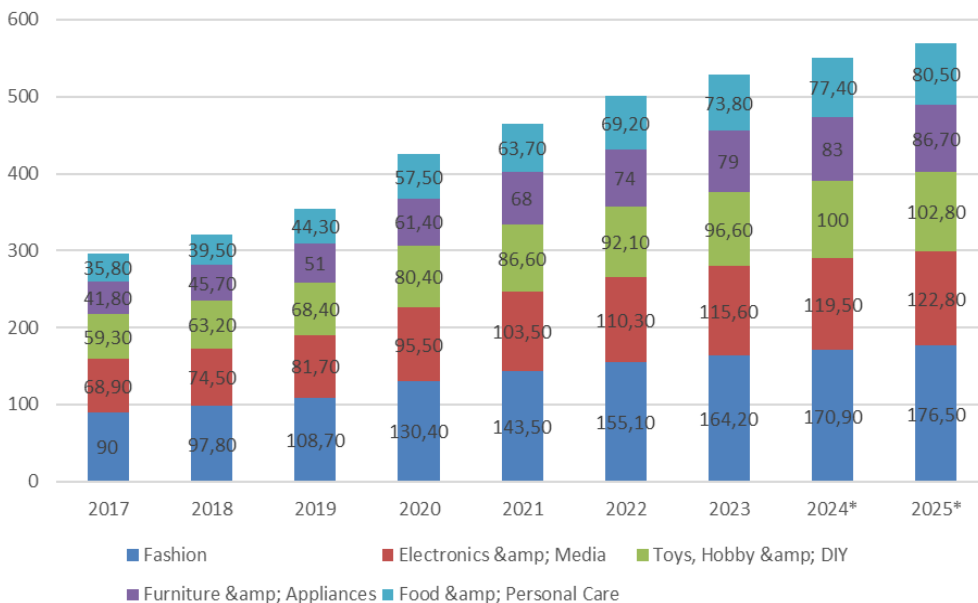
Figure 3. European B2C cross-border e-commerce market trading



Source: Statista "Digital & trends. E-commerce in Europe".

The outlook for the e-commerce market in Europe is positive. Growth is not expected to be as great as in 2019-2021, but the upward trend is still expected to continue (Figure 4). In 2024, the total value of the e-commerce market in Europe is forecast to grow by around 4% y-o-y and by a further around 3.5% in 2025.

Figure 4. Value of the European e-commerce market by product segment (billion USD)



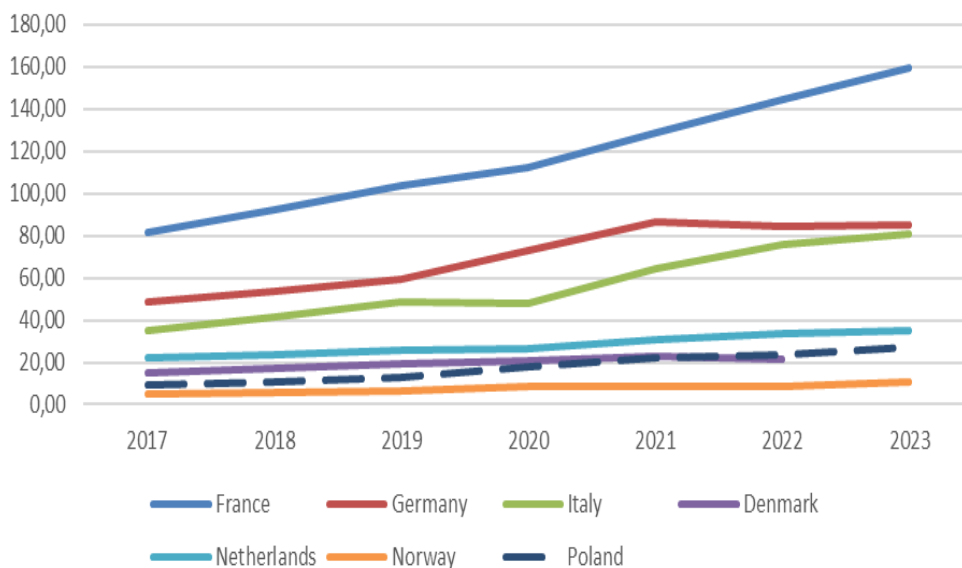
Source: Own elaboration based on Statista.

The largest increases are forecast in the furniture and home appliances category (5.1% in 2024 and 4.5% in 2025) and food and personal care (4.9% in 2024 and 4% in 2025). In the other segments, the projected y-o-y increases are lower.

Overall, the European B2C e-commerce market is growing in terms of turnover value. The weaker 2023 result should not be interpreted as a reversal of the upward trend. However, the deceleration of dynamics may be related to the recovery (increased dynamics) in cross-border e-commerce. It seems that European consumers are starting to trust Chinese shopping platforms, for example, more and more, which may create more competitive pressure on players operating in the EU internal market. However, the outlook remains optimistic for the market as a whole, and a continuation of the upward trend seems certain.

It is also worth noting the value of turnover in selected e-commerce markets of several EU countries (Figure 5). In 2017, among the compared countries, the highest turnover on the e-commerce market was recorded in France - EUR 71.5 billion. On the other hand, the lowest turnover among the compared countries was recorded in Norway - EURO 5.33 billion (Poland, for comparison, recorded EUR 9.39 billion). Among the group of comparator countries, France stands out not only in terms of turnover, which in a way can be linked to population and GDP. It is also a country that has recorded a steady increase in the value of turnover on the e-commerce market throughout the entire period analysed.

Figure 5. E-commerce market trading in selected EU countries (billion EUR)

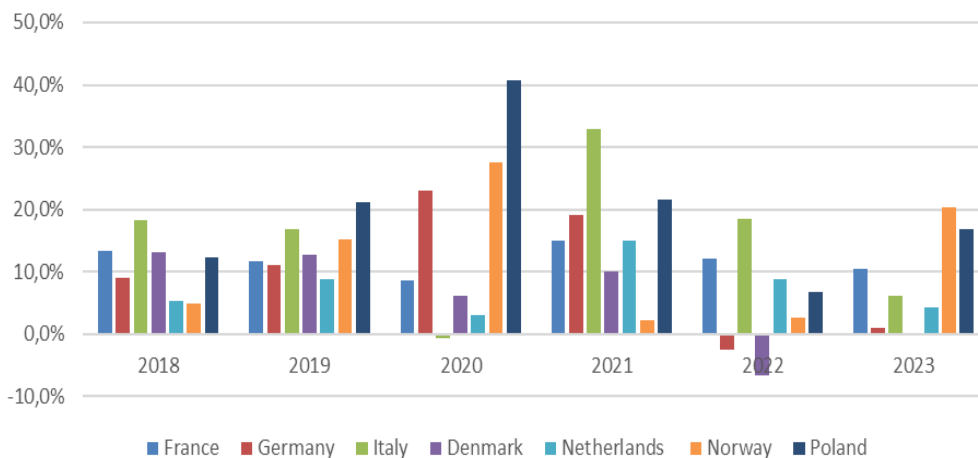


Source: Own elaboration based on Statista.

At the end of the analysis period, i.e., in 2022, France still remains the country (in the comparison group of countries) with the highest e-commerce market turnover (Figure 5), which amounts to EUR 144.7 billion. In comparison, the aforementioned Norway is characterised by an e-commerce market turnover of EUR 10.4 billion (Poland EUR 23.36 billion). All countries analysed recorded a positive effect of the pandemic from the point of view of e-commerce market turnover. Of course, the scale of the increase in absolute terms varied.

French e-commerce market turnover growth accelerated in 2020, so the pandemic effect was an additional stimulus in this case. In the case of the other countries, it was one of the main drivers behind the growth in e-commerce market turnover. Of course, in the case of France, there is a greater base effect, so the increases themselves in terms of value are greater than, for example, in the aforementioned Norway. To this end, it is also worth analysing the dynamics themselves in the form of chained dynamics indicators (Figure 6).

Figure 6. Dynamics of change in e-commerce trading in selected EU countries (billion EUR)



Source: Own elaboration based on Statista.

In 2018, the highest growth rate in e-commerce turnover was recorded in Italy with 18.2% y-o-y (nominal EUR 6.4 billion). France came in second with growth of 13.3% y-o-y (nominally EUR 10.9 billion), followed closely by Denmark with growth of 13.1% y-o-y (nominally EUR 2 billion). Poland recorded a nominal growth of EUR 1.16 billion in this period, which corresponded to a 4.9% y-o-y increase in the value of the entire market.

In 2019, it was Poland that ranked first in terms of e-commerce market turnover growth - 21.2% y-o-y (nominally EUR 2.24 billion). Second place went to Italy –

16.9% y-o-y (nominally EUR 7 billion). And third place with growth of 15.2% y-o-y (nominal EUR 0.85 billion) went to Norway.

In 2020, Poland is again in first place with growth of 40.7% y-o-y (nominal EUR 5.2 billion), closely followed by Norway with growth of 27.6% y-o-y (nominal EUR 1.78 billion). Third place belongs to Germany, whose market grew by 23% y-o-y (nominal EUR 13.6 billion).

2021 will see Italy return to the number one spot, with annual growth of 33% (nominally €15.9 billion). It is worth noting that the Italian e-commerce market had declined by 0.6% the year before. Second place belonged to Poland, with growth equal to 21.6% y-o-y (nominal EUR 3.9 billion). In contrast, third place belonged to Germany with growth of 19.1% y-o-y (nominal EUR 13.9 billion).

In 2022, the situation in terms of the annual dynamics of the value of the e-commerce markets of the countries studied has changed noticeably. Two of the seven countries compared recorded negative dynamics (the German market shrank by 2.5% y-o-y, while the Danish market shrank by 6.7% y-o-y). The first position in terms of growth in the value of e-commerce turnover belonged to Italy, whose market grew by 18.4% year-on-year (€11.8 billion in nominal terms). Second place belonged to France, with growth of 12.1% y-o-y (nominally EUR 15.6 billion). Third place went to the Netherlands - with growth of 8.8% y-o-y (nominal EUR 2.7 billion).

Over the entire period analysed, it was Poland that recorded the highest market growth rate of 148.6% (an increase of EUR 23.36 md). On the other hand, Italy, which has appeared so often in the top 3, increased its e-commerce turnover by 116.2% (nominally EUR 44.2 billion) over the years analysed. It is also worth mentioning France and Germany, whose markets grew by more than 70% over the same period. However, France recorded the highest nominal growth (EUR 73.2 billion), while Italy (EUR 44.2 billion) overtook Germany (EUR 40.3 billion).

Focusing on Poland alone, the value of turnover in the domestic e-commerce market in 2022 was approximately PLN 109 billion and in 2023 already PLN 124 billion. In the period from 2017-2018, the turnover growth rate was approximately 12% year-on-year. Starting in 2019, the turnover of the domestic e-commerce market increased by 22.2%. In the following year, the turnover dynamics increased and was a record for the analysed period - it amounted to 45.5%. In 2021, the turnover of Polish e-commerce reached PLN 100 billion (a 25% y-o-y increase). In 2022, on the other hand, the turnover growth slowed down to 9% y-o-y.

Analysing the dynamics of changes in the value of the turnover of Polish e-commerce, the strong impact of the COVID-19 pandemic is clearly visible. 2020 is a record year in terms of annual turnover growth, while 2021 is a breakthrough year, as turnover rose to PLN 100 billion (in 2017 it was PLN 40 billion).

The growing turnover of the e-commerce market in Poland was associated with an increase in the attractiveness of the market for entrepreneurs. This translated into a higher number of entities operating in this market. The number of entities operating on the e-commerce market between 2017 and 2022 increased significantly by 98.96%. In 2017, a total of 29.1 thousand companies operated on the e-commerce market in Poland. Starting from 2019, i.e., the beginning of the COVID-19 pandemic, a dynamic increase in the number of such entities is noticeable.

The record dynamics was recorded just in 2019 and amounted to 26.6%. Interestingly, this dynamics remained above 15% y-o-y up to and including 2021. During this period, a total of 49.9% more businesses arrived on the Polish e-commerce market compared to 2017 levels. Finally, in 2022, the dynamics drops to around 10% y-o-y, and the number of entities active on the market is 57.9 thousand. In 2023, another clear rebound can be seen, as the y-o-y dynamics reached 13.3%, and finally 65.6 thousand entities were active on the market.

In the context of the number of players operating in the domestic e-commerce market, the increase in the number of players operating in the sector is also noticeable. This growth is one year ahead of turnover growth, from a dynamics point of view. This shows that new players are finding their way into the market to a large extent and are contributing to the increase in turnover. On the other hand, it can also be seen that the market is still attractive for companies and no longer appears to be saturated.

5. Conclusions

The development of the e-commerce market in Poland in recent years, especially in the context of the COVID-19 pandemic, is an example of the dynamic transformation of the digital economy, which has accelerated the adaptation of consumers and businesses to the new market reality. Poland stands out from other European Union countries both in terms of the number of entities operating in the sector and the rate of growth in the value of turnover. Impressive growths have been recorded over several years, indicating the huge potential for further development of this market segment.

As the data shows, the increase in the number of users of platforms such as Allegro and the growing consumer confidence in online shopping are contributing to the further development of the sector. Furthermore, the increase in the number of e-commerce businesses in Poland, especially during the pandemic period, shows that the sector remains attractive and has the potential for further growth. However, in order to maintain this trend, it is necessary to continue investing in digital infrastructure, including the development of payment technology and logistics, which will allow for even faster order processing and customer satisfaction.

A comparative analysis with European markets shows that the Polish e-commerce market, although smaller in terms of turnover than in countries such as France or Germany, stands out for its high growth rate, especially during the pandemic period. The growth of 40.7% in 2020 shows that Polish consumers have quickly adapted to changing market conditions and shopping preferences.

In the coming years, it will be crucial to continue the growth trend through innovation and optimisation of shopping processes. The results of this study can serve as a basis for the formulation of future policies and strategies for the development of the e-commerce market, both at national and EU level, as well as for entrepreneurs who are planning further expansion in this sector.

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