

E-commerce in Poland and Denmark - comparative analysis and development trends

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Abstract

The article touches on the rapidly growing field which is e-commerce. At first it describes the basic conditions affecting the development of this area and the main indicators of its potential. The next part focuses on presenting the current state of e-commerce development in Poland and in Denmark on the background of other, selected countries. In the final part, a brief assessment on the situation regarding the use of e-commerce in the two, surveyed countries was done. Main used methods are deduction, induction and comparative analysis of different reports concerning e-commerce markets in Poland and Denmark.

Introduction

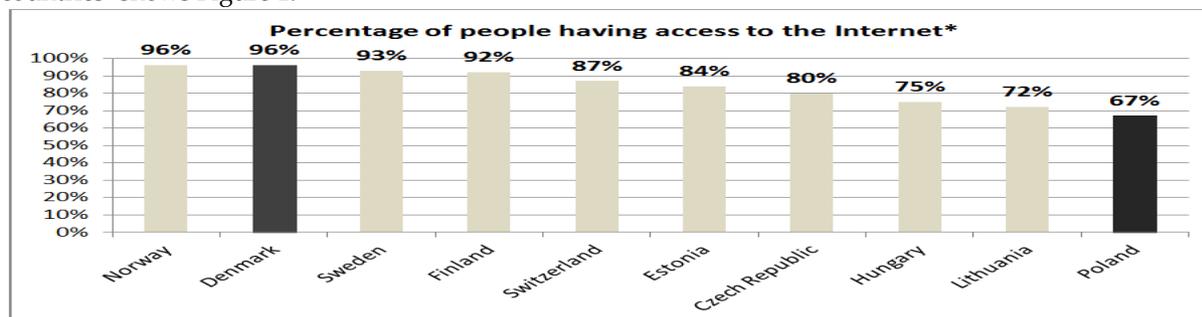
The term "e-commerce" was introduced by IBM for the first time in 1997. However, we can speak about the development of e-commerce at least since the first demonstration of an online shopping system in 1979 (Tkacz, Kapczyński, 2009, p. 255) or since the commercial introduction and use of electronic networks. Polish version of Wikipedia shows that already in 1980 e-commerce has been widely used by manufacturers such as: Ford, Peugeot-Talbot, General Motors and Nissan (pl.wikipedia.org [online access 06.05.2016]).

Even today, after at least 20-25 years of e-commerce market activity, this term is not always defined in an unambiguous manner. But most often it is assumed that e-commerce is mainly connected with e-trade, and includes transactions that are made through electronic networks. Goods and services are ordered in direct mode (online), and the delivery as well as payment can be done online or in the traditional form. It is worth noting that the dynamic expansion of information and communication technologies (ICT) is currently the driving force behind the growth of innovation and competitiveness of the economies of individual countries (Kraus, Kasprzyk, Chorób, 2010, p. 7).

Regardless of the theoretical approach, the business practice shows, that nowadays this form of trade is developing worldwide.¹ However, we cannot forget that this development is unequal between various countries, and its rate depends very often on specific conditions.

1. Basic conditions for the development of e-commerce

One of the most important and at the same time a fundamental factor affecting the development of electronic commerce is the public access to the Internet. The data on this subject for 2014 in selected European countries² shows Figure 1.



¹ The first online shops appeared even in North Korea - albeit in a very truncated form; <http://www.cnbc.com/2015/05/06/> [online access 06.05.2016].

² Next to the countries being under study (Poland and Denmark) the article includes a comparative situation mainly in some other Nordic countries as well as in few other countries in Central and Eastern Europe.

* excluding people aged 0-14

Fig. 1. Access to the Internet at the end of 2014 in selected European countries

Source: Central Europe B2C E-Commerce Report 2015, p. 24 and Northern B2C E-Commerce Report 2015, p. 24, www.ecommerce-europe.com [online access 16.04.2016].

On average, for the 28 countries belonging to the European Union, access to the Internet has 78% of the population, while for the whole Europe the figure is 72%. This clearly shows that in this respect Poland with a score of 67% has still a lot of catching up to do. A completely different situation is in Denmark, which is one of the leaders regarding Internet penetration level (next to Norway – which has the same score – namely 96%), and is second only to the small and little populated Iceland (the results of which hovers around incredible 98%).

Another important factor for the development of e-commerce is the ability to use the Internet and computers. That translates to the frequency of use of the Web. Information on this topic, are shown on Figure 2.

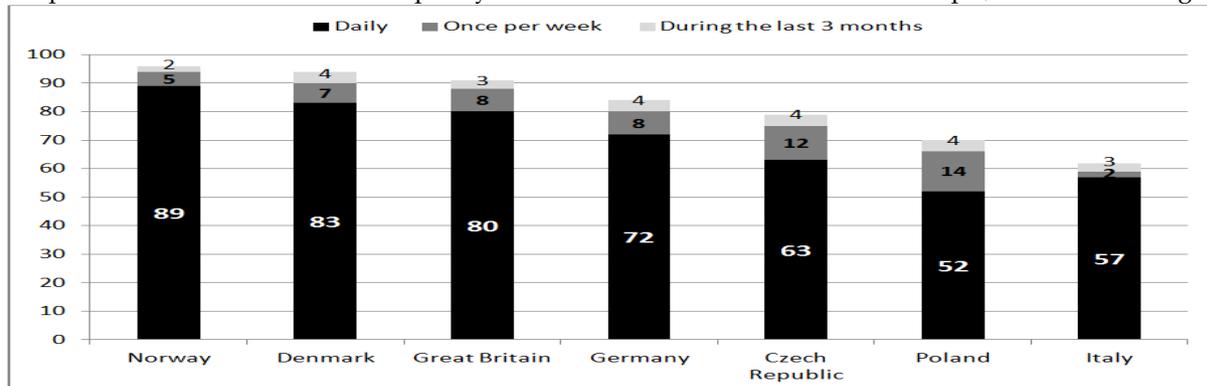


Fig. 2. The frequency of Internet use by citizens of selected EU countries in 2014 (in%)

Source: Eurostat, [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Frequency_of_internet_use,_2014_\(%25_of_individuals_aged_16_to_74\)_YB15.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Frequency_of_internet_use,_2014_(%25_of_individuals_aged_16_to_74)_YB15.png) [online access 15.05.2016].

Beside the mentioned, basic factors, one should also mention other issues affecting the development of e-commerce. These are undoubtedly such as the usefulness of individual websites, applications and sales channels for selected categories of services and products and a variety of socio-economic conditions lying on consumers' side (e.g. the perception of the risks associated with online shopping). You can find opinions that the study of the interactions between technology development and societies, and economies should take into account the following issues - the infrastructure as well as services provided on its basis and also user needs (Kuczera 2012, p. 200).

On the basis of those presented and mentioned considerations the world of e-commerce is developing. And this takes place in different countries at different rates. To compare the development of this economy sector both in Poland and in Denmark, it seems reasonable to analyze the basic indicators of the potential of e-commerce and collate it with some data from other European countries. Such approach should not only indicate which of the two examined countries has a stronger e-commerce market but it should also show their places in comparison and on the background of other European markets.

2. Basic indicators of e-commerce potential

The potential for e-commerce development depends on many factors. Certainly an important impact in this regard is the size of the national economy itself. One of the most important measures indicating the level of economic development of the country is the GDP as well as the GDP per capita. The data on this subject for the year 2014 in selected European countries are presented in Table 1.

Country	GDP (in billions of Euro)	GDP per capita (in thousands of Euro)
Austria	328,4	38.500
Czech Republic	154,7	14.700
Denmark	257,0	45.500
Lithuania	36,3	12.400
Germany	2.899,9	35.200
Poland	412,5	10.700
Sweden	430,0	44.300
Hungary	103,2	10.500

Table 1. GDP and GDP per capita in selected European countries at the end of 2014

Source: Central Europe B2C E-commerce Report 2015, p. 25 and Northern B2C E-commerce Report 2015, p. 25; www.ecommerce-europe.com [online access 16.05.2016].

It is clearly visible that the GDP of Denmark is almost twice lower than the Polish one, but taking into account the number of inhabitants - the GDP per capita in Denmark is four times higher than in Poland. Comparing it with the next indicator - the share of e-commerce within the general GDP - it is obvious in which country e-commerce market is more developed. Data on the share of e-commerce in GDP in selected European countries shows Figure 3.

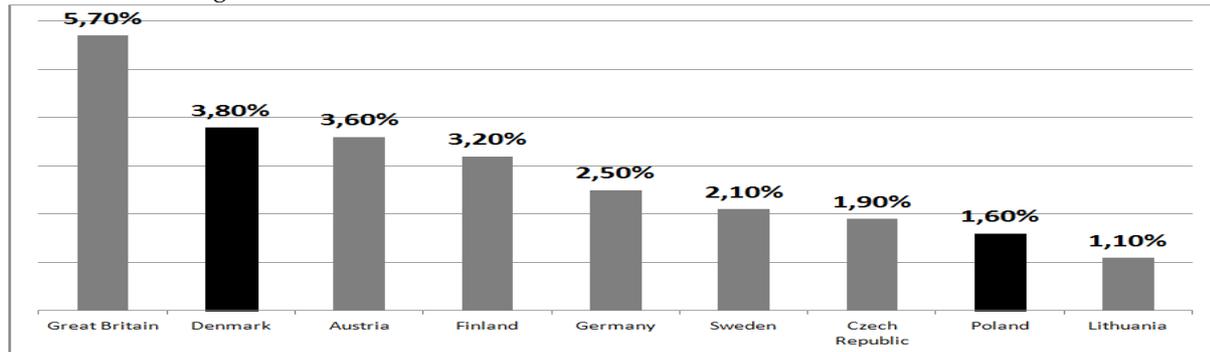
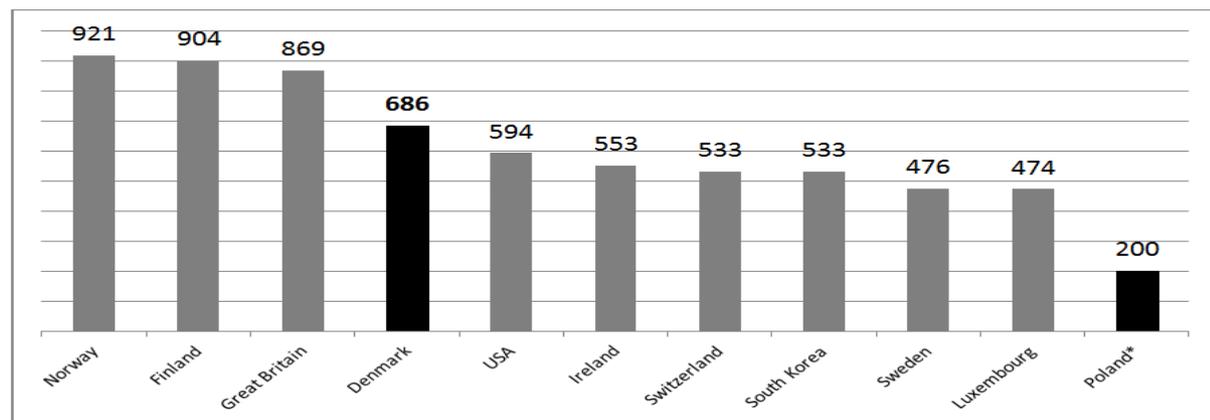


Fig. 3. The share of e-commerce in GDP in selected European countries at the end of 2014 (in %)

Source: Central Europe B2C E-commerce Report 2015, p. 25 and Northern B2C E-commerce Report 2015, p. 25, www.ecommerce-europe.com [online access 16.05.2016].

The largest markets for e-commerce are the US, China and Great Britain with the respectively expenditures at the level of 187.0, 75.3 and 54.7 billions of dollars (Euromonitor, 2013). However, the situation is different, if one takes into account the expenditure per capita. In this respect, by far the forefront are the European countries³ with the Scandinavian ones at the top and Denmark just behind the so-called podium. Data on this subject are shown in Figure 4.



* For Poland no indication was given in the Euromonitor specification. However, according to the report this country took 25th place, while in Czech Republic being at 20th place expenses amounted to 217 USD.

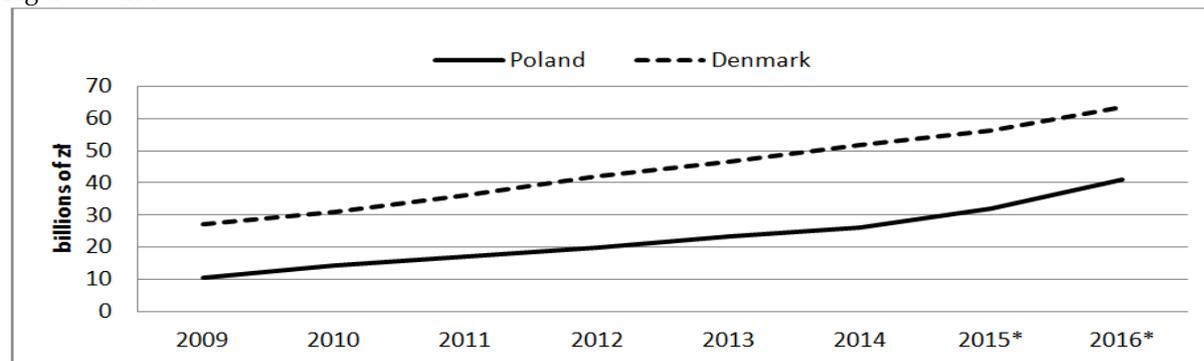
Fig. 4. Expenditures per capita on e-commerce in selected countries in 2013 (in USD)

Source: Euromonitor International, Cushman & Wakefield, after: P. Mazurkiewicz, *Norwegia światowym liderem, „Rzeczpospolita”* from 4.07.2013.

On the basis of all previous presented data it is quite easy to draw a conclusion about the much higher level of development of e-commerce in Denmark than in Poland. However, it is also worth to pay attention to the development potential of this business segment in these two countries. To check this, the author analyzed

³ There are only 2 countries outside of Europe in the Top 10.

the level of turnover of e-commerce and sales growth during the recent years. Data on this subject are shown in Figures 5 and 6.



* forecast

Fig. 5. The turnover of e-commerce in Poland and Denmark in the years 2009-2016 (billion zł - Denmark converted to the euro at the rate of 4.2 zł)

Source: PBI after „Puls Biznesu” from 6.10.2015, M. Sieliwierstow, *Więcej magazynów dla e-handlu*, p. 16 and SMB, Kelkoo, Forrester Research, Gemius Report 2012/1013, Raport e-commerce 2013 after „DGP ekstra” 29.11-01.12.2013; <http://www.statista.com/statistics/260976/b2c-e-commerce-sales-in-denmark/> [online access 10.05.2016]; <http://www.ekosglobal.com/markets/uk-and-europe/denmark/> [online access 10.05.2016].

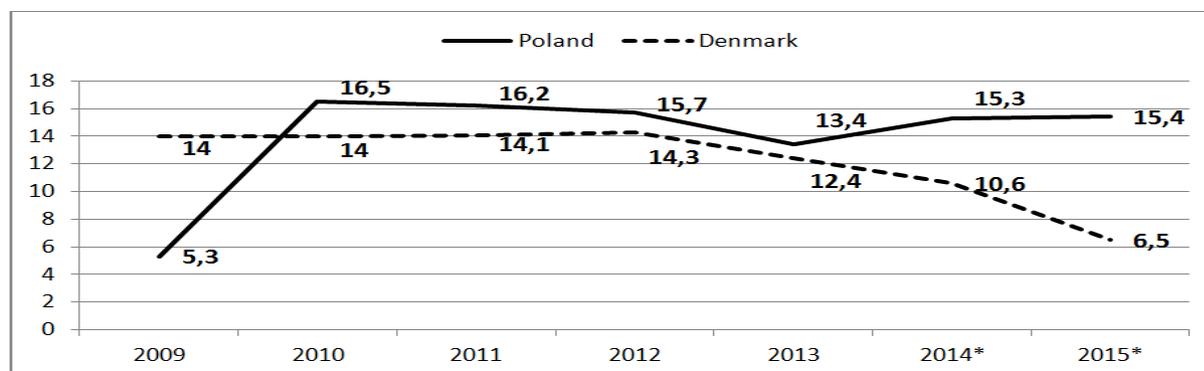


Fig. 6. Sales growth of e-commerce in Poland and Denmark in 2009-2015 (in%)

Source: own elaboration on the basis of: PBI after „Puls Biznesu” 6.10.2015, M. Sieliwierstow, *Więcej magazynów dla e-handlu*, p. 16; <http://www.wirtualnemedi.pl/artykul/polski-rynek-e-commerce-rozwija-sie-stabilnie-ponad-30-mld-zl-w-2015-r> [online access 12.05.2016]; <http://www.wirtualnemedi.pl/artykul/polski-rynek-e-commerce-ze-stabilnym-wzrostem-wartosci-ponad-27-mld-zl-w-2014-r> [online access 12.05.2016]; <http://www.statista.com/statistics/261456/b2c-e-commerce-sales-growth-in-denmark/> [online access 12.05.2016]; <http://ec.europa.eu/eurostat/documents/3433488/5584656/KS-SF-12-018-EN.PDF/29574eb8-7651-4921-bf10-85a477e83368> [online access 12.05.2016].

As can be observed, in the reporting period the results in terms of sales growth in e-commerce are relatively high for both countries. However, in the case of Denmark, after years of steady growth, we can start talking about a downward trend, while Poland still has a high and stable sales growth. Research of M. Michałowska, S. Kotylak and W. Danielak (Michałowska et al. 2015), show that the sales growth is due to the repeatability of online shopping, because the vast majority of respondents, namely 92% makes repeat purchases because of the competitive prices and ease of the transaction. As can be seen, the price and simplicity of transactions are among the key factors taken into consideration when choosing this form of trading as a place to make repeated purchases.

On one hand, it should be noted that compared to the fastest growing e-commerce markets even the Polish results look completely average. In the years 2007-2012 the fastest growth regarding the online sales increase was recorded in such countries like China (101%), Macedonia (73%), Egypt (69.1%), Mexico (43.2%), Colombia (41.9%) and Indonesia (40%) (Euromonitor 2013). On the other hand, we should not forget that all of the listed countries belong to the group of developing economies.

Discussions and conclusions

In Poland the importance of e-commerce is still growing. Online sales becomes another important distribution channel for many fields of economic activity, as well as for the growing number of Internet users who are increasingly using e-commerce. Even the fact that in this article there are no data records on e-commerce in division by individual industry branches it should be mentioned that on the Polish market, the effects are most visible in the consumer electronics and in the multimedia sector, and to a much lesser extent, in such branches as clothing industry⁴. Despite these positive changes, in international comparisons, Poland in terms of the use of e-commerce it is still on a fairly distant place, which is the result of traditions and habits as well as not always satisfactory Internet access. However, one should assume, that the younger generation, well using the Internet network, will contribute to the increase in demand for e-commerce services and thereby rapidly eliminates these differences.

According to Denmark, we can say that e-commerce is also growing, but due to very good infrastructure and well developed economy it already became a very important distribution and sales channel. In international comparisons Denmark is in many ways a leader or at least a distinctive country. The only reason to worry a bit is the decreasing rate of online sales growth. Naturally this is very common among relatively (comparing to other countries) mature markets. Nevertheless a next step for the Danish e-commerce market seems to be a global strategy (E-commerce News Europe [online access 24.05.2016]) pursued by the biggest companies in this country in order to remove constraints of an relatively small domestic market and in order not to lose its dominant position in Europe.

References

- Central Europe B2C E-commerce Report 2015, www.ecommerce-europe.com [online access 16.05.2016].
- E-commerce News Europe, Nordic online stores should think more globally, <http://ecommercenews.eu/nordic-online-stores-should-think-more-globally/> [online access 24.05.2016].
- Euromonitor International, Cushman & Wakefield, after: P. Mazurkiewicz, *Norwegia światowym liderem, „Rzeczpospolita”* 4.07.2013.
- Eurostat, [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Frequency_of_internet_use_2014_\(%25_of_individuals_aged_16_to_74\)_YB15.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Frequency_of_internet_use_2014_(%25_of_individuals_aged_16_to_74)_YB15.png) [online access 15.05.2016].
- Kraus A., Kasprzyk B., Chorób R. (2010), *Innovative forms of the use of new information technologies in the labour market. Forecasts and prospects*, Rzeszów: Wyd. Uniwersytetu Rzeszowskiego.
- Kuczera K. (2012), *Infrastruktura, usługi i potrzeby jako elementy spójnego kształtowania społeczeństwa informacyjnego tworzącego warunki zrównoważonego rozwoju*, Handel Wewnętrzny, lipiec-sierpień, t. III, Warszawa.
- Michałowska M., Kotylak S., Danielak W. (2015), *Forming relationships on the e-commerce market as a basis to build loyalty and create value for the customer. Empirical findings.*, „Management”, Vol. 19, No. 1, p. 57-72, Zielona Góra.
- Northern B2C E-commerce Report 2015, www.ecommerce-europe.com [online access 16.05.2016].
- PBI after „Puls Biznesu” 6.10.2015, M. Sieliwierstow, *Więcej magazynów dla e-handlu*.
- SMB, Kelkoo, Forrester Research, Gemius Report 2012/1013, Raport e-commerce 2013, after DGP ekstra 29.11-01.12.2013.
- Tkacz E. Kapczyński A. (2009), *Internet – Technical Development and Applications*, Springer Science & Business Media, Berlin, Heidelberg.
- <http://www.cnbc.com/2015/05/06/> [online access 6.05.2016].
- <http://ec.europa.eu/eurostat/documents/3433488/5584656/KS-SF-12-018-EN.PDF/29574eb8-7651-4921-bf10-85a477e83368> [online access 16.04.2016].
- <http://www.ekosglobal.com/markets/uk-and-europe/denmark/> [online access 12.05.2016].
- <http://www.statista.com/statistics/260976/b2c-e-commerce-sales-in-denmark/> [online access 10.05.2016];
- https://pl.wikipedia.org/wiki/Handel_elektroniczny [online access 06.05.2016].
- <http://www.wirtualnemedi.pl/artykul/polski-rynek-e-commerce-rozwija-sie-stabilnie-ponad-30-mld-zl-w-2015-r> [online access 12.05.2016].
- <http://www.wirtualnemedi.pl/artykul/polski-rynek-e-commerce-ze-stabilnym-wzrostem-wartosci-ponad-27-mld-zl-w-2014-r> [online access 12.05.2016].

⁴ Statement of Mr. Mark Noetzel from Cushman & Wakefield.