

E-SHOPPING MODELS IN SELECTED EUROPEAN COUNTRIES

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The paper presents e-shopping preferences in selected European countries. Research encompassed the period of 2017-2017. The source material includes foreign and domestic literature on the subject, numerical data provided by Eurostat and data from DPD report. The work was developed using the descriptive, tabular and graphic tools, as well as the Pearson linear correlation coefficient. The average Internet purchases by individuals in households in European Union increased from 30% in 2007 to 57% in 2017. E-shopping is very different in individual EU countries. They differ in terms of ordered goods online, frequency of purchases, important criteria of e-shopping to customers, devices used to order, preferred payment methods and places of parcels delivered. It was found very high level of correlation between the Internet purchases and the computer and Internet access.

Key words: e-commerce, e-shopping, European market

1. Introduction

E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet [1]. Electronic commerce is a relatively new concept. The term electronic commerce is frequently used to denote different meanings, very often depending on the professional orientation and background, focal product or service, and type of information technology deployed [2, 3, 4]. E-commerce is the process of purchasing, selling and exchange of products, services and information via com-

puter networks. E-commerce is very important a part of e-business and e-economy. E-commerce only refers to the goods and services transaction between a seller and a consumer, whereas e-business refers to the complete process necessary to manage an online business [5, 6].

The increased pace of development of e-commerce was associated with shifting of financial and human resources to this field of activity. Enterprises, which were skeptical at first, were forced by the competition to invest in e-commerce [7]. After year 2005, e-business developed very quickly. This was aided by development of mobile applications and improvement of the electronic distribution and payment systems [8, 9].

Each business focuses on a type of client. As for entities participating in e-commerce, the following systems have been identified: business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C), consumer-to-business (C2B), business-to-public (B2P). In addition to these types of electronic commerce, there are other popular types such as G2C (Government-to-Consumer), C2G (Consumer-to-Government) or B2E (Business-to-Employer) [10, 11]. B2C relations are the most popular. In this system businesses sell their products or services directly to the consumer. This is the usual type and there are thousands of examples of clothes, shoes or electronics stores [12, 13].

E-shopping (electronic shopping, online shopping) is a form of e-commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser. Consumers can find a product by visiting the website of the retailer directly or by searching among other vendors using a shopping search engine, which displays the same product's availability and pricing at different e-retailers. Customers can shop online using desktop computers, laptops, tablet computers and smartphones. Online stores are usually available 24 hours a day and many consumers have internet access both at work and at home. So it is very convenient for them to shop online. One of the great benefits of online shopping is the ability to read product reviews, written either by experts or fellow online shoppers [14, 15, 16].

2. Research methodology

The main objective of the study was to assess the functioning e-shopping models in selected European countries. The detailed objectives included determining the importance of electronic sales in society, showing the most popular products sold electronically, defining parameters important for customers, fixing of correlations between e-shopping and access to a computer and the Internet. Research encompassed the period of 2017-2017. The source material includes foreign and domestic literature on the subject, numerical data provided by Eurostat and data from DPD report. The E-Shopper Barometer of DPD presents pan-

European shifts in shopping habits identified in a Kantar TNS survey between June 1st and July 3rd, 2017. Blind interviews were conducted online among 24,871 participants across 21 European countries and Russia. The article includes selected results from the five largest e-sales markets and Poland. 1643 interviews were conducted in Great Britain, 1544 in France, 1582 in Germany, 1539 in Spain, 1509 in Italy and 1509 in Poland. The work was developed using the descriptive, tabular and graphic tools, as well as the Pearson linear correlation coefficient.

3. The results

The average Internet purchases by individuals in households in European Union increased from 30% in 2007 to 57% in 2017 (Tab. 1). That mean the most of half society used Internet to purchase. For the most of countries this rate is slightly higher that 50%. In the top of European countries in terms of Internet purchase, it is interesting to see that almost all the most economically developed countries are represented. Data shows that more than 80% of British and Swedish Internet users used online shopping in 2017. Huge growth can be found in Estonia: 9% of Internet users shopped online in 2007, but this percentage will grow to 58% by 2017. In Slovakia, ecommerce adaption will also grow strong: from 16% in 2007 to 59% in 2017. Internet purchases are the least popular in the countries that joined the EU in the recent accession, but also in several of the most economically developed countries, such as Italy and Spain. Therefore, there were large disparities between EU countries. Overall, Internet shopping has become a fairly natural way to purchase goods.

Based on data from the UK, Germany, France, Spain, Italy and Poland it found out that clothing, books and footwear are amongst the most popular product categories, just like beauty and health products and electronics (Fig. 1). This categories are well-established with little room to progress. Fashion remains the leading product category that e-shoppers order, because 20% of purchases were made online. Each category's degree of maturity varies according to country. Fashion products purchases was the most popular in Germany (52% people bought this product), books and electronics in Italy (47%), shoes, beauty and health products in Poland (respectively 47 and 44%). In terms of growth potential, books, high-tech/electronics show the best chances of attracting new online buyers.

Around 14 of all e-shoppers have ordered fresh food and beverages online (Fig. 2). Most of them (27%) bought from this product category regularly, at least once per month. The UK is a particularly active market in this respect, with 33% of e-shoppers having already made at least one purchase a week from the fresh food and beverage category. The UK is far ahead in % age of food purchases made online.

Table 1. Internet purchases by individuals in Households in years 2007-2017

Countries	Internet purchases by individuals in years (% of individuals]										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
United Kingdom	53	57	66	67	71	73	77	79	81	83	82
Sweden	53	53	63	66	71	74	73	75	71	76	81
Denmark	56	59	64	68	70	73	77	78	79	82	80
Luxembourg	47	49	58	60	65	68	70	74	78	78	80
Netherlands	55	56	63	67	69	65	69	71	71	74	79
Germany	52	53	56	60	64	65	69	70	73	74	75
Finland	48	51	54	59	62	65	65	68	69	67	71
France	34	40	44	54	53	57	59	62	65	66	67
Austria	36	37	41	42	44	48	54	53	58	58	62
Belgium	21	21	36	38	43	45	48	54	55	57	60
Slovakia	16	23	28	33	37	45	44	48	50	56	59
Estonia	9	10	17	17	20	23	23	49	59	56	58
Czech Republic	17	23	24	27	30	32	36	43	45	47	56
Ireland	33	36	37	36	43	46	46	50	51	59	53
Malta	20	22	34	38	45	44	46	47	51	48	52
Spain	18	19	22	24	27	30	32	37	42	44	50
Latvia	11	16	19	17	20	27	32	34	38	44	46
Slovenia	16	18	24	27	31	34	36	37	39	40	46
Poland	16	18	23	29	30	30	32	34	37	42	45
Hungary	11	14	16	18	22	25	29	33	36	39	39
Lithuania	6	6	8	11	16	20	26	26	32	33	38
Portugal	9	10	13	15	18	22	25	26	31	31	34
Greece	8	9	10	12	18	20	25	26	32	31	32
Italy	10	11	12	15	15	17	20	22	26	29	32
Cyprus	10	9	16	18	21	21	25	27	23	29	32
Croatia	7	7	10	14	17	23	26	28	31	33	29
Bulgaria	3	3	5	5	7	9	12	17	18	17	18
Romania	3	4	2	4	6	5	8	10	11	12	16
EU 28	30	32	36	40	42	44	47	50	53	55	57

Sources: Eurostat Database

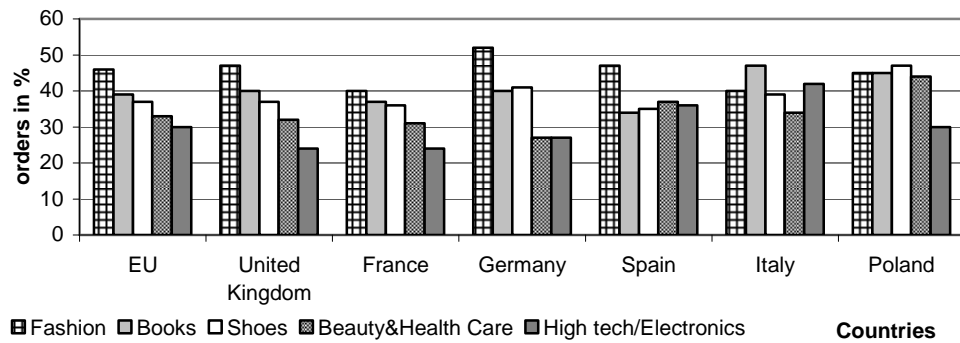


Figure 1. Types of goods ordered online

Sources: European E-shopper barometer report 2017, dpd group, dpdgroup.com.

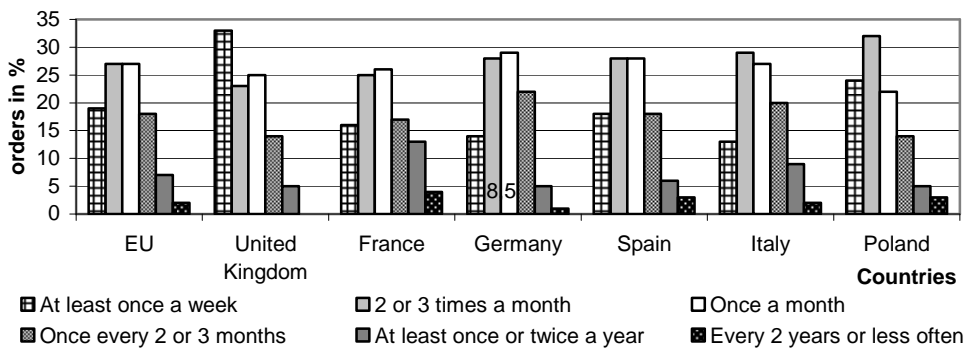


Figure 2. Frequency of order Fresh Food & Beverage online

Sources: European E-shopper barometer report 2017, dpd group, dpdgroup.com.

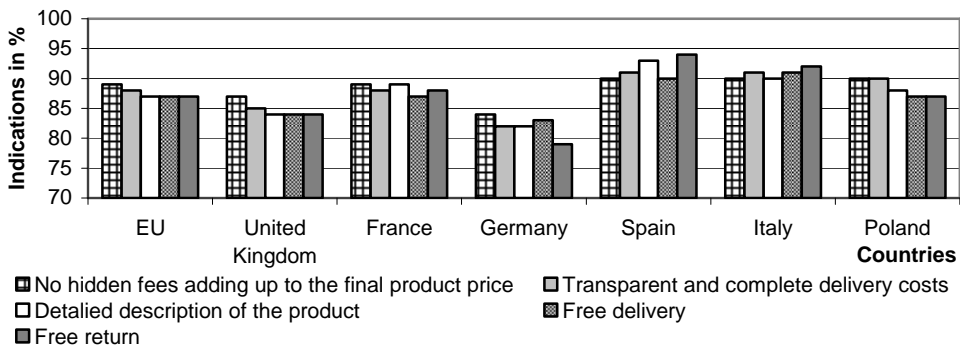


Figure 3. Important criteria of e-shopping to customers

Sources: European E-shopper barometer report 2017, dpd group, dpdgroup.com.

For customers of online stores the most important criterion in e-shopping was no hidden fees adding up to the final product price (Fig. 3). The highest demands were placed in countries from the South of Europe, in Italy and Spain, and the smallest in Germany. Needs were differentiated and dependent on many factors, such as culture, society profile, etc. In Spain and Italy the most important criterion was free return and in Poland was transparent and complete delivery costs.

Most online purchases were still made on a laptop or desktop computer (Fig. 4). E-shoppers buy from multiple devices, increasingly from smartphones. Smartphones are more used by the young generation. Nonetheless, laptop and desktop computers remain the primary devices used to purchase online (61% use laptop and 52% use desktop), meaning that an easy-to-navigate website is also critical. Of those surveyed, 43% said that they consider a mobile-friendly website to be an essential factor in making online purchases.

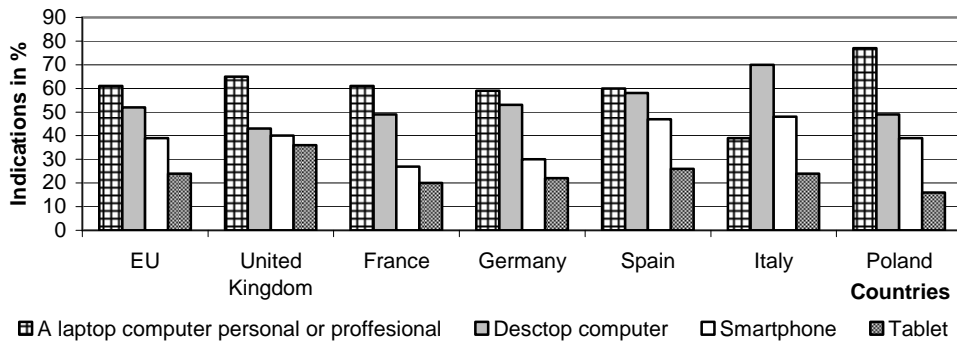


Figure 4. The devices used to order

Sources: European E-shopper barometer report 2017, dpd group, dpdgroup.com.

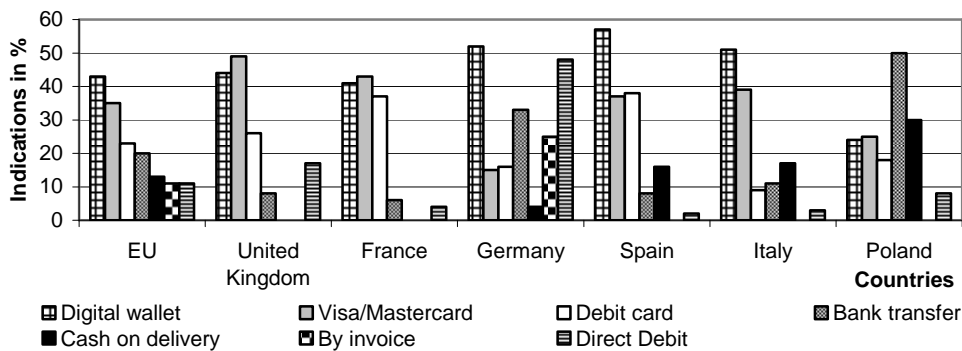


Figure 5. Preferred payment methods to pay online

Sources: European E-shopper barometer report 2017, dpd group, dpdgroup.com.

In EU, digital wallets like PayPal and AliPay are the preferred means of payment for online shopping, followed by Visa, Mastercard and other credit/debit cards (Fig. 5). However, each country has its own unique habits and preferences: Germany, Hungary, the Netherlands, and Portugal rarely use credit/debit cards; cash-on-delivery is a very important way to pay in Romania, Slovenia, and Slovakia; Austria and Switzerland prefer to pay by invoice. Certain countries opt for local payment methods, among them iDeal in the Netherlands, Mister Cash in Belgium, and Payu in Poland. E-shoppers tend to have well-established habits; half of them only have one preferred payment method. In Western Europe, paying by credit card for online purchasing is common. In Central and Eastern Europe, cash on delivery is the most popular way to payment.

Each European country has its own specific habits, with delivery and payment preferences varying widely from one place to the next. Therefore, in order to develop e-commerce and meet customer expectations, e-shops need to think local to maximize opportunities. Flexibility is also key: most e-shoppers say next-day delivery, real-time tracking, and the option to reschedule are likely to incite them to purchase. Home is the main delivery place used in EU and is still the most-have for e-tailers (Fig. 6). However, taking into account the countries specificities and large growth potential of all the alternative delivery palces, e-shops should consider expanding their delivery offer. The best solution is delivery parcels to where e-shoppers may be. As there are not always at home, especially during the week. Alternative options become more and more popular, for example at work, in parcel shop, or in parcel locker station. Delivery to a parcel shop is very common in France and parcel locker stations are very popular in Poland and the Baltics. Places of parcel delivery is very different in EU countries.

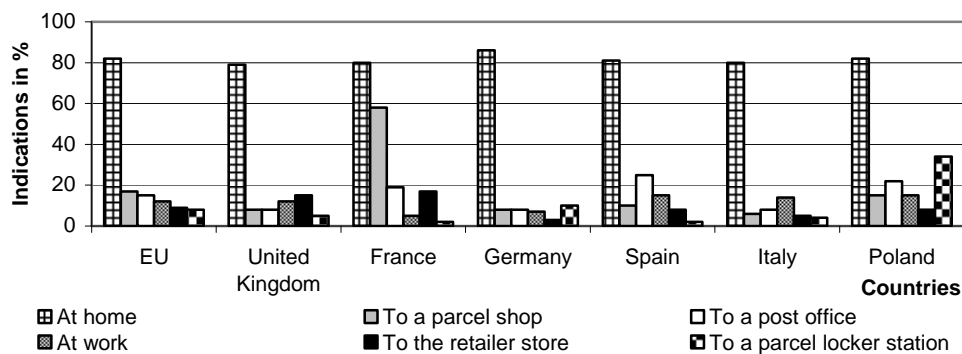


Figure 6. Places of parcels delivered

Sources: European E-shopper barometer report 2017, dpd group, dpdgroup.com.

Table 2 presents results of the Pearson correlation coefficient and p value. The limit value of significance level was assumed to be $p = 0.05$. Significant correla-

tions were marked by grey background of the text. Correlation coefficients were calculated for years 2007-2017 and for all countries in UE.

Table 2. Pearson correlation coefficients between the Internet purchases and levels of access to computers and Internet

Parameters	Pearson linear correlation coefficients											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2007-2017
The coefficients of correlation between the percentage of Internet purchases and availability of computers in households												
correlation	0,906	0,910	0,928	0,928	0,952	0,945	0,928	0,952	0,931	0,934	0,945	0,922
p-vale	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001
The coefficients of correlation between the percentage of Internet purchases and computer use in last 12 months												
correlation	0,909	0,895	0,928	0,911	0,920	0,933	0,924	0,961	0,960	0,955	0,948	0,929
p-vale	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001
The coefficients of correlation between the percentage of Internet purchases and level of Internet access												
correlation	0,897	0,903	0,928	0,928	0,948	0,954	0,929	0,959	0,933	0,945	0,930	0,900
p-vale	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001
The coefficients of correlation between the percentage of Internet purchases access to broadband Internet												
correlation	-0,10	-0,10	-0,01	0,472	0,402	0,477	0,347	0,416	0,330	0,314	0,178	0,461
p-vale	0,628	0,607	0,987	0,011	0,034	0,01	0,07	0,028	0,086	0,104	0,364	0,001

Source: own research

Very strong positive correlation values were found to exist between the percentage of Internet purchases and availability of computers in households, computer use in last 12 months and level of Internet access. These dependencies were stronger in subsequent years. Only in the case of broadband Internet in relation to Internet purchase, the relations were not obvious. The correlations were only in 2010-2014 and all period of research. The relations was weak. This means that the existence of high-speed Internet is not a determinant of the use of online stores.

4. Summary

The most of half society of European Union used Internet to purchase. Data shows that more than 80% of British and Swedish Internet users used online shopping in 2017. Internet purchases are the least popular in the countries that joined the EU in the recent accession, but also in several of the most economically developed countries, such as Italy and Spain. Therefore, there were large disparities between EU countries.

Based on data from the UK, Germany, France, Spain, Italy and Poland it found out that clothing, books and footwear are amongst the most popular product categories, just like beauty and health products and electronics. These categories are well-established with little room to progress. Each category's degree of maturity varies according to country. In terms of growth potential, books, high-tech/electronics show the best chances of attracting new online buyers. Around 14 of all e-shoppers have ordered fresh food and beverages online. Most of them (27%) bought from this product category regularly, at least once per month. Laptop and desktop computers remain the primary devices used to purchase online. Smartphones are more used by the young generation. In EU, digital wallets are the preferred means of payment for online shopping, followed by Visa, Mastercard and other credit/debit cards. Each country has its own unique habits and preferences. Differences were also found in payment preferences. Delivery to a parcel shop is very common in France and parcel locker stations are very popular in Poland and the Baltics.

It was found very high level of correlation between the Internet purchases and the computer and Internet access. No correlation was found when comparing the Internet purchases and use of broadband Internet.

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