



10.2478/cer-2013-0033

TOMASZ CZAJKOWSKI^{*}, GRZEGORZ SZYMAŃSKI^{}**

**Comparative Analysis Of The Utilisation Of Electronic Commerce
And Business In Polish E-shops In The Years 2009-2011****Abstract**

The aim of the article is to present the results of research concerning the utilisation of different aspects of electronic commerce and business in Polish e-shops, based on a number of comparative analyses performed for the years 2009-2011. Some of the presented data concern also the year 2008. The most important aspects covered by the analyses are: international trade and exports of Polish e-shops, marketing aspects of online businesses, the infrastructure and safety of Polish e-shops, their financial results, and also actions planned in order to minimise the effects of the economic crisis. The main conclusions drawn from these analyses, as well as predictions for the future for the Polish e-market, are also presented.

Keywords: retail electronic commerce and electronic business, e-shops, ICT, Poland

1. Introduction

In the age of the so-called global village, electronic commerce and business have become necessary tools for companies. They allow companies to

^{*} Ph.D., University of Łódź, Faculty of Economy and Sociology, Department of World Economy and European Integration

^{**} Ph.D., Lodz University of Technology, Faculty of Organisation and Management, Department of Management Systems and Innovations

present a complete, up-to-date offer to their clients (both actual and potential) and enable good relations between suppliers and customers, based on the possibility to react almost instantaneously to their needs. E-commerce and e-business also help lower the costs of economic activity in almost every field of running a company, which can be especially vital in the difficult time of economic crisis (Czajkowski 2011). Implementation of modern ICT (*information and communication technologies*) also creates the possibility for companies to significantly optimize their functioning, which directly brings about an increase in innovativeness and competitiveness of the economy. ICT stimulate changes in organisations and business models of companies and induce additional investments in human capital (Turban, King, Viehland 2006). The unique features of electronic commerce, such as ubiquity, global reach, and personalisation and customization, result in e-commerce gaining more and more popularity, both among the companies and private users, in all sectors of the economy (Turban, King, Viehland 2006).

It is also worth mentioning that the policies of the European Union support in the highest possible way the development of the ICT and the electronic commerce and electronic business connected with it, as these sectors are seen as vital to the EU economy (Czajkowski 2012). They are also considered to be among the sectors that can help the EU to become the most competitive economy in the world (i.e., to fulfill the renewed Lisbon Strategy)¹.

In the light of the above, we decided to conduct research among the Polish online shops (or e-shops) in order to see how they have managed to operate in the years in which the economic crisis was the most evident aspect of the global economy.

2. Methodology of research

The research was conducted by IDG S.A. for the needs of the Internet Standard Reports 'eCommerce 2009', 'eCommerce 2010', 'eCommerce 2011' and 'eCommerce 2012', with the use of a questionnaire prepared by Grzegorz Szymański (PhD), and the research results have been analysed and described by the authors of the present article. Due to the fact that not all of the questions were included in the questionnaire for the research concerning the year 2008, some graphs present data from 2008, and others from 2009. The number of operating online shops in Poland in the years under consideration was estimated

¹ 'i2010 – A European Information Society for growth and employment', COM(2005) 229 final, Brussels, 1.6.2005

to be between nine and sixteen thousand (depending on the year), and the questionnaires were sent to approximately 80-90% of them in each year. The number of properly answered questionnaires differed during the research period. The details are given in Table 1 below.

Table 1. Realisation of the survey research

Year	Number of companies surveyed	Correctly filled out surveys	Percentage, calculated in relation to all sent questionnaires
2008	7198	409	5.68%
2009	7500	593	7.90%
2010	7500	400	5.33%
2011	14398	250	1.74%

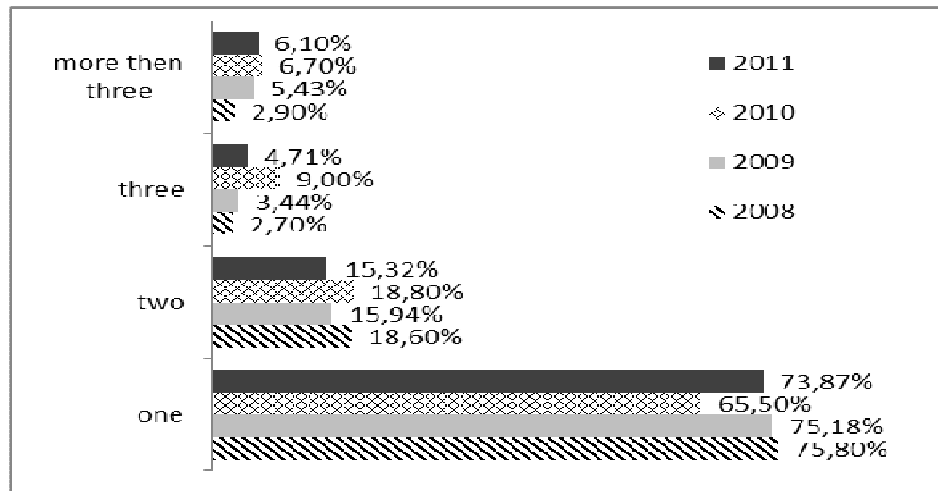
Source: Authors' own compilations.

3. Results of the survey research

Most of the entrepreneurs focus on operating only one internet shop (Figure 1). However, in 2010 there was a decrease of the number of companies operating one internet shop, while at the same time the number of entities operating three e-commerce services increased significantly. The motive for starting further domains by the same entrepreneur is the desire to increase profits by intensification of actions and multiplication of distribution channels. However, the main flaw to such a solution is the necessity to perform more marketing actions, because the additional online shops operate mainly in different domains, so customers using one of them very often are not aware of the existence of the other e-shops of the same company. Among the advantages, one has to point to the decrease in costs brought about by common warehousing, using the same suppliers, and lower financial expenses connected with hosting.

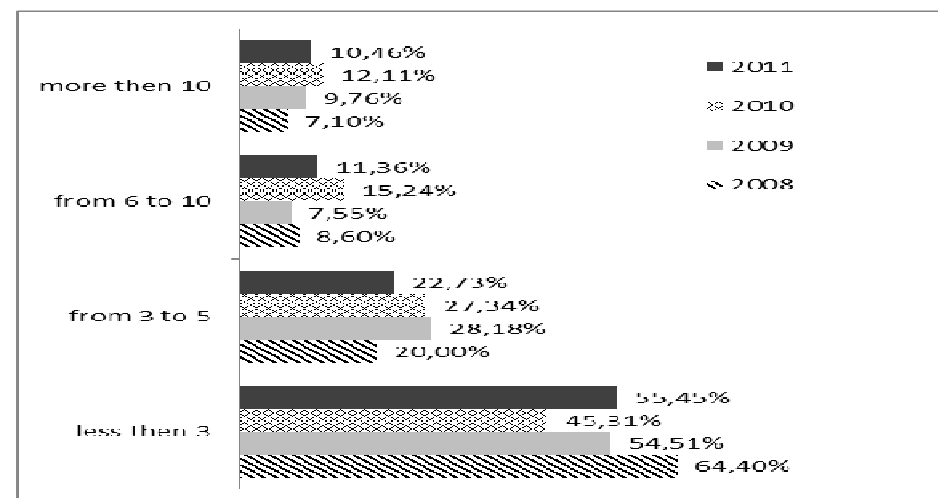
Over the last four years the number of e-shops operated by one entrepreneur has remained at a similar level, with a great majority of single services of online commerce. There was a slight increase in companies operating three or more online platforms.

Figure 1. Comparison of the number of e-shops operated at the same time by one company in Poland in the years 2008-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

Figure 2. Number of people working in one e-shop in Poland in the years 2008-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

According to e-customers, the main advantage of online shopping is the lower prices as compared to traditional forms of sales. The significant aspect influencing this phenomenon are the lower costs of operating a commercial

activity on the internet, as e-shops do not bear the costs of renting premises, and sometimes they do not even have their own warehouses and do not need to hire additional workers for security, cleaning, etc. The most important workers are those servicing the online orders. More than half of the surveyed internet shops employ less than three persons, which in most cases is sufficient to enable the efficient functioning of the company.

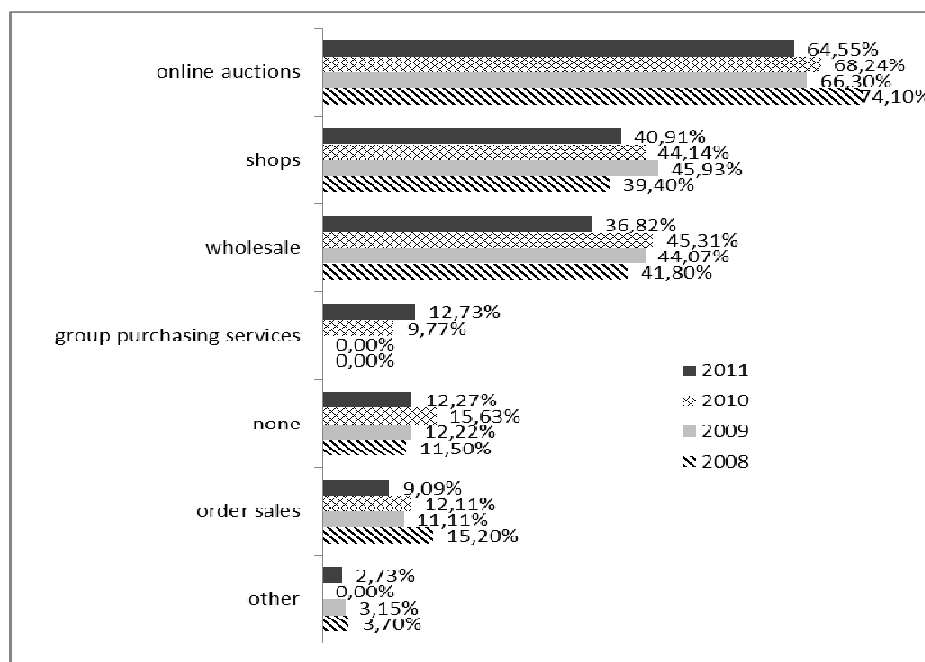
However, shops characterised by monthly orders of over one thousand and visited by more than ten thousand unique users need additional workers to handle specific actions. One such action, significant for proper customer service, is the reply time in responding to incoming questions. Users of the internet, accustomed to internet communication, often utilise communicators or electronic mail and expect quick and clear answers. If too few persons are employed for servicing customers the company will not be able to realise the orders in a timely fashion and look after continuous contact with the consumers. Thus e-shops characterised by a high number of orders employ more than six persons to handle them, and every tenth company surveyed hired more than ten employees.

Most of the Polish internet shops offered from one to five thousand products (see Table 2 below). There is a regular increase in the number of entities characterised by the widest offer, i.e. over 50 thousand products. These are mainly internet hypermarkets, offering products from different branches and categories. The operation of such a general store requires greater resources, both financial and human. The main advantage to such an operation is the number of potential clients, orders and, what follows, revenues. Internet users are increasingly eager to make purchases on portals in which they have the widest possible range of products, which lowers the costs of per unit shipping. However, the cooperation with a large number of suppliers, effective management of the products' shipment process, and efficient customer and complaint services also constitute significant factors which limit the development of multi-branch shops. Stores that sell less than 10% of their products in their internet shops, constituting almost 10% of the surveyed companies, are mainly selling products of their own production, and they treat electronic commerce as an additional distribution channel. These shops are mainly operating in a single branch of the economy. An increase in the number of products offered increases not only the number of employees required, but also the marketing budget and the net profits.

Table 2. Number of products offered by e-shops. Results from the years 2009-2011

number of products	year		
	2009	2010	2011
less than 100	9.48%	7.11%	9.81%
from 101 to 500	19.89%	14.23%	19.63%
from 501 to 1000	16.91%	13.04%	16.82%
from 1 – 5000	28.44%	30.43%	23.83%
from 5000 to 10,000	10.78%	16.21%	10.28%
from 10,000 to 50,000	10.59%	13.44%	12.15%
more than 50,000	3.90%	5.54%	7.48%

Source: Author's own compilations based on research performed for the needs of Internet Standard reports.

Figure 3. Additional sales channels of Polish internet shops in the years 2008-2011

Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

Among the additional sales channels, the most popular are internet auctions. The clients, who have quick access to large amounts of information, can avoid inconvenient intermediaries and force price competition on the

companies. Internet auctions mediate in the sale of both consumption goods (in B2C and C2C sectors), and industrial products (B2B sector). The most popular auction services in Poland are Allegro, Ebay and Świstak, with Allegro having almost 80% of the auction purchase market.

Around 40% of the respondents also sell in traditional shops. These entities treat electronic commerce as an additional feature of their traditional operation. A similar percentage of the respondents use the internet as a wholesaling channel, which in e-commerce comprises purchases of big batches of assortments from producers, change in the volume of the products and selling to intermediary recipients or smaller wholesalers. However, the most dynamic increase in popularity in recent years can be observed in sales on group-purchasing portals (e.g. Groupon), one of the innovative forms of trade in the B2C sector. The key positive features of this form of sales for the e-commerce sector are:

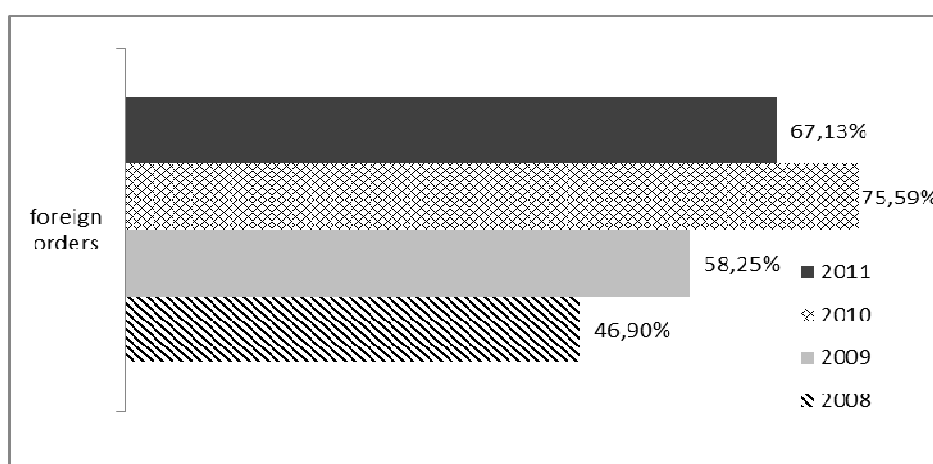
- Possibility of attracting new clients;
- Innovative image of the company;
- Effective and relatively inexpensive marketing;
- Utilization of buzz marketing;
- Good efficiency of advertising actions.

Only around 12% of the surveyed companies are online shops that do not use different sales channels and focus their actions solely on the e-commerce website. Correspondingly, a systematic decrease can be observed in the popularity of mail-order selling. This form of retail sales is characterized by a specific form for placing an order – by internet, phone or mail, while the selection of the products is done by the client on the basis of a catalogue that is sent to him/her in paper or electronic form. The high convenience, overall availability and low prices in the sector of internet commerce have significantly influenced the decrease of interest in mail-order selling.

The development of the Polish e-commerce sector implies a broadening of the market and obtainment of new foreign clients. The growth of both the global and Polish economy depends more and more on internet commerce and the internet economy. The research of the Centre for Retail Research demonstrates that in Poland the percentage share of e-commerce in overall national retail sales was equal to 3.1% in 2011. The highest share among European countries was recorded in the UK (12%), followed by Germany (9%) and Switzerland (8.7%), while in Spain this indicator was equal to only 3.5%. However, Poland experienced the highest growth rate in the value of their e-commerce market,

which in the period of 2010-2011 equalled 33.5%². The increase of interest in Polish e-shops among foreign clients is shown in Figure 4, where a trend toward increasing foreign orders over the last four years can be observed. The results obtained in 2011 show, however, a small decrease in this number, which can be explained to some extent by the fact that many newly opened shops took part in the previous research. In order to attract new clients, the owners of Polish e-shops introduce foreign language versions of their shops. The most common language is obviously English, but there are also commercial platforms enabling the choice of German, Russian, and even Scandinavian languages.

Figure 4. Percentage of Polish e-shops handling foreign orders in 2008-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

Marketing actions of entities in the Polish e-commerce sector

The realisation of marketing concepts and strategies requires an oriented management, which means that the e-shops should be managed by people who are oriented to the needs and expectations of their e-customers. With the development of the internet the approach to marketing has changed. The newly developed internet marketing can be defined, in general terms, as any marketing action taken using the internet medium. Among the wide selection of tools and methods of internet marketing, one should especially mention search engines, browsers, and price comparison websites. No less important, but characterised

² B. Skórzewska, „Jak wyglądał rynek e-commerce w Europie w 2011 roku? Polska rośnie najszybciej, ale daleko nam do liderów”, <http://www.ekomercyjnie.pl/jak-wygladal-rynek-e-commerce-w-europie-w-2011-roku-polska-rosnie-najszybciej-ale-daleko-nam-do-liderow>, [13.01.2013].

by a smaller coefficient of efficiency, is e-mail marketing and display advertisement. In the Polish sector of electronic commerce the most popular advertising tool is search engines, and more precisely advertisement in the form of SEO (search engine optimisation) website positioning. The positioning of websites is based on implementing a series of appropriate actions which are aimed at putting the websites as high as possible in the results of searches for given key words in a particular search engine. It is important to select appropriate methods of positioning, i.e. those that make it possible to achieve the best possible result, together with following basic principles, thanks to which the website will not be blocked by a search engine.

The leader in the Polish search engine market is Google, which almost totally dominates this market and sets market trends for the remaining competitors, who do not have a significant influence in shaping the market. Thus all SEO actions in the sector of Polish e-commerce are concentrated on Google. Since 2008 almost 80% of entities that carry out sales on the internet use this type of advertisement, considering it to be one of the most effective.

Only a bit less popular are price comparison websites, which are used by about 70% of the surveyed companies. An important advantage of this type of tool is the high coefficient of conversion, i.e. the ratio of clicking on the advertising link of a shop compared to the number of internet users who actually make a purchase. However the price comparison websites, regardless of their high popularity, have flaws, among the most important of which are the clients' focus on only in the cheapest offers, and the high competition.

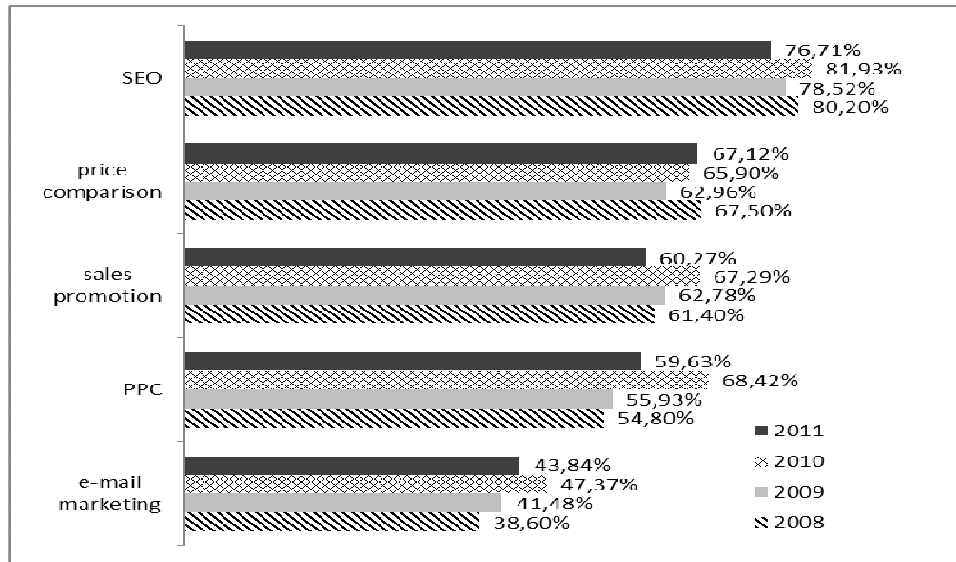
Third place among the most preferred forms of advertising belongs to promotional sales. Currently it is estimated that almost 60% of consumers regularly make use of some form of promotional sales, which is also confirmed by the results in the e-commerce sector survey, which revealed that around 60% of the respondents use this marketing element.

Advertisements of PPC type (Pay Per Click) are present as payable links occurring next to organic results in search engines, but are clearly secluded from them. The advertisement is displayed depending on the key word or phrase typed by the user. Currently the increasing flaw of such type of promotion is associated with the ever increasing costs, brought about by a systematic increase of competitiveness.

The last of the five most popular advertising forms is e-mail marketing. The advantage of e-mailing, as compared to other forms of internet advertising, is mainly connected with the possibility of placing significantly higher amounts of information in the communication, as well as the increasing popularity of e-mail communications. The years 2008-2010 show an increase of interest in

e-mailing on the part of e-shops, who use this communication channel for informing clients about promotions and the existence of a given internet shop.

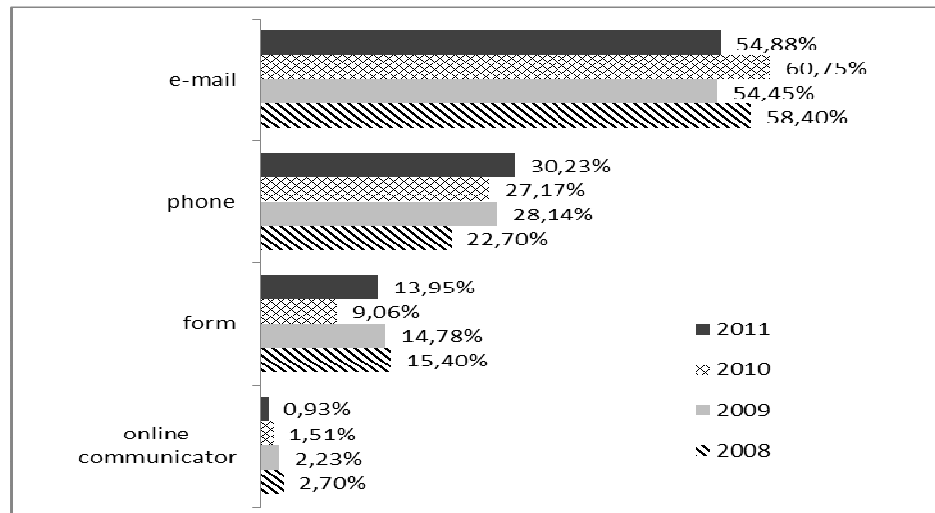
Figure 5. Comparison of the most popular forms of advertising of Polish e-shops in 2008-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

The interest of shop owners in e-mailing as a form of promotion is also confirmed by examining the communication tools used by the customers of e-commerce sector. The e-mail is the most popular tool, with more than 50% of internet users sending e-mail messages in order to contact the personnel of an e-shop. Over the last four years there was also an increase in telephone communication, a significant advantage of which is the rate of obtaining the information. Every third shop surveyed indicated the telephone as the most often used form of communication. Forms available on the webpages of e-shops are far less often used. Their disadvantage is the lack of a history of communication in the area of customer service. However, the most surprising trend is the increasingly minimal use of internet communicators as a tool of contact with the employees of e-shops. The systematic increase in the number of users of Skype or GG (Gadu-Gadu – a Polish communicator) would seem to indicate online communications with the use of proper software will become ever more frequent in the e-commerce sector. However, the results from the last four years indicate an opposite trend. In 2011 less than 1% of the respondents indicated that this type of communication was a popular one for e-commerce.

Figure 6. Popularity of various tools for client communication used by companies of the Polish e-commerce sector in 2008-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

The dynamics of development of the Polish e-commerce sector indicate that the increasing interest in all forms of promotion, together with the high intrusiveness of most modern advertisements, will shape and lead to an increase in innovative advertising creations, enabling shops to interest consumers. Viral, buzz or guerilla marketing should become more and more intensively implemented in the e-commerce sector, at the same time shaping the trends of modern advertising.

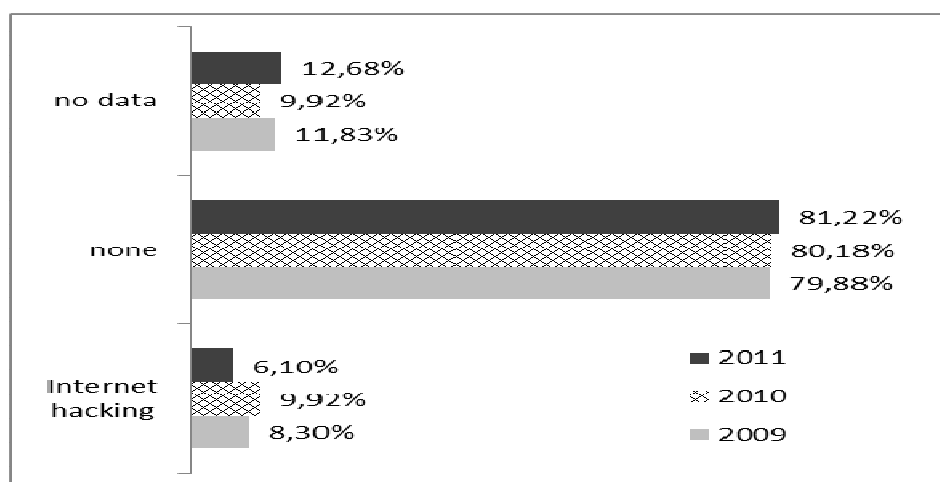
Safety of online shopping

Ensuring a proper level of safety of the solutions employed and convincing clients of their reliability are basic elements that are decisive to the success of economic activities performed on the internet. In the age of ubiquitous use of the internet, the associated dangers are also ubiquitous. They range from harmful software to attempts to extort logins and passwords to gaps in the process of data transmission. In order to properly secure themselves against these dangers, the internet shops implement many improvements and procedures and train their employees in this area. Nonetheless cases of hacking the servers of e-shops occur. In 2011 more than 6% of the surveyed shops declared that such incidents occurred in their e-shop, although in comparison to

previous years there was a slight decrease in this phenomenon. The results from 2008 are not included because this question was not in the questionnaire at that time.

One of the common tools for increasing the safety in e-commerce sector is the SSL protocol (Secure Socket Layer), which is designed to ensure the safety of transmitted data, and in particular its confidentiality and integrity. Based on the research carried out by Unizeto Technologies it can be concluded that Polish e-shops are still weakly protected with respect to the safety and security of customer data. Most of those shops do not ensure even the basic level of safety to their clients. The results of the research showed that only 26% of the e-shops had an installed SSL certificate, and as many as 74% of them do not use any certificate³. Despite this fact however, the graph below shows that for the three surveyed 80% of the Polish e-shops reported no cases of hacking. On the other hand, 10% of respondents were not able to say whether their shop was hacked, which can be explained by using external servers for the functioning of the trading platform.

Figure 2. Percentage of break-ins to the total number of Polish internet shops in 2009-2011



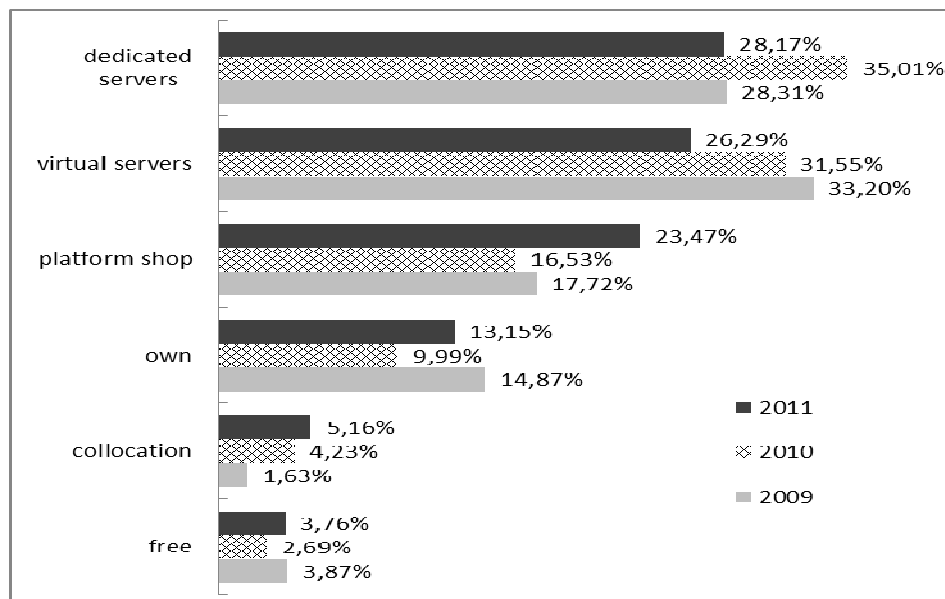
Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

The safety of customers is integrated with the use of hosting, of a trading platform, and its software. The most popular solutions are dedicated and virtual servers. Most of the dedicated platforms of an internet shop have implemented management systems, allowing the employees of e-shops to

³ Unizeto Technologies SA, „Niskie bezpieczeństwo rynku e-commerce”, www.bezpiecznyesklep.pl/raport, [20.12.2012].

administer particular modules. The existing modules and systems of the CMS class (Content Management System) are characterised by the possibility of managing content and flow of information in an internet shop. In 2011 over 28% of the surveyed companies functioned with the use of dedicated hosting, while slightly fewer platforms used virtual solutions. The third most popular solution was shop platforms, which allow focusing the actions of the company exclusively on the selected goals and service of the customer, without the distraction of administration and system management of the e-shop. In the short term the use of shop platforms is relatively cheaper than purchasing licenses, with their associated costs of administration of the system and hosting. Moreover, it is often used as a form for testing new business solutions, selling products under a different brand, and in cases of uncertainty about the financial benefits of implementing an e-commerce model in a company. These advantages were noted by the companies in the Polish e-commerce sector, as in comparison to previous years the utilization of this hosting type increased by 7%.

Figure 8. Forms of hosting utilised in Polish internet shops in years 2009-2011



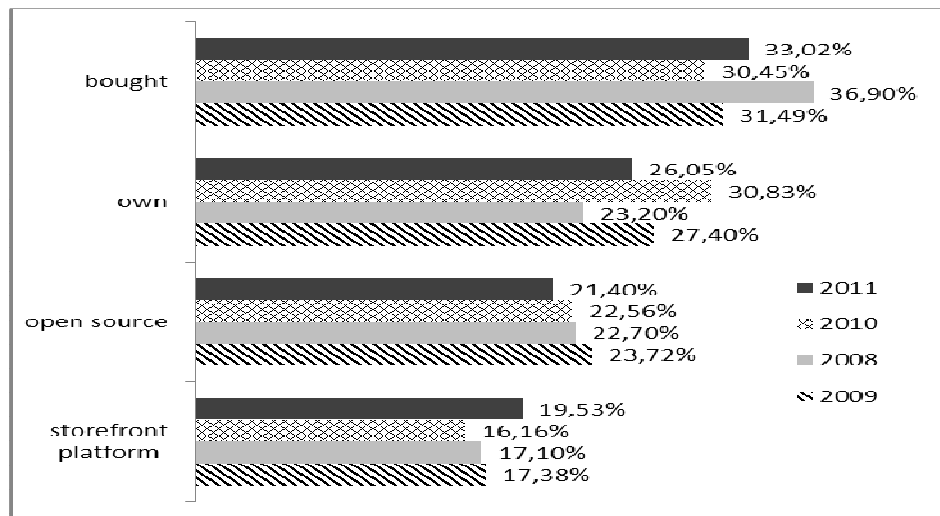
Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

From the point of view of transaction safety and client protection, the least credible solution is the utilisation of free hosting systems. While such a solution allows mainly for savings on the costs connected with the functioning of an e-shop, these are usually deceptive savings, because companies offering free

services finance their activity through advertising offers. Other disadvantages are the possibility that the website of a shop may be inoperable for a period of time, even up to several days, which in the case of the e-commerce sector is connected with big losses. Moreover, the regulations with respect to usage of the service by e-shops often include notations about lack of responsibility of the owner of the shop for the loss of data or other damages caused by a free server. An analysis of advantages and disadvantages of free hosting seems to suggest that this type of solution should be avoided, nonetheless for three years nearly 4% of platforms in the Polish e-commerce sector have employed this model.

Another element influencing the safety of e-commerce is the software utilised by an e-shop. Currently the most popular solution is purchasing a commercial shop application in the form of a license. The so-called 'box' solutions are usually characterized by a one-time license fee, and among their advantages should be mentioned their reliability of functioning, especially in the case of a software package that was developed for several years and is popular on the market. Purchasing of a license enables the use of updates and allows for maintaining a high level of security.

Figure 9. Software used in Polish e-shops in 2008-2011



Source: Author's own compilations based on the research performed for the needs of Internet Standard reports.

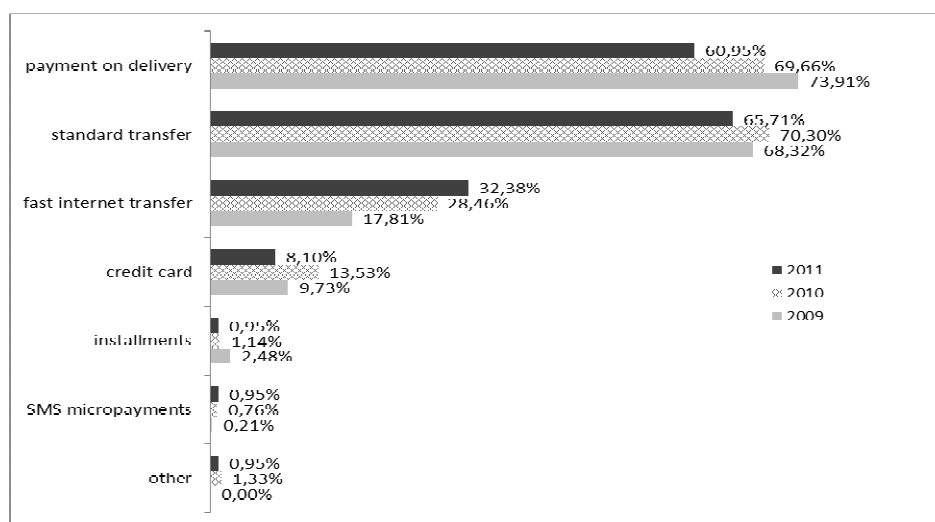
The second most popular solution was a firm's utilisation of its own software, however this solution recorded a decrease of four percentage points in comparison to previous years. An advantage of this solution can be the fact that a shop's own software is far less susceptible to standard Trojan horses, rootkits,

and other malicious software using holes and errors in popular and commonly accessible applications. What's more, using one's own software better enables the design of innovative solutions that stand out in comparison to standard layouts. Over the last four years an average of 25% of companies have utilised their own solutions. A slow but systematic decrease was recorded for Open Source software, which in 2011 was utilised by 21.4% of the respondents.

Payment options

Polish e-shops offer a wide range and selection of payment methods to their clients. The popularity of these methods can be seen in Figure 10. It is worth noting that pay-on-delivery was not as popular in 2011 as in previous years (61%). This suggests that people doing shopping online have increasing trust in internet shops and do not need to see the products before paying for them, i.e. are confident that they will get the product they ordered.

Figure 10. Popularity of various payment methods among the clients of Polish e-shops in 2009-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

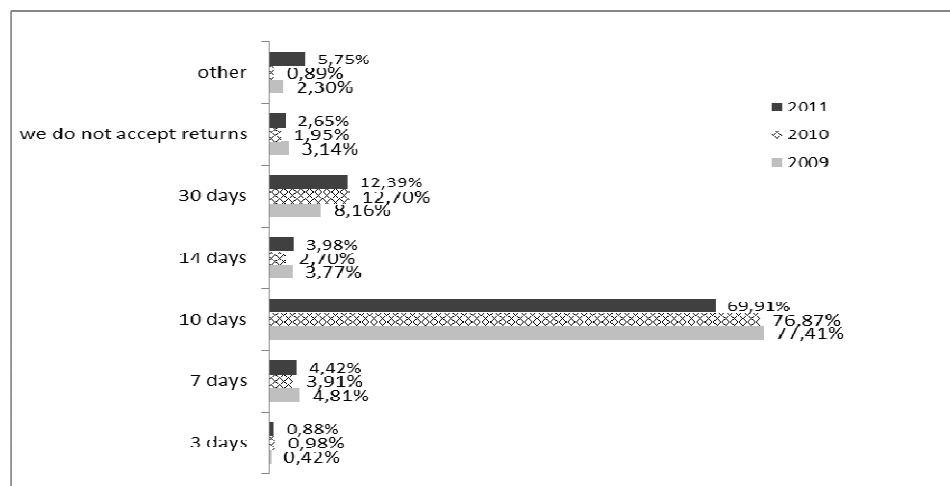
A traditional bank fund transfer was also less popular (declared as the most popular by 65% of the surveyed e-shops – similarly as payment with the use of a credit card). Attention should be paid to the growing popularity of rapid internet transfers. In 2011 almost 1/3 of the surveyed shops declared that their clients most often chose this form of payment, which was almost double the results for 2009. This is mainly due to the fact that this type of payment is much

quicker than a traditional bank funds transfer, which results in quicker realisation of the order. This type of payment is also much more convenient for the customer, who does not have to fill out a transfer form, but only log into his/her bank account and confirm the transfer. Instalment purchases are popular in only 1% of Polish e-shops, mainly those which offer computer equipment. Micro-payments are popular only in niche shops, offering low-price products such as ring-tones, games or wallpapers for mobile phones.

Return policies of Polish e-shops

Shopping online means that the clients cannot see and check the product they purchase, which makes it very important that an internet shop have a clearly defined return policy which is in compliance with the legal requirements. In Poland this means that the client can resign from the purchase for any reason within ten days from the moment of concluding the deal (this provision of the law does not apply to perishable goods, such as flowers, food, and to those which are custom-made).

Figure 11. Returns of products bought in Polish e-shops in 2009-2011



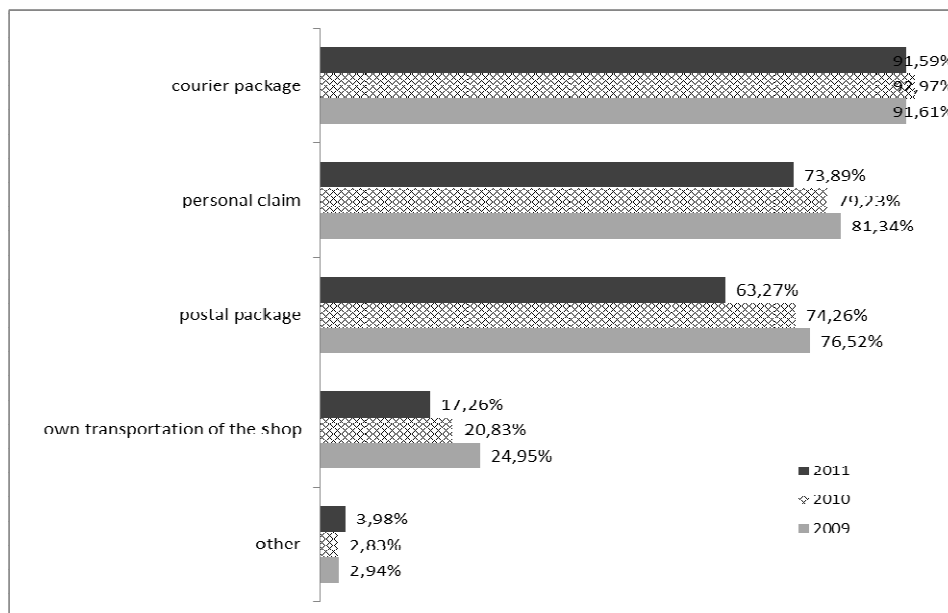
Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

The possibility of returning the product is very important for clients and increases their trust in a shop. In 2011 more than 96% of the surveyed shops respected returns. Almost 70% of them accepted returns within the lawful period of 10 days, while nearly 4% of them prolonged this term to 14 days, and 12% even to 30 days.

Logistics – delivery to the client

The next Figure shows clearly that over the past three years the companies have been resigning from both personal claiming of products (a decrease of 5.5% in 2011 in comparison to 2010) and postal delivery (decrease of almost 11 percent). The most often utilised form of delivery was unalterably courier packages (available for selection in almost 92% of surveyed shops in 2011). This results mainly from the lower prices associated with this type of service, which are offered by ever more courier companies, which in turn increases competition and the pressure toward lower prices while at the same time retaining or increasing the level of services, including speed of delivery. As a result, this form of delivery is also most convenient for the majority of clients.

Figure 12. Forms of delivery available to clients in Polish e-shops in 2009-2011

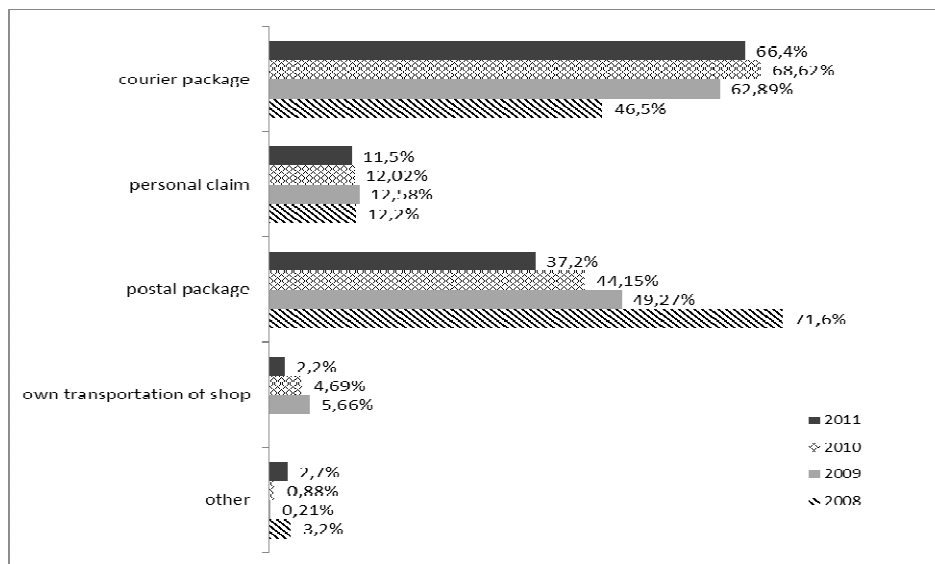


Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

The trend shows that e-shops are partially resigning from delivery themselves and allowing their clients to choose postal packages, which can be seen as a response to the needs of customers and market trends. As can be seen from Figure 13, in the years 2008-2011 the popularity of postal delivery decreased almost twofold (from 71.6% in 2008 to 37.2% in 2011). This was certainly caused by the very low level of service of the Polish Post, which is

a commonly known fact, the long waiting time for such deliveries, and the difficulties in lodging complaints in event of any problems with the delivery.

Figure 13. Most popular forms of delivery in Polish e-shops in 2008-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

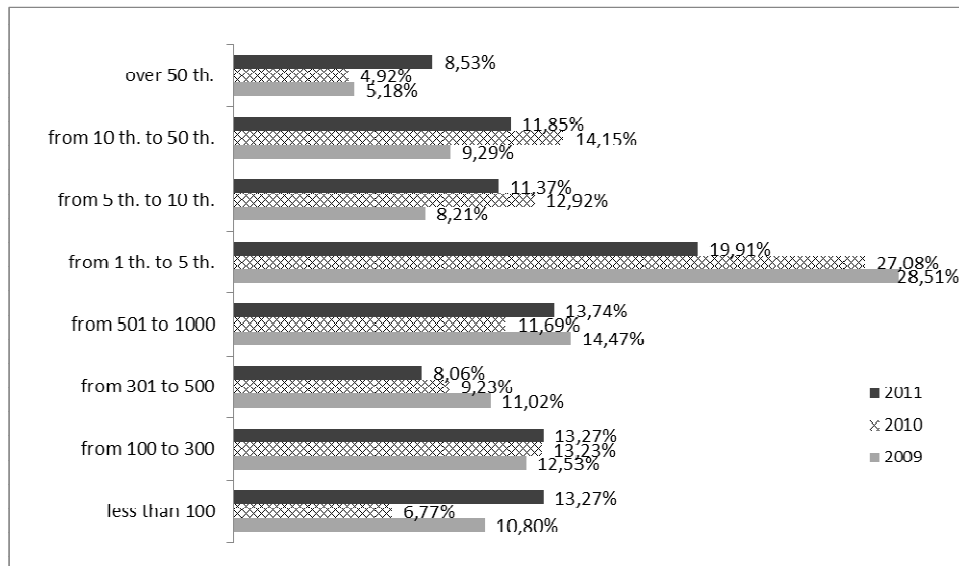
Moreover, the prices of courier services have decreased significantly, which also brought about a decreased interest in postal services. All these factors explain why courier packages are the customers' most commonly selected method of delivery of products purchased in e-shops. A company's own delivery usually means higher costs, and it is selected by only a small number of clients (in 2011 this form of delivery was ranked the most popular in only 2.2% of the surveyed e-shops). It can be projected that this trend will continue in the future. Personal claiming of the products by customers was most popular in around 12% of e-shops over the past four years.

Number of orders

As has already been mentioned, in 2011 many newly opened e-shops took part in the research, which is also reflected in the number of orders. The percentage of big companies with more than ten thousand orders increased by 1% in 2011 in comparison to 2010, but the percentage of medium e-shops with one - ten thousand orders decreased by almost 9%. In addition, the percentage of

the smallest shops (less than one thousand orders) also increased (to 48% in 2011, which constituted an increase of 8% in comparison to the previous year).

Figure 14. Annual number of orders in Polish e-shops in 2009-2011

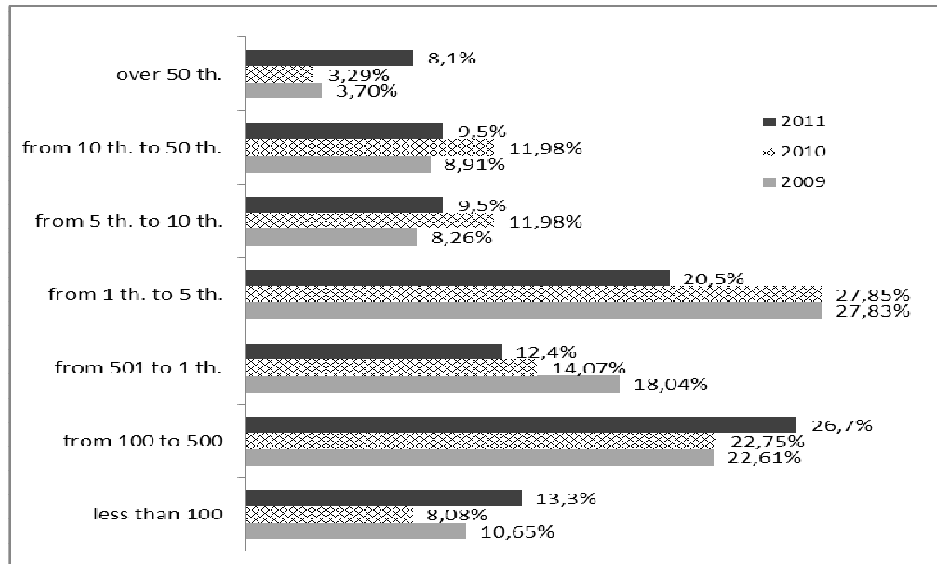


Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

Despite the overall lower number of orders that were received by particular shops, their dynamics in the shops investigated in the research nonetheless increased. Among the companies that existed on the market in 2010 and 2011, over 60% of them increased the number of their orders. Almost 16.5% had a similar number of orders, and only 23% had fewer orders. Therefore the overall trend is definitely positive.

Number of e-customers

The number of clients in the surveyed shops changed in a similar way as the net sales, which will be presented later in the article. There was a decrease of shops with a medium numbers of customers and an increase of shops with lower numbers of them. The biggest shops, i.e. those with over five thousand clients, constituted over 27% of respondents in 2011, which was an almost identical result in comparison to 2010. There were 52.4% of companies with less than one thousand customers, which meant an increase of over 7%, while shops with one to five thousand clients constituted slightly more than 20%, a decrease of 7%.

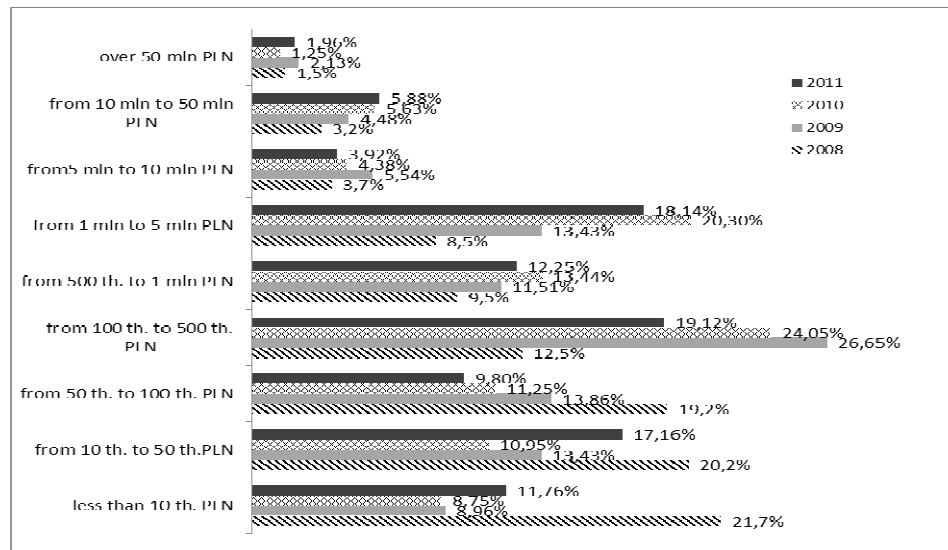
Figure 15. Number of customers of Polish e-shops in 2009-2011

Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

Financial results

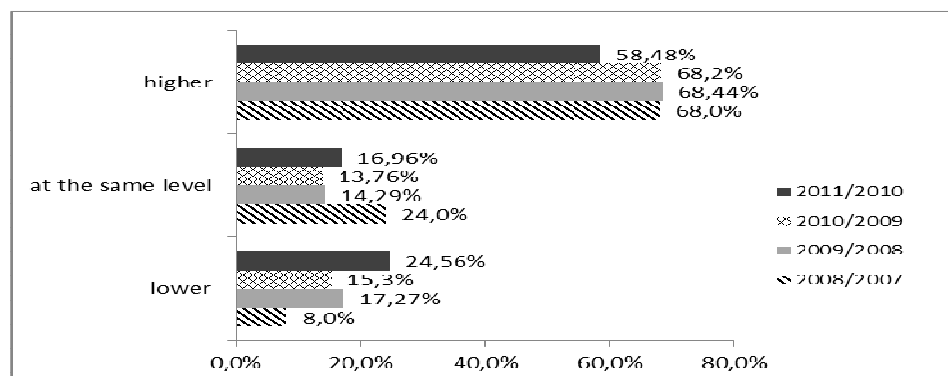
In 2011 many new shops took part in the research, which resulted in their net sales being lower than in 2010. A significantly higher percentage of shops recorded sales at the level of 50 thousand zloty or less (almost 29% of the surveyed companies, an increase of ten percentage points in comparison to the previous year). As a result there was also a lower percentage of companies with higher sales. There were 6% less companies with sales at the level of 50,000 - 500,000 zloty in comparison to 2010, and the percentage of companies with sales of 500,000 – 5 million zloty was 3%. There was, however, an increase of the biggest companies with sales of over 5 million zloty (increase of 0.5 percent in comparison to 2010).

A comparison of the years 2011 and 2010 shows a significant decrease in the overall dynamics of sales. Among the shops that existed in both years 58% of them showed increased sales, which is not a bad result, but nonetheless is lower by 10% in comparison to the dynamics of the year 2010 compared to 2009. Sales were retained at the same level by almost 17% of the surveyed shops, and 24.5% showed lower results in 2011 than in 2010.

Figure 16. Net sales of Polish e-shops in 2008-2011

Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

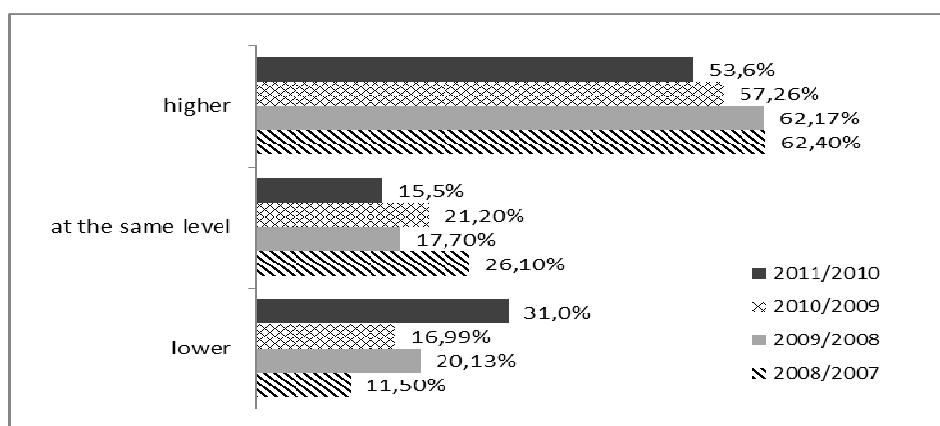
We can, therefore, speak about a certain slowdown in terms of electronic commerce in Poland, which is also noticeable in the next set of data which was included in the research, which concerned the first half of 2012. In comparing it with the first half of 2011, an increase in sales was recorded by 54% of companies, with 17% recording no change of sales and 29.5% recording a decrease in their sales.

Figure 17. Dynamics of sales in Polish e-shops in 2008-2011

Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

The slowdown is also visible in the answers to the question concerning the net profits of the surveyed companies. From 2009 on we can observe a decreasing percentage of companies that achieved a profit. In 2011 the figure was 77.6%. This however is still a better result than in 2008, when there were slightly over 73% of profitable companies.

Figure 18. Dynamics in the number of orders in Polish e-shops in 2009-2011

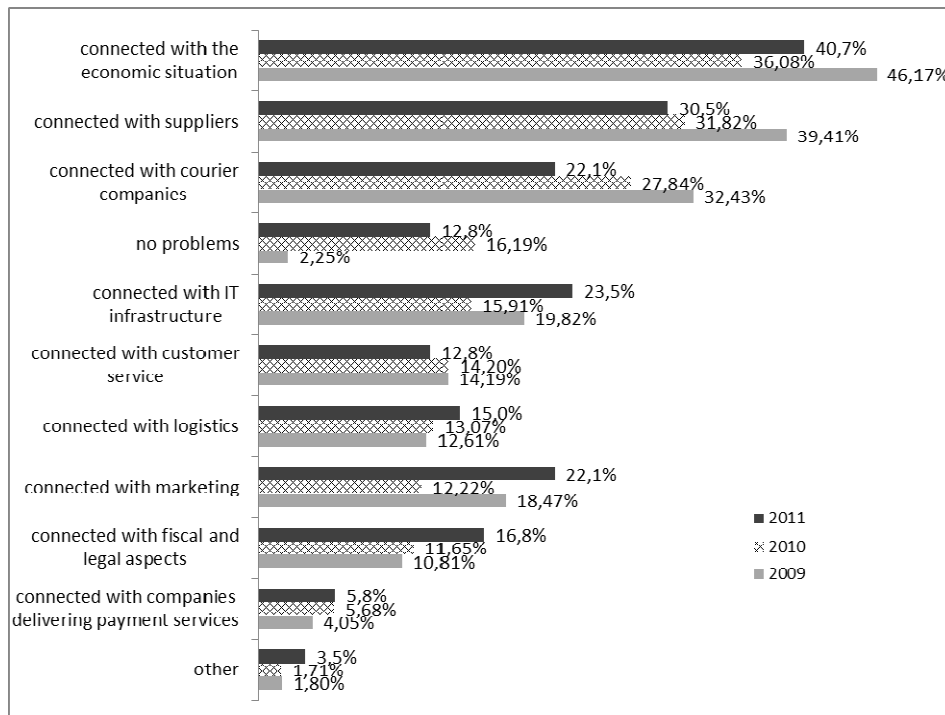


Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

There was also a decrease of in the number of companies that recorded an increase in their net results in comparison to the previous year, while there was an increase in the number of companies that recorded a decrease. There were 53.6% of companies whose net result in 2011 was better than that of 2010, which means that this indicator dropped by 3% in comparison to the answers received for the years 2010/2009. In addition 15.5% of companies retained the same net result (a decrease of 5% in comparison to 2010/2009), and as many as 31% of shops recorded poorer results, which is the worst showing in the last four years.

Problems of Polish e-shops

In comparison to the results of previous research into the Polish e-commerce sector, the distribution of problems encountered by the shops surveyed changed slightly. Since 2009 we can observe a decreasing trend in problems with suppliers (in the past year it was mentioned by 30.5% of the surveyed shops) and with courier companies (22.1%). A significant increase in problems (at the level of 5-10%) was also noted in areas such as IT infrastructure, marketing, or legal and fiscal issues.

Figure 19. Types of problems encountered by Polish e-shops in 2009-2011

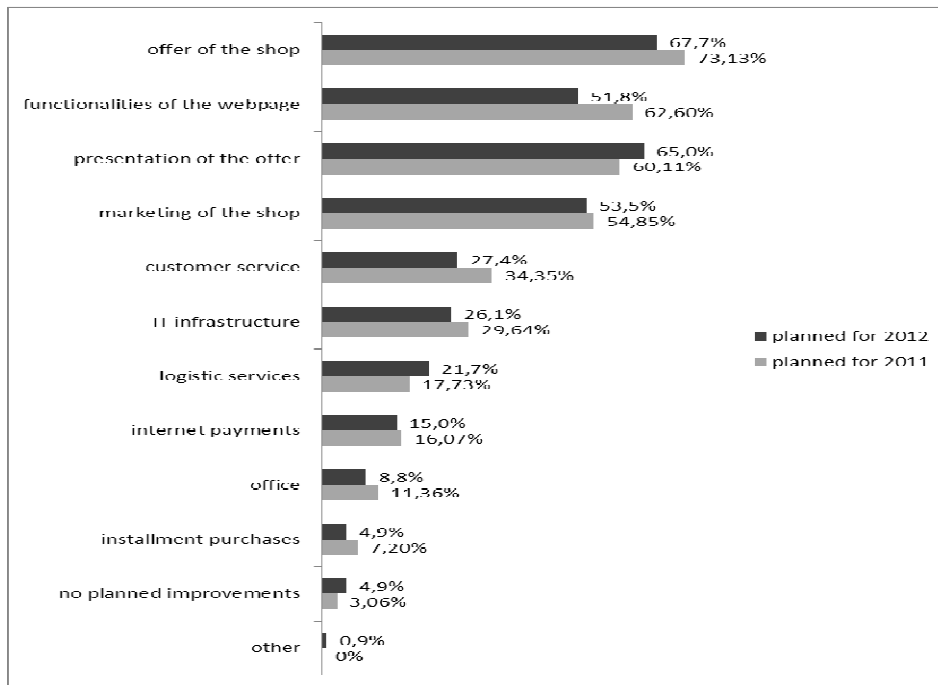
Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

There were few problems connected with companies providing payment services (mentioned by only 6% of the companies survived). There was an increase of 2% in companies that had problems with logistic services, and a decrease of the same percentage in connection with customer service problems.

It is worth noting that over 40% of the surveyed shops declared problems connected with the economic situation. This can explain to some extent the overall slowdown which was observable in the current research.

Trends and prospects for the future

Despite the weaker results, presented in this article, a significant majority of the surveyed companies expect an increase of their net sales in the year 2012 (almost 60% of respondents). About 17% of them believe that their sales will not change, and slightly less than 23% expect a decline in sales revenues, and the great majority of the companies expecting a decline do not anticipate it to be significant.

Figure 20. Improvements planned in Polish e-shops for 2011 and 2012

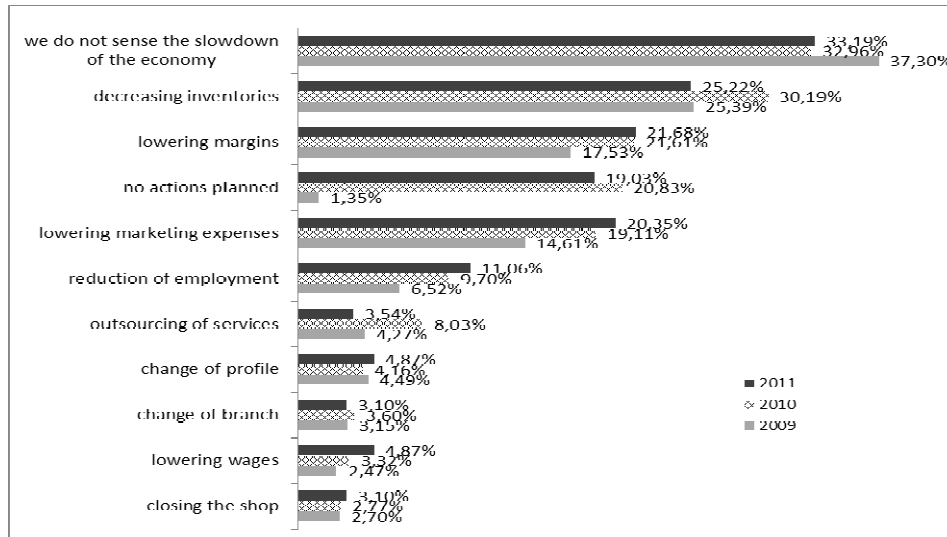
Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

On the other hand 10% of the companies that expect increases in net sales estimate that the increases will be equal to 75% or more, and 24% of the respondents expect their increase in net sales will be within a range of 25-75%.

Similarly as in the previous research, also in this year the majority of companies declared that they planned to enhance their shops' offer (67,7%), their form of presenting the offer (65%), and their marketing of their shop (53.5%). What is thought-provoking is that in the current year significantly fewer companies plan to enhance the functionality of their shops' webpage, which is the most important tool of communication with the client. In 2012 only 51.8% of the respondents declared such an intention, a decrease of 10% from the previous year. Overall the companies plan to enhance their online shop to a lesser extent than in previous years. Taking into consideration the fact that the obtained sales results are rather worse than in previous years, it is puzzling that the companies are not undertaking more and larger efforts to improve their results. On the other hand, only 5% of them declared that they will not be implementing any enhancements, so it is possible that the companies know very

well which aspects of their activity should be improved and want to focus only on them, rather than try to implement a number of changes at once.

Figure 21. Actions to counteract the economic crisis taken/planned by Polish e-shops in 2009-2011



Source: Authors' own compilations based on the research performed for the needs of Internet Standard reports.

The Polish economy has not so far suffered extremely painful effects from the international economic/financial crisis, but that may change in the upcoming years. For this reason the companies were also asked how they plan to counter the effects of the economic slowdown. In 2011 there was a similar percentage of companies as in 2010 that did not feel the effects of such slowdown, which is certainly a positive fact. The most popular answer to the question about the companies' planned actions in connection with the crisis was to decrease their inventories, which was declared by 1/4 of the respondents. Around 20% plan to lower their profit margins or decrease marketing expenses, while the same percentage of companies do not intend to undertake any actions to counteract the crisis, which seems surprising, especially taking into consideration the decreasing sales or the decreasing percentage of companies that do not have net profits.

Reduction of employment is planned by 11% of the surveyed companies, which is an increase of 2.5% in comparison to 2010. The remaining methods of counteracting the crisis, such as outsourcing services, changing the company's action profile, change of branch or lowering the wages are still much less popular among the investigated companies.

4. Conclusions

As can be seen from the analyses presented of Polish e-shops from the years 2008-2011, the crisis has not yet had much negative influence on them. One can even postulate that the Polish e-commerce sector did much better than the Polish economy as a whole. Different trends in changes with respect to marketing, safety, payment options, distributions or logistics can be seen from the presented analyses, but they generally did not have a strong negative influence on the companies operating in the Polish e-commerce sector. However, in the financial data from the last year under consideration (2011) we can observe a slowdown in the development of the investigated companies. Nonetheless the companies themselves remain positive about their future results and seem to be undertaking the correct actions in order to remain or become profitable. The further research that will be performed in the upcoming years will show how the Polish e-commerce sector is dealing with the ongoing crisis, and whether the current opinions held by the companies are correct.

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Streszczenie

KOMPARATYWNA ANALIZA WYKORZYSTANIA HANDLU I BIZNESU ELEKTRONICZNEGO W POLSKICH E-SKLEPACH W LATACH 2009-2011

Celem artykułu jest zaprezentowanie wyników badań dotyczących wykorzystania różnych aspektów handlu i biznesu elektronicznego w polskich e-sklepach oraz ich komparatywnej analizy wykonanej dla lat 2009-2011. Niektóre zaprezentowane dane dotyczą także roku 2008. Najważniejsze aspekty poruszane w analizach to: międzynarodowy handel i eksport polskich sklepów internetowych, aspekty marketingowe biznesu internetowego, infrastruktura i bezpieczeństwo polskich e-sklepów oraz ich wyniki finansowe, a także działania, które są planowane w celu zminimalizowania skutków kryzysu gospodarczego. W artykule zaprezentowane są również wnioski z wykonanych analiz oraz przewidywania na przyszłość dotyczące polskiego e-ryнку.