

## FROM E-CONSUMER TO E-PROSUMER – CHANGES IN BEHAVIOUR OF E-SERVICES' PURCHASERS

Robert Wolny

University of Economics in Katowice

**Abstract.** E-service market development is accompanied by development of a presumption phenomenon. Technical possibilities currently provided by the Internet favour prosumer behaviours. E-service consumers are not only passive beneficiaries of e-providers' offer, but they take the initiative, co-participate in creating and designing individualized e-services. The article presents the issues related to behaviour of e-services' purchasers and demonstrates the results of qualitative research in this regard. The empirical material was conducted via the technique of non-participant observation, in 2015, investigating the discussion participants on specialized Internet message boards devoted to e-services.

**Key words:** e-services, presumption, qualitative research

### INTRODUCTION

Changes in consumers' approaches and behaviours have been observed for decades. However, it is hard to escape the impression that these changes accelerated profoundly within the last few years. Polish consumers within the last 25 years could observe at least several significant changes, which influenced their ways of shopping. Taking into account the scale of changes, we could venture a name – revolution. That is why we could distinguish at least economic revolution – a transfer to a free-market revolution and hence a change of purchasing behaviours (a change of what we buy, how we buy, and how much we buy) and IT revolution – the occurrence of the opportunity of online shopping (a change of where we buy). Seemingly, the possibility of online shopping had an impact only on a purchasing place. However, as the research results of e-consumers' behaviours indicate, the possibility of such way of shopping is an occasion for the occurrence of a prosumer category. The development of e-service market favours the presumption

---

Corresponding author: Robert Wolny, University of Economics in Katowice, Department of Markets and Consumption, 40-287 Katowice, 1 Maja 50, Poland, e-mail: [robert.wolny@ue.katowice.pl](mailto:robert.wolny@ue.katowice.pl)

© Copyright by Warsaw University of Life Sciences Press, Warsaw 2016

phenomenon. Currently, e-service consumers are not only passive beneficiaries of e-providers' offer, but they take the initiative and co-participate in creating e-services.

The objective of the article is an attempt at the exemplification of behaviour of e-service purchasers and their prosumer behaviours.

## SOURCE MATERIAL AND RESEARCH METHODS

Field and desk research results were used in the article. Data reported by Central Statistical Office (GUS) concerning the functioning of the entities on e-service market were collected from desk sources. Data related to supply entities originate from the years 2007–2013, and demand entities from the years 2006–2014. Field sources constitute qualitative data collected via the technique of non-participant observation. The research was conducted within the months January – May 2015 analysing the activity of discussion participants on specialized internet message boards. The observation was conducted on Internet message boards fulfilling the following criteria:

- adequacy of topics discussed on a message board with the thematic category;
- high frequency of occurrence of responses on a given message board;
- large number of message board participants;
- high degree of details and contents related to responses of message board participants.

The research was done on 92 message boards of e-services, including e-tourism (25 message boards), e-health (24 message boards), e-banking (22 message boards), and e-insurance (21 message boards). The temporal scope of observations comprised posts on message boards displayed within the period of time from January 2011 to December 2014. Number of 19,728 people expressed their opinions on message boards within the analysed period of time, out of which 32% was constituted by men, and almost 28% by women. About 40% of participants could not be identified because of sex (it did not result from the name of the participant or from a specificity of the post). The most participants were expressing their views on message boards related to services within e-tourism (9,625), and the least within e-banking (2,265). In general, 25,795 posts were displayed on the selected message boards, out of which the most were displayed on message boards related to e-tourism (11,856), and the least within e-insurance (2,889) – Table 1.

Table 1. Characteristics of the studied Internet message boards

Specification	Number of message boards participants			Number of posts
	total	including		
		women	men	sex not stated
E-tourism	9 625	2 265	1 908	5 452
E-health	4 882	1 426	1 225	2 231
E-insurance	2 956	1 152	1 660	144
E-banking	2 265	680	1 520	65
Total	19 728	5 523	6 313	7 892

Source: Own research.

## RESULTS AND DISCUSSION

### Development of e-service market

The basic criterion of identification of e-service market is an environment in which services are provided – electronic environment. E-service market may be defined as a set of relations among the entities offering the Internet services to sell (service providers) at a given price and the entities purchasing the Internet services (customers) for possessed funds, provided that some services may be offered (provided) free of charge [Wolny 2013]. E-service market is a part of electronic market, which is considered (on a narrow basis) a system or a complex of IT system serving for the realization of purchase-sale transactions of products and services in a given branch [Ordyński 2007].

A big growth of e-service market has been observable in Poland in the recent years. A number of supply entities and customer increases, as well as the offer of provided e-services. Service companies providing e-services are included in the companies running e-sale. In the years 2007–2013 a percentage of companies running e-sale doubled. At average 6.5% of companies were running e-sale in Poland in 2007. The percentage increased to about 12% in 2013. The highest percentage of companies running e-sale is noted among large companies (about 35% in 2013) and these companies noted the highest increase in the years 2007–2013 (of about 26 percentage point). The medium companies were ranked before the small ones – the increase in the analogous period amounted to 9 percentage point, and for the small ones – 4 percentage point (Table 2).

Table 2. Companies running e-sale in the years 2007–2013 (%)

Specification	2007	2008	2009	2010	2011	2012	2013
Total	6.5	4.9	8.7	10.0	10.9	10.7	11.7
In accordance with size of company							
Small (10–49)	6.2	3.9	7.3	8.3	9.2	8.9	10.1
Medium (50–249)	7.0	6.9	11.8	14.3	15.0	15.7	16.1
Large (250 and more)	8.5	18.0	24.5	29.0	31.7	33.3	34.4

Source: *The use of IT technologies...* [2014].

A number of individual consumers using e-services increase. Central Statistical Office research indicates that a percentage of consumers purchasing goods and services online in the years 2006–2014 tripled. About 15% of consumers were doing such shopping in 2006, and 45% in 2014. The activity of consumers within e-services sensitive to a phenomenon of prosumption increases in the analysed years. About 33% of consumers (almost four times more than in 2006) were using electronic banking services in 2014. Over 36% of consumers use social networking sites, and at least every eighth participates in message boards or publishes his/her piece of work online (Table 3).

Table 3. Selected objectives of the use of the Internet by consumers in the years 2006–2014 (%)

Specification	2006	2007	2008	2009	2010	2011	2012	2013	2014
Shopping for goods and services online	14.9	19.3	23.3	29.6	35.7	39.1	40.0	42.0	45.1
Using banking services	9.1	12.8	17.1	21.2	27.5	25.3	32.0	32.0	32.6
Using social networking sites	.	.	.	.	35.7	28.0	35.7	35.3	36.8
Participation in chats, groups or message boards online	.	.	15.8	14.6	17.9	10.1	16.6	16.0	13.8
Publishing own texts, photo, videos etc. online	.	.	7.1	10.8	12.8	11.3	14.7	12.9	12.5

Source: *The use of IT technologies...* [2014].

### Development of prosumer behaviours

Prosumption is a mixture of consumption and production processes until the distinctions between them become less clear [Bywalec and Rudnicki 2002]. A. Toffler [Guido and Peluso 2008] is regarded as a founder of a category of prosumption. Prosumption may be the effect of tendency: consumption is incorporated in the production process – a producer becomes a consumer and production is included in consumption – a consumer becomes a producer. Prosumption may be also considered as a desire (or a wish) to own products which are compatible with a consumer's concept, a thanks to individual choices and activities consumer become co-creators of a given product [Gach 2008]. When consumers create goods and services for personal use, they become prosumers.

Changes occurring in a contemporary world are very significant for the functioning of both service companies and for consumers. Service providers are forced to be open to environment, to make contact with it. Supply entities on market involve their customers more and more frequently and encourage them to cooperate, providing them with their resources and materials, treating them as if they were friends. It is reflected in the creation of relations, the result of which is [Tapscott and Williams 2008]:

- personalisation – consumers have the impact on a final version of a product, they decide themselves about product prices, which reflect their desires, expectations;
- product hacking or product modification to improve them, to adjust them to own needs;
- crowdsourcing – obtaining information from consumers, enable them to express their opinions on the company's offer;
- collective intelligence – group intelligence – summed up knowledge, which is gained as a result of choices, opinions of independent participants.

### E-prosumers' behaviour

The 21st century e-service purchaser is not only a passive recipient of a market offer, but he/she more and more frequently participates in its creation. Prosumer behaviours of e-service purchasers may have diverse forms. In a natural environment of e-consumers, which is the Internet network, it is associated with:

- the use of opinion of other Internet users (including: passive use of information displayed by other on the Internet message boards, on social networking sites, blogs etc.);
- expressing opinions on e-services (own description of e-services on the Internet message boards, on social networking sites, blogs etc.);
- displaying suggestions online related to the improvement of service (on social networking sites of service providers);
- own decision how e-service should look like (e-service personalisation);
- displaying suggestions online related to the introduction of new e-services (also transferred directly to service providers).

Polish e-service purchasers are active prosumers on the said market. It is proved by current research [Jaciow and Wolny 2011, Jaciow et al. 2013]. The research results concerning prosumption on the selected e-service markets will be presented in the subsequent part of this report.

The subjects of observations of the Internet message boards were: sources of information about e-services; recommended and not recommended service providers, reasons for recommendation and lack of recommendation of service providers, positive and negative opinions on e-services, suggestions concerning improvements of e-services, including: modifications of the existing e-services and the suggestion of the introduction of new e-services.

Women were more active than men on the Internet message boards concerning services within e-tourism. Among the opinions concerning the functioning of e-service market (both subjective and objective side of market), many of them concerned the improvement (enhancement) of e-services. The respondents suggested modification of the existing e-services, which in terms of a customer should facilitate the process of searching tourist offers, provide more information on tourist offers, as well as facilitate the process of their purchase. The suggestions of the introduction of new services concerned both a new offer (e.g. services within thanatourism, enotourism and such kinds of tourism as: holiday, fishing, shopping), as well as modification of offers targeted at the selected groups of recipients (e.g. seniors, disabled people) – Table 4.

Table 4. Suggestions of service improvements within e-tourism – selected instances

Modification of existing e-services	<ul style="list-style-type: none"> <li>• improvement in booking tourist services online</li> <li>• possibility of options in searching a hotel, e.g. a street name</li> <li>• less errors in logging on a message board</li> <li>• modification of option “search and browse” to improve search for offers</li> <li>• information should be more frequently updated</li> <li>• monitoring of courier company dealing with delivery of tickets</li> </ul>
Introduction of new services	<ul style="list-style-type: none"> <li>• introduction of offers within fishing, shopping, holidays tourism</li> <li>• introductions of offers within enotourism (travels with a map, where the best global vineyards are marked)</li> <li>• introduction of offers within country tourism (farming holiday – opportunity to participate in preparation of traditional regional specialities, walking, bike, horse trips, the whole set of outdoor wellness treatments)</li> <li>• introduction of offers targeted exclusively at: seniors, disabled people</li> <li>• introduction of message boards by each travel agency</li> </ul>

Source: Own research.

Women were more active than men on the Internet message boards concerning services within e-health. Among the opinions concerning the functioning of e-service market (both subjective and objective side of market), many of them concerned the improvement (enhancement) of e-services. The respondents were suggesting modifications of the existing e-services, which in terms of a customer should facilitate the process of searching specialists, enable the electronic exchange of medical information. The suggestions of the introduction of new services concerned the introduction of the Internet evaluation of doctors or a remote conversation with a doctor (Table 5).

Table 5. Suggestions of service improvements within e-health – selected instances

Modification of existing e-services	<ul style="list-style-type: none"> <li>• opportunity to make an appointment to see a doctor via the Internet</li> <li>• running an online verification system of qualifications and experience of psychologists</li> <li>• improvement of information system about given medications</li> <li>• improvement of online cancer screening (e.g. the increase of accuracy of obtained results)</li> <li>• improvement of electronic storage area of test results</li> <li>• provision of electronic medical information both among medical institutions and among medical institutions and residents</li> </ul>
Introduction of new services	<ul style="list-style-type: none"> <li>• designing and implementation of online Integrated Hospital Information System providing access to medical services</li> <li>• creating a medical register, which are to enable a patient to make appointments via the Internet and monitoring a waiting list</li> <li>• introduction of electronic medical record book and system of e-prescriptions</li> <li>• introduction of a system of Internet questionnaires on the websites of particular outpatient clinics</li> <li>• on-line introduction of a system of online 24-hour clinics</li> <li>• dialogue with a doctor via a microphone, loudspeakers and sensors</li> <li>• opportunity to have a videoconference with a specialist</li> </ul>

Source: Own research.

Men were definitely more active on the Internet message boards concerning services within e-insurance. The respondents suggested a great deal of modification of the existing e-services, which in terms of a customer should facilitate the use of e-insurance. The modifications concerned the improvement of the functioning of software, ways of taking out an insurance policy and additional benefits for customers. Among the new services within e-insurance, the respondents suggested the implementation of the possibility to purchase all insurance products via the Internet and multimedia assistance for customers (Table 6).

Men were definitely more active on the Internet message boards concerning services within e-banking. The respondents suggested plenty of modifications of the existing e-services, which in terms of a customer should facilitate the use of e-banking. The modifications concerned electronic transfers, improvement of the functioning of bank interface, the extension of the objective scope of services and technical possibilities during their use. Among the new services within e-banking, the respondents suggested the implementation of new opportunities within making bank transfers and checking balance, the implementation of new applications for mobile devices (Table 7).

Table 6. Suggestions of service improvements within e-insurance – selected instances

Modification of existing e-services	<ul style="list-style-type: none"> <li>• improvement of the functioning of calculators to calculate expenses</li> <li>• improvement of security of accounts on the Internet services</li> <li>• improvement of software for smart phones</li> <li>• possibility to take out an insurance policy online together with a loan</li> <li>• reductions for cars with GPS</li> </ul>
Introduction of new services	<ul style="list-style-type: none"> <li>• investment policies</li> <li>• Skype contact with customers via Skype</li> <li>• implementing of all types of insurance online</li> <li>• posting instructional films, teaching how to take out Internet policies</li> </ul>

Source: Own research.

Table 7. Suggestions of service improvements within e-banking – selected instances

Modification of existing e-services	<ul style="list-style-type: none"> <li>• improvement of completion time of Internet transfers</li> <li>• creation of a clear bank interface</li> <li>• facilitation in the use of e-banking via the change in the way of logging in/out</li> <li>• option of demonstrating a precise time of registering a transaction</li> <li>• balance updated and visible after each transaction</li> <li>• comparison of balance with planned transactions</li> <li>• the increase of account availability via text messaging</li> </ul>
Introduction of new services	<ul style="list-style-type: none"> <li>• implementation of checking balance via text messaging</li> <li>• monthly turnover statement on brokerage account</li> <li>• bank statement on e-mail</li> <li>• implementation of virtual currency exchange</li> <li>• possibility of mutual finance management for marriages</li> <li>• possibility to make transfers with the use of e-mail address or phone number instead of bank account number</li> <li>• implementation of rating observations on mobile devices</li> </ul>

Source: Own research.

## CONCLUSIONS

The development of e-service market is accompanied by the development of a phenomenon of prosumption. E-service prosumption allows for their further development and improvement, which also contributes to the occurrence of subsequent customers. Technical possibilities which are provided by the Internet favour a phenomenon of prosumption. In the future, we may also expect a bigger participation in the creation of e-services and active participation in designing individualized e-services. Consumers want to feel awarded and exceptional. They want to use e-services dedicated for them and fully satisfying their needs. The development of prosumption is determined by economic and social trends, technological advancement, as well as by knowledge development. The companies also willingly use the consumers' knowledge running outsourcing of the part of activity based on them as well as using the consumers' knowledge in the process of product development. Gained knowledge on new e-services may contribute to the development of a new offer. Even if some e-services may seem to be too futuristic these days, they may be surely implemented in the future.

## REFERENCES

- Bywalec, Cz., Rudnicki, L. (2002). Konsumpcja [Consumption]. PWE, Warszawa.
- Gach, D. (2008). Pozyskiwanie i wykorzystywanie wiedzy klientów [Acquisition and use of customer knowledge]. *E-Mentor*, 23, 57.
- Guido, G., Peluso, A.M. (2008). Preconditions for the diffusion of prosumption among firms: a case study approach. *Problems and Perspectives in Management*, 6, 4, 65.
- Jaciow, M., Wolny, R. (2011). Polski e-konsument. Typologia, zachowania [Polish e-consumer. Typology, behaviour]. OnePress Gliwice.
- Jaciow, M., Wolny, R., Stolecka-Makowska, A. (2013). E-consumer in Poland. Comparative analysis of behaviours. OnePress, Gliwice.
- Ordyński, T. (2007). Modelowanie strategii rozwoju e-biznesu w przedsiębiorstwie [Modeling of e-business development in the company]. USZ, Szczecin.
- Tapscott, D., Williams, A.D. (2008). Wikinomia. O globalnej współpracy, która wszystko zmienia [Wikinomics. The global collaboration that changes everything]. Wydawnictwa Akademickie i Profesjonalne, Warszawa.
- Wolny, R. (2013). Rynek e-usług w Polsce – funkcjonowanie i kierunki rozwoju [E-services market in Poland – the functioning and developing directions]. UE, Katowice.
- Wykorzystanie technologii informacyjno-telekomunikacyjnych w przedsiębiorstwach i gospodarstwach domowych w latach 2007–2013 [The use of IT technologies in companies and households in the years 2007–2013] (2014). GUS. Available at: [www.stat.gov.pl](http://www.stat.gov.pl).

## OD E-KONSUMENTA DO E-PROSUMENTA – ZMIANY W POSTĘPOWANIU NABYWCÓW E-USŁUG

**Streszczenie.** Rozwojowi rynku e-usług towarzyszy rozwój zjawiska prosumpcji. Możliwości techniczne, jakie obecnie daje sieć internetowa, sprzyjają zachowaniom prosumenckim. Konsument e-usług nie są już jedynie biernymi beneficjentami oferty e-usługodawców, ale przejmują inicjatywę, współuczestniczą w tworzeniu i projektowaniu zindywidualizowanych e-usług. W artykule przedstawiono tematykę związaną z postępowaniem nabywców e-usług i zaprezentowano wyniki badań jakościowych w tym zakresie. Materiały empiryczne zebrano techniką obserwacji nieuczestniczącej, w 2015 roku, badając uczestników dyskusji na branżowych forach internetowych poświęconych e-usługom.

**Słowa kluczowe:** e-usługi, prosumpcja, badania jakościowe

Accepted for print: 11.02.2016

For citation: Wolny R. (2016). From e-consumer to e-prosumer – changes in behaviour of e-services' purchasers. *Acta Sci. Pol., Oeconomia*, 15 (1), 145–152.