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# **Prosumers' eagerness for knowledge sharing with enterprises – a Polish study**

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## **Abstract**

*This research focuses on prosumption. Its purpose is to diagnose prosumers' eagerness for knowledge sharing with enterprises. In the first part of the paper, the classification of prosumers in terms of their eagerness to share knowledge with enterprises is presented. This classification was used as a foundation to specify the essential knowledge sharing activities that prosumers undertake in their relationship with the enterprise. The second part presents a conceptual model delineating the relationships occurring between the characteristics of prosumers and their eagerness for knowledge sharing. The third section presents the results of research indicating which prosumers, distinguished by a variety of characteristics, are most eager to share their knowledge with the enterprise. As a result of the conducted research, a prosumer's profile in terms of their eagerness to share knowledge with the enterprise was built and practical conclusions, and recommendations regarding the use of prosumption in the enterprise were formulated.*

**Keywords:** prosumer, prosumption, enterprise, prosumers' engagement, eagerness, consumer knowledge, knowledge sharing, Poland

## **Introduction**

Knowledge is a crucial asset of an individual as well as enterprises to succeed in the increasingly changing environment (Ziemba, 2013a; Cohen, 2013; Tsai, Tsai, Li, & Lin, 2012, p. 23; Aktharsha, 2011, p. 103-106; Abdel-Aziz & Bontis, 2010, p.105; Oinas-Kukkonen, 2008 p. 173-176; Drucker, 2002; Kowalczyk & Nogalski, 2007; Paliszkiwicz & Koohang, 2013). According to Nonaka and Takeuchi (1995), enterprises cannot create knowledge on their own. Knowledge creation depends upon the initiative of individuals and the interaction that takes place within a group (Nonaka & Takeuchi, 1995). Additionally, Nonaka (1994) suggests that efficient knowledge sharing depends on the eagerness of individuals to signal to enterprises which knowledge they possess and share knowledge when required. Thus, the issues of how to create conditions for knowledge sharing and how to conduct knowledge acquisition from individuals are becoming challenging for enterprises.

Knowledge acquisition by the enterprise is a multi-faceted process, occurring with some obstacles and difficulties, such as: estimating the value and quality of the owned knowledge resources, the distribution of knowledge within the enterprise, the reluctance of people to share their knowledge or lack of appropriate incentives to encourage people to knowledge sharing (Turban, Bolloju, & Liang, 2011; Kowalczyk & Nogalski 2007, p. 70-78). Additionally, at present, in the process of creating innovations, enterprises cannot be content with their internal knowledge resources (Ziemba, 2013). Simultaneously, modern consumers do not wish to be passive consumers only. They want to satisfy their consumption needs through self-design, -reconfiguration or even -production and -distribution of products (Tapscot & Willimas, 2006; Tapscot, 2009). Through knowledge sharing, they become co-creators – prosumers (Zwick,

Bonsu, & Darmondy, 2008, p. 163-196; Merchant, 2012; Ind & Coates, 2013, p. 86-95; Ziemba, 2013). The observed transition of consumers' role in relation to enterprises causes that enterprises more often turn directly to prosumers' knowledge. Increasingly, enterprises strive to acquire prosumers' knowledge using information and communication technologies (ICTs) (Füller, Matzler, & Hoppe, 2008, p. 609; Turban, Bolloju, & Liang, 2011). The possibility to exploit that knowledge is up to prosumers' eagerness for knowledge sharing. Thus, the need to explore the above-mentioned issues and problems arises.

The aim of this paper is to diagnose prosumers' eagerness for knowledge sharing with enterprises. This paper is structured as follows. Firstly, the knowledge sharing process and eagerness to share knowledge are characterized. Secondly, the classification of consumers in terms of their eagerness to share their knowledge with the enterprise is presented. Thirdly, the contemporary presumption is characterized, and the term "prosumer" is defined. Fourthly, a conceptual model is presented which delineates the relationships occurring between the characteristics of prosumers and their eagerness for knowledge sharing with enterprises. Fifthly, the results of the direct research are shown which provide the basis for an analysis of prosumers' characteristics and their impact on the eagerness to share knowledge with the enterprises. The paper concludes by discussing its findings, limitations, implications, and avenues for further research.

## **Theoretical Background**

Until recently, consumers remained merely passive market participants, who were forced to accept everything that had been determined by manufacturers, service providers and traders. The increase in education level, the enormous growth in consumer awareness, and the continuous development of ICTs have transformed the relationship between the enterprise and consumers (Vega-Vazquez, Revilla-Camacho, & Cossio-Silva, 2013, p. 1945-1946). Modern consumers share their knowledge with the enterprise in order to become the co-creators of products appearing on the market (Nasri, 2012). Moreover, they creatively and courageously judge products – becoming the "strict judges" of their quality. They also share their knowledge with other consumers (Ziemba & Wielki, 2008).

Knowledge sharing could be characterized as a process in which individuals share what they have learned and transfer what they know to those who have a collective interest in it and who have found this new knowledge useful (Cheng, Ho, & Lau, 2009, p. 313). In this process the value of knowledge appreciates when it is shared. Therefore, knowledge sharing can significantly improve quality of work and decision-making skills, problem-solving efficiency as well as competency that will benefit the business outcomes (Yang, 2007, p. 83-84; Syed-Ikhsan & Rowland, 2004). In the literature some authors focus on individuals' attitudes towards knowledge sharing. They present a new and relevant distinction between the willingness to share knowledge on the one hand, and the eagerness to share knowledge, on the other (De Vries, Van den Hooff, & De Ridder, 2006, p. 116-117; Van den Hooff, De Ridder, & Aukema, 2004; Tong, Tak, & Wong, 2013, p. 13). The willingness is defined as "*the extent to which an individual is prepared to grant other group members access to their individual knowledge*" (Van den Hooff & Hendrix, 2004, p. 2). While the eagerness is characterized as "*the extent to which an individual has a strong internal drive to communicate their knowledge to other group members*"

(Van den Hooff & Hendrix, 2004, p. 2). The eagerness primarily derives from the individual's passion for a practice, whereas the willingness comes from a focus on collective interests (Van den Hooff, Schouten, & Simonovski, 2012, p. 149).

In view of the above considerations a distinction is made between individuals' attitudes towards knowledge sharing, on the one hand, and the perceivable attitude and active role of modern prosumers, on the other, and on that basis the term "eagerness" has been employed in this paper.

In the subject literature one can find studies focusing on the problem of consumers' knowledge sharing using ICTs. Assuming the consumers' eagerness to participate in knowledge sharing, both with the enterprise as well as with other consumers, as the basic criterion, there can be distinguished six categories of consumers (Bryant, 2011, p. 29-31):

- Inactives who do not participate in any activities relating to knowledge sharing neither with enterprise nor with other consumers;
- Spectators who familiarize themselves with the content and the opinions of other consumers, but do not undertake any activity on their own to share knowledge neither with the enterprise nor with other consumers;
- Joiners who possess profiles on social networking sites and are the members of the virtual communities, but they are not active in sharing knowledge with other consumers and the enterprises;
- Collectors who gather information about the enterprise and its products in order to make their own decisions;
- Critics who comment, rate and are happy to discuss the enterprise and its products; and
- Creators who share their knowledge, affect the perception of problems and issues by other consumers and are actively involved in the knowledge-sharing initiatives provided to them by the enterprise.

This division represents the subsequent levels of consumers' involvement in projects and initiatives for knowledge sharing with the enterprise. A conclusion can be drawn that the 'critics' use ICTs to share opinions, insights or experiences on products or services. In turn, the 'creators' eagerly and actively engage in the processes of designing or improving products and, this way, they share their valuable knowledge with enterprises. By using ICTs, the 'critics' and the 'creators', consciously and deliberately affect the final forms of products. These consumers are called prosumers, and conception of using prosumers' knowledge for enterprises' needs is described as prosumption (Ziemba, 2013; Tapscott & Williams, 2006; Xie, Bagozzi, & Troye, 2008; Zwick, Bonsu, & Darmondy, 2008; Ritzer & Jurgenson, 2010).

The significance, role and involvement of prosumers have changed over the years. Originally, the prosumer was a person producing for their own use. The person who consumed what they had produced on their own (Toffler, 1980). With the development of technology prosumers acquired the ability to cooperate and participate in some of the tasks and business processes previously performed by employees of the enterprise. Finally, prosumers have become involved in the production process through an independent product design and reconfiguration (Ziemba, 2013; Lebiejko, 2011, p. 65; Tapscot & Williams, 2006). They turn into an "external enterprise

employees”, who actively participate in designing, producing and distributing of newer versions of a product (Ziemba, 2013). As a result, they can get the final product in line with their own expectations.

The contemporary prosumption means that enterprises take into account the increasing importance of prosumers. It is related to the enterprises’ need to refocus their activities to allow prosumers to undertake joint and innovative activities (Gustafsson, Kristensson, Löfgren, & Witell, 2011, p. 140-159; Witell, Gustafsson, & Löfgren, 2011, p. 87-99). The contemporary prosumption, therefore, manifests itself in the fact that enterprises compete by involving consumers in the process of knowledge exploration, creating innovation, and co-creation of value (Ziemba, 2013). Prosumers are involved in the product development through participation in all, or part, of business processes (Tsai, Tsai, Li, & Lin, 2012, p. 30; Jurgenson & Ritzer, 2009). For this purpose, enterprises employ the active social attitudes which focus on the significant characteristics of prosumers (Ferguson & Cummings, 2008, p. 77-78; Boni, 2011) and the prosumers’ eagerness to share knowledge as well as their willingness to cooperate with others (Arvidsson, 2007, p. 9-12). The most valuable, in this respect, are prosumers’ unpredictability of actions, experimentation, and creativity (*Managing...*, 2012, p. 7; Campbell, 2003; Davenport, Harris, & Kohli, 2001). It is worth underlining that prosumers share knowledge with enterprises voluntarily. They do not expect enterprises’ incentives or rewards. Their activities are unprompted. Undertaken activities often reflect prosumers’ interests. Sometimes, the main purpose of knowledge sharing is the possibility of achieving the expected level of group recognition, among peers or among virtual communities (Lilley, Grodzinsky, & Gumbus, 2012).

A conclusion can be derived from this, that prosumption is a process which involves both prosumers and enterprises and that it benefits each party (Levy, 2009, p. 122-124). Prosumers, by taking an active part in the knowledge sharing process with enterprises, shaping the product, which then they can use. They obtain a specific control over the product and create directions for its changes (Brabham, 2012). Moreover, prosumers regard the social advantages connected with the possibility of achieving a proper status in their environment as highly important. In turn, thanks to prosumption, enterprises can faster and more accurately follow the real needs of consumers (Sinclair & Bogus, 2011, p. 303-305; Reitz, 2012), as well as predict consumption patterns in the future (Siuda, 2012). In addition, prosumption enables consumers to strengthen the emotional bond with enterprises (Thomson, MacInnis, & Park, 2005; Morrison & Crane, 2007).

Benefits for enterprises, both financial and those associated with building the reputation, prestige and “consumer-friendly” image, cause that more and more enterprises take initiatives oriented towards adopting prosumption. Researchers indicate two distinct attitudes among prosumers regarding knowledge sharing (Van den Hooff & Hendrix, 2004, p. 2-4; Van den Hooff, Schouten, & Simonovski, 2012, p. 150-151). The first one could be characterized as prosumers’ attitude to knowledge sharing, but only in case of reciprocity. In other words – by sharing knowledge prosumers hope that others (consumers or enterprises) will fall into line. The other one describes prosumers, who share their knowledge actively. This is mainly the knowledge about certain, determinate topic, which turned prosumers on. Prosumers are eager to let others know what they know because they themselves consider it valuable and expect their individual knowledge to be appreciated by others (De Vries, Van den Hooff, & De Ridder, 2006, p. 116-

117). One of the problems that appears is determining which consumers are the most eager to share their knowledge. This study attempts to resolve this problem. There are presented the results of studies indicating which consumers are the most eager to share their knowledge with the enterprise.

## **Research methodology**

### **Research steps**

This research took the following steps:

1. The first step – the literature was in-depth reviewed to explore the concepts: knowledge sharing, eagerness to share knowledge, prosumption and prosumer.
2. The second step – netnography (virtual ethnography) was conducted to examine how prosumers share their knowledge with enterprises. Netnography is an online marketing research technique (Kozinets, 2002, p. 61). It is a form of ethnographic research, adopting the participant-observational approach and taking online interactions as its fieldwork. In other words, netnography is a research technique adapted to the study of online communities (Dumitrica, 2013), which offer insights into the virtual space in relation to consumers' needs and wants, choices or their attitudes (Xun & Reynolds, 2010, p. 18). Netnography was used to indicate that enterprises foster prosumption. These were: Lego, IBM Poland, Western Bank WBK (the Polish name: Bank Zachodni WBK), Digital Polsat – Polish TV (the Polish name: Cyfrowy Polsat), Nikon Poland, Tymbark (the Polish beverage producer). Furthermore, netnography enables the specification of the prosumers' activities shown in the model presented hereafter.
3. The third step – based on the literature findings, netnographic observations, as well as methods of creative thinking, a conceptual model of prosumers' eagerness for knowledge sharing with enterprises was established. According to Johnson (2000) creative thinking is considered as demonstration of thought that classifies, analyzes and evaluates given information. In addition, creative thinking needs logical thinking to provide meaningful relations among independent variables (Incikabi, Tuna, & Biber, 2013, p. 257-258).
4. The fourth step – thanks to the questionnaire-based direct survey this conceptual model was verified. The collected data were statistically analyzed. For this purpose pivot tables in Microsoft Excel were employed.
5. The fifth step – based on the methods of creative thinking and outcomes of the questionnaire-based direct survey, a prosumer's profile has been built, in terms of prosumers' eagerness to share knowledge with enterprises. Additionally, practical conclusions and recommendations regarding adoption of prosumption in enterprises have been formulated.

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## **Research question and auxiliary hypotheses**

The paper focuses on addressing the following research question:

**RQ:** What is the relationship between the basic features differentiating prosumers and their eagerness to share knowledge?

Five auxiliary hypotheses, based on an in-depth study of literature and methods of creative thinking, were put forward to answer the research question.

Even twenty-thirty years ago, researchers noted that it was generally more difficult for men to adapt to social life due to their high propensity for independence (Shaver & Buhrmester, 1983). They built and earnestly tried to maintain the independence of their own ego, while women formed interdependent relationships, treating others as part of their ego (Cross & Madson, 1997). Currently, a change in the behavior of men towards activities related to building social relationships in the online environment can be observed. The research conducted by Ma and Yuen (2011) indicates a greater desire and more attention paid by men than women to forming relationships and bonds on the Internet. However, in an experiment conducted in the Polish social media, based on the technique of snowball, women far more eagerly shared knowledge than men (Mitreǵa, 2013, p. 46). Following this idea and the results of those studies, the first hypothesis was formulated:

**H.1.** Eagerness for knowledge sharing with the enterprise depends on the gender; however, women have a greater eagerness in this respect.

Researchers divide the Internet users with regard to their age into the generations of the Baby Boomer, X, Y, Z and Alpha. It is assumed that generation Y is individuals born between mid-70s and mid-90s of the twentieth century, whereas the generation Z are individuals born between mid-90s of the twentieth century and 2009. These generations are crucial for knowledge sharing with enterprises, especially thanks to ICTs using (Tapscott, 2009; Ziembra, 2013; Asthana, 2008; Gardner, 2006). Contemporary, young consumers are very often the most skilled users of the Internet. Moreover, they are the individuals who are able to search for information on the Internet that they are interested in, relying more on their powers of observation and inquisitiveness than the information that can be obtained from the enterprise. Such consumers eagerly take actions directed at sharing their knowledge with enterprise and other users (Ziembra & Eisenhardt, 2013; Bothun, Lieberman, & Tipton, 2012). The conducted in-depth literature studies allow for bringing the following hypotheses:

**H.2.** Eagerness for knowledge sharing with the enterprise depends on the age, however, young people show greater eagerness in this respect.

**H.3.** Eagerness for knowledge sharing with the enterprise depends on the access to the Internet. People with frequent, almost constant access to the Internet, prove to have greater eagerness in this respect.

The research on the prevalence of prosumption in Poland shows that greater propensity towards prosumption, understood in the traditional manner – as production for their own use, have people from rural areas (Nowak, 2002, p. 77). The reasons for this are twofold. Firstly, rural residents have better manual skills. They can easily perform themselves a lot of tasks, especially those

related to minor repair work. Secondly, their access to various types of products is very limited. Additionally, at this point it needs to be reminded that income is the essential characteristic which determines the behavior in the sphere of consumption and it is higher among urban residents (Nowak, 2002, p. 76-77). The research demonstrates that contemporary prosumers are, to a large extent, people with income equal to or above the national average (Szopiński, 2012, p. 49). Taking into account the above determinants the fourth hypothesis is as follows:

**H.4.** Eagerness for knowledge sharing with the enterprise depends on the place of residence, and people living in large towns have a greater eagerness in this respect.

### Characteristics of the respondents

The direct survey was preceded (February, 2013) by a pilot survey, which purpose was substantive and methodological scrutiny of the questionnaire. The findings of the pilot survey enabled the verification of this questionnaire. The questionnaire-based direct survey was performed in March and April 2013 at two universities, and involved a sample of 575 persons, including 346 women and 229 men. The participants of the survey stayed anonymous.

The direct survey was run on a group of consumers, a majority of whom were Generation Y, since they are now considered the largest and most active faction of Web users (Lazarevic, 2012). People of generation Y perceive ICTs as an inalienable part of their lives and as tools used for work as well as for entertainment. They happily share knowledge with other Web users or enterprises and consult the opinions of others before making purchase decisions (Eisner, 2005). That has been confirmed by this research. Detailed characteristics of the research group are shown in Table 1.

**Table 1.** Characteristics of the respondents

	Specified data	Number of respondents	%
Gender	women	346	60.2
	men	229	39.8
Age	19-25	441	76.7
	26-30	56	9.7
	31-35	38	6.6
	36-40	19	3.3
	41-50	19	3.3
	over 50	2	0.3
Internet access	non	1	0.2
	with difficulties	2	0.3
	incidental	4	0.7
	frequent	111	19.3
	constant	457	79.5
Place of residence	extraurban area	60	10.4
	city below 100.000 inhabitants	166	28.9
	city over 100.000 inhabitants	349	60.7

The respondents were asked:

1. Do you share your knowledge with the enterprise by personal commenting on products and evaluating them?
2. Do you share your knowledge with the enterprise by personal upgrades or product improvements?
3. Do you share your knowledge with the enterprise by proposals for new products?

The respondents could choose one of five responses to the posed questions, according to Likert scale: (1) definitely not (never), (2) unlikely, (3) no opinion, (4) rather yes, (5) definitely yes (many times).

Below there are presented the results of the research which answer to the research question. The results are divided into four parts, by which the hypotheses were verified one by one. The presented results only embrace the answers of those respondents who ticked (4) or (5). They are the prosumers in accordance with the theory presented in the part devoted to the theoretical background. These results are preceded by the developed conceptual model of prosumers' eagerness for knowledge sharing with enterprises.

## **Research Findings**

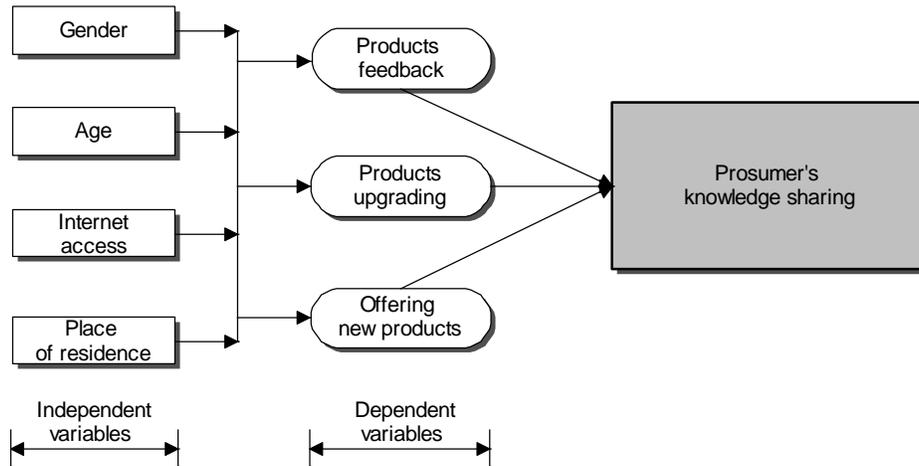
### **Conceptual model**

The research findings show that prosumers share knowledge with enterprises and enterprises can acquire prosumers' knowledge in three ways. Firstly, prosumers issue opinions and give comments, whereas enterprises analyze those comments and opinions. Secondly, prosumers propose product improvements, while enterprises use them to improve products and aim at encouraging prosumers to improve existing products. Thirdly, consumers suggest and specify new products, whereas enterprises create new products based on prosumers' suggestions and encourage prosumers to create new products. In addition, nowadays knowledge sharing with the enterprises is facilitated by ICTs. It is worth underlining, that the majority of enterprises use well known ICTs, for example: e-mails, online surveys, social networks, Internet forums, business blogs, comments posted on a producer website, business (specialized) portals, online price comparison (Ziamba & Eisenhardt, 2013a). Some of them have implemented their own solutions to facilitate consumer interactions.

Consistent with those research findings, a conceptual model of prosumers' eagerness for knowledge sharing with enterprises was established (Figure 1). It was designed to highlight how prosumers can share knowledge with enterprises. Prosumers' activities which demonstrate the manners of knowledge sharing with the enterprise are:

- Product feedback;
- Products upgrading; and
- Offering new products.

This proposed model is the foundation for further considerations. It reflects the relationships between the independent and dependent variables. The independent variables differentiating prosumers are: gender, age, Internet access and place of residence. The dependent variables are the highlighted three kinds of prosumers’ activities connected with knowledge sharing, such as: products feedback, products upgrading and offering new products.



**Figure 1.** The conceptual model of prosumers’ eagerness for knowledge sharing with enterprises

**The relationship between the prosumers’ gender and their eagerness for knowledge sharing**

Data presented in Table 2 show the relationship between the dependent variables specified in the model (product feedback, products upgrading and offering new products) with regard to the independent variable, which is prosumers’ gender.

**Table 2.** Prosumers’ gender vs. their eagerness for knowledge sharing

Variables	Prosumers’ gender		Total
	Women	Men	
Products feedback	130 (22.6%)	92 (16%)	222 (38.6%)
Products upgrading	14 (2.4%)	20 (3.5%)	34 (5.9%)
Offering new products	13 (2.3%)	13 (2.3%)	26 (4.6%)

The study shows that women are the most active in the case of knowledge sharing through commenting, while men are more active in the case of knowledge sharing through products personal upgrades and improvements. There is no difference between men and women in the case of proposals for new products.

Thus, the conducted study only partially supports hypothesis H1. Women are much more likely to share knowledge with the enterprise through commenting, thus evaluating products. However,

men are more active when enterprises encourage prosumers to share knowledge, giving them the opportunity to improve products. The results confirm the study conducted by American scientists, which shows that the men’s attitude has a higher tendency towards being highly task-oriented (Venkatesh, Morris, Davis, & Davis, 2003, p. 468).

**The relationship between the prosumers’ age and their eagerness for knowledge sharing**

Data presented in Table 3 show the relationship between the dependent variables specified in the model (product feedback, products upgrading and offering new products) with regard to the independent variable, which is the age of prosumers.

**Table 3.** Prosumers’ age vs. their eagerness for knowledge sharing

Variables	Prosumers’ age					
	19-25	26-30	31-35	36-40	41-50	>50
Products feedback	173 (30.1%)	26 (4.5%)	15 (2.6%)	4 (0.7%)	3 (0.5%)	1 (0.2%)
Products upgrading	23 (4%)	5 (0.9%)	3 (0.5%)	2 (0.3%)	1 (0.2%)	0 (0%)
Offering new products	18 (3.1%)	3 (0.5%)	1 (0.2%)	2 (0.3%)	2 (0.3%)	0 (0%)

The study indicates that the most eager to share their knowledge with the enterprise were young individuals between 20 and 24 years of age, mainly the individuals from the Y Generation and younger.

Thus, the conducted study strongly supports hypothesis H2. Young prosumers more often share their knowledge with the enterprise in any of the listed forms than the older ones. A conclusion can even be put forward that only the young prosumers tend to share knowledge with the enterprise.

**The relationship between the prosumers’ Internet access and their eagerness for knowledge sharing**

The data presented in Table 4 show the relationship between the dependent variables specified in the model (product feedback, products upgrading and offering new products) with regard to the independent variable, which is prosumers’ Internet access.

**Table 4.** Prosumers’ Internet access vs. their eagerness for knowledge sharing

Variables	Prosumers’ Internet access				
	non	with difficulties	incidental	frequent	constant
Products feedback	0 (0%)	0 (0%)	0 (0%)	35 (6.1%)	187 (32.5%)
Products upgrading	0 (0%)	0 (0%)	0 (0%)	6 (1%)	28 (4.9%)
Offering new products	0 (0%)	0 (0%)	0 (0%)	7 (1.2%)	19 (3.3%)

The study indicates that the most eager to share their knowledge with the enterprise are the people with the constant access to the Internet.

Thus, the conducted study strongly supports hypothesis H3. The prosumers having constant and free access to the Internet are far more likely to share their knowledge with the enterprise in any of the listed forms than other prosumers. It is worth noting that the prosumers, who do not have Internet access or the prosumers with an incidental access or an access with difficulty, do not participate in any of the specified activities of knowledge sharing with the enterprise.

### **The relationship between the prosumers' place of residence and their eagerness for knowledge sharing**

Data presented in Table 5 show the relationship between the dependent variables specified in the model (product feedback, products upgrading and offering new products) with regard to the independent variable, which is prosumers' place of residence.

**Table 5.** Prosumers' place of residence vs. their eagerness for knowledge sharing

Variables	Prosumers' place of residence		
	Extra urban area	City below 100.000 inhabitants	City over 100.000 inhabitants
Products feedback	26 (4.5%)	58 (10.1%)	138 (24%)
Products upgrading	3 (0.5%)	9 (1.6%)	22 (3.8%)
Offering new products	3 (0.5%)	8 (1.4%)	15 (2.6%)

The study indicates that the most eager to share their knowledge with the enterprise are people living in large cities.

Thus, the conducted study confirms hypothesis H4. The prosumers living in large cities show a greater eagerness for knowledge sharing than the prosumers living in smaller cities or rural areas.

### **Discussions**

The article presents the outcomes of research on the consumers' eagerness for knowledge sharing with the enterprise by: (1) products feedback, (2) products upgrading, (3) offering new products. The paper presents the outcomes concerning only prosumers, i.e. according to the methodology of research – respondents reporting taking different activities in order to share knowledge with enterprises.

A comprehensive analysis of the conducted research gives the underpinnings to the following conclusions:

1. The outcomes of the research enable to specify the Polish prosumer's profile. This is a young person, living in a large city, having constant access to the Internet, willing to share with others their own experiences and opinions. A noticeable difference appears

regarding the prosumers' gender. It is worth to stress, that women more often use ICTs to share knowledge through product personal evaluation and comments. Men use ICTs to upgrade and improve products through personal knowledge sharing. Based on the proposed prosumer's profile, enterprises can accurately choose the activities and marketing campaigns. With the information about which consumers are more eager to share knowledge the enterprises can direct prosumer's initiatives more accurately and properly selecting consumers to conduct them. For example, if the purpose of the enterprise is to obtain feedback and comments on the product, its activities should be focused on those ICTs, which are frequently visited by women. And they should act differently if the objective is to improve the product. In such a case, enterprises should be focused on those ICTs that are more frequently visited by men.

2. The comprehensive analysis of the data shows that the presumption in Poland is not a common phenomenon. A large part of prosumers gets involved in activities that require relatively little knowledge sharing, like commenting and posting their own opinion. Relatively few prosumers, regardless of their differentiating characteristics, engage in activities related to the demonstration of specific inventiveness, ingenuity, standing out with their own creativity. The reasons for such behavior may be threefold. Firstly, making comments or providing feedback is very easy and generally available for every ICTs user. Sometimes it is obligatory. Secondly, the number of projects aimed at prosumers' involvement in creative participation is still relatively small. Such projects are organized mostly by the enterprises and last only a specified period of time. In the upshot not all potential stakeholders are then able to participate in them. Thirdly, there is a tendency of caution and conservatism with regard to eagerness for knowledge sharing in the society (Kowalczyk & Nogalski, 2007, p. 105). Increasingly, knowledge is treated as a distinctive competence that gives a person an advantage over the other one, (Thurow, 2006, p. 14). Hence the tendency to knowledge sharing is often very limited (Zhou, Siu, & Wang, 2010, p. 460; Rok & Olejniczak, 2012, p. 121).

The presented analysis of eagerness for knowledge sharing with the enterprise in terms of various characteristics of prosumers can translate into creating value for both the enterprise and the prosumers. The analysis of utilitarianism of research results presented in the study suggests the conclusions of the following nature:

- Business – adapting business to the new reality, in which prosumers are given the control and influence over the direction of the enterprise's activities, raises new challenges for enterprises, but also becomes the determinant of the modern business, where consumers create paths of development of the enterprise and its products;
- Technological and organizational – the fact that the majority of young prosumers has constant access to the Internet shows the enterprises that it is worth initiating prosumer activities on the Internet when their goal is to reach young consumers. As a result, this leads both to tangible benefits (e.g. Bigger sales, reduced spending on research) and intangible benefits (e.g. branding, building a positive image of the enterprise);

- Social – attracting consumers and encouraging them to participate, creates a community around the enterprise and its products. Consumers perceive the enterprise as being more friendly towards them, taking into account their views and their own opinion; and
- Marketing – the use of the identified prosumer's profile allows for accurate marketing activities. The enterprise that provides consumers with a variety of knowledge-sharing activities is perceived as more modern and positively standing out from the competition.

## **Conclusions**

These research findings indicate the basic consumers' division, according to their characteristics and determinants, indicating prosumers who are most likely to get involved in creative and opinion-forming projects. Thereby they present the prosumers who are most eager to share their knowledge with the enterprise.

The limitation of this study was on-target selection sample. The sample mainly consisted of young people. The manner in which the survey sample was formed could be partly justified on pragmatic grounds: owing to that, who uses ICTs fluently and frequently. On the other hand, the selection implies that the findings may not be representative of the entire population. However, the sample obviously permits definite conclusions on the contemporary young population.

This work contributes to extant research by suggesting a model of prosumers' eagerness for knowledge sharing with enterprises. Researchers and scholars who develop studies on prosumption could find reliable guidelines in this paper. Moreover, for practitioners, the results of this study can be used to undertake empirical activities aimed at prosumption adoption, ultimately helping them reap more benefits from their activities. Our results may be helpful for businesses when taking initiatives to acquire information, knowledge and ideas from prosumers. The outcomes of our survey can be useful for businesses intending to get prosumers involved in the process of innovation. They reflect prosumers' desire to take part in a rich variety of prosumption initiatives. The findings also indicate which interactions between businesses and prosumers the latter are most eager to support.

The results of the study are not exhaustive. It is important to estimate and examine the benefits for enterprises initiating prosumer initiatives using the proposed prosumers' profile. Of no lesser importance is the issue of estimating the value of the knowledge gained from prosumers by the enterprise. Another research challenge is to extend research to senior people and the verification of the identified prosumer profile with the results from research carried out in other countries. These problems will be devoted to further inquiry and research carried out by the authors.

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## References

- Abdel-Aziz, A. & Bontis, N. (2010). Intellectual capital and business performance in the pharmaceutical sector of Jordan. *Management Decision*, 1(48), 105-131.
- Aktharsha, U. S. (2011). A theory of knowledge management. *Journal of Contemporary Research in Management*, 1, 103-119.
- Arvidsson, A. (2007). Creative class or administrative class? On advertising and the "underground". *Theory & Politics in Organization*, 7(1), 8-23.
- Asthana, A. (2008). They don't live for work... They work to live. *The Observer*. Retrieved April 05, 2013 from <http://www.theguardian.com/money/2008/may/25/workandcareers.worklifebalance>
- Boni, M. (2011). Młodzi 2011 [Young 2011]. Retrieved December 15, 2013 from <http://zds.kprm.gov.pl/mlodzi-2011>
- Bothun, D., Lieberman, M., & Tipton, G. (2012). The speed of life: consumer intelligence series. Consumer privacy: what are consumers eager to share. Retrieved January 06, 2014 from <http://www.pwc.com/us/en/industry/entertainment-media/assets/pwc-consumer-privacy-and-information-sharing.pdf>.
- Brabham, D. C. (2012). Motivations for participation in a crowdsourcing application to improve public engagement in transit planning. *Journal of Applied Communication Research*, 40(3), 307-328.
- Bryant, C. A. (2011). The social media bubble: an examination of social media user motivations and their implications for future users and communication technologies, *Research Papers*, Paper 161. Southern Illinois: University Carbondale. Retrieved May 20, 2013 from [http://opensiuc.lib.siu.edu/gs\\_rp/161](http://opensiuc.lib.siu.edu/gs_rp/161).
- Campbell, A. J. (2003). Creating customer knowledge competence: managing customer relationship management programs strategically. *Industrial Marketing Management*, 32(5), 375-383.
- Cheng, M. Y, Ho, J. S. Y, & Lau, P. M. (2009). Knowledge sharing in academic institutions: a study of multimedia university Malaysia. *Electronic Journal of Knowledge Management*, 3(7), p.313-324.
- Cohen, W. A. (2013). *The practical Drucker. Applying the wisdom of the world's greatest management thinker*. Amacom Publishing House.
- Cross, S. E. & Madson, L. (1997). Models of the self: self-construals and gender. *Psychological Bulletin*, 122, 5-37.
- Davenport, T. H., Harris, J. G., & Kohli, A. K. (2001). How do they know their customers so well? *MIT Sloan Management Review*, 42(2), 63-74.
- De Vries, R. E., Van den Hooff, B., & De Ridder, J. A. (2006). Explaining knowledge sharing: the role of team communication styles, job satisfaction and performance beliefs. *Communication Research*, 33(2), 115-135.

- Drucker, P. F. (2002). *Managing in the Next Society*. New York: St. Martins Press.
- Dumitrica, D. D. (2013). Netnography. Doing ethnographic research online. *Canadian Journal of Communication*, 1(38), 156-158.
- Eisner, S. P. (2005). Managing Generation Y. *S.A.M. Advanced Management Journal*, 4(70), 4-15.
- Ferguson, J. E. & Cummings, S. (2008). Knowledge management in practice: the case of international development. In A. Koochang, K. Harman, & J. Britz (Eds.), *Knowledge Management: Research and Application*, Santa Rosa: Informing Science.
- Füller, J., Matzler, K., & Hoppe, M. (2008). Brand community members as a source of innovation. *Journal of Product Innovation Management*, 6(25), 608-619.
- Gardner, S. F. (2006). Preparing for the Nexters. *American Journal of Pharmaceutical Education*, 70(4). Retrieved March 20, 2013 from <http://www.ajpe.org/doi/pdf/10.5688/aj700487>.
- Gustafsson, A., Kristensson, P., Löfgren, M., & Witell, L. (2011). Idea generation: customer co-creation versus traditional market research techniques. *Journal of Service Management*, 22(2), 140-159.
- Incikabi, L., Tuna, A., & Biber, A. C. (2013). An analysis of mathematics teacher candidates' critical thinking dispositions and their logical thinking skills. *Journal of International Education Research*, 3(9), 257-266.
- Ind, N. & Coates, N. (2013). The meanings of co-creation. *European Business Review*, 25(1), 86-95.
- Johnson, A. (2000). *Up and out: using creative and critical thinking skills to enhance learning*. Boston, MA: Allyn and Bacon.
- Jurgenson, N. & Ritzer, G. (2009) Efficiency, effectiveness, and Web 2.0. In S. Kleinman (Ed.), *The Culture of Efficiency*, 51-67. New York: Peter Lang Publishing.
- Kowalczyk A. & Nogalski, B. (2007). *Zarządzanie wiedzą. Koncepcja i narzędzia* [Knowledge management. The conception and tools]. Warszawa: Difin.
- Kozinets, R. V. (2002). The field behind the screen: using netnography for marketing research in online communities. *Journal of Marketing Research*, 1(39), 61-72.
- Lazarevic, V. (2012). Encouraging brand loyalty in fickle generation Y consumers. *Young Consumers*, 1(13), 45-61.
- Lebiejko, A. (2011). Prosumer – a new trend of active consumption on the example of banking services. *Journal of Interdisciplinary Research*, 1(2), 65-69.
- Levy, M. (2009). WEB 2.0 implications on knowledge management. *Journal of Knowledge Management*, 13(1), 120-134.
- Lilley, S., Grodzinsky, F. S., & Gumbus, A. (2012). Revealing the commercialized and compliant Facebook user. *Journal of Information, Communication and Ethics in Society*, 2(10), 82-92.

- Ma, W. W. K. & Yuen, A. H. K. (2011). Gender differences of knowledge sharing in online learning environment. In: R. Kwan (Ed.), *Proceeding ICHL'11 Proceedings of the 4<sup>th</sup> International Conference on Hybrid Learning Pages*, 116-128. Berlin Heidelberg: Springer-Verlag.
- Managing the social media mix*. (2012). *An Oracle White Paper*. Redwood Shores: Oracle Corporation. Retrieved February 01, 2014 from <http://www.oracle.com/us/products/social-media-mix-1896559.pdf>.
- Merchant, N. (2012). How social tools can help your company avoid strategic failure. *MIT Sloan Management Review*. Retrieved April 21, 2013 from <http://sloanreview.mit.edu/article/how-social-tools-can-help-your-company-avoid-strategic-failure>.
- Mitęga, M. (2013). Czy prosumpcja w dobie kryzysu to zjawisko jednowymiarowe? Eksploracja wśród użytkowników portali społecznościowych [In times of crisis, if prosumption is a one-dimensional phenomenon? Exploration of social networks members]. *Problemy Zarządzania*, 1(40), 40-53.
- Morrison, S. & Crane, F. G. (2007). Building the service brand by creating and managing an emotional brand experience. *Journal of Brand Management*, 14, 410-421.
- Nasri, G. (2012). Why consumers are increasingly eager to trade data for personalization. Retrieved March 01, 2014 from <http://www.digitaltrends.com/social-media/why-consumers-are-increasingly-eager-to-trade-data-for-personalization>.
- Nonaka, I. & Takeuchi, H. (1995). *The Knowledge-Creating Company*. Oxford: Oxford University Press.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organizational Science*, 1(5), p. 14-37.
- Nowak, W. (2003). Konsumpcja i prosumpcja w rodzinach województwa kujawsko-pomorskiego [Consumption and prosumption in families of Kujawsko-Pomorskie voivodeship]. In Z. Tyszka (Ed.), *Roczniki socjologii rodziny. Życie rodzinne uwarunkowania makro i mikrostrukturalne*, 14, 71-85. Poznan: Publishing House of Adam Mickiewicz University.
- Oinas-Kukkonen, H. (2008). Network analysis and crowds of people as sources of new organisational knowledge. In A. Koohang, K. Harman, & J. Britz (Eds.), *Knowledge Management: Theoretical Foundations*, 173-190. Santa Rosa: Informing Science Press.
- Paliszkiewicz, J. & Koohang, A. (2013). Organizational trust as a foundation for knowledge sharing and its influence on organizational performance. *Online Journal of Applied Knowledge Management*, 1(2), 116-127.
- Reitz, A. (2012). Social media's function in organizations: a functional analysis approach. *Global Media Journal*, 5(2), 41-56.
- Ritzer, G. & Jurgenson, N. (2010). Production, consumption, prosumption: the nature of capitalism in the age of the digital 'prosumer'. *Journal of Consumer Culture*, 10(1), 13-36.

- Rok, J. & Olejniczak, K. (2012). Determinanty uczenia się i zarządzania wiedzą – synteza badań empirycznych [Determinants of learning and knowledge management – empirical synthesis]. In K. Olejniczak (Ed.), *Organizacje uczące się. Model dla administracji publicznej*, 108-129. Warszawa: Scholar Press.
- Shaver, P. & Buhrmester, D. (1983). Loneliness, sex-role orientation, and group life: a social needs perspective. In P. Paulus (Ed.), *Basic Group Processes*, 259–288. New York: Springer.
- Sinclair, J. K. & Vogus, C. E. (2011). Adoption of social networking sites: an exploratory adaptive structuration perspective for global organizations. *Information Technology and Management*, 12(4), 294-314.
- Siuda, P. (2012). Mechanizmy kultury prosumpcji, czyli fani i ich globalne zróżnicowanie [Mechanisms of prosumption culture, i.e. the fans and their global diversity]. *Studia Socjologiczne*, 4(207), 109-132.
- Syed-Ihksan, S. O. S. & Rowland, F. (2004). Benchmarking knowledge management in a public organisation in Malaysia. *Benchmarking: An International Journal*, 3(11), 238-266.
- Szopiński, T. (2012). *E-konsument na rynku usług* [E-consumer on service market]. Warszawa: CeDeWu.
- Tapscott, D. & Williams, A. D. (2006). *Wikinomics: how mass collaboration changes everything*. New York: Penguin Group.
- Tapscott, D. (2009). *Grown up digital: how the net generation is changing your world*. New York: McGraw Hill.
- Thomson, M., MacInnis, D. J., & Park, C. W. (2005). The ties that bind: measuring the strength of consumers' emotional attachments to brands. *Journal of Consumer Psychology*, 1(15), 77-91.
- Thurow, L. C. (1999). *Building wealth. The new rules for individuals, companies, and nations in a knowledge-based economy*. New York: HarperInformation.
- Toffler, A. (1980). *The Third Wave*. New York: Bantam Books.
- Tong, C., Tak, W. I. W., & Wong, A. (2013). The impact of knowledge sharing on the relationship between organizational culture and job satisfaction: the perception of information communication and technology (ICT) practitioners in Hong Kong. *International Journal of Human Resource Studies*, 1(3), 9-37.
- Tsai, W., Tsai, M., Li, S., & Lin, C. (2012). Harmonizing firms' knowledge and strategies with organizational capabilities. *Journal of Computer Information Systems*, 53(1), 23-32.
- Turban, E., Bolloju, N., & Liang, T. (2011). Enterprise social networking: opportunities, adoption, and risk mitigation. *Journal of Organizational Computing and Electronic Commerce*, 3(21), 202-220.
- Van den Hooff, B. & Hendrix, L. (2004). Eagerness and willingness to share: the relevance of different attitudes towards knowledge sharing. Paper presented in the academic track at *The 5th European Conference on Organizational Knowledge, Learning and Capabilities*.

- Insbruck, Austria. Retrieved March 02, 2014 from [http://www2.warwick.ac.uk/fac/soc/wbs/conf/olkc/archive/oklc5/papers/d-3\\_hooff.pdf](http://www2.warwick.ac.uk/fac/soc/wbs/conf/olkc/archive/oklc5/papers/d-3_hooff.pdf).
- Van den Hooff, B., De Ridder, J., & Aukema, E. (2004). Exploring the eagerness to share knowledge: the role of social capital and ICT in knowledge sharing. In M. Huysman & V. Wulf (Eds.), *Social Capital and Information Technology*, 7, 163-186. Cambridge: The MIT Press.
- Van den Hooff, B., Schouten, A. P., & Simonovski, S. (2012). What one feels and what one knows: the influence of emotions on attitudes and intentions towards knowledge sharing. *Journal of Knowledge Management*, 1(16), 148-158.
- Vega-Vazquez, M., Revilla-Camacho, A. M., & Cossio-Silva, F. J. (2013). The value co-creation process as a determinant of customer satisfaction. *Management Decision*, 10(51), 1945-1953.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis F. D. (2003). User acceptance of information technology: toward a unified view. *MIS Quarterly*, 3(27), 425-478.
- Witell, L., Gustafsson, A., & Löfgren, M. (2011). Identifying ideas of attractive quality in the innovation process. *TQM Journal*, 1(23), 87-99.
- Xie, C., Bagozzi, R. P., & Troye, S. V. (2008). Trying to prosume: toward a theory of consumers as co-creators of value. *Journal of the Academy of Marketing Science*, 36, 109-122.
- Xun, J. & Reynolds, J. (2010). Applying netnography to market research: the case of the online forum. *Journal of Targeting, Measurement and Analysis for Marketing*, 1(18), 17-31.
- Yang, J. (2007). The impact of knowledge sharing on organizational learning and effectiveness. *Journal of Knowledge Management*, 2(11), 83-90.
- Zhou, S., Siu, F., & Wang, M. (2010). Effects of social tie content on knowledge transfer. *Journal of Knowledge Management*, 3(14), 449-463.
- Ziemba, E. & Eisenhardt, M. (2013). Prosumption awareness among young consumers. In M. Pankowska, H. Sroka, & S. Stanek (Eds.), *Studia Ekonomiczne, Creativity Support System, Methods, and Applications*, 153, 163-177. Katowice: University of Economics.
- Ziemba, E. & Eisenhardt, M. (2013a). Aktywności prosumenckie z wykorzystaniem technologii informacyjno-komunikacyjnych w świetle badań bezpośrednich [Research on ICT application towards prosumers' activities]. In A. Nowicki & D. Jelonek (Eds.), *Wiedza i technologie informacyjne w kreowaniu przedsiębiorczości*, 101-113. Częstochowa: Publishing House of Wydział Zarządzania Politechniki Częstochowskiej.
- Ziemba, E. & Wielki, J. (2008). The use of corporate portals in managing knowledge on entities operating in the electronic space. In S. Wrycza (Ed.), *Proceedings of the Seventh International Conference on Perspectives in Business Informatics Research BIR'2008*, 143-157. Gdansk: Gdansk University Press.
- Ziemba, E. (2013). Conceptual model of information technology support for prosumption. In V. Ribiere & L. Worasinchai (Eds.), *Proceedings of the International Conference on Management, Leadership and Governance*, 355-363. Bangkok: Bangkok University.

Ziemba, E. (2013a). The holistic and systems approach to the sustainable information society. *Journal of Computer Information Systems*, 54(1), 106-116.

Zwick, D., Bonsu, S. K., & Darmondy, A. (2008). Putting consumers to work: co-creation and new marketing govern mentality. *Journal of Consumer Culture*, 8, 163-196.

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