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The phenomenon of prosumption in the digital transformation time

Zjawisko prosumpcji w czasach transformacji cyfrowej

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Abstract. The fusion of cutting-edge information technology and manufacturing, like cloud computing, the Internet of Things, big data fosters greater consumer involvement and engagement throughout the entire product life cycle. A shared vision for socially responsible, personalized, service-driven, smart, sustainable, and eco-friendly development is a global priority. The rapid progress of the „Internet +” and „intelligence +” scientific and technological revolution blurs the lines of various media channels, establishing an evolved environment that encourages expression, communication, creation, and sharing. This revolution launched the advent of prosumption, allowing consumers to take part in the production process via an „open + continuous” model that eclipses older, traditional media. This article endeavors to showcase the concept of prosumption during the era of digital transformation. Exploring recent prosumption case studies in enterprises, this article also utilized theoretical research methods. In addition to analyzing relevant literature through analytical-synthetic analysis, the study employed abstraction to focus on crucial elements for analysis. Furthermore, generalization and inference were utilized to draw conclusions from the findings. It should be stated as the main hypothesis that the prosumption has a great importance in the digital world. This article explores the notion of prosumption in the context of digital transformation. It's important to note that digital transformation has revolutionized all aspects of businesses, especially the use of social media.

Keywords: prosumption, digital prosumer, digital transformation, innovative enterprises, IT solutions

Abstrakt. Połączenie najnowocześniejszych technologii informatycznych i produkcji, takich jak cloud computing, Internet rzeczy, Big Data, sprzyjają większemu zaangażowaniu konsumentów oraz zaangażowaniu w całym cyklu życia produktu. Wspólna wizja odpowiedzialnego społeczeństwa, spersonalizowanego, zorientowanego na usługi, inteligentnego, zrównoważonego i przyjaznego dla środowiska rozwoju jest globalnym priorytetem. Szybki postęp rewolucji naukowej i technologicznej, „Internet +” i „Inteligencja +”, zacierają linie różnych kanałów medialnych, tworząc rozwinięte środowisko, które zachęca do wyrażania opinii, komunikacji, tworzenia i dzielenia się. Ta rewolucja zapoczątkowała nadejście prosumpcji, umożliwiając konsumentom udział w procesie produkcji przez model „otwarty + ciągły”, który przyćmiewa starsze, tradycyjne media. Artykuł jest próbą przybliżenia koncepcji prosumpcji w dobie cyfrowej transformacji. Eksplorując najnowsze studia przypadków prosumpcji w przedsiębiorstwach, w artykule wykorzystano również teoretyczne metody badawcze. Oprócz omówienia odpowiedniej literatury za pomocą metody analityczno-syntetycznej w badaniu wykorzystano abstrakcję, aby skupić się na kluczowych elementach do analizy. Ponadto do wyciągnięcia wniosków z wyników wykorzystano uogólnienie i wnioskowanie. Jako główną hipotezę należy przyjąć, że prosumpcja ma ogromne znaczenie w cyfrowym świecie. Artykuł przybliży pojęcie prosumpcji w kontekście transformacji cyfrowej. Należy zauważyć, że transformacja cyfrowa zrewolucjonizowała wszystkie aspekty przedsiębiorstw, szczególnie wykorzystanie mediów społecznościowych.

Słowa kluczowe: prosumpcja, prosument cyfrowy, transformacja cyfrowa, innowacyjne przedsiębiorstwa, rozwiązania IT

Introduction

The digital age poses challenges to existing enterprises and provides all kinds of problems that they have to face. Newly emerging companies face a huge dilemma, how their organization should shape and what modern tools should be used by them to achieve their goals and improve their results. Digital technology provides a huge range of solutions and their use by enterprises depends on their level of maturity, financial resources, trained staff and the level of sales development. Its influence is also visible in marketing activities in the form of the emergence of a new trend called prosumption. To grasp the meaning of prosumption, it is crucial to consider the concept within its appropriate context. The terms “prosumption” and “prosumer” were originally coined by A. Toffler (1980), a renowned sociologist and author. Despite being published in 1980, Toffler’s “The Third Wave” has long been overlooked by scholars, perhaps due to its seemingly audacious assumptions. M. Maruyama (1982) notes that while the book is rich in concepts, there are some conceptual flaws. In particular, A. Toffler’s idea of “prosumption” is concerning for M. Maruyama, as it may lead to a misunderstanding of the situation faced by unemployed individuals. It could be interpreted as suggesting that the unemployed are productive since they are “prosuming”. However, this would only serve as an excuse. Without consideration for the unemployment, policymakers risk delivering an insulting blow. The article presents the theoretical and practical issues, based on the literature review as well as own research. The main purpose of the article is an attempt to present the concept of prosumption in the era of digital transformation in the theoretical and practical aspect, based on own research carried out in innovative enterprises from the *NewConnect* market.

The phenomenon of prosumption – definitions and the concept

The terms “prosumption”, “co-production”, and “co-creation” are frequently employed synonymously. Within the realm of literature, these terms serve to signify the act of generating value. The concept of “prosumer” stems from the collaboration of consumers and producers. In order to underscore the dissolving boundaries and highlight the merging of roles, the terms “consumer” and “producer” are utilized. The concept of “prosumer” can be attributed to the merging of professional and consumer categories. For example, in the music industry, this term is used to refer to a professional consumer (Cole, 2011, p. 452).

The roots of prosumption, as it was written before, can be traced back to a time long before academic research on the subject even began. A. Toffler coined the term “prosumption” and was also the first to predict this phenomenon. What is more, the author distinguished three stages that arose during economic development. In the initial phase, consumers focused on producing products that would meet their needs. The second stage, which initiated the industrial revolution in the 19th century, completely transformed the position of consumers and goods manufacturing. The main goal of production was exchange between consumers. The third stage started prosumption, which was originally characterized by a shift in some of the issues related to consumption, which caused consumers to source their goods on their own – what was possible was created in the household (Wolny, 2012, pp. 118-119).

Introduced the term to the literature in 1972 by M. McLuhan and B. Nevitt, “prosumption” fuses “production” and “consumption”. It describes the process whereby consumers delve into the design and production aspects of goods and services, taking control over some of the activities previously handled exclusively by producers. Thanks to electric-information technology, the line between consumer and producer has been blurred.

Later on, the beginning of the appearance of prosumption in the sociology was the phenomenon observed by A. Toffler, which consisted in mutual aid among people. This help resulted from sharing the opinion, experience, observation among consumers as well as involvement in activities that were once performed by companies, but are now carried out by consumers (Toffler, 1980, pp. 312-319). It is also important that the author did not associate the prosumer only with technological progress and methods of data exchange. Aside from the boom in the digital age and the world around it, he paid particular attention to the emergence of the *Do It Yourself Concept* in the late 1960s. This manifested itself in using the manual skills of customers to incite people to create things from scratch, as well as increasing the scope of consumer self-service through the emergence of self-service stores or using the hotline to obtain technical assistance (Krzanicki, 2015).

The phenomenon of prosumption concerns consumers who are actively involved in increasing the significance of the purchased product and its use (Sowa, 2015,

p. 121). Tapscott understands prosumption as a modern concept of consumption which means that consumers are not only allowed from producers to actively change their products, but also take the initiative to use their innovative ideas in designing a product from scratch (Tapscott, Williams, 2008, p. 215). Quain has a slightly different view of the term prosumption, who believes that it is a kind of cooperation between the producer and the consumer. They not only offer the opportunity to buy products at lower prices, but also engage consumers in actively advertising the company's goods and participating in its profit. Thanks to such a process, the producer gains loyal customers and thus strengthens his trust in the market, and the consumer, by promoting the product, begins to identify with the brand, at the same time deriving income from it (Wolny, 2012, p. 119).

Marketers must acknowledge and account for the growing trend of prosumption, as predicted by Ph. Kotler (1986, p. 513). This rise can be attributed to factors such as higher rates of unemployment, increasing labour costs, technological advancements, a desire for self-actualization, and a demand for higher quality products and services. Kotler suggests that prosumption is more likely to occur in situations where significant cost savings can be achieved with minimal skill, time, and effort, while still producing high personal satisfaction. Kotler also identified two key prosumer profiles – “Avid Hobbyists” who are passionate about gardening, cooking, and home repairs, and “Arch-prosumers” who prioritize ecological consciousness by producing their own food and clothing. Overall, Ph. Kotler agrees with A. Toffler's observations on this topic.

The fusion of “consumer” and “producer” spawned contemplations. G. Ritzer (2010) proposed an alternative concept called the “conducer” for situations where one component's features supersede the other. For example, serving self-serving vegetables at a salad bar consumes fewer resources than writing a blog. In such instances, the term “prosumer” would be replaced with the “conducer” to reflect this dual approach.

Initially, the “producer” function stood tall, with “conducer” reserved for cases where consumption held more significance. While this dual terminology was later discarded, its underlying principle endured. The term “prosumption” has since gained traction and is now used to describe both scenarios. The concept of the “prosumer” potentially gaining prominence in society is a heavily discussed topic within academic literature.

Experts widely acknowledge that modern market economies now consist of producers, consumers, and prosumers, with the latter gaining momentum and challenging the importance of production and consumption (Comor, 2011, p. 311). The world economy shift since the 2008 financial crisis has led to a decrease in production and consumption, creating a fertile ground for prosumption to thrive. According to G. Ritzer and N. Jurgenson (2010, p. 15), the rise of prosumption did not result from the recession, but the recession created an opportunity for scholars to take an increased interest in prosumption. It appears that the traditional consumer

and producer-focused society is gradually losing its pre-eminence to the emerging “prosumer society”. Despite the fact that prosumption activities have been around since before the industrial era and the term itself was coined over 40 years ago, its utilization remains limited. A possible explanation for this is the absence of a clear, shared definition of what prosumption truly entails. Therefore, let us undertake the task of refining the definition of the prosumption phenomenon to bridge this gap.

According to the literature review the process of prosumption can be defined in different ways (Table 1).

Table 1. Selected definitions of “prosumption”

Definition	Author
By crafting their own creations from what they consume, individuals exhibit their inventiveness while engaging in social interaction. Such activity can serve as a means of leisure or work. Through this productive process, individuals can sculpt an image of themselves and aid in defining their identity.	Toffler, 1980
This proposition describes the outcome of the prosumption process as the “introduction of products that transform into consumption experiences for prosumers”, while not implying that the eventual consumption of such products is any less important.	Prahalad, Ramaswamy, 2003
The process where “consumers” participate in the design, creation, and production of the product; co-innovate and co-produce the products they consume; to collaborate and add deeper value and earlier engagement in design processes and products; sharing it globally.	Tapscott, Williams, 2008
The activity when “consumers” are producing exchange value for companies.	Humphreys, Grayson, 2008
The act of prosumption endures as a fluid process, characterized by the ongoing co-creation of both parties involved. Value co-creation involves three key entities: the producer, the consumer, and the consumer community. This leads to the introduction of goods that transform the way prosumers consume.	Serafin, 2012
Prosumption is a market segment which arises from the consumer concept and participate in the production process through creative abilities, bringing extra value to the company they work with.	Seran, Izvercian, 2014
The prosumption refers to joint production between customers and the producer through the sharing of knowledge and experiences on the Internet, which affects the firms’ innovation processes and value creation	Gomez-Borja, 2020

Source: own study based on the literature review

It is believed that the technological progress related to the transmission of information and communication was the impulse that caused the development of prosumption (Bylok, 2013, p. 230). Thanks to tele-informatics, the relations between the company and the client have changed, resulting in the transformation of the communication process from one-way into two-way (Tiwana, 2003, p. 68).

Some of the most characteristic manifestations of online prosumption include (Tapscott, Williams, 2008, p. 69):

- **collective intelligence** – which exactly means “group intelligence”. Currently, he focuses the problems of companies on websites existing on the Internet. They support the ability to communicate around the world and, most importantly, get help from specialists. Due to easy and quick access to a group of people willing to help, the problem of a given company can be solved effectively;
- **crowdsourcing** – is a popular process used by entrepreneurs to obtain relevant knowledge and creative ideas from an independent group of people not closely related to the company. Entrepreneurs who ask for an opinion on a given product receive valuable feedback and possible proposed changes that affect the functionality of the offer in the future (Wereda, Knap-Stefaniuk, 2023, p. 192);
- **product hacking** – currently means modifying products offered by enterprises. Changes are made to them in order to obtain a product tailored to the needs of consumers. Hacking products usually involves creating a new product based on the use of the prototype of another product. The most cited example of hacking is the “stealing” of Apple design by other electronics companies;
- **personalization** – adjusting the product to the individual needs of the customer thanks to the available applications and websites. They allow the product to be modified in terms of colour, material and shape (Żółtek, 2009, pp. 41-42);
- **self-banking** – arbitrary use by consumers of available, self-service paths based on their knowledge and competences.

There are two groups of factors that influence the development of prosumption. The first of these are the basic factors. They are related to consumption, but understood in a broad sense. We distinguish between biological, economic, social, cultural and technological factors. In recent months, the health factor associated with the widespread epidemic around the world has become an important factor. They have an impact on the phenomenon of prosumption (Wolny, 2013, pp. 152-153). In the second group, determinants can be distinguished that are related only to the term prosumption – special factors (Bywalec, Rudnicki, 2002, p. 146). There is also a different classification of the specific factors that favour prosumption to flourish. We can distinguish here (Bywalec, 2007, p. 153):

- increasing free time as a result of automating the production process and the intention to use it in a satisfactory way;
- flexible work – allowed to work outside the office with the possibility of combining it with other duties not related to professional work;
- development of their skills and access to knowledge;
- work focused on the creativity of employees and their creativity.

According to P. Siuda and T. Żagielski (2014, pp. 11-12), there are two key factors shaping prosumption. The first is a different approach to production. This factor emphasizes the importance of production in the economy and indicates that it is currently heading in the non-material direction. This is manifested by the fact that the product manufacturing process does not only take place in closed factories, but goes beyond this district, creating the so-called “social factory”. This is to collect innovative ideas and concepts. Consumers are commonly referred to as factory workers. The product manufacturing process can be greatly improved when consumers have sufficient resources to enable them to translate their ideas into reality. The second factor is the development of technology, and especially the Internet should be mentioned. Widespread access has contributed to the fact that any consumer will be able to become a producer.

As mentioned earlier, technological progress contributed to the development of prosumption, but it did not affect this process from the very beginning. In the first phase of the development of networks, enterprises strengthened their position in the market by service providers. Consumers using the Internet played a minor role. There is a classification of prosumer behaviour that can be divided into (Szymusiak, 2013, pp. 263-266):

- individual prosumption – it exists when a given consumer is individually involved in the course of prosumption;
- collective prosumption, which results from cooperation between a group of buyers;
- inter-prosumption, which is created from the cooperation of prosumers with the enterprise.

The process of prosumption, apart from the technological level related to computerization and mechanization, is also visible in other areas. Activities related to the development and creation of product and service proposals appear not only on the web, but also in the real world. An adequate summary of this idea is the recognition that “every Internet user is a prosumer, but not every prosumer is a web user” (Baruk, Iwanicka, 2016, p. 184). There is also debate as to whether prosumption is positive or negative. Critics believe that the concept of prosumption is free labour, so people involved in this process work without pay (Southerton, 2011, p. 1160). There may be a situation on the market that in the future employees of companies will be laid off or their work will be limited in favour of prosumers who will work for the company for free. A symptom of this phenomenon is the substitution of work with technology and principles (Mika, 2014, pp. 78-79). Another argument that adversely speaks in favour of the process of prosumption is the weakening of culture. Poor-quality offers proposed by prosumers and accepted by enterprises at the same time, may adversely affect the further development of culture. We are talking about products that, for example, do not meet the ethical standards in a given country. Proponents of prosumption assume that engaging prosumers in the company’s affairs is aimed

at creating strong relationships that have a positive impact on producers and on consumers themselves (Siuda, Żagielski, 2014, pp. 13-15).

Prosumption has been the subject of intense research for many years, resulting in a wealth of studies that have extensively documented its taxonomy. Despite this extensive research, the concept remains to be fully explored. Recent classifications have identified six different archetypes of prosumers (Lang, Dolan, Kemper, Northey, 2021, p. 185):

1. Prosumers who engage in DIY (do-it-yourself) activities create goods and services solely for personal use, without remunerating external parties.
2. Prosumers skilled in partial self-service, who are capable of using technology to repair their bikes or computers, thereby contributing to value co-creation.
3. Personalized prosumers – consumers who tailor products to their specific preferences, particularly in the areas of entertainment, travel, or fashion.
4. Cooperative prosumers are those who cater to their own or others' requirements, thereby generating value without any benefit to intermediaries. For instance, they might design open-source software.
5. Prosumers who produce value accessible to others through commercial entities, yet remain unrewarded for their efforts, are known as monetized prosumers. This includes individuals who utilize social media platforms to create and share content.
6. Individuals who create value for others and receive financial incentives for their efforts are known as economic prosumers. A prime example of this is individuals who generate electricity not only for their own consumption but also for sale.

Characteristics of the prosumer in a digital world

Entrepreneurs must demonstrate the ability to create the right environment for prosumers to manifest their attitudes. There are groups of entrepreneurs who provide the right tools so that market users have the opportunity to design and implement their product. Tapscott and A. Williams (Tapscott, Williams, 2008) distinguished four creative attitudes of enterprises towards consumers (Coté, Pybus, 2017, p. 95):

1. Allowing the consumer to be able to decide what a product offered by companies should look like and at the same time to be adapted to the requirements of buyers.
2. They enable consumers to fully act in terms of product creation or to correct it, even in the event of a risk of partial loss of supervision over this process.
3. Cooperation between business entities and customers.
4. Consumers become beneficiaries, i.e. they can profit from things that were created in the process of cooperation with the enterprise.

We can distinguish four types of prosumer groups, taking into account their degree of activity in interacting with the enterprise. Taking into account the area in which consumers make decisions and the level of their creative attitude, prosumers are divided into (Szul, 2013, p. 355):

- consumers who create products for their own needs bearing in mind the cost-saving aspect;
- consumers who actively use the Internet to provide feedback and evaluate products on websites specially designed for forums;
- consumers who use crowdsourcing campaigns offered by enterprises;
- consumer innovators – people who personally want to play a role and want to have control in creating projects for the company.

In the literature, apart from the concept of prosumer, one can also notice the term “digital prosumer” (Dusi, 2016, pp. 375-381). This indicates that prosumer activity is not connected with the use of the Internet, but there is such a possibility, but then such a person is called a digital prosumer. Their behaviour is multidirectional. The activities of prosumers on the Internet can be distinguished (Baruk, Iwanicka, 2016, p. 185):

- sharing feelings about the product they own;
- presenting their evaluation of the product under the opinions of other buyers;
- online consultation of consumers in order to obtain information about the product they are interested in and want to buy;
- contacting entrepreneurs voluntarily in order to present their assessment, send an inquiry, as well as provide advice on products that are used by him/her or he/she intends to do so;
- presence at events organized by suppliers of products and services – supporting companies in shaping patterns and advertising slogans.

The prosumer as a modern customer has two types of relationships. The first is the relationship between the consumer and the consumer. It is about helping each other and giving each other advice and guidance when a problem occurs. The second type of relationship is the consumer – the company. It presents a cooperation interaction determined by the client’s involvement in the affairs of the company. This cooperation is based on shaping the products and services offered by the enterprise, according to the company’s own needs (Rupik, 2010, pp. 332-333). The prosumer is not only the recipient, but also actively participates in shaping and creating offers. Collects information about companies on an ongoing basis. He/she counts on producing individual things, reflecting their own needs and influencing their improvement (Halicki, 2020).

There are some advantages and disadvantages of the phenomenon of digital prosumption. They are presented in table 2.

Table 2. Advantages and disadvantages of a digital prosumer

Advantages	Defects
Awakening creativity in consumers by being active in the process of creating a product or redesigning things that are already on the market.	Obligation to exercise supervision over intangible goods as well as patents and trademarks that are distributed online.
Innovation based on encouraging customers to help in creating and planning products.	Possibility of replacing employees, free work done by the consumer and doubts as to the truthfulness of the motive for doing so.
Creation and dissemination of data and information on the web.	The future fate of the prosumer as a person used for free work in creating the value of the enterprise cannot be ruled out.
Digital prosumption enlivens the social environment of the inhabitants and makes citizens attract attention to policy-related and other activities.	Isolation of prosumers against the rest of consumers.
Significance in the economic and social transformation with the help of social activists who devote their unused time to help and act in good faith for the public.	Merge the identity of consumers and consider their adversities and problems shared online.

Source: own study based on: Dusi, 2016, pp. 377-378

There is no consensus on prosumption in the online world among people who research this phenomenon. A discussion arises as to whether digital prosumption is intended to strengthen the significant position of the prosumer in the market or, on the contrary, companies seek to use them in their activities. Prosumption is not only the self-execution of certain activities such as a producer, seller or other support staff, it also creates new products or innovations. The simplest example is for a client who invents a new catchphrase. But not only that. Creativity can only be developed internally Company efficiency decreases. The whole process takes too long and a lot. The results often do not fully meet the needs of customers. New approach aims to include an organization’s environment. Consumers pay special attention. They are people who know what they need. Not only can they tell what it is, they can build it. More and more examples of the diminishing role of corporations. Only for the manufacture and sale of products, like other functions taken over by consumers.

Summarizing, academic circles have taken notice of prosumers for the following primary reasons. Once more, the list is as stated below (Jin, Hu, Qi, 2022, p. 3):

1. Advancements in digital and intelligent technology have presented prosumers with a range of innovative platforms to explore. The Fab lab and GitHub platform, for instance, have emerged as affordable and user-friendly tools for prosumers seeking to harness the power of technology.
2. In today’s Web 4.0 media landscape, the role of prosumers is more pronounced than ever before due to its cross-stage, cross-platform, and fully

- connected nature. Prosumers' opinions, demands, heartfelt wishes, and emotions hold more weight and can greatly influence the business chain.
3. Manufacturers have made significant strides in enhancing the efficiency of flexible production. In a bid to provide consumers with superior products at reduced prices and satisfy their demands with greater accuracy, they are keen to engage prosumers. This strategy helps to cement a lasting bond between the manufacturers and the consumers.
 4. Individuals who engage in new product development as prosumers can be incentivized not only by the opportunity to exercise their creativity and autonomy but also by their proficiency and the satisfaction that comes with it.
 5. Prosumers are increasingly driven by social incentives, including the desire to forge connections, build communities, make friends, and achieve public recognition.

Methodology of the own research

The article delves into the significance of prosumption as one of benefits resulting from the enterprise's presence on social networks and a part of contact with customers and making sales through a study conducted among innovative enterprises in Poland's *NewConnect* market. The research relied on a quantitative method, employing a diagnostic survey and questionnaire technique to collect data via the CATI method. The survey involved 100 enterprises in July-August 2021. The study also drew from theoretical research methods, including analytical-synthetic analysis of literature on the subject. Drawing on generalization and inference, the article provides valuable insights into prosumption in the creation of relationship sales and its importance for innovative enterprises in the *NewConnect* market. These findings are part of a wider research enquiry into the role of prosumption in the functioning of innovative enterprises.

The study employed systematic random selection to ensure the leading activity profile criterion was met for records on the *NewConnect* market. The selection was stratified according to enterprise size. Respondents were limited to managers or those responsible for environment-related or innovative areas, or operational employees from companies listed on *NewConnect* market. The sample size and breakdown are detailed in table 3.

As it can be seen in the above table most respondents were from the highest level of management. Managers present mostly experienced enterprises at the age of 16-24 years. What is more, most enterprises operate on the European and international scale (69).

Table 3. Criteria for description of the research sample (N = 100)

Size of an enterprise					
Micro	Small		Medium		Big
0	40		31		29
Scale of enterprise's operation					
Local	Regional	Domestic	European		International
6	1	24	38		31
Revenue for the year 2020 (net)					
0-10 mln PLN	10-20 mln PLN	20-30 mln PLN	30-50 mln PLN	50-100 mln PLN	More than 100 mln PLN
37	17	9	8	11	18
Respondent's position in enterprise					
The highest level of management		The intermediate level of management		The lowest level of management	
52		23		25	
Age of enterprise					
Very young (1-3 years)	Young (4-6 years)	Young enough (7-15 years)	Experienced (16-24 years)	Mature (25< years)	
1	0	8	48	43	

Source: own work

As can be seen in figure 1, respondents from all companies indicated the following benefits of the company's presence on social networks: customer proximity and openness, the opportunity to learn about the opinions of current customers, define the profile of the future buyer, the possibility of contacting customers and creating your own brand, the possibility of getting inspiration and ideas from customers (prosumption), a chance to create a database of visiting customers, a chance for low-cost promotion of new products/services, activity on the site as an opportunity to gain the sympathy of future customers, obtaining information and opinions on satisfaction or lack thereof from customers and the ability to implement changes and innovations in the enterprise based on customer feedback. The size of the company does not matter, because the managers of each organization similarly pointed out these benefits.

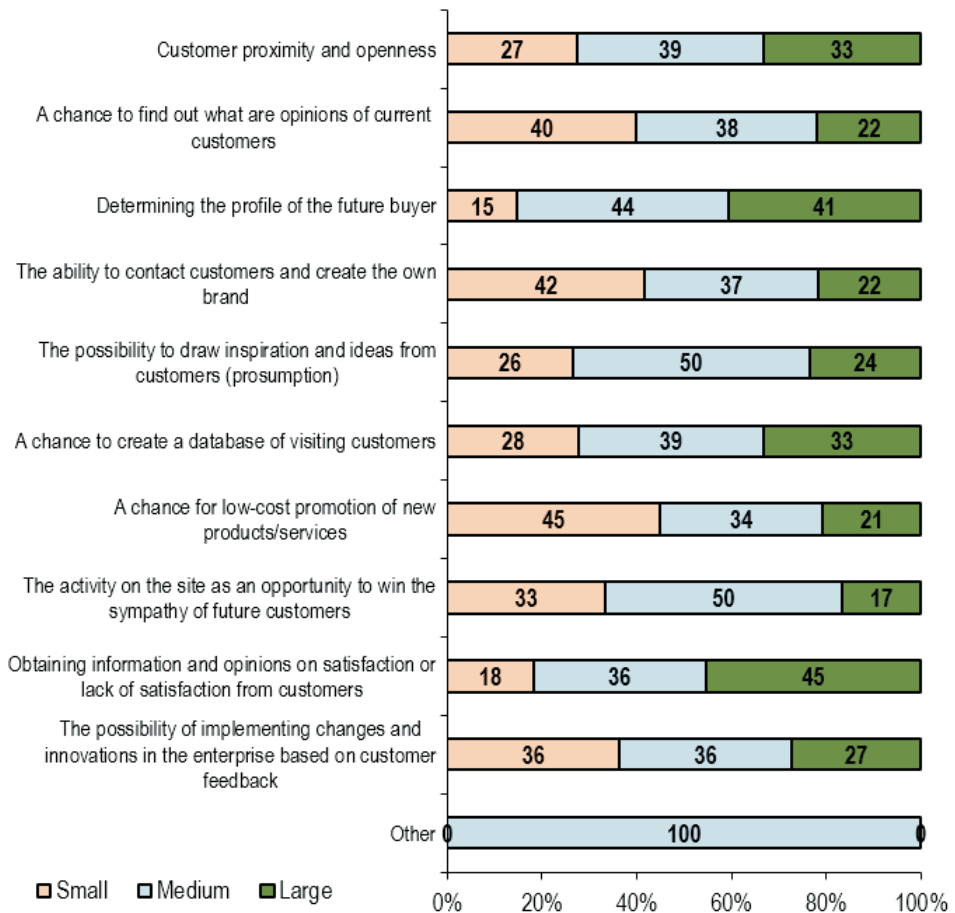


Fig. 1. Benefits resulting from the company's presence on social networks as part of contact with customers and making sales, according to the surveyed managers from the *NewConnect* market in Poland (N = 100) in (%) (July-August, 2021)

Source: own study

Conclusions and discussions

Prosumers, in general, are consumers who seize the initiative, leveraging Internet technology to pursue their interests proactively. Although their individual traits vary widely, they possess certain common characteristics, such as being early adopters who embrace innovation, highly engaged, collaborative and share their experiences with others. They often become opinion leaders, value recognition,

respect, and rewards, and are independent thinkers who scrutinize information critically. While they are currently a minority, this is likely to change in less than a decade as tech-savvy youths become active market participants.

The potential influence of prosumers in the market should not be overlooked, as their collective prosumption can have a considerable impact. The emergence of internet-based customer collaboration is a recent addition to academic research, and is currently viewed as a crucial field of study. With the advent of Web 4.0, companies must re-evaluate their approach to customer needs. Rather than simply customizing goods, consumers are now demanding an active role in shaping future products. This shift has led to a transition from company-centric co-creation to a more prosumer-centric approach (Tapscott, Williams, 2008, pp. 124-150). However, successfully engaging in prosumption activities with customers is a new marketing research problem, and it is not without its challenges. Finding the balance between customer autonomy and company control is a delicate task. Allowing customers complete freedom to modify products may lead to a loss of control over the business, whereas excluding customers from the co-creation process may result in missed innovation opportunities and damage to the company's reputation.

The impact of prosumption can either be advantageous or disadvantageous depending on the nature of the enterprise. Analysing triumphs and fiascos in the business world can shed light on the efficacy of different frameworks, guiding companies to make judicious decisions that yield success. Based on the conducted analyzes and research, it can be concluded that the phenomenon of prosumption is well known among enterprises. Most of them recognize that prosumption is the basis for obtaining new ideas from consumers.

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