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## SUBSCRIPTION ECONOMY AS A RESPONSE TO NEW TRENDS IN POLISH CONSUMER BEHAVIOR

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**ABSTRACT:** The purpose of this study is to identify trends in consumer behaviour relevant to the development of the subscription economy and to identify motives and preferences of Polish consumers related to the analysed business model. The study used the literature analysis and critique method and the diagnostic survey method (N=350). The authors' study showed a high interest of Poles in the subscription model, the highest among 18-24-year-olds. At the same time, as many as 75 percent of respondents in the oldest age group (over 60 years) declared that they would like to increase their subscriptions in the future. Based on the analysis, it was concluded that Poles have a high interest in products/services in the following categories: telecommunications/TV, home services, and medical services. Concerning the identified factors influencing consumer behaviour in terms of subscription economics, the research showed that economic factors such as subscription price remain the most important for Polish consumers. The article describes the new motivations and trends behind the adoption of subscription models by Polish consumers.

**KEYWORDS:** access economy, subscription economy, sharing economy, business model, trends in consumer behaviour

*„The customer, not the product is the heart of the subscription business model.”*

Zuora

## Introduction

The article deals with the subscription economy, which is seen as an innovative business model, a kind of game changer in terms of traditional market models and consumer behaviour that is changing the way consumers use products and services and how companies manage their business (Kammer et al., 2015; Tani et al., 2022; Baek & Kim, 2022; Bocken, 2023).

The business model of paying for access to goods or services in the form of a regular subscription (subscriptions) has been used in the economy for many years. The history of the subscription model in business goes back as far as the 16th century when European map publishers urged their customers to subscribe to new editions that changed with each land discovered, conquered, and conquered. The geopolitical landscape was evolving, and cartographic publishers were receiving commitments from nobles and academics to purchase new editions of their maps, giving them the capital they needed to transfer the subsequent discoveries of great voyagers to paper. In Europe, the model was applied to the first editions of newspapers and periodicals as early as the 17th century (Webber, 2006). However, the rapid development of the subscription model and its popularisation in almost all industries only became possible in the late 20th and early 21st centuries – thanks to the virtualisation of consumption and the development of technology. The growing role of the subscription economy can be seen in the increasing number of products and services offered on the aforementioned basis. This is undoubtedly the dominant trend in the market today. According to a study conducted by Zuora, the subscription model has shown continuous growth for the past 11 years, incomparably faster than other sales models, and its cumulative annual growth rate for this period averages 17 percent, while standard sales keep score at 4.6 percent (Zuora, 2023). The European subscription market is growing faster and faster, and subscription services are most popular in the Nordic countries of Denmark, Sweden, Norway, and Finland (Fundacja Digital Poland, 2019). In Poland, the subscription economy is gaining popularity and becoming an important trend, with the level of interest varying depending on specific subscription services and products and the preferences of individual users. Some industries, such as streaming media, music, gaming, and health services, are particularly popular in the context of subscriptions. The “Subscriptions PL” report, prepared by the Digital Poland Foundation and Straal, shows that there are 3.9 subscriptions per statistical Pole, among which the traditional ones, i.e. TV subscriptions or water fees, still dominate. A study conducted by ING last year showed that consumers in Central and Southern European markets are the most enthusiastic among Europeans about subscription commerce (Fundacja Digital Poland, 2019).

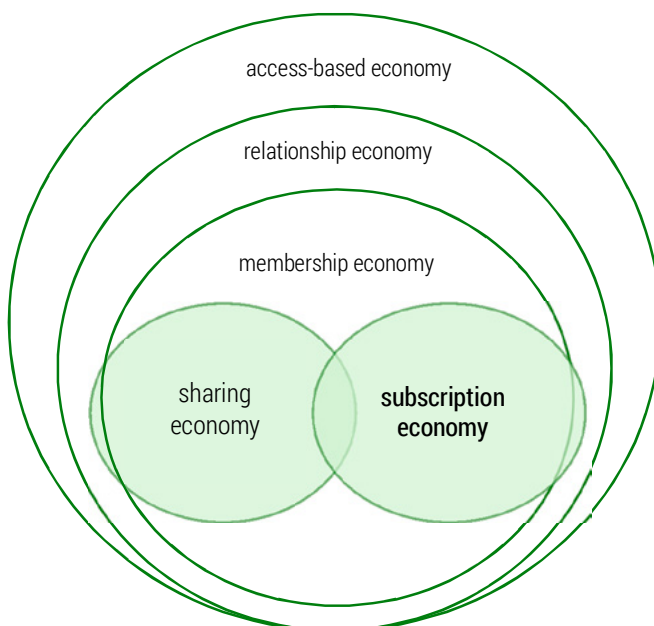
However, despite the significant increase in the number of subscription-based businesses, very little is still known about consumers’ preferences, motives, and experiences with the analysed business model, especially in the Polish market. The authors decided to fill this gap.

## An overview of the literature

Subscription economy is a term referring to a business model in which customers regularly pay certain fees, usually monthly or annually, in exchange for access to certain products or services (Iyengar et al., 2020). The aforementioned model is thus related to the concept of the access economy, in which consumers have access to products they cannot afford or do not want to own due to space constraints or environmental concerns (Bardhi & Eckhardt, 2012). A key feature of the model in question is access rather than transfer of ownership. Access-based consumption occurs here (Burgiel & Zralek, 2019). It is also related to the concept of the sharing economy, which is “a certain module of the access-based economy” (Czernek et al., 2018). According to Eckhardt and Bardhi: “the sharing economy is not about ‘sharing’ at all; it is an access economy” (Bardhi & Eckhardt, 2015). The authors propose to drop the term sharing economy and use only the term access economy. They justify the

conceptual change as follows: sharing is a form of social exchange between people who know each other, and it occurs on a nonprofit basis. If, on the other hand, “sharing” is done through the market, it is no longer essentially sharing. Rather, it is consumers paying to receive access to goods and services owned by someone else for a specified period (Bardhi & Eckhardt, 2015). Ritter and Schanz (2019) consider the subscription economy to be part of the sharing economy while maintaining a key common element – the transition to sustainability. The sharing economy is about sharing resources, while the subscription economy is about regular access to products or services without permanently owning them. In the subscription economy, people share access to certain products or services in exchange for a regular subscription fee (Kammer et al., 2015). Both the sharing economy and the subscription economy emphasise access to products or services rather than ownership. In both cases, customers do not necessarily own the resource or product but can use it as they wish. So, both sharing economics and subscription economics belong to access economics.

The “as-a-service” business model, as opposed to the old product model, means that the product itself is no longer a one-time transaction, but an ongoing service, where the focus is primarily on building long-term, personalised relationships with loyal subscribers, rather than on unit sales (Konary, 2019). The subscription economy, thus assumes a long-term supplier-customer relationship, and customer relationship management plays an important role in the success of the subscription model (Janzer, 2020; Liu et al., 2020; Mc Kinsey & Company, 2021; Zuora, 2023). In such a view, the analysed model is related to the concept of relationship economy, which is based on the strength of ties built with customers and where cultivating relationships with customers promotes trust and loyalty, which ultimately helps the company grow (Forbes, 2021). It is important to note that the subscription model is not defined solely by recurring revenue. Subscription is when a customer pays for the future delivery of a product or service with a certain degree of variability. This volatility can be the basis of “stored value”, through which companies can build long-term relationships with customers (Eyal, 2022). The term subscription economy is also related to the concept of membership economy proposed by Baxter (2015). According to the author, subscriptions are a big part of membership, but the new membership economy is much more than simple subscriptions. The aspect of community, of belonging to a brand, is gaining importance here. This means moving from an ownership model to access, from a single payment to multiple recurring payments, from an anonymous transaction to a valuable relationship (as in the subscription model), and from one- or even two-way communication to a full community gathered under the umbrella of an organisation. The relationship between subscription economics and related concepts is shown in Figure 1.



**Figure 1.** Subscription economics and related concepts

Source: authors' work based on Czernek et al. (2018), Ritter and Schanz (2019), Bardhi and Eckhardt (2012), Bardhi and Eckhardt (2015), Forbes (2021), Baxter (2015).

Analysing the definitions of the subscription economy both in the narrow and broad sense, it is important to note one element that is common to the various approaches to the issue at hand. This is the change in a certain philosophy of action of the participants in the subscription economy and the shift of its participants away from ownership and possession towards use and permanent enjoyment.

In economics, consumer behaviour is mainly associated with the process of consumption, understood as the process of satisfying human needs. Consumption, in this view, should be understood not only as the consumption expenditures themselves incurred by households but also as the degree of satisfaction of broadly understood needs (Zalega, 2012). Consumer behaviour is all the activities that make up the preparation of the decision to choose a product, its making, and purchase (Woś et al., 2004). They are determined by both internal factors (needs, motives, perceptions, attitudes) and external factors (economic, socio-cultural, situational conditions). The result of changing economic, social, and cultural determinants of consumption are new trends in the consumption behaviour of society, understood as a specific direction of change in consumer preferences, which is a consequence of changes constantly taking place in the market environment (Zalega, 2012). Among the new consumption trends observed is the regular use of products and services on a subscription basis. Consumer preferences are changing rapidly, which affects the demand for certain types of subscriptions. The rise of the subscription economy is a consequence of several simultaneous changes that have taken place in four key areas: economic (the dotcom crisis of 2001, the global economic crisis, the growing contribution of services to GDP); technological (the development of communication technologies, home-centrism, the development of the online payment system); social (the heterogenisation of consumption, the promotion of healthy, active lifestyles, the reduction of ownership of goods on property, the tendency to create virtual communities); ecological (attention to sustainable development and sustainable consumption). Dynamic changes in the consumer environment make their behaviour transformed.

The 2008 financial crisis has been a factor in many changes in the global economy. In uncertain times, financial security has become important, important elements of which include not having to spend large amounts of money at one time to meet needs (consumers are seeking more flexible payment models that avoid large one-time purchase costs) and not having long-term high commitments (which is the case in loans or leasing, among other things) (Kucharska, 2019). The search for alternative ways of satisfying needs has contributed to the proliferation of new initiatives and models (including the subscription model) so that consumers suffering the economic effects of the crisis are not forced to abandon consumption altogether. Subscription economics based on the access economy meets these needs, as it equalises wealth inequalities (e.g., a needy person can use a luxury car or enjoy a luxury hotel on a subscription basis) and, thanks to the fixed costs used in the model, provides more predictable spending of cash and thus more efficient budgeting. The subscription model can be cost-effective for users by offering favourable prices compared to single purchases. Consumers can thus save money, especially if they regularly use access to a particular service or product. In addition, companies using a subscription model can employ flexible pricing structures, such as using so-called tiered pricing or combining a fixed membership fee with usage-based fees. The first option consists of the possibility of periodically resetting the subscription to a higher or lower cost level, depending on the economic situation in which the user finds himself. The second strategy allows the inclusion in the subscription model of products and services whose consumption is intensive in some periods and low or negligible in others. For example, some vacation clubs charge a fixed annual fee, usually based on membership levels, and a varying additional fee based on the consumption of the product offered (for each trip taken by the consumer). Basic fees, in this case, guarantee predictability for both consumers and businesses, while usage-based fees reflect what the consumer derives from the offering (McKinsey & Company, 2021).

A manifestation of criticism of mass consumption in many countries (especially in highly developed countries, where mass consumption has led to so-called overconsumption), is the emergence of the phenomenon of deconsumption, understood as a conscious reduction of consumption to a rational size (Wilczak, 2016). Owning and accumulating goods is no longer a symbol of social status and a marker of success in life. The new generation of consumers feels fatigue and disillusionment with over-consumption, the symptoms of which are a feeling of constant dissatisfaction, nervous tension, haste, and a sense of constant lack of time, which intensifies the need to rationalise purchases and the responsibility associated with satisfying one's own needs. Consumers are becoming more

willing to abandon the prevailing standard of being attached to owning something on their own, in favor of temporary access being a key feature of the “new” economy. According to research conducted by Harris Poll (on behalf of Zuora) among more than 13,000 adults in 12 countries around the world, nearly 60 percent of the world’s adults prefer to own fewer things (Zuora, 2019). In contrast, nearly 70 percent believe that a person’s status is no longer defined by what they own. At the same time, 70 percent agree that subscriptions to products and services can free them from the burden of ownership (Zuora, 2019). The subscription economy, based on the right of access in exchange for the right of ownership, is becoming a promoter of sustainable consumption and can be considered a sustainable business model (Bocken, 2023). It can contribute to reducing waste and resource consumption by making products or services available to multiple users, extending the life cycle of products (e.g., longer life by offering product upgrades), reducing greenhouse gas emissions and pollution (e.g., in transportation subscriptions), or promoting sustainable business practices (choosing green delivery options, recycling packaging, using environmentally friendly materials, etc.) (Nosradabadi et al., 2019; Atasu et al., 2021; Bocken, 2023).

Among the new consumption phenomena relevant to the development of the subscription economy, we should also mention the heterogenisation of consumption resulting in a more diverse behaviour of consumers, who are more critical of the quality of the product offered, report a demand for products and services tailored to their individual needs and requirements, because they want to express their identity and individuality through the products they purchase. As a result, the success of the subscription model often depends on the ability of companies to personalise the products and services provided to subscribers (NETS, 2018). By using artificial intelligence and analysing data about customer behaviour, preferences, and habits, companies can create more personalised and satisfying experiences for their subscribers, which increases their engagement and maintains their loyalty. For example, companies offering travel planning subscriptions can offer subscriptions that include access to personalised, by preference itineraries, bookings, and travel tips. Thus, the subscription economy allows for building long-term relationships with customers; providing regular contact increases the quality of the consumer experience and brand loyalty. From a company’s perspective, loyal subscribers provide it with steady and predictable revenue, which allows it to plan for growth more effectively. Loyal customers are also more likely to provide positive feedback and referrals, which can contribute to an enterprise expanding its customer base (Ostrowska, 2010; Szymańska, 2011). With information on the reputation of sellers, the risks associated with transacting with strangers have decreased (Hamari et al., 2015). The ability to access exclusive products and services that are not otherwise available is also gaining importance. Additional privileges can include original movies and series, access to exclusive events, exclusive products (e.g., access to VIP products), or membership in brand-focused communities (Iyengar et al., 2020). Thus, the subscription economy allows for building long-term relationships with customers; providing regular contact increases the quality of the consumer experience and brand loyalty. From a company’s perspective, loyal subscribers provide it with steady and predictable revenue, which allows it to plan for growth more effectively. Loyal customers are also more likely to provide positive feedback and referrals, which can contribute to an enterprise expanding its customer base (Ostrowska, 2010; Szymańska, 2011). With information on the reputation of sellers, the risks associated with transacting with strangers have decreased (Hamari et al., 2015). The ability to access exclusive products and services that are not otherwise available is also gaining importance. Additional privileges can include original movies and series, access to exclusive events, exclusive products (e.g., access to VIP products), or membership in brand-focused communities (Iyengar et al., 2020).

The virtualisation of consumption, understood as the satisfaction of needs through electronic media (including the Internet) (Bywalec, 2007), can be considered one of the most important trends in consumer behaviour conditioning the development of the subscription economy. Its development is closely related to the development of digital technologies. Indeed, the Internet has become the main platform on which many subscription model companies operate, and it is thanks to it that we can talk about the global scale of the phenomenon in question. The modern consumer wants free access to services anywhere and anytime and expects the latest technology or product model to always be available at his fingertips (the pursuit of a comfortable life manifested in a preference for the convenience of acquiring and using products). It demands a choice of payment methods, flexible pricing options, the ability to customise the package, and the freedom to pause and renew services

(Konary, 2019; Krzepicka, 2016; Malysa-Kaletka, 2016). Mobile devices (smartphones and tablets) meet these needs, allowing consumers to access subscription products and services anywhere and anytime. Mobile apps allow convenient management of subscriptions, viewing of content, and use of mobile services, greatly increasing accessibility and convenience. Subscriptions thus offer convenience and flexibility; consumers can use services or products for a fixed fee without having to make individual purchases. They can access them on demand, whenever they want. As a result, they can easily manage their subscriptions and avoid having to remember payment deadlines. Companies are also using cutting-edge technology to automate their subscription management processes (e.g., subscription renewals and reminders), which helps automate long-term customer relationships. Technology is also making it easier to make payments for subscription services. The development of various payment methods, including digital wallets, payment cards, and mobile payments, is increasing the accessibility of the subscription model for different customer groups. The security of online data and payments is also increasing, which is a key determinant for the development of the subscription economy.

The global epidemic of COVID-19 (Kestenbaum, 2020; Baek & Kim, 2022) is also among the factors influencing the rapid growth of subscription models worldwide. Due to several restrictions, consumers have been forced to move many activities to their homes. The phenomenon of consumption domesticity, which involves the transfer of consumption from outside the home (from public institutions) to the home, has gained strength, and its main feature is the preference for private consumption (the so-called privatisation of consumption) (Bywalec, 2007). This has led to an increased interest in new ways of purchasing products and services (including the subscription model). These changes were also noticeable in the Polish market (Santander Consumer Bank, 2020; Fundacja Digital Poland, 2021; Polski Instytut Ekonomiczny, 2021). The pandemic has led to a much more widespread acceptance of digital technologies in our lives, permanently changing the way we work, learn, and purchase products and services, which could represent a huge opportunity for the development of the subscription economy.

## Research methods

The survey aimed to identify the motives and preferences of Polish consumers related to the business model under study. The article consists of two parts. The first part presents the essence and definitional issues related to subscription economics and identifies trends in consumer behaviour conditioning the development of the analysed business model. The second part presents the results of the author's research on the experience of Polish consumers related to the subscription economy.

In the first stage, the study used the method of literature analysis and criticism, and in the second stage, the method of diagnostic survey and statistical analysis. The quantitative survey was carried out between October 2, 2023, and December 4, 2023, on a sample of 350 respondents using the standardised online CAWI (Computer Assisted Web Interview) method. The survey questionnaire used, which was made available electronically, required respondents to have access to the Internet, which means that not everyone had the chance to be in the research sample.

As previous studies have shown, young people today aged 18-24 (the so-called "Generation Z") are the most enthusiastic among adult consumers about the subscription model. They are also more familiar with online services, apps, and subscription-based business models. For many of them, it is a natural way to access content and services. Based on the knowledge available at the stage of preparing the article and the literature review, the research hypothesis is:

H1: 18-24-year-olds (the so-called 'generation Z') show higher levels of engagement with the subscription model compared to other age groups of adult consumers.

To test this hypothesis, the authors performed a correlation analysis of the responses from the point of view of this characteristic (age of respondents).



## Results of the research

The survey aimed to identify the motives and preferences of Polish consumers related to the business model under study. Among the respondents (350), 53 percent were women and 46 percent were men, with three respondents declaring a different gender. Those aged 18-24 accounted for 30 percent of the respondents, those aged 25-44 accounted for 32 percent, and those aged 45-59 accounted for 24 percent. The smallest group comprised those in the oldest group, aged 60 and over (14 percent). More than half of the respondents had a college degree (28 percent) or incomplete college degree (26 percent), a third were those with a high school education (33 percent), a distinct minority were those with vocational (8 percent) and primary (5 percent) education. The largest number of respondents came from localities with a population of 150.000 to 500.000 (27 percent) further up to 50.000 residents (22 percent), more than 500.000 residents (20 percent), and from 50.000 to 150.000 (17 percent). Rural residents accounted for 14 percent of respondents. Taking into account the monthly net income of respondents, the largest group were those who declared their income between 3 and 4 thousand zlotys (28 percent) and between 4 and 5 thousand zlotys (24 percent). A similarly sized group was made up of those earning between PLN 1.500 and PLN 3.000 and above PLN 5.000. The least numerous group was made up of those with an income of less than PLN 1.5 thousand. The demographics of the respondents are presented in Figure 2.

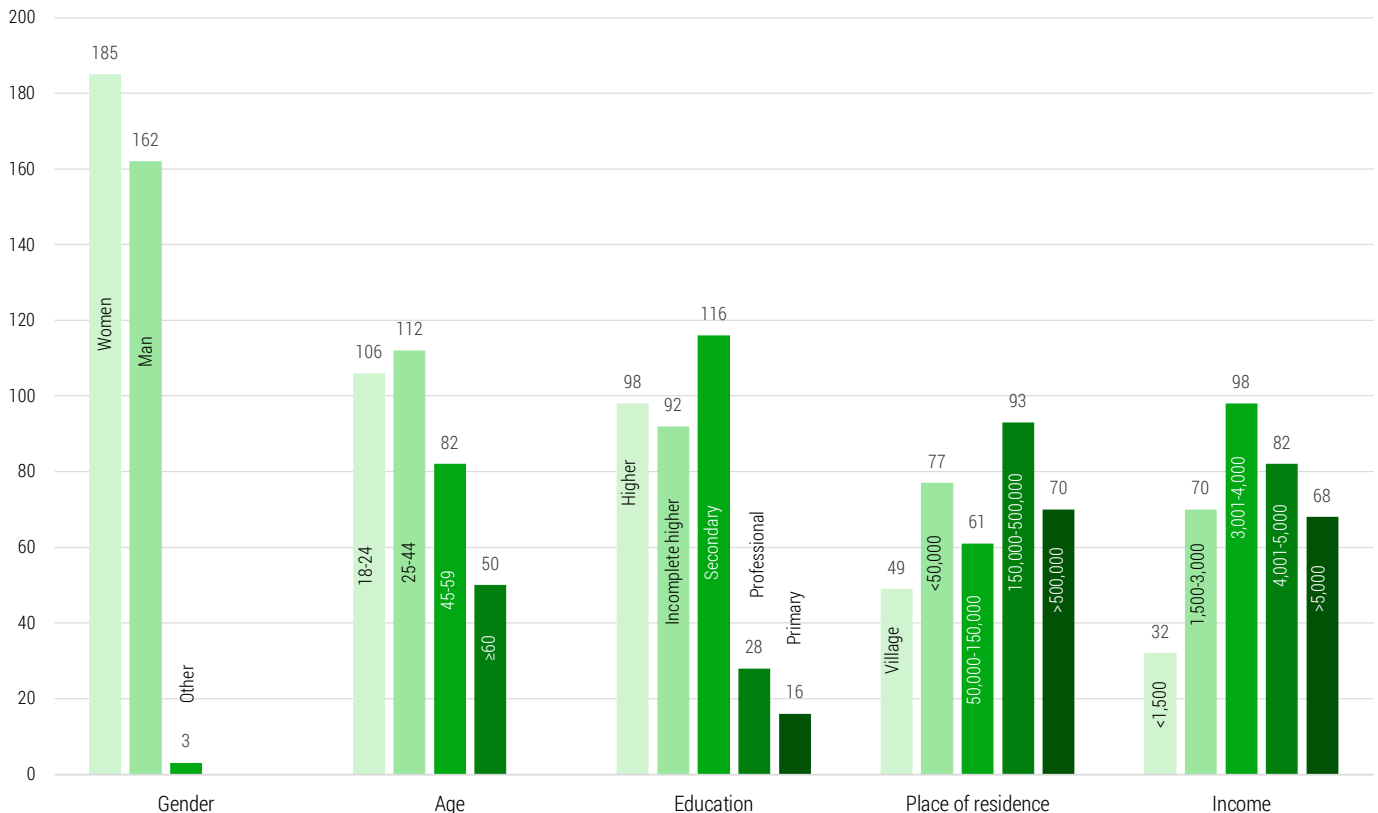


Figure 2. Demographic characteristics (N=350)

The actual part of the questionnaire began with a question about respondents' participation in the subscription economy. Nearly 80 percent of respondents answered this question positively and took part in the rest of the survey (Figure 3).

Among those aged 18-24, as many as 89.62 percent of respondents used subscription services, those aged 25-44 used 87.50 percent, those aged 45-59 used 81.71 percent, and among those aged 60 or older, 32.00 percent of respondents used subscriptions.

In the next question, respondents were asked to select from a list of products/services they use on a subscription basis. Almost half of the respondents indicated telecommunications/television services (e.g., landline, Internet, cable/digital TV) (46 percent) and home services (e.g., electricity, gas, water, rent) (45.7 percent), and in third place the respondents indicated medical services (e.g., Lux med, Enel-med, Medcover) (40.6 percent). Nearly a third of respondents on a subscription basis also use insurance services (e.g., OC/AC premiums) (27.9 percent), computer software (licenses, antivirus software) (27.2 percent), and transportation services (e.g., lease installment, long-term car rental) (27.2 percent). As the survey showed, few respondents use subscriptions to tangible products (8.7 percent) and food and beverage (e.g., cafe, bar, and restaurant subscriptions) (5.1 percent). There were indications in the “Other” responses, which were expanded in the next question to respondents, which concerned leisure products and services<sup>1</sup>. Those in the 18 to 24 and 25 to 44 age brackets most often chose subscriptions to telecommunications services (43.4 percent and 42.86 percent, respectively). For those aged 45 to 59, subscriptions to home services were the most popular (41.46 percent), while those aged 60 and over were most likely to opt for subscriptions to medical services (20.00 percent). For a detailed percentage distribution of services chosen, see Figure 4.

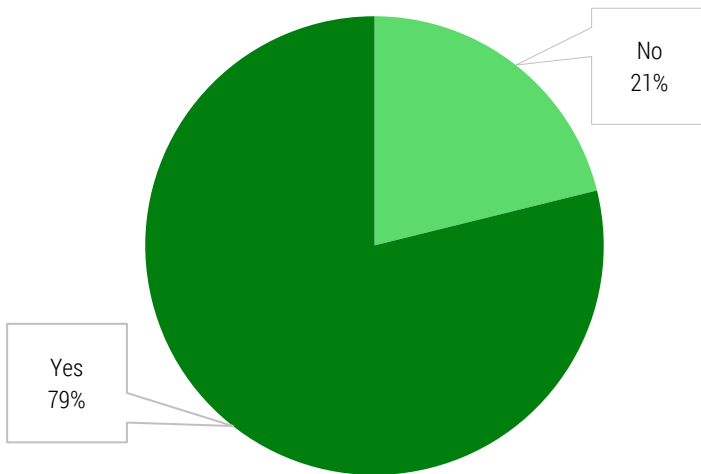


Figure 3. Do you use any services or products on a subscription basis? (N=350)

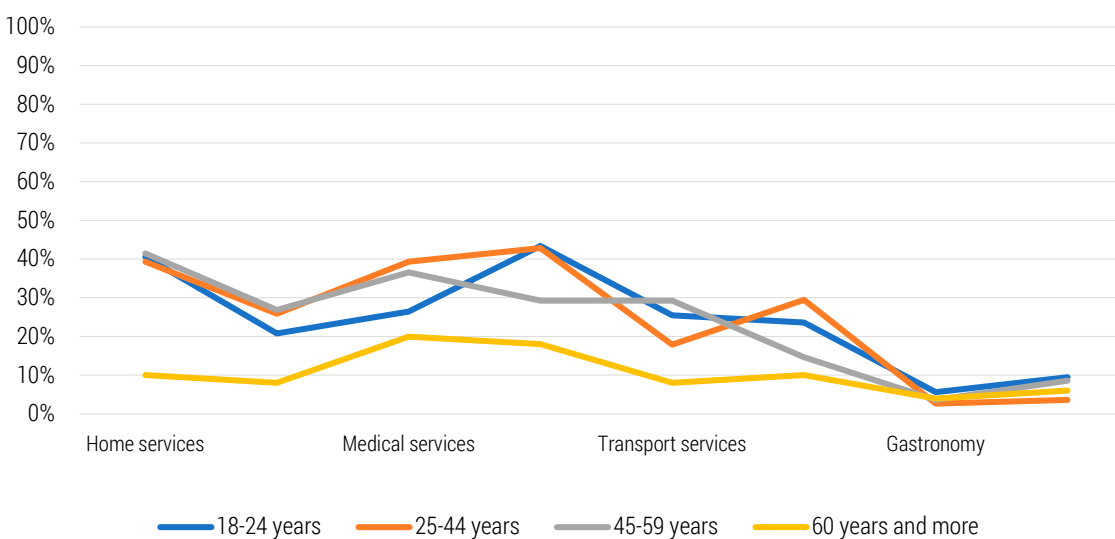


Figure 4. Percentage distribution of subscription services used among age groups surveyed (N=276)

<sup>1</sup> The authors will present the subscription model for leisure products/services in a separate publication.



In the next part of the survey, respondents were asked to indicate the factors influencing their decision to participate in the subscription economy. Considering the factors influencing subscription decisions, the subscription price was the most important for all age groups, as shown in Figure 5, followed by respondents (overall) who marked the range of services/products available through subscription (42 percent), convenience of use (31.2 percent) and freebies and promotions (23.9 percent).

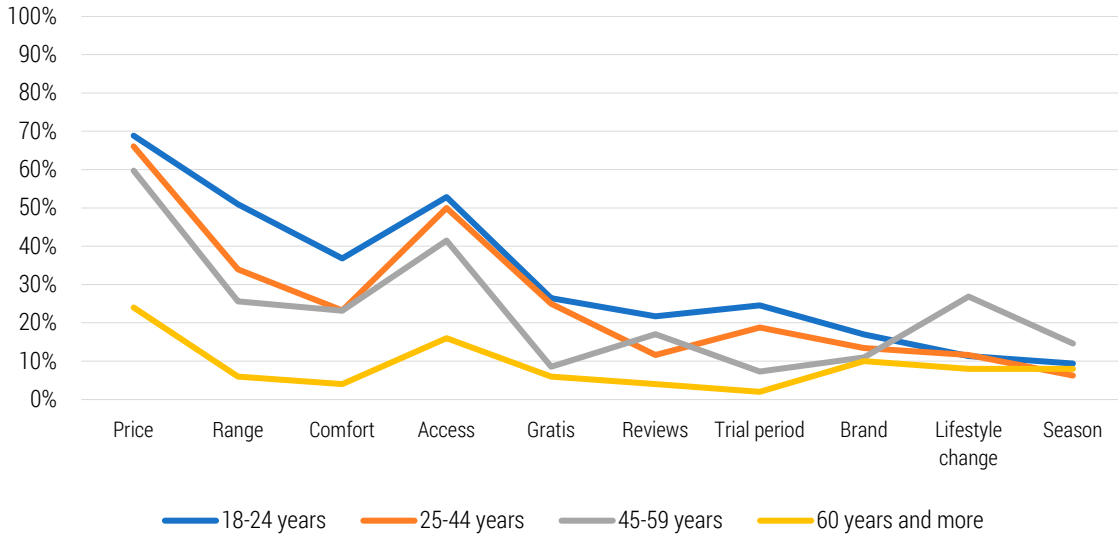


Figure 5. Percentage distribution of key factors influencing subscription decisions among the age groups surveyed (N=276)

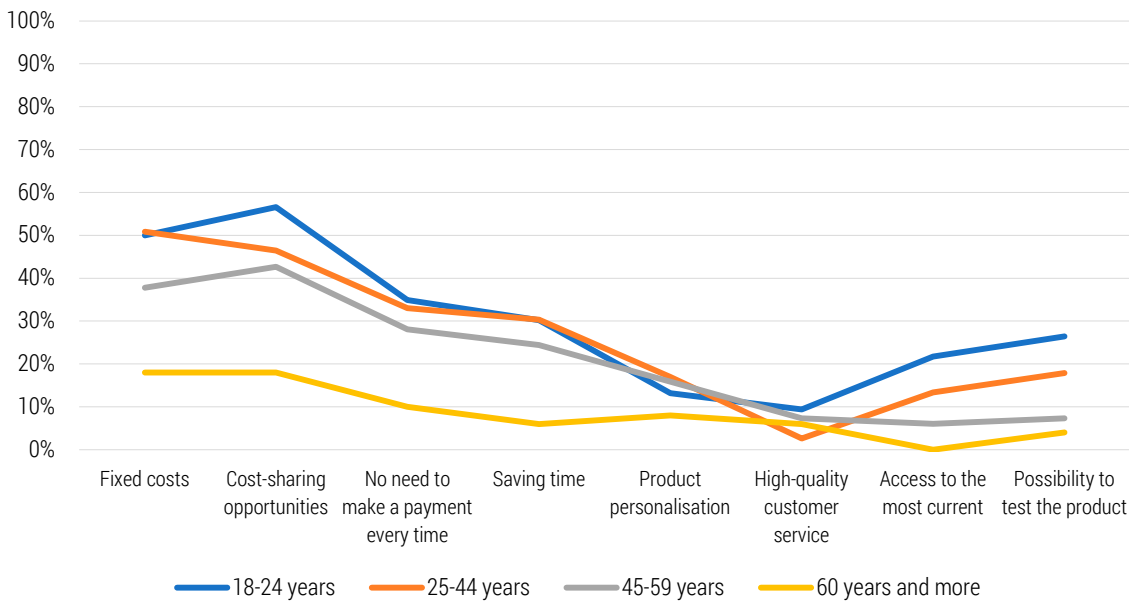


Figure 6. Percentage distribution of key subscription advantages among the age groups surveyed (N=276)

After selecting the motivators for participation in the subscription economy, respondents were asked to identify the advantages and disadvantages of this model. More than half of the respondents identified the ability to share costs with others (sustainable consumption) (56.5 percent) and fixed costs, enabling them to plan their spending (54.3 percent) as the biggest advantages. This was followed by respondents who cited not having to make payments each time (37 percent), time savings (32.2 percent), the ability to test the product/service (free trial period) (20.3 percent), personalisa-

tion of the product/service (18.1 percent) and access to the most current version of the product/service (15.6 percent). As the survey results showed, high quality of service is not a significant advantage of the subscription model for most respondents. “Other” responses included indications of a sense of security of continuity in accessing the service. For 18- to 24-year-olds, the key advantage of subscription was the ability to share costs (56.60 percent), while for the 25- to 44-year-old group, keeping costs constant was important (50.89 percent). Those aged 45 to 59 also cited the ability to share costs as the main advantage of subscriptions (42.68 percent). In contrast, those aged 60 and over often emphasised both fixed costs and the ability to share expenses (18 percent). The percentage distribution of key subscription advantages is shown in Figure 6.

After pointing out the advantages of the subscription model, the next part of the survey asked respondents to identify its most important disadvantages. Half of the respondents believe that subscribing to too many services at once that are not used regularly can lead to unnecessary spending. In addition, respondents see risks associated with the use of personal data collected by companies operating under the subscription model (48.2 percent). One in three respondents also pointed to price volatility (29.3 percent) and lack of product/service ownership (28.6 percent). Difficulty in cancelling subscriptions and dependence on the company/service provider are important to about 20 percent of respondents. Among the disadvantages of subscriptions, those in the 18 to 24 and 45 to 59 age groups most often reported a problem with the use of collected personal data (44.34 percent and 37.80 percent, respectively). In contrast, for those aged 25 to 44 and at least 60, the main disadvantage of the subscription system was subscribing to too many services at once (48.21 percent and 18.00 percent, respectively). The percentage distribution of key subscription disadvantages is shown in Figure 7.

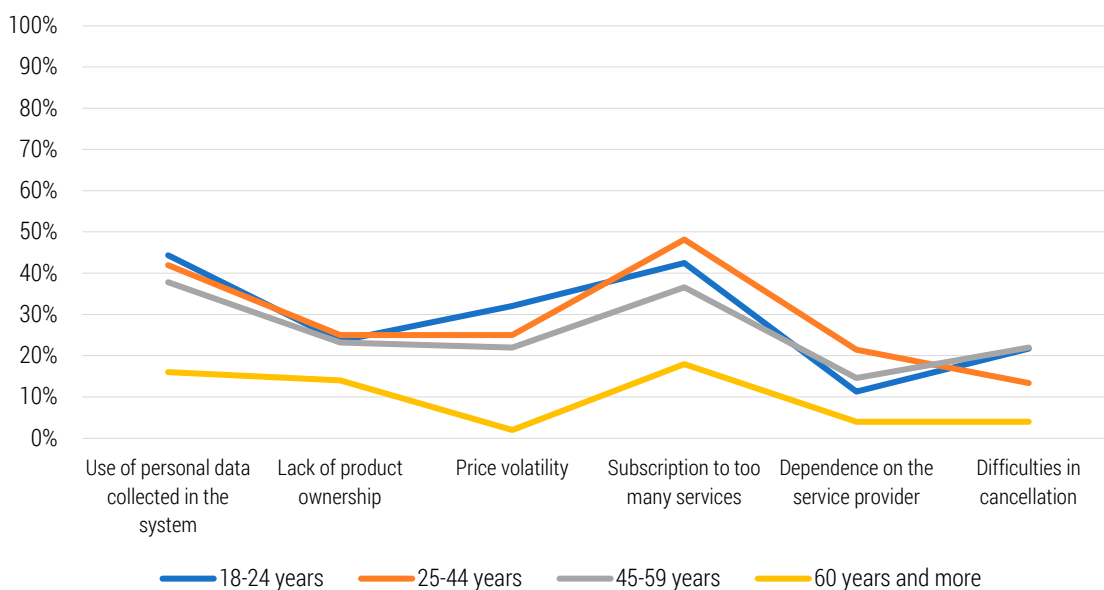
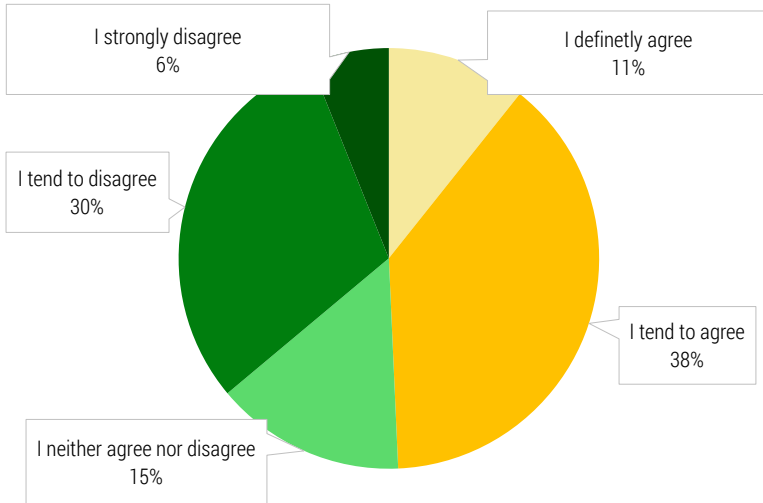


Figure 7. Percentage distribution of key subscription disadvantages among the age groups surveyed (N=276)

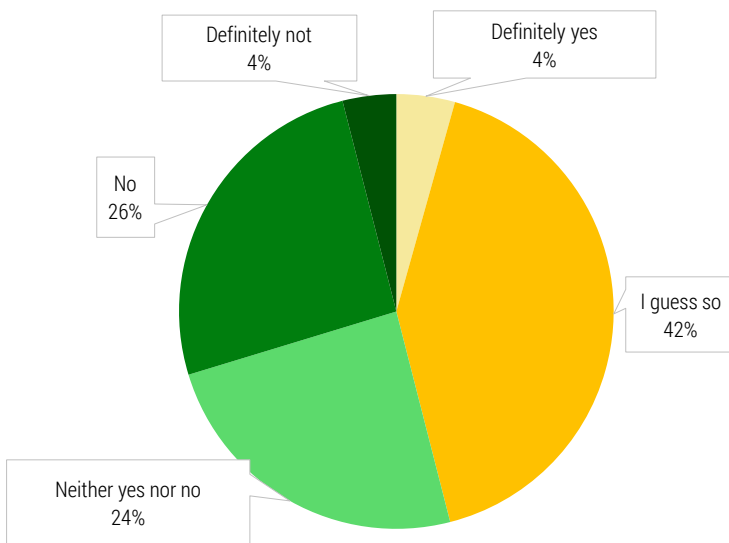
Complementing the issue of the disadvantages and risks of the model in question was another question, in which respondents were asked to respond to the statement: subscriptions lead to excessive accumulation of things or services that you do not use (Figure 8). The questionnaire used a five-stage Likert scale. Likert scale responses can be easily analyzed quantitatively, allowing statistical analysis of the data and more objective conclusions. Half of the respondents agreed with the statement (answers strongly agree and rather agree), less than 40 percent had a contrary opinion, and the rest could not make a clear statement on the subject. In the 18-24 age group, more than 50 percent of respondents agreed with the statement (answers strongly agree and rather agree). In the 25-44 age group it was close to 50 percent of indications, in the next group of 45-59 years it was more than 40 percent of indications and in the last group of over 60 years it was more than 60 percent of responses.

The final part of the survey focused on the future of respondents' participation in the subscription economy. Respondents were asked the question: do they plan to increase their subscriptions in

the coming years? As the results of the survey showed, almost half of the respondents intend to increase their participation in the model in question (yes and definitely yes answers), nearly one in three declares no such action, and 25% cannot answer this question clearly (Figure 9). In the 18-24 and 25-44 age groups, more than 40 percent of respondents plan to increase their participation in the model under review, in the 45-59 age group it is nearly 50 percent of indications and in the oldest respondents, it is more than 75 percent of indications.



**Figure 8.** Do you agree with the statement that subscriptions lead to an excessive accumulation of items or services that you do not use? (N=276)



**Figure 9.** Do you plan to increase your subscriptions in the coming years? (N=276)

In addition, an analysis of basic descriptive statistics with Shapiro-Wilk tests and a one-way analysis of variance with posthoc tests were performed on the results of the diagnostic survey. The Shapiro-Wilk test is used to assess whether the results we collected from the surveyed individuals have a normal distribution. One-way analysis of variance is a statistical test used to compare averages across multiple populations, and posthoc tests are performed as the next step of variance analysis. The significance level was considered to be  $\alpha = 0.05$ . The main strength of this test is its high power, i.e. for a fixed  $\alpha$ , the probability of rejecting the hypothesis  $H_1$  if it is false is higher than for other such tests.

In the first step of the analysis, the distributions of quantitative variables were checked. For this purpose, basic descriptive statistics were calculated along with the Shapiro-Wilk test, examining the normality of the distribution.

Details of the analyses performed are presented in Table 1. Next, a one-way analysis of variance was performed along with Tukey’s posthoc test to test for differences between the age groups studied (Table 2). The Tukey test identifies specific pairs of groups between which there are statistically significant differences. This provides a better understanding of which groups differ and to what extent. The Tukey test is an effective tool to control for family bias (i.e. the risk of Type I error) that can occur with multiple group comparisons. By focusing on significant differences between specific groups, this test reduces the risk of false results.

**Table 1.** Basic descriptive statistics of the studied variables with the Shapiro-Wilk test (N=276)

Dependent variable	M	Me	SD	Sk.	Kurt.	Min.	Maks.	W	p
Number of subscription services	1.80	2.00	1.35	0.34	-0.45	0.00	6.00	0.91	<0.001
Number of factors influencing subscription decisions	2.48	2.00	1.86	0.33	-0.54	0.00	8.00	0.93	<0.001
Number of perceived advantages of subscriptions	1.91	2.00	1.44	0.51	0.22	0.00	7.00	0.89	<0.001
Number of perceived disadvantages of subscriptions	1.54	2.00	1.11	0.40	0.22	0.00	6.00	0.82	<0.001
Accumulation of unused subscriptions	3.19	3.00	1.15	-0.17	-1.11	1.00	5.00	0.88	<0.001

Annotatio: M – mean; Me – median; SD – standard deviation; Sk. – skewness; Kurt. – kurtosis; Min – minimum value; Max. – maximum value; W – Shapiro-Wilk test result; p – p-value for Shapiro-Wilk test.

As can be seen in Table 1, the results obtained from the Shapiro-Wilk test indicate a distribution of all results that is different from a normal distribution. However, taking into account the central limit theorem, which assumes that a characteristic adopts a normal distribution when there are at least 30 subjects, and the fact that no measure of skewness for most variables exceeds the critical absolute value of 1 (George & Mallery, 2016), it can be assumed that the studied variables adopt a normal distribution. Therefore, parametric analyses were used.

**Table 2.** Results of one-way analysis of variance examining perceptions of subscription between age groups (N=276)

Dependent variable	Group	n	M	SD	F	df	p	η²
Number of subscription services	18-24 years	106	1.95	1.24	10.69	3; 346	<0.001	0.08
	25-44 years	112	2.01	1.30				
	45-59 years	82	1.90	1.35				
	60 years and over	50	0.84	1.36				
Number of factors influencing subscription decisions	18-24 years	106	3.20	1.91	21.07	3; 346	<0.001	0.15
	25-44 years	112	2.60	1.65				
	45-59 years	82	2.35	1.67				
	60 years and over	50	0,88	1,44				
Number of perceived advantages of subscriptions	18-24 years	106	2.42	1.37	20.65	3; 346	<0.001	0.15
	25-44 years	112	2.12	1.47				
	45-59 years	82	1.70	1.15				
	60 years and over	50	0.70	1.20				
Number of perceived disadvantages of subscriptions	18-24 years	106	1.75	1.04	17.30	3; 346	<0.001	0.13
	25-44 years	112	1.75	1.11				
	45-59 years	82	1.56	1.00				
	60 years and over	50	0.58	0.93				

Accumulation of unused subscriptions	18-24 years	95	3.28	1.11	1.85	3; 272	0.138	0.02
	25-44 years	98	3.20	1.21				
	45-59 years	67	2.94	1.09				
	60 years and over	16	3.56	1.15				

Annotation: n – number of observations; M – mean; SD – standard deviation; F – value of test statistic; df – degrees of freedom; p – statistical significance;  $\eta^2$  – strength of effect index.

Based on the analysis, it turned out that respondents aged 60 and over use fewer subscription services and products than the other groups (an average-sized difference between the groups), and the number of factors influencing decisions to use subscriptions was also similar, with the difference that those aged 18-24 cited more reasons for deciding to use subscriptions, compared to the other age groups (a large difference between the compared groups). When it came to the number of advantages cited for using subscriptions, those aged 18-24 indicated more advantages (a large difference between the compared groups) than those aged 45 and over. In addition, those aged 60 and older indicated fewer advantages of subscription than the other age groups and, for disadvantages of subscription, also fewer than the other age groups (average differences).

## Discussion/Limitation and future research

The most important products/services purchased under the subscription model are telecommunications/television services, home services, and medical services. Regarding the identified factors influencing consumers' subscription economy behaviour, the research showed that economic factors were the most important for Polish consumers. This is confirmed by research findings in the US and other European countries (Chen et al., 2018; Deloitte Digital, 2022). For all age groups, the subscription price was of the greatest importance. More than half of the respondents identified the ability to share costs with others (sustainable consumption) (56.5 percent) and fixed costs, enabling them to plan their spending (54.3 percent) as the greatest advantages. Those aged 18-24 cited more advantages about respondents from other age groups. Among the most important disadvantages of the model in question, one in two respondents believes that subscribing to too many services at once that are not used regularly can lead to unnecessary spending. In addition, almost a third of respondents point to price volatility as a disadvantage of the model in question. The virtualisation of consumption and the convenience associated with it proved to be other important factors for Poles in the subscription area. Nearly 40 percent of respondents pointed to the lack of the need to make payments each time and more than 30 percent to time savings as important determinants of using this model.

As the results of the survey showed, social factors relating to lifestyle changes are not the most important determinants of participation in the subscription economy for Poles; only 20 per cent of respondents declared them. In addition, as part of the disadvantages of the model in question, almost a third of respondents pointed to the lack of ownership of the products/services purchased in this model. This means that barriers to the development of this model in the Polish market remain the firmly entrenched belief that ownership is an indicator of high social status, which is not borne out by the results of other studies showing that a person's status is no longer defined by what he or she owns (Zuora, 2019; Fundacja Digital Poland, 2021; Rifkin, 2016). This is related to environmental factors (lack of concern for sustainability and sustainable consumption). This is also in line with another author's prediction that ownership will be replaced by access in the new economic reality. As a result of rapid technological change and the very short market 'life' cycles of products, it would become uneconomic to maintain the facilities necessary to run a business (Rifkin, 2000). Although half of the respondents agreed that subscriptions lead to excessive accumulation of things or services, almost 40 percent had a different opinion on this, and the rest could not make a clear statement. The results of the survey on consumption heterogeneity showed that product personalisation and access to exclusive products were unimportant factors in determining participation in the subscription economy, indicated by only 18 percent and 16 percent of respondents, respectively. This is not borne out by the results of other studies, which have shown that personalisation and access to

premium offerings are, next to price and convenience, the most important factors driving participation in the subscription economy (Chen et al., 2018; Deloitte Digital, 2022).

Regarding the self-reported research conducted, it should be noted that the study was a pilot study. A small sample may not be representative of the entire population, which may lead to errors in inference and generalisation of results on a larger scale. With a small sample, the results may also be more susceptible to the influence of random events. Nevertheless, some of the results of our research are also reflected in the literature and provide a basis for expanding the scope of the research in the future.

We can expect to see a greater variety of subscription offerings in the future. Companies can customize subscription packages, offering flexibility and personalization to fit the age of users, among other things. As technology advances and Internet access improves, older generations may also become more open to using subscription services.

## Conclusions

The purpose of the article was to identify trends in consumer behaviour relevant to the development of the subscription economy and to identify the motives and preferences of Polish consumers related to the analysed business model. Within the trends, the authors identified economic, technological, social, and environmental factors. The authors' research showed a strong interest among Poles in the subscription model, the highest among those aged 18-24. Therefore, there are no grounds to reject H1: People aged 18-24 (the so-called 'generation Z') show a higher level of enthusiasm for commitment to the subscription model compared to other age groups of adult consumers. At the same time, it is worth noting that as many as 75 percent of respondents from the oldest age group say they would like to increase their subscriptions in the future. Subscription preferences can vary, and not every older person is necessarily interested in using this service model. Subscription offerings must be tailored to different age groups and user preferences.

## The contribution of the authors

Conceptualization, E.M. and J.Z.-SZ.; literature review, E.M. and J.Z.-SZ.; methodology, E.M. and J.Z.-SZ.; formal analysis, E.M. and J.Z.-SZ.; writing, E.M. and J.Z.-SZ., conclusions and discussion, E.M. and J.Z.-SZ.

The authors have read and agreed to the published version of the manuscript.

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## EKONOMIA SUBSKRYPCJI JAKO ODPOWIEDŹ NA NOWE TRENDY W ZACHOWANIACH POLSKICH KONSUMENTÓW

**STRESZCZENIE:** Celem artykułu jest identyfikacja trendów w zachowaniach konsumentów istotnych dla rozwoju gospodarki subskrypcyjnej oraz identyfikacja motywów i preferencji polskich konsumentów związanych z analizowanym modelem biznesowym. W badaniu wykorzystano metodę analizy i krytyki literatury oraz metodę sondażu diagnostycznego (N=350). Badanie autorek wykazało wysokie zainteresowanie Polaków modelem subskrypcyjnym, najwyższe wśród osób w wieku 18-24 lata. Jednocześnie aż 75 proc. respondentów w najstarszej grupie wiekowej (powyżej 60 lat) zadeklarowało, że chciałoby w przyszłości zwiększyć liczbę subskrypcji. Na podstawie przeprowadzonej analizy stwierdzono, że wśród Polaków istnieje duże zainteresowanie produktami/usługami z kategorii: telekomunikacja/TV, usługi dla domu oraz usługi medyczne. Jeśli chodzi o zidentyfikowane czynniki wpływające na zachowania konsumentów w zakresie ekonomii subskrypcji, badanie wykazało, że czynniki ekonomiczne, takie jak cena subskrypcji, pozostają najważniejsze dla polskich konsumentów. Artykuł opisuje nowe motywacje i trendy stojące za przyjęciem modeli subskrypcyjnych przez polskich konsumentów.

**SŁOWA KLUCZOWE:** ekonomia dostępu, ekonomia subskrypcji, ekonomia współdzielenia, model biznesowy, trendy w zachowaniach konsumentów