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## Preferences and Consumer Choices: A Case of Polish Markets for Goods and Services

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### Abstract

The study aims to investigate the consumer preferences of Polish individuals in both the goods and services markets. The research methodology employs a range of methodological approaches, including analysis and synthesis, inductive and deductive reasoning, abstraction, statistical analysis, and a systematic approach. Data from 694 respondents were collected through Computer Assisted Web Interviewing (CAWI) between November and December 2021. The T hierarchy analysis method was used for data processing and priority determination. The findings of the study reveal significant changes in consumer behavior among Poles, which can be attributed to shifting social attitudes, economic uncertainties, and an increased focus on ethical consumption. The study identifies several key factors that influence consumer choice and trends in the markets of goods and services among Polish consumers. These factors include shifting social attitudes, economic uncertainties, the rise in online shopping, the importance of innovation and product offerings, the emphasis on customer experience, the significance of sustainability and ethical considerations, the role of digital marketing and engagement, and the value of market research and consumer insights. Overall, the study provides valuable insights into the evolving consumer behavior of Polish individuals and highlights the various factors that shape their preferences in the goods and services markets.

Keywords: consumer choice; consumer preference; Polish markets

JEL Classification: A10; D12; D91

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## 1. Introduction

In the last decade, the world faced challenges that affect economic, social, and political processes: there has been a decline in economic activity and an unprecedented increase in inflation, social tensions, the significant rise in the level of social unrest due to the easing of restrictions related to the Covid-19 coronavirus infection pandemic and the war in Ukraine (Barrett, 2022; Silviu, 2022).

The main consequences of these shocks for both business and consumers in Europe – geopolitical instability and economic uncertainty – force leading companies, entrepreneurs and consumers to look for new behaviours related to adaptation to the prevailing conditions (Periokaite and Dobrovolskiene, 2021). As a result, the business is searching for ways to retain existing customers and attract new ones; maintain market share and consumer spending as well as revenue and profit indicators at a level sufficient to ensure financial stability in the short and medium term. On the other hand, the amount and structure of household expenditures, the attitude towards savings, and the model of consumer behaviour are changing (Maalej, 2022). Thus, the driving forces that determine consumer choice are a priority area of study for businesses, regardless of the field of activity, scale, and geography, the knowledge that will ensure their competitiveness.

As part of the study, consumer behaviour in Poland is regarded as the result of preferences that changed under the influence of various factors, which led both to the change of the model of consumer behaviour (including its elements) and the social structure of consumer risk (when the choice is made based on compromise decisions regarding the need to maintain health, psychological balance and financial resources). Thus, the problem solved in the study is caused by the fact that the experience related to the consumer choice of the Poles turned out to be devalued: household incomes changed, the social structure of consumer risk changed, and social attitudes and value orientations have changed.

The impact of restrictions during the Covid-19 pandemic in Poland on consumer behaviour is discussed by Werner-Lewandowska et al. (2021). Bareja-Wawryszak et al. (2022) conducted a comparative analysis of Polish and Turkish consumer behaviour during the COVID-19 pandemic. The authors concluded that changes in consumer behaviour were more observed among respondents from Turkey and to a lesser extent among respondents from Poland. The study of Buraczynska et al. (2022) examines the change in the behaviour of Polish consumers in the organic market due to the Covid-19 pandemic. Maciejewski et al. (2021) conducted a differentiation of consumers on the example of Polish consumers considering the impact of the concept of sustainable development on consumer behaviour, which is proposed to be used in the segmentation of the market for consumer goods and services.

The results of the existing studies reveal the consequences of one phenomenon or factor (for example, the Covid-19 pandemic) on changing consumer behaviour in Poland, often on the example of a certain social group (for example, students) or a certain market (organic products). The current study's problem is related to understanding consumer preferences and choices in the markets of goods and services in Poland. The mentioned studies provide valuable insights that can contribute to addressing this problem.

This research paper aims to investigate the preferences that influence consumer choices among Polish consumers in the markets of goods and services, particularly in the context of global challenges faced in the third decade of the 21st century. The research problem is determined by a changing economic, social and environmental landscape, which necessitates insight into the factors that influence Polish consumer behaviour.

## 2. Literature Review

One of the problems that countries have faced earlier than others considered in this study is the vulnerability of their economies to financial instability and energy crises. Raviv (2017) argues that institutions, actors and widely used financial practices underlie financial instability in Europe. Wray (2011) considers the problem more broadly, without limiting the geography of research to European countries, he believes that lessons from the last global financial crisis have not been learned. The conclusions formulated by the author describe the structural vulnerabilities that make a new crisis likely and also contain recommendations aimed at strengthening the financial system and revitalizing the real economy. A wide range of problems is considered by Mavruk (2022), which explores the possible economic, political, and social consequences, including high inflation and food crises, economic sanctions, and refugees. Arakji (2022) considers financial instability in European countries due to migration policy, noting that the Covid-19 pandemic has worsened the situation. Joensen and Taylor (2021) also look at the humanitarian crisis that followed the wave of illegal migrants by analysing the disparity in spending among the member states of the European Union. Understanding the factors mentioned in these studies helped analyse their impact on consumer behaviour in the Polish market, providing a valuable context for the current study of consumer preferences and choices (Akanova et al., 2016).

Analysing the impact of crises on changes in the model of consumer behaviour, Joensen and Taylor (2021) note that the scientific community and business, which has the resources to conduct research, directed their efforts to study trends in consumer behaviour and analyse consumer preferences. As such, Chlipala and Zbikowska (2021) highlight the main trends: panic buying at the initial stage of the crisis; reduction of expenses for certain categories of goods (clothing, footwear); increase in online shopping. Werner-Lewandowska et al. (2021) also note an increase in online shopping, concluding that for many Polish consumers, the new experience will become the norm, and there will be no return to old shopping habits. Szabuniewicz and Majkut (2021), studying the choice of Polish consumers during Covid-19, note an increase in ethnocentric sentiments. The mentioned studies highlight trends observed during crises, including panic buying, reduced expenses for certain categories of goods, and an increase in online shopping. They also identify the emergence of ethnocentric sentiments among consumers.

Research by Szabuniewicz and Majkut (2021) considers the increase in consumer ethnocentrism during the Covid-19 among Polish consumers, which is confirmed by the data of the study, according to which the country of origin is a factor determining the consumer choice of Polish consumers and in the process of acquiring goods, and in the process of acquiring services. It should be noted that a similar trend is observed

not only in Poland but also in most European countries as a reaction of consumers who are ready to support the economy of their country and domestic producers (Krawczyk, 2022; Szostak, 2022). The study findings on consumer ethnocentrism during the pandemic provide valuable insights that are relevant to the current study's exploration of consumer preferences and choices in the Polish market, particularly concerning the role of country of origin in consumer decision-making.

The change in consumer behaviour in the Czech Republic due to Covid-19 is explored by Eger et al. (2021). The authors' findings relate to different generations of consumers and show that health and economic fears change consumer behaviour and affect the frequency of online purchases. Svajdova (2020) considered the features of the processes related to changes in consumer expectations, consumer choice and risk as a consequence of Covid-19 in the example of the Czech Republic, an increase in sales via the Internet was noted, as well as a decrease in demand for clothes, footwear and electronics, which, according to the data presented earlier, is also typical for the Polish consumer. This information is relevant to the current study as it contributes to the broader understanding of the changes in consumer behaviour brought about by COVID-19 and its implications for consumer preferences and choices in the Polish market. It helps identify common patterns and trends that may be present in both countries and provides valuable insights for businesses and policymakers in adapting their strategies to meet the evolving needs and preferences of consumers.

The changes in the behavior of Polish consumers, as presented in Svajdova (2020), resulting from the aforementioned crises, have been categorized and divided into two groups: the goods market and the services market. These identified trends align with the conclusions drawn in studies focused on the analysis of consumer behavior in Poland. For instance, Truong and Truong (2022) investigate the shifts in purchasing behavior during the pandemic and explore the variables that impact it. The primary findings indicate that concerns about health and the preservation of financial well-being significantly influence changes in consumer behavior, leading to modifications in purchasing habits and payment methods. The authors also argue that demographic variables play a decisive role in the purchasing decision.

The study of Werner-Lewandowska et al. (2021) presents an assessment of the impact of Covid-19 on consumer behaviour in Poland, which became the basis for practical recommendations to companies and entrepreneurs regarding development, considering the identified patterns. The identified trends in consumer behaviour, as discussed in the studies, provide a basis for understanding the changes that have occurred in the goods market and services market in Poland. These findings align with the broader analysis of consumer behaviour in the country, enhancing the reliability and validity of the conclusions drawn in the current study.

Trends describing the tendency to make panic buying in response to Covid-19 are reflected in the studies of Chlipala and Zbikowska (2021), and Hoang Nam et al. (2021). It is important to note that panic buying has declined significantly already by mid-2020. Due to the decrease in fear of the coronavirus, however, other observed effects of changes in consumer behaviour turned out to be more persistent. Thus, in the post-pandemic period, the propensity to purchase goods via the Internet for some groups of goods remained; partly

there was a tendency to postpone purchases for the future; more conservative financial behaviour in the consumption of goods and services has been preserved. The relevance of the studies by Chlipala and Zbikowska (2021) and Hoang Nam et al. (2021) to the current study lies in their examination of panic buying behaviour during the COVID-19 and its lasting effects on consumer behaviour. These studies highlight the initial tendency for panic buying, which significantly declined by mid-2020. However, other changes in consumer behaviour have persisted beyond the pandemic.

Exploring the impact of the pandemic on the behaviour of Polish consumers in the organic market, Buraczynska et al. (2022) identified more frequent purchases on the Internet, more consumer attention to prices, more frequent purchases of larger product amounts, preference for Polish products and preference for organic products. Maciejewski et al. (2021) considered sustainable development as a factor that distinguishes the behaviour of Polish consumers and is devoted to individual factors influencing the choice of Polish consumers. The growth of commitment to ethical consumption is studied by Zollo (2021). The Polish market of goods and services is also characterized by an increase in the manifestation of this trend, which is confirmed by the results of the study. Financial aspects of Polish consumer behaviour are considered by Lewicka-Strzalecka (2019), including moral vectors, the role of which in the consumption process is gradually growing. These studies provide insights into the impact of the pandemic and other factors on consumer behaviour concerning online purchases, price sensitivity, preferences for Polish and organic products, commitment to ethical consumption, and the role of financial aspects and moral values in consumer decision-making.

Consumer preferences regarding the choice of places to purchase goods and household services in the pre-pandemic period are presented by Maciejewski et al. (2021). There is already an increase in online trade at the time of publication, the role of which is increasing in the purchase of household appliances, clothes, and shoes. As further research confirms, this trend has increased over time and as a result of the restrictions associated with the pandemic, changes in the preferences of Polish consumers regarding the choice of the place of purchase continue. Zyminkowska et al. (2018) described the phenomenon of customer involvement among Polish consumers. They consider the reasons for consumer involvement in the engagement process and specific forms of such participation. Engagement reduces the cost of attracting new customers, so this area is in demand by businesses and has significant potential for the implementation of loyalty programs. In the current study, which focuses on consumer preferences and choices in the Polish market, these findings are highly relevant. This information helps to understand the changing landscape of consumer behaviour and the growing role of e-commerce in the Polish market.

Dudziak and Kocira (2022) examined the preference-based determinants of consumer choice on the Polish organic food market. The majority of respondents claimed to know and occasionally buy organic food. Women in the age groups of 18-25, 26-40, and 41-60 showed more interest and purchased organic products. Men aged 18-25 and 41-60 also purchased organic food, but women were twice as likely to do so. Consumers in cities with over 30,000 residents preferred organic food, while those in rural areas or smaller cities tended to

buy local food. Most respondents spent 10-20 EUR on organic food monthly, with younger individuals spending less. The study suggested highlighting the quality and health benefits of organic food to increase its demand. It emphasized the need for producers and distributors to consider changing consumer preferences and conduct further research on consumer satisfaction, personality types, and expectations towards innovation in organic food. Overall, raising awareness about organic products could contribute to the growth of the organic food market in Poland.

The factors that determine consumer behaviour are summarized and presented by Szwacka-Mokrzycka et al. (2021). An important conclusion substantiated in the study of Szwacka-Mokrzycka et al. (2021) lies in the fact that the determinants that determine consumer choice are actively studied, and research is enriched with new developments in this direction. The issues of changes in consumer behaviour due to the spread of Covid-19 and the subsequent various restrictions in Slovakia are presented in the study of Culakova et al. (2022). According to the results of the analysis, the authors noted the emergence of a trend of making panic buying, as well as an increase in the number of purchases made through online channels. The studies by Szwacka-Mokrzycka et al. (2021) and Culakova et al. (2022) contribute relevant insights to the current study by examining the factors that determine consumer behaviour and the changes in consumer behaviour during the COVID-19.

In summary, the study reveals that COVID-19 and subsequent crises have significantly impacted consumer behaviour in Poland and other European countries. Consumer behaviour has become more conservative, with changes observed in spending patterns and a shift towards online shopping. Factors such as sustainable development, ethical consumption, and country of origin preferences influence consumer choices. The study also highlights similar trends in neighbouring countries like Slovakia and the Czech Republic. The findings align with the principles of behavioural economics, recognizing that consumer decisions are influenced by psychological and social factors.

### 3. Materials and Methods

In the process of studying preferences that determine consumer choice in the markets of goods and services in the Republic of Poland, a set of methods was used that was sufficient to achieve the set goals and substantiate the obtained results.

The study employed a range of methodological approaches to investigate the changes in consumer behaviour and preferences among Polish consumers in the markets of goods and services. The methods of analysis and synthesis were utilized to examine the dynamics of consumer behaviour and draw conclusions regarding the factors influencing consumer choice. Inductive and deductive reasoning were applied to develop an expanded system of factors that can potentially influence consumer behaviour and serve as predictors of consumer choice.

Abstraction was employed to identify and highlight the main trends characterizing changes in consumer behaviour among Poles in the post-pandemic period, considering the consequences of the spread of the

coronavirus infection, the Russian invasion of Ukraine, and subsequent crises. Statistical analysis methods were utilized to assess the dynamics of average monthly income and household expenses, including growth rates and the structure of expenditure.

A systematic approach was used to group the predictors of consumer behaviour and identify trends that impact consumer behaviour in the post-pandemic period. The study also drew on the principles of behavioural economics, which combines elements of psychology and economics to understand how individuals make economic decisions, recognizing that rational calculations of utility and price are not the sole determinants of consumer choices. The study focused on the influence of social attitudes, value orientations, economic well-being, and environmental concerns on consumer behaviour.

In terms of data collection, the study employed the Computer Assisted Web Interviewing (CAWI) method. CAWI is a cost-effective and efficient approach that allows for data collection without the presence of an interviewer, reducing potential biases and pressures on respondents. An online questionnaire was used to collect data. Participants were given Google forms in which they answered questions anonymously.

The sample consisted of 694 respondents, the representativeness was ensured by reproducing the main demographic characteristics of the population – Polish consumers of goods and services. The study included 475 women (68.53%) and 219 men (31.47%) who ranged in age from 18 to 55 years. All of them were citizens of Poland or citizens who had lived on the territory of the state for at least 5 years. All members of the sample indicated their income as average, and almost 520 people (75%) have completed higher education. The data were collected at the end of 2021 for two months (November-December).

The validity of the criteria selected for the study of consumer preferences is achieved through the analysis, systematization, and generalization of information about the factors that determine consumer choice in the post-pandemic period. Data processing was carried out using the T hierarchy analysis method. Saaty et al. (1980).

The vector of priorities calculated for each criterion reflects its significance. The consistency of the estimates obtained is determined by the formula (1).

$$CR = \frac{CI}{RC} \leq 20\% \quad (1)$$

where CR is the consistency ratio (it is considered acceptable, in some cases  $\leq 20\%$  is allowed), CI – the consistency index, RC – the value corresponding to the average random consistency of a matrix of this order, and is determined based on the dimension of the matrix and for seven criteria is equal to 1.32 (Saaty, 1980). The consistency index is determined by the formula (2):

$$CI = \frac{\lambda_{max} - n}{n-1} \quad (2)$$

where n – is the number of compared elements,  $\lambda_{max}$  – the calculated value.  $\lambda_{max}$  is calculated as the sum over each column of the matrix, multiplied by the corresponding component of the priority vector. The obtained values of the priority vector represent a system of criteria based on which the global priority of the alternative is calculated for each option (3).



$$P_{j(i)} = \sum_{i=1}^m P_{j(i)} \times b(i) \quad (3)$$

$P_{j(i)}$  – priority of the  $j$ -alternative following the  $i$ -criterion,  $b(i)$  – priority of the  $i$ -criterion. The logic of the study predetermined the following sequence of stages of its implementation. In the first stage, the prerequisites were formulated that led to a change in consumer behaviour; the main trends that emerged in the process of consumer choice as a result of crises are formulated.

The analysis of the dynamics of the average monthly income and expenses in the households of the Republic of Poland was carried out; the growth rate of indicators; cost structures for individual groups. A grouping of predictors of consumer behaviour has been carried out. In the second stage, the analysis of research on the preferences of Polish consumers was carried out using the method of analysis of hierarchies Saaty (1988) and Saaty (1980). The conclusions are formulated regarding the weight of certain criteria that reflect the preferences of Polish consumers in the market of goods and services. Within the framework of the ongoing study, the choice of the hierarchy analysis method is because its application allows a more systematic approach to solving the tasks and studying consumer preferences with the necessary degree of detail and the choice of alternative options for targeted actions.

At the final stage, based on the analysis carried out earlier, conclusions were drawn about trends reflecting changes in consumer preferences, their causes, and consequences; the significance of individual criteria reflecting consumer preferences is determined.

#### 4. Results and Discussion

The analysis of consumer behaviour allows us to assess the main driving force behind the process of making a purchase decision when faced with numerous alternatives. Understanding consumer preferences enables companies and entrepreneurs to accurately identify product attributes and features that have a decisive impact on the purchasing decision process. This understanding allows for a more complete satisfaction of needs, helps determine an acceptable price range for the target audience, and contributes to building customer loyalty. Consumer behaviour is influenced by various factors, including objective and subjective elements, external circumstances, and internal changes. European countries, including Poland, are facing multiple crises such as financial instability, energy crisis, migration issues, and the COVID-19 pandemic. These crises have significant consequences for the economy and society.

Despite the challenges, there is potential for companies and entrepreneurs who demonstrate adaptability and resilience. Optimization of product lines, and supply chains, and the use of digital technologies are crucial in addressing these challenges. Understanding consumer preferences is vital for developing effective strategies. Factors influencing consumer behaviour can be grouped into product attributes, service-related factors, consumer characteristics, and external macroeconomic factors. Analysing these factors provides valuable insights into consumer decision-making and helps businesses meet consumer needs.

It is important to note that the factors influencing consumer choice may vary depending on the type of purchase decision. The study acknowledges that the analysis of predictors of consumer choice is not complete and recognizes the variability in their influence on different purchase decisions. By analysing these factors, businesses can gain valuable insights into consumer decision-making and tailor their approaches accordingly. Factors influencing consumer behaviour can be categorized into product attributes, service-related factors, consumer characteristics, and external macroeconomic factors:

1. Product attributes: these factors encompass physical, chemical, and ergonomic properties of the product that influence consumer decision-making.
2. Service-related factors: factors such as delivery speed and available forms of payment play a role in shaping consumer behaviour during the purchase process.
3. Consumer characteristics: these factors include physiological, psychological, and sociocultural aspects that influence individual preferences and choices.
4. External macroeconomic factors: economic, environmental, and social factors outside the individual's control can impact consumer behaviour.

Understanding and analysing these factors can provide valuable insights into consumer decision-making and assist businesses in developing effective strategies to meet consumer needs and preferences.

One of the important characteristics that need to be considered in the process of analysing consumer behaviour is the dynamics of income and expenditure at the household level. The dynamics of indicators reflecting the amount of average monthly income and expenses per person in a household in the Republic of Poland from 2010 to 2021 are shown in Figure 1.

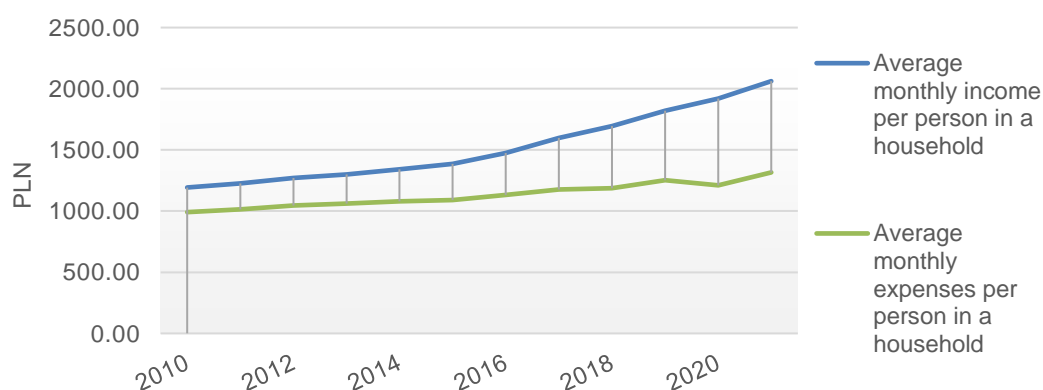


Figure 1: Dynamics of average monthly income and expenses per person in a household in the Republic of Poland in 2010-2021, PLN (Polish Zloty)

Source: compiled by the author based on Bareja-Wawryszak et al. (2022).

The data presented in Figure 1 shows that, despite the Covid-19 pandemic, the average monthly income is rising. The growth rate was also characterized by positive values comparable to the pre-pandemic period (Table 1).

Table 1: Growth rate of average monthly income and average monthly expenses per person in a household in the Republic of Poland in 2010-2021

Years	The growth rate of the indicator "Average monthly income per person in the household", %		The growth rate of the indicator "Average monthly expenses per person in the household", %	
	chain	basic	chain	basic
2010				
2011	3%	3%	2%	2%
2012	4%	6%	3%	5%
2013	2%	9%	2%	7%
2014	3%	12%	2%	9%
2015	3%	16%	1%	10%
2016	6%	24%	4%	14%
2017	8%	34%	4%	19%
2018	6%	42%	1%	20%
2019	7%	53%	5%	26%
2020	6%	61%	-3%	22%
2021	7%	73%	9%	33%

Source: compiled by the author based on Barrett (2022).

Analysing the dynamics of average monthly expenses per person in the household of the Republic of Poland, the authors note the change in consumer behaviour, which manifested in the reduction of expenses. Thus, in 2020, the growth rate for the first time in the analysed period was characterized by a negative value (Table 1). Details of average monthly expenses per person in a household in the Republic of Poland are presented in Figure 2.

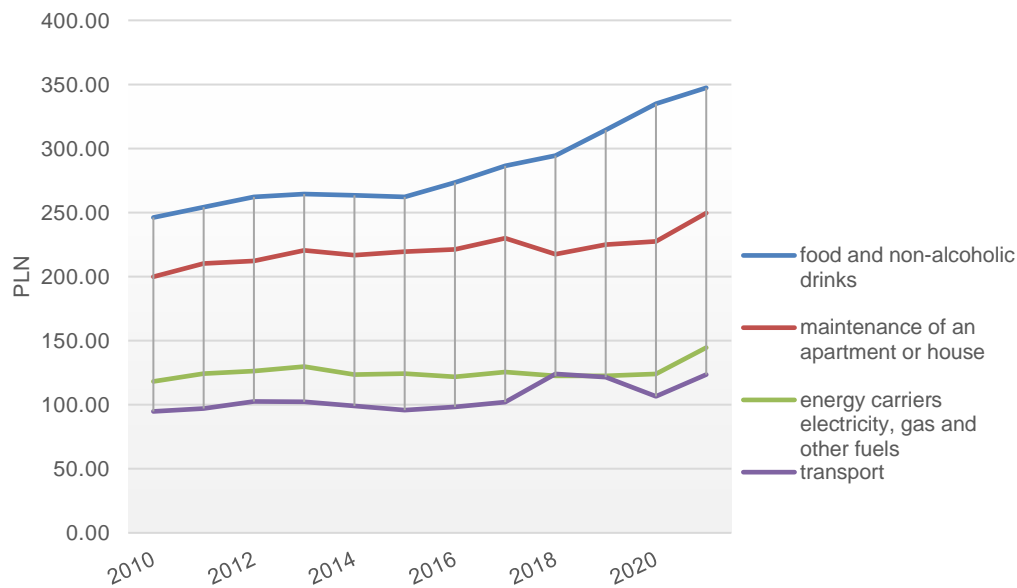


Figure 2: Dynamics of average monthly expenses per person in a household in the Republic of Poland by cost groups in 2010-2021, PLN (Polish Zloty)

Source: compiled by the author based on Bareja-Wawryszuk et al. (2022).

Based on the data in Figure 2, the authors can conclude that the change in consumer behaviour during the pandemic was most evident in the increase in spending on food and non-alcoholic beverages, which is one of the manifestations of the panic buying trend at the initial stage of the crisis associated with the spread of the pandemic Covid-19. The structure of household expenditures by the analysed groups of costs is presented in Table 2.

Table 2: Structure of average monthly expenses per person in a household in the Republic of Poland by cost groups in 2010-2021, %

Years	Food and non-alcoholic drinks	Maintenance of a flat or house	Energy, electricity, gas, and other fuels	Transport
2010	24.83%	20.16%	11.92%	9.56%
2011	25.03%	20.72%	12.24%	9.56%
2012	25.09%	20.31%	12.09%	9.81%
2013	24.90%	20.77%	12.23%	9.64%
2014	24.41%	20.09%	11.46%	9.18%
2015	24.04%	20.11%	11.40%	8.78%
2016	24.17%	19.56%	10.77%	8.70%
2017	24.35%	19.54%	10.67%	8.67%
2018	24.82%	18.32%	10.32%	10.45%
2019	25.11%	17.97%	9.79%	9.70%
2020	27.68%	18.80%	10.25%	8.82%
2021	26.39%	18.97%	10.99%	9.39%

Source: compiled by the author based on Barrett (2022).

The data in Table 2 indicate a slight change in the share of expenses falling on the expense groups “maintenance of a flat or house”, “energy, electricity, gas and other types of fuel”, “transport” (in 2019 -0.35, -0.54, -0.75, respectively), with a subsequent increase to the level of the pre-pandemic period.

The observed tendency to make panic buying during the spread of the pandemic, when the scale of changes that would have to be faced was hardly predictable, and the restrictions imposed were manifested as physical inconveniences for consumers (disruption of supply chains, lack of necessary goods on sale, rising prices for demanded goods etc.), and in the psychological pressure caused by uncertainty – not the only change in consumer behaviour. A variety of manifestations of changes in consumer behaviour due to the spread of Covid-19 were recorded by companies and entrepreneurs, which, for the most part, led to a reactive response and a difficult period of finding solutions to minimize damage (Pakhomova et al., 2021).

Summarizing the results of studying changes in consumer behaviour in the Republic of Poland as a result of the spread of coronavirus infection, the Russian invasion of Ukraine and the subsequent crises, authors will highlight and supplement the main trends for the markets of goods and services (Table 3).

Table 3: Main trends in consumer behaviour in Poland during crises

Commodity Market	Service Market
Panic buying at the initial stage of the crisis associated with the pandemic	At the initial stage of the crisis - reducing the cost of services
Reduction of expenses for certain categories of goods	As we adapt to COVID-19 restrictions - an increase in the cost of services related to receiving experiences
Omnichannel	The emergence of alternative formats for the provision of services
Development of e-commerce	Development of e-commerce
Consumer ethnocentrism	More conservative financial behaviour
Conservative financial behaviour	The declining importance of human service in favour of automated
	Faster response of service providers to needs
Ethical consumption	Innovative forms of communication with consumers
	Involvement of consumers in the service process

Source: compiled by the author.

Further research included the collection of data on consumer preferences regarding the choice of goods and services among Polish consumers. The 694 respondents took part in the study, the answers were obtained using the CAWI method. Part of the respondents' answers (N=3) was excluded from the data array based on which the results were formed (the reasons are stated in the description of the sequence of the study).

When conducting a study of preferences that determine the choice of Polish consumers in the markets of goods and services, the method of analysis of hierarchies of Saaty (1988) and Saaty (1980). In this paper,

the hierarchy analysis method allowed the explication of consumer preferences to identify predictors of consumer behaviour (see Figure 1), the change of which will increase consumer loyalty. As alternatives, two options based on the grouping of predictors of consumer behaviour were considered: Alternative 1 – factors reflecting the properties and attributes of the product; Alternative 2 – factors reflecting the service available during the purchase process.

Factors describing the consumer and external, including macroeconomic factors, are not considered within the framework of the study as an alternative, since they are characterized by less manifestation directly in the process of consumer choice and the complexity of influencing them as predictors on the part of business (Boustani et al., 2021). The need to consider the factors that describe the consumer as a predictor implies a change in the target audience, which is an independent task and is beyond the scope of this study. External, including macroeconomic, factors, indirectly influencing consumer behaviour, are outside the area of business responsibility, therefore, they are excluded from consideration as alternatives.

For the goods market, the system of criteria includes price, quality, country of origin, packaging, variety and convenience of payment methods, delivery speed and variety of delivery options, environmental friendliness; for the service market – price, quality, involvement, variety, and convenience of payment methods, environmental friendliness of the materials used, speed of service delivery without loss of quality, quality assurance (Nastisin et al., 2022). The results of determining the weight of criteria reflecting the preferences of Polish consumers when choosing goods are presented in a matrix (Table 4).

Table 4: Matrix of pairwise comparisons of criteria reflecting the preferences of Polish consumers in the goods market (on the example of one respondent)

	Price	Quality	Country of origin	Package	Variety and convenience of payment methods	Delivery speed and variety of delivery options	Environmental friendliness	Matrix eigenvector (a)	Priority vector (x)
Price	1	3	8	2	7	5	7	3.815	0.367
Quality	1/3	1	9	7	9	4	2	2.846	0.274
Country of origin	1/8	1/9	1	8	3	7	7	1.490	0.143
Package	1/2	1/7	1/8	1	5	5	5	1.016	0.098
Variety and convenience of payment methods	1/7	1/9	1/3	1/5	1	3	3	0.514	0.049
Delivery speed and variety of delivery options	1/5	1/4	1/7	1/5	1/3	1	7	0.443	0.043
Environmental friendliness	1/7	1/2	1/7	1/5	1/3	1/7	1	0.267	0.026
Sum	2.444	5.115	18.744	18.600	25.667	25.143	32.000	10.391	1.000

Source: calculated by the author.

The values obtained as a result of calculating the priority vector (X) are the weights of the corresponding criteria. The consistency of the estimates obtained is determined by the formula (1). That is  $10.391/1.32=7.872$  consistency should be  $\leq 10\%$ , in some cases  $\leq 20\%$  is acceptable. The condition is met. From further calculations, the data were excluded, during the processing of which the condition for the consistency ratio was not satisfied (excluded at a value of  $>10\%$ ). Similarly, calculations were made for a system of criteria reflecting the preferences of Polish consumers when making purchases in the services market. The generalized results of the significance of criteria for consumers, which determine their choice, are presented in Table 5.

Table 5: Weight coefficients of criteria reflecting the preferences of Polish consumers in the market of goods and services

Goods market		Service market	
Criteria	Criterion weight	Criteria	Criterion weight
Price	0.349	Price	0.351
Quality	0.267	Quality	0.314
Country of origin	0.127	Environmental friendliness of the materials used	0.102
Package	0.099	Variety and convenience of payment methods	0.097
Variety and convenience of payment methods	0.058	Involvement	0.064
Delivery speed and variety of delivery options	0.054	Speed of service without loss of quality	0.039
Environmental friendliness	0.046	Quality assurance	0.033
Sum	1.000	Sum	1.000

Source: calculated by the author.

It is advisable to detail the intermediate result that provides information about the preferences that determine consumer choice in the context of individual categories of consumers, product groups, and geographic locations, which allows the development of a set of measures aimed at increasing consumer loyalty by influencing the predictors that are a priority in the selection process. Further application of the Saaty (1988) method allows to obtain the values of the importance of the considered alternatives for influencing consumer behaviour (Table 6).

Table 6: Priority of the considered alternatives according to all criteria, taking into account their significance for consumers

Alternative	The resulting indicator for the goods market	The resulting indicator for the service market
Alternative 1 – factors reflecting the properties and attributes of the product	0.819	0.624
Alternative 2 – factors reflecting the service available during the purchase process	0.181	0.376

Source: calculated by the author.

The results of the calculations indicate that when choosing goods, the consumer pays the main attention to the properties and attributes of the product itself, paying much less attention to the related service; when choosing services, the importance of factors reflecting the level of service increases significantly (Baigusheva et al., 2013). The application of the Saaty (1988) hierarchy analysis method in the process of researching the preferences that determine consumer choice provides the business with a basis for making informed decisions. The information received, both in a generalized and detailed form, with an appropriate information policy, can become a tool to help build effective relationships with the consumer.

In a report on the transformation of consumer behaviour in the Republic of Poland, “Strategy&” (Badowski, 2022), which is part of PricewaterhouseCoopers (PwC, 2022), notes that the consequences of the Covid-19 pandemic and the war in Ukraine are the most significant factors that have influenced the activities of companies and individual entrepreneurs. Recognizing the magnitude of the changes taking place and their penetration into all spheres of society, the authors note that for European consumers the last few years have become a time when the pace of change in consumer behaviour has accelerated, and their vector has changed its usual direction.

The conclusions of Wood (2020), regarding the evolution of consumer behaviour, most fully convey the changes that have taken place in the retail trade. The author notes that in the process of consumer choice, the Polish consumer changed values. Consequences: awareness of the importance of spending on impressions; more conservative financial behaviour (tendency to spend less and save more); the disappearance of the main motives for living in the city; growth in spending on “best for you” (BFY) products (9% growth in the Republic of Poland in 2021). The growing demand for omnichannel offers, the increased effect of pre-store preferences, the presence of labels when making a purchase decision, the development of e-commerce and the digital revolution are also highlighted as changes that determine consumer choice in the product market (Ali et al., 2022).



Most of the studies reviewed in the process of studying consumer behaviour collected information using online surveys, which reflects the sustainability and continuity of changes in public behaviour associated with openness to digitalization in all areas. Among the methods used to process the results, cluster, and correlation analysis have found wide application. The method of analysis of hierarchies was used in expanding the methods used (Saaty, 1988; Saaty, 1980). The use of method of analysis of hierarchies (analytical hierarchical process) and individual methods in the process of making managerial decisions are actively used in economic research, including for modelling the hierarchical composition of factors influencing the decision-making process by the consumer (Stofkova et al., 2022; Wielki et al., 2020). An analysis of the practical application of the hierarchy analysis method in the process of making managerial decisions demonstrates the high accuracy of the results. At the same time, businesses note that this tool is quite complex for everyday use while showing interest in its capabilities.

Determining the criteria, their significance, and assessing the impact of each of the criteria on the relevance of deciding on the choice of alternatives provides the researcher with a wide range of tools that allow qualitative variables to be converted into quantitative ones, visualized and interpreted depending on the tasks and quickly assess changes when adjusting the initial data or alternatives.

## 5. Conclusions

The study provides a summary of the challenges encountered by the economies of European countries, which have led to changes in consumer behavior, including among Polish consumers. These changes can be attributed to geopolitical instability and economic uncertainty in Europe. Building upon previous investigations into consumer behavior, the study proposes a categorization of factors that influence consumer behavior. These factors are put forth as predictors of consumer choice, offering insights into understanding and analyzing consumer preferences.

Through the analysis of consumer behavior, data regarding the income and expenses of Polish households from November to December 2021 are presented. The findings reveal that, despite the ongoing pandemic, the average monthly income indicator experienced a positive growth rate, reaching values comparable to the pre-pandemic period. However, expenditures per household member exhibited a reduction, albeit unevenly across different groups. This reduction can be attributed to one of the manifestations of panic buying, which occurred during the analyzed period.

The shifting preferences of consumers in Poland have significant implications for businesses operating in the market. To thrive in this dynamic environment, businesses must adapt to these changing preferences and fulfill the evolving needs of their customers. This entails innovating their products and services, adjusting their marketing strategies, enhancing the overall customer experience, and taking into consideration sustainability and ethical factors.

During the pandemic, online commerce witnessed a surge, particularly in sectors such as appliances, clothing, and footwear. Studies conducted even after the peak of the pandemic have confirmed this upward trend, which continues to evolve due to the widespread adoption of online shopping systems. As a result, businesses should recognize the growing importance of e-commerce and adapt their strategies accordingly to tap into this expanding market.

Based on the research findings, businesses in Poland can consider adopting strategies such as enhancing their online presence, expanding product offerings for online purchases, improving customer service, embracing ethical and sustainable practices, utilizing digital marketing techniques, adjusting pricing strategies, encouraging customer engagement, staying informed about consumer preferences and market trends, and adapting their strategies accordingly. These strategies can help businesses cater to the preferences of Polish consumers, improve their competitiveness, and meet the changing demands of the market.

The findings of this study also have implications for other economies, such as the Asian consumer market. Businesses should consider several key implications. Firstly, understanding the diverse cultural factors that influence consumer behavior is essential for tailoring products and services to meet the preferences and values of Asian consumers. Secondly, businesses should leverage technological advancements and the increasing adoption of online shopping in the region, ensuring a strong online presence and utilizing digital marketing strategies. Additionally, recognizing the rising middle class, focusing on personalization and localization, incorporating sustainability and ethical considerations, and embracing influencer marketing and social media are crucial for success. Adapting to the regulatory environment, staying aware of the competitive landscape, and conducting continuous market research are also vital in meeting the evolving demands of the Asian consumer market.

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