

ANALYSIS OF CONSUMER BEHAVIOR OF THE POPULATION IN ROMANIA IN THE CONTEXT OF RISING PRICES

TOMESCU-DUMITRESCU CORNELIA

ASS.PROF.PHD, "CONSTANTIN BRÂNCUȘI" UNIVERSITY FROM TÂRGU-JIU

e-mail:elitomescu@gmail.com

Abstract

The sharp increase in prices represents an economic phenomenon with a significant impact on consumer behavior, influencing expenditure patterns, purchasing priorities, and households' adaptation strategies. This article aims to analyze the consumer behavior of the population in Romania in the context of rising prices, highlighting the changes that have occurred in purchasing decisions and in the allocation of household budgets. The research is based on the statistical survey method, applied to a representative sample of the population, which allows for the collection of quantitative data on consumption frequency, preferences for different product categories, and strategies adopted to manage the impact of price increases. The collected data were analyzed using descriptive and inferential statistical methods, providing an empirical perspective on the relationship between price dynamics and consumer behavior. The results indicate a pronounced shift toward essential goods, a reduction in the consumption of non-essential products, and increased price sensitivity, with significant differences across population segments depending on income level and socio-demographic characteristics. The study's conclusions contribute to a deeper understanding of consumer behavior during periods of economic pressure and may serve as a relevant basis for the formulation of public policies and marketing strategies.

Keywords: *consumer behavior; rising prices; inflation; statistical survey; population of Romania*

JEL: *D12, D91, E31, C83*

1. Introduction

Consumer behavior represents a central field of economic and social research, encompassing the set of processes through which individuals and households select, purchase, use, and dispose of goods, services, and experiences in order to satisfy their needs and desires (Schiffman & Kanuk, 2010). The study of consumer behavior involves the analysis of both internal factors—such as motivations, perceptions, attitudes, and lifestyle—and external factors, including social, cultural, and economic influences, which can lead to significant changes in consumption choices (Kotler & Keller, 2016; Solomon, 2017).

In Romania, within the recent economic context marked by significant price increases, persistent inflation, and rising costs of basic goods and energy, the analysis of consumer behavior becomes particularly relevant. According to the specialized literature, periods of economic pressure lead to changes in expenditure structures, prioritization of essential goods, reduced consumption of non-essential products, and the search for more affordable alternatives or promotional offers (Biswas & Roy, 2015; Lamberton & Stephen, 2016). Understanding these changes is essential for the development of economic policies, the adjustment of commercial strategies, and the anticipation of consumer behavior during periods of financial instability.

The method chosen to investigate the consumer behavior of the Romanian population is the statistical survey, regarded as one of the most rigorous and validated quantitative research methods. By administering a survey to a representative sample, it is possible to collect accurate data on purchase frequency, preferences for different product categories, the degree of adaptation to rising prices, and the strategies adopted by households to manage their budgets (Groves et al., 2009; Cochran, 1977). This method also allows for a differentiated analysis of consumer behavior according to socio-demographic variables such as age, income, level of education, and area of residence, providing a detailed and stratified overview of the phenomenon.

The aim of this article is to identify and analyze the effects of rising prices on the consumer behavior of the population in Romania, highlighting patterns of expenditure adjustment, budget allocation priorities, and the adaptation strategies adopted by consumers. The results obtained through the statistical survey allow for a rigorous empirical approach, contributing to the substantiation of economic decisions, public policies, and marketing strategies oriented toward consumers' actual needs.

This research also seeks to integrate the theoretical perspective with recent empirical data, providing a comprehensive picture of consumer behavior in the context of current economic pressures and highlighting both general trends and significant differences among population segments.

2. Research Purpose and Objectives

The main purpose of the research is to analyze the manner in which rising prices influence the consumer behavior of the adult population in Romania.

The specific objectives are:

- to analyze the population's perception of price developments;
- to identify changes in the structure of household expenditures;
- to assess differences in consumer behavior according to income level;
- to analyze the influence of the area of residence (urban/rural) on consumer behavior;
- to highlight the strategies adopted by the population to adapt to rising prices.

3. Consumer Behavior

Consumer behavior represents the process through which individuals and households decide how to allocate their financial resources in order to satisfy needs and desires. Utility theory (Marshall, 1890) suggests that consumers seek to maximize satisfaction as a function of income and prices, while modern behavioral models emphasize the influence of perceptions and preferences on consumption decisions (Kotler & Armstrong, 2018).

The structure of household expenditures reflects priorities between essential goods (food, housing, energy) and non-essential goods (leisure, entertainment). Economic changes, such as inflation, lead to adjustments in this structure, with differentiated effects depending on income levels and area of residence (Mankiw, 2020).

Inflation represents a generalized and sustained increase in the price level, reducing purchasing power and particularly affecting the consumption of non-essential goods (Voineagu, 2018). Indirect effects manifest through changes in preferences, a shift toward cheaper products, and adjustments in saving strategies. Vulnerable groups, such as low-income individuals and residents of rural areas, experience these effects more acutely, thereby intensifying economic and social inequalities (Chelcea, 2017).

Consumer behavior is a multidisciplinary field that integrates contributions from psychology, sociology, economics, and marketing to explain how individuals, groups, and organizations select, purchase, use, and dispose of goods, services, or ideas to satisfy their own needs and desires (Schiffman & Kanuk, 2010). Its study is not limited to purchasing decisions alone but also includes the analysis of factors influencing these choices, such as motivations, perceptions, attitudes, cultural values, social influences, and consumers' personal characteristics.

Dominant theoretical models highlight complementary perspectives. The classical economic model views the consumer as a rational agent who optimizes the utility derived from purchases (Becker, 1976). However, subsequent research has demonstrated the limitations of this approach, emphasizing the influence of emotions, social norms, and individual experiences on purchasing behavior (Solomon, 2017). In this respect, psychological and behavioral models enhance the understanding of the decision-making process by focusing on perception, learning, motivation, and conditioning (Maslow, 1943; Skinner, 1953).

Furthermore, cultural and social factors have been identified as essential determinants of consumer behavior. Family, reference groups, and cultural norms shape preferences, attitudes, and brand-related behaviors, indirectly influencing individual decisions (Hofstede, 2001). At present, digital trends, social media-based marketing, and concerns related to sustainability have expanded the complexity of consumer behavior research, generating new research directions and analytical methodologies (Lamberton & Stephen, 2016; Biswas & Roy, 2015).

Thus, understanding consumer behavior is essential for the development of effective marketing strategies and for designing personalized consumer experiences, contributing to increased organizational competitiveness and to meeting market demands.

4. Theoretical Models of Consumer Behavior

1. **Rational (Economic) Model:** Based on classical economic theory, this model assumes that consumers are rational and make decisions to maximize their utility (Becker, 1976). The limitations of this model emerge when emotions, personal preferences, and social influences come into play.
2. **Psychological Model:** Focuses on internal processes such as perception, motivation, attitudes, and learning. For example, Maslow (1943) proposes the hierarchy of needs, explaining how physiological, safety, social, and self-actualization needs influence consumption decisions.
3. **Behavioral Model:** Emphasizes observable behaviors and learning through experience, rewards, and incentives. Skinner's operant conditioning theory (1953) is frequently cited in this context.
4. **Social Influence Model:** Reference groups, culture, family, and the opinions of other consumers affect choices (Solomon, 2017). In modern marketing, social media phenomena and influencer marketing play a major role.

5. Determinants of Consumer Behavior

a) **Personal Factors:** Age, gender, socio-economic status, and education (Kotler & Keller, 2016); lifestyle and personality, which influence preferences and brand choices (Aaker, 1997).

b) **Psychological Factors:** Motivation and needs (Maslow, 1943); perception and attention to stimuli (Schiffman & Kanuk, 2010); attitudes and beliefs related to products and services.

c) **Social and Cultural Factors:** Family, friends, and colleagues influence decisions through social pressure or cultural norms (Solomon, 2017); culture and subculture determine types of products consumed and brand-related behaviors (Hofstede, 2001).

d) **Situational Factors:** Physical or emotional context, product availability, promotions, and seasonality can affect purchasing decisions (Belk, 1975).

Recent Trends in Consumer Behavior Research:

- **Digital Consumer:** The influence of online platforms and reviews on the purchasing process (Lamberton & Stephen, 2016).
- **Sustainability and Responsible Consumption:** Growing environmental awareness is shaping consumer preferences (Biswas & Roy, 2015).
- **Neuromarketing and Emotions:** Recent studies highlight how emotions impact decision-making and brand engagement.

și reacțiile subconștiente influențează decizia de cumpărare (Plassmann et al., 2012).

5. Statistical Survey as a Research Tool

The statistical survey represents the primary method for collecting primary data in studies on consumer behavior. It allows for the analysis of households' perceptions, attitudes, and actions, as well as the assessment of relationships between variables using descriptive and inferential statistical techniques (Anghelache, 2016).

The purpose of a statistical survey is to determine trends, opinions, or behaviors without the need to study the entire population (Creswell, 2014). It is an essential quantitative research method, used to collect data from a representative sample of a population in order to estimate its characteristics and draw inferential conclusions (Groves et al., 2009). Its development has been influenced both by the practical needs of censuses and public policy and by the theoretical advancement of modern statistics. The first systematic forms of data collection appeared in the 17th–18th centuries, primarily aimed at censuses and taxation, laying the foundation for subsequent statistical studies (Anderson, 1976).

The 20th century brought significant contributions to the definition of sampling methods and the theoretical framework of surveys. Neyman (1934) introduced the concept of stratified sampling and highlighted the importance of separating sampling errors from arbitrary selection errors, providing the mathematical basis for modern surveys. During the interwar period, political and social opinion surveys developed by Gallup and Roper demonstrated the relevance of applying these methods to estimate population perceptions and intentions, representing the first examples of large-scale representative surveys.

Subsequently, in the post-war period, the complexity of statistical surveys increased significantly with the introduction of cluster and stratified samples, non-response corrections, data weighting, and the use of multivariate analysis for interpreting results (Cochran, 1977; Hosmer & Lemeshow, 2000). These methodological innovations improved the precision and validity of statistical inferences, consolidating the survey as a central tool in social, economic, and marketing research.

In recent decades, digitalization and the development of big data have generated new opportunities and challenges for statistical surveys. Online data collection methods, digital panels, and predictive analytics allow for rapid data acquisition and integration with traditional sources, but also raise issues related to representativeness and selection bias (Couper, 2008; Einav & Levin, 2014). In this context, traditional surveys based on probabilistic samples and structured interviews remain indispensable for ensuring data quality and reliability.

Therefore, the statistical survey constitutes an essential methodological tool, providing empirical support for the analysis of behaviors, opinions, and population characteristics, and playing a crucial role in decision-making in politics, economics, marketing, and applied social research.

In the context of this study, the survey aims to examine:

- Reduction or increase in consumption according to age.
- Consumers' orientation toward cheaper products, differentiated by gender.
- Changes in shopping frequency depending on income.

6. Stages of a Statistical Survey

According to the specialized literature (Fowler, 2014; Babbie, 2020), a statistical survey involves the following stages:

1. **Defining Objectives** – Clarifying the research questions and the information sought. (Example: *What is the consumer behavior of Romanians according to age, gender, and income?*)
2. **Selecting the Population and Sample** – Identifying the group of individuals to be interviewed and choosing the sampling method (e.g., simple random, stratified). (In our example, the population could be the entire adult population, and the sample would be selected to include all age groups, genders, and income levels.)
3. **Designing the Questionnaire** – Formulating questions to obtain quantitative or qualitative data. (Survey examples: *“Have you reduced your consumption in the last 6 months?”* *“Do you purchase cheaper products?”*)

4. **Data Collection** – Administering the questionnaires through face-to-face, telephone, or online interviews.
5. **Data Processing and Analysis** – Organizing the data into tables, calculating percentages, and creating charts for interpretation.
6. **Interpreting Results and Reporting** – Analyzing trends and drafting conclusions for decision-makers or researchers.

7. Research Hypotheses

Based on economic literature and the current socio-economic context in Romania, the following hypotheses have been formulated:

- **H1:** Rising prices lead to a reduction in the consumption of non-essential goods and services.
- **H2:** Low-income populations are more affected by inflation compared to medium- and high-income populations.
- **H3:** Individuals in rural areas are more vulnerable to rising prices than those in urban areas.
- **H4:** Rising prices cause consumers to shift toward cheaper products or alternative brands.

8. Research Methodology

The research employs the statistical survey method, based on the collection of primary data through a standardized questionnaire.

The population studied consists of all individuals aged 18 and over residing in Romania. This population represents the statistical universe of the research.

Given the large size of Romania's adult population, the study relies on a representative sample. The sample size is 1,000 respondents. Stratified probabilistic sampling was used, with stratification criteria including area of residence (urban/rural), development region (the 8 regions of Romania), age category, and income level.

The sample size allows for statistically relevant results, with a margin of error of approximately $\pm 3\%$ at a 95% confidence level.

The research instrument is a questionnaire consisting of 18 questions, structured as follows:

- **Identification questions:** age, gender, income, area of residence;
- **Questions on perceptions of price changes;**
- **Questions regarding changes in consumer behavior;**
- **Questions on adaptation strategies to rising prices.**

Data were collected through both online and face-to-face administration of the questionnaire. Data processing involved coding the responses and centralizing them in a statistical database.

In this survey, the variables are classified as follows:

- **Qualitative (categorical):** Gender (male/female), orientation toward cheaper products (Yes/No/Occasionally).
- **Quantitative:** Reduction in consumption (%) and shopping frequency (% daily/weekly/monthly).
- **Ordinal:** Shopping frequency (daily, weekly, monthly).

According to Hair et al. (2019), the correct identification of variable types influences the applicable statistical analysis methods, including frequency tables, charts, and statistical tests.

9. Data Analysis and Interpretation

The data collected from the survey allow for:

- **Comparing consumer behavior** across different age groups, genders, or income levels.
- **Identifying trends and patterns**, e.g., older individuals reduce consumption more, while higher-income individuals shop less frequently.

- **Creating charts and tables** for clear visualization of information (frequency tables, bar charts, or pie charts).

Data interpretation is essential for decision-making in marketing, public policy, or planning commercial offerings (Bryman & Bell, 2015).

Surveys also allow for the application of **Chi-square tests, Pearson correlation, and linear regression** to evaluate relationships between variables such as inflation perception and changes in consumption (Voineagu, 2018; Anghelache, 2016). The Chi-square test is used to assess the association between qualitative variables, such as household income and changes in expenditure.

Table 1: Distribution of respondents by monthly income and changes in non-essential goods consumption

Income	Low income (%)	Medium income (%)	High income (%)
Below Average	74	20	6
Average	49	42	9
Above Average	35	55	10

Table 2: Distribution of Respondents by Area of Residence and Perception of Inflation Impact

Area	High Impact (%)	Moderate Impact (%)	Low/No Impact (%)
Urban	55	35	10
Rural	66	28	6

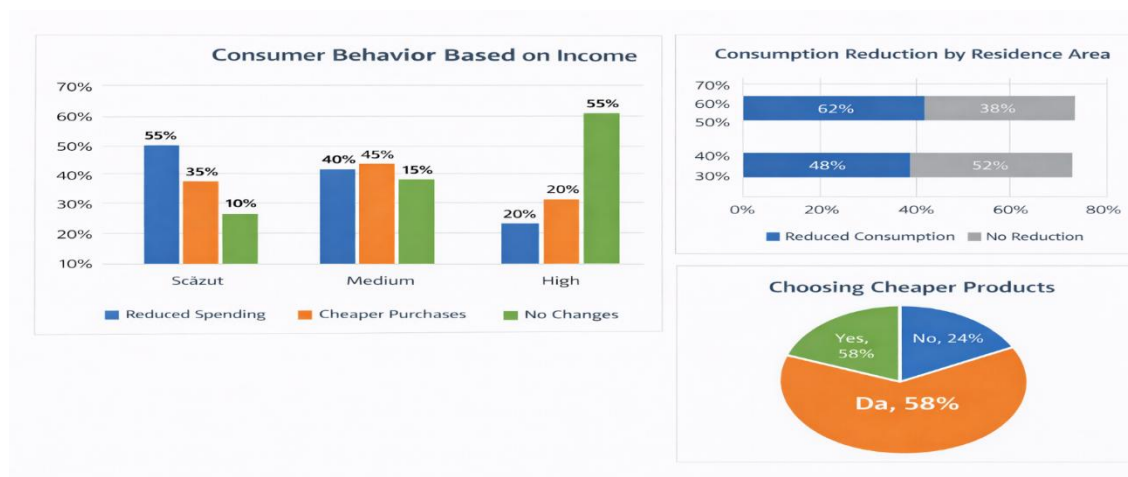


Figure 1: Consumer Behavior of the Surveyed Population

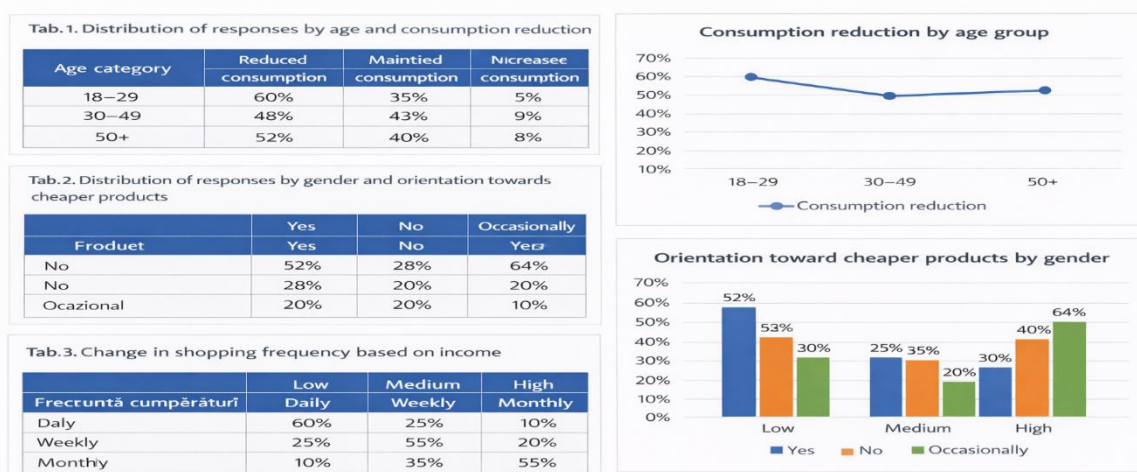


Figure 2: Consumer Behavior in Terms of Reduced Consumption and Shift Toward Cheaper Products

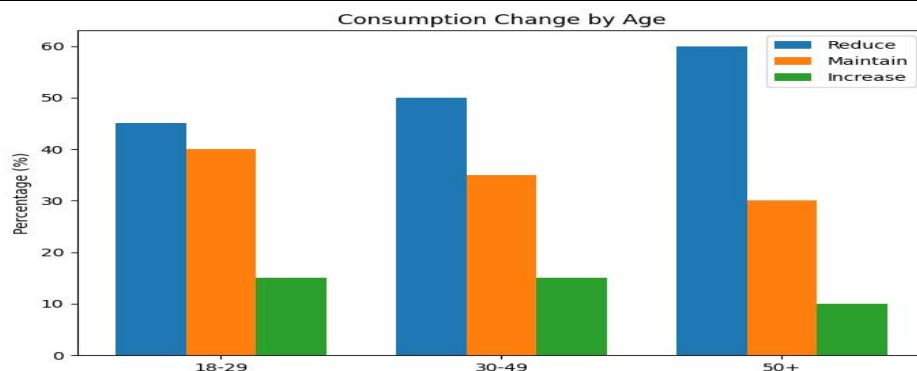


Figura nr. 3. Comportamentul de consum în funcție de vârstă

Figure 3 illustrates that the reduction in consumption increases with age. Specifically, 45% of consumers aged 18–29, 50% of those aged 30–49, and 60% of those over 50 reduce their consumption. Consumption increases decline among older individuals (from 15% to 10%), while maintenance of consumption decreases slightly with age. Older consumers tend to be more cautious and are more likely to save or reduce spending. Younger consumers are more flexible and may even increase consumption at times. Savings offers or promotional discounts may be particularly attractive for the 50+ age segment.

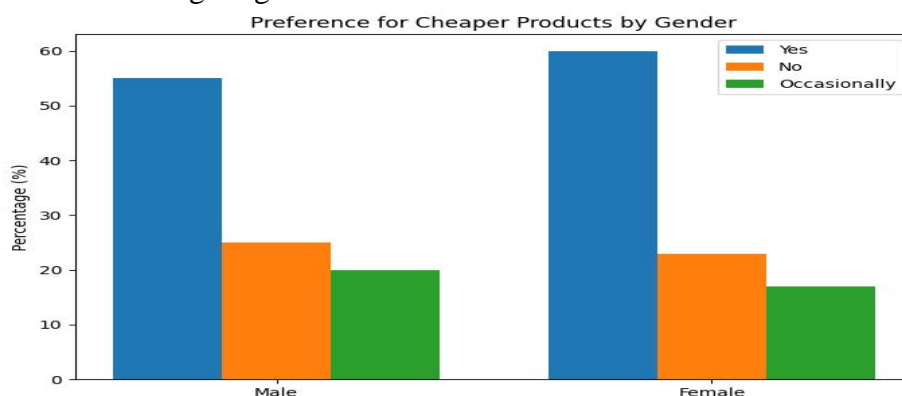


Figure 4: Preference for Cheaper Products by Gender

It can be observed that women are slightly more inclined to seek cheaper products (60% vs. 55%), while the difference between “No” and “Occasionally” responses is minimal. Both genders show a strong tendency toward saving, but women appear somewhat more price-sensitive. Companies can leverage promotions, value packs, or targeted discounts for both genders, with a slight emphasis on the female segment.

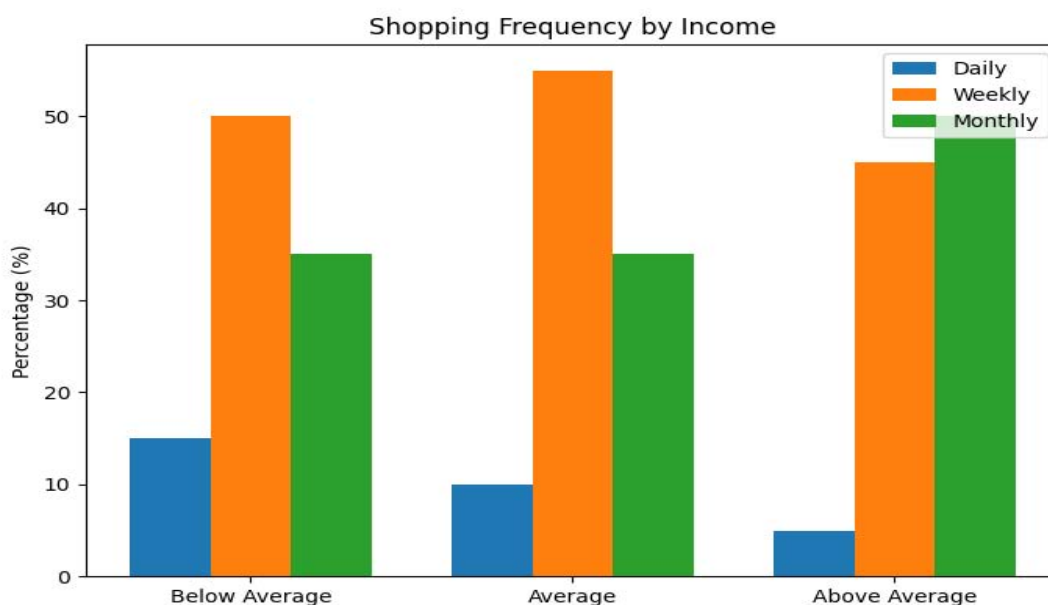


Figure 5: Shopping Frequency by Income

Individuals with below-average incomes shop more frequently (weekly 50%), whereas those with above-average incomes shop less often but in larger quantities (monthly 50%). Daily shopping is very low among higher-income groups. Income influences shopping patterns as follows:

- **Lower incomes** → frequent shopping in small quantities.
- **Higher incomes** → less frequent shopping, but larger purchases per visit.

10. Discussion

The data analysis was conducted using descriptive and inferential statistical methods to test the formulated hypotheses.

The interpretation of the results confirms the existence of statistically significant relationships between the analyzed variables, highlighting the clear impact of rising prices on the consumer behavior of the adult population in Romania.

Regarding **Hypothesis H1**, the calculated Chi-square value ($\chi^2 = 18.47$; $df = 2$) exceeds the critical value at the 5% significance level, indicating the rejection of the null hypothesis and acceptance of the alternative hypothesis. This statistical relationship demonstrates that a strong perception of price increases is associated with a significant reduction in the consumption of non-essential goods and services, confirming consumers' cautious behavior in an inflationary context.

For **Hypothesis H2**, the obtained Chi-square value ($\chi^2 = 22.13$; $df = 2$) reflects a strong association between income level and the degree of impact experienced by the population. Observed differences among income categories indicate that low-income individuals bear a greater share of the effects of price increases, contributing to the widening of economic and social inequalities.

Regarding **Hypothesis H3**, the test results ($\chi^2 = 9.62$; $df = 1$) show a statistically significant relationship between area of residence and vulnerability to rising prices. Individuals in rural areas experience a more pronounced impact of inflation, which can be explained by lower income levels and limited access to alternative consumption options.

Hypothesis H4 is also confirmed by the obtained Chi-square value ($\chi^2 = 16.05$; $df = 2$), indicating a significant association between rising prices and consumers' orientation toward cheaper products or alternative brands. This adaptation reflects rational utility-maximizing behavior under budgetary constraints.

Overall, the results demonstrate that inflation generates structural changes in the consumer behavior of Romania's population, with effects varying according to income and area of residence.

The use of the Chi-square test confirms the robustness of the conclusions drawn and underscores the methodological relevance of the statistical survey in applied economic research.

11. Conclusions

The conducted research highlights, in a rigorous and statistically grounded manner, the significant impact that rising prices have on the consumer behavior of Romania's adult population. Using a statistical survey and Chi-square association tests, the study demonstrated clear relationships between inflation perception and structural changes in consumption.

The results indicate that inflation primarily leads to a reduction in the consumption of non-essential goods and services, reflecting households' rational adaptation to budget constraints. This trend points to a consumption focus on basic needs, with potential negative effects on economic sectors dependent on discretionary spending.

The study also confirms that the impact of price increases is not evenly distributed across the population. Low-income individuals and rural residents are the most vulnerable groups, bearing a greater share of the effects of inflation. This contributes to widening economic and social disparities and underscores the need for public policies aimed at protecting disadvantaged categories.

Consumers' orientation toward cheaper products, alternative brands, and promotional offers demonstrates significant changes in purchasing behavior, with direct implications for business strategies. In this context, the study's results can serve as a basis for adjusting pricing policies, marketing strategies, and commercial offerings.

Overall, the research conclusions emphasize the importance of using statistical methods in analyzing current economic phenomena and the relevance of the statistical survey as an applied research tool. The study provides a comprehensive overview of consumer behavior in Romania under inflationary conditions and can serve as an informational resource for policymakers, businesses, and future economic research.

Recommendations

Based on the obtained results, the following recommendations can be formulated:

Recommendations for Public Policy

- **Support for vulnerable groups:** Implement compensation schemes or subsidies for low-income individuals and rural residents.
- **Financial education:** Promote financial literacy programs to help households manage their budgets more efficiently in an inflationary context.
- **Price monitoring:** Strengthen mechanisms to monitor prices of essential goods to prevent excessive increases and abusive practices.

Recommendations for Businesses and the Private Sector

- **Product diversification:** Adapt offerings to include more affordable options, promotions, and alternative products to meet demand generated by inflation.
- **Consumer communication:** Develop information campaigns highlighting product value and discounts to maintain customer loyalty.
- **Strategic planning:** Adjust pricing and production strategies in line with changes in consumer behavior to maintain market competitiveness.

12. Bibliografie

1. Aaker, J. (1997). *Dimensions of Brand Personality*. Journal of Marketing Research, 34(3), 347–356.
2. Anderson, J. E. (1976). *Introduction to Survey Sampling*. Holt, Rinehart & Winston.
3. Anghelache, C., *Analiză economică și statistică*, Editura ASE
4. Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). Wiley.

5. Becker, G. S. (1976). *The Economic Approach to Human Behavior*. University of Chicago Press.
6. Belk, R. W. (1975). *Situational Variables and Consumer Behavior*. *Journal of Consumer Research*, 2(3), 157–164.
7. Biswas, A., & Roy, M. (2015). *Green products: an exploratory study on the consumer behaviour in emerging economies of the East*. *Journal of Cleaner Production*, 87, 463–468.
8. Chelcea, S., *Metodologia cercetării sociologice*, Editura Polirom
9. Couper, M. P. (2008). *Designing Effective Web Surveys*. Cambridge University Press.
10. Einav, L., & Levin, J. (2014). *Economics in the Age of Big Data*. *Science*, 346(6210), 1243089.
11. Groves, R. M., Fowler, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey Methodology* (2nd ed.). Wiley.
12. Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*. Sage Publications.
13. Hosmer, D. W., & Lemeshow, S. (2000). *Applied Logistic Regression* (2nd ed.). Wiley.
14. Kish, L. (1965). *Survey Sampling*. Wiley.
15. Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson.
16. Lambertson, C., & Stephen, A. T. (2016). *A Thematic Exploration of Digital, Social Media, and Mobile Marketing: Research Evolution from 2000 to 2015 and an Agenda for Future Inquiry*. *Journal of Marketing*, 80(6), 146–172.
17. Maslow, A. H. (1943). *A Theory of Human Motivation*. *Psychological Review*, 50(4), 370–396.
18. Neyman, J. (1934). On the two different aspects of the representative method: The method of stratified sampling and the method of purposive selection. *Journal of the Royal Statistical Society*, 97(4), 558–625.
19. Plassmann, H., Ramsøy, T. Z., & Milosavljevic, M. (2012). *Branding the brain: A critical review and outlook*. *Journal of Consumer Psychology*, 22(1), 18–36.
20. Schiffman, L. G., & Kanuk, L. L. (2010). *Consumer Behavior* (10th ed.). Pearson.
21. Skinner, B. F. (1953). *Science and Human Behavior*. Macmillan.
22. Solomon, M. R. (2017). *Consumer Behavior: Buying, Having, and Being* (12th ed.). Pearson.
23. Voineagu, V. (coord.), *Statistică economică*, Editura Economică