

Doctoral (PhD) thesis

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**HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE
SCIENCES**

**EXAMINATION OF CONSUMER BEHAVIORS RELATED TO
PHARMACY PURCHASES
OVER-THE-COUNTER MEDICINES AND
ON THE DIETARY SUPPLEMENTS MARKET**

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Contents

| | |
|---|----|
| 1. INTRODUCTION AND OBJECTIVES..... | 1 |
| 1.1 The research model | 3 |
| 2. MATERIAL AND MODEL | 5 |
| 2.1 Hipoteses | 5 |
| 2.2 The relationship between research questions and hypotheses | 8 |
| 2.3 The presentation of the research, the method of data collection | 8 |
| 2.4 Presentation of the questionnaire | 9 |
| 2.5 The hipotesis model..... | 10 |
| 2.6 The applied statistical methods | 11 |
| 2.7 The presentation of the sample..... | 12 |
| 3. THE RESULTS AND THEIR DISCUSSION..... | 13 |
| 3.1 Analysis of the relationship between health and value systems | 13 |
| 3.2 The analysis of price as a factor of influence | 16 |
| 3.3 Analysis of the role of professional advice and its impact on pharmacy purchases..... | 17 |
| 3.4 Analysis of consumer attitudes..... | 20 |
| 3.5 Analysis of customer goals..... | 23 |
| 4. CONCLUSIONS AND RECOMMENDATIONS | 26 |
| 5. NEW SCIENTIFIC RESULTS | 29 |
| 6. PUBLICATIONS | 30 |

1. INTRODUCTION AND OBJECTIVES

The customer – as the end participant in the supply chain – can be one of the new focal points for companies involved in the chain and collaborating in processes. This is especially true in the pharmaceutical industry, considering the pharmaceutical supply chains, where the participants in the chain strengthen and support each other during safe drug supply, working together to ensure that the drug is available and safely reaches the patients. Among the participants in the pharmaceutical supply chain, the quality of cooperation is important for maintaining and improving the level of service. In the context of forward-looking, strategic cooperation, focusing on customers is the guiding principle. In a market heavily exposed to environmental impacts, where the distribution of prescription and over-the-counter drugs and dietary supplements has been taking place, many changes have occurred in recent years. The fluctuation in demand poses a challenge, especially in the over-the-counter market, where, although the market is stabilizing, the volume is decreasing and the value growth is slowing down. Patients' consumer behavior has changed significantly in recent years, dynamically shaping the market and presenting new challenges to the players in the supply chain. To maintain corporate competitiveness, organizations needed to be able to respond flexibly to changes; those who couldn't were left behind and lost revenue. The sales of over-the-counter products and dietary supplements show such fluctuations that they encourage supply chain participants to direct their attention even more towards the customers.

It is important for companies to identify the driving forces that help "pull" their products off the shelves of stores, and, in the examined market, off the shelves of pharmacies. If organizations can identify these driving forces well, they will be able to optimize their marketing budgets, become more efficient in their sales activities, and achieve volume growth even in tougher economic conditions. The basis for this could be a comprehensive consumer behavior analysis, which can help identify the factors that motivate consumers to make purchases. Companies will also see what effects they can achieve with different activities on consumers, and which factors will most influence the consumer's decision-making, that is, in taking the product off the shelf. If companies recognize and understand consumer behavior influenced by current economic conditions and are able to impact consumer decisions, then they can presumably achieve the planned growth.

The responsiveness and flexibility of companies are of paramount importance in today's uncertain economic environment. If companies get closer to their customers, they can be better prepared and respond more quickly to sudden market changes (CHIKÁN et al., 2006). It is very important to see that both the harmony of the areas within the organization and the integration of the organization into the supply chain, as well as its relationship with the supply chain participants, play a role in profitable operation and reaching the customer. The starting premise of the research is that no matter how well the supply chain processes work, if the customer is not there at the end of the process. If the customer does not take the product that has been placed on the shelf at the end of the supply process, the supply chain gets "clogged." As a result, costs increase, inventories accumulate, turnover increases, risks increase, and revenue decreases. Overall, the invested costs will not be recouped, the inventory must be destroyed, the labor must be paid, and the production, logistics, placement, and marketing costs of the product must be covered.

A comprehensive understanding of consumer needs and the market helps companies implement sales strategies, reach consumers, that is, to be chosen by the consumer, to be able and willing to purchase their products. Consequently, revenue from sales increases, companies' annual turnover

risers, profit presumably increases, cost coverage is in order, and thus they can invest money in new product innovations and spend more on marketing activities. A company can successfully launch a product if it understands consumer needs, trends, and the habits of different generations. Then you can develop a good marketing strategy and your marketing expenses will pay off if you know what motivates consumers to purchase the product and which activities generated the highest traffic. Then you can decide which sales channel to be actively present in, where to plan what activities and at what cost, if you understand why the consumer is buying where they are currently buying. You can build a good sales strategy if you understand what the consumer priorities are. Overall, he sees the market, the different generations present in the market and their behavior, the consumer trends.

The results of examining consumer habits provide companies with tools for making design and strategic decisions. At the center of my research is the consumer, as the user and consumer of the product. Their important role is to ensure that at the end of the product flow processes that take place during the supply chains, the consumer of the product expresses their satisfaction and remains a long-term customer. Supply chain processes can operate smoothly in a circular manner if the consumer at the end of the chain "consumes" the product. If the consumer withdraws from purchasing the product, "does not consume," then at this point the supply chain comes to a halt. The consumer can play a "pull role" in this process, as they take the product out of the chain and generate new cycles, which can operate dynamically in the long term if, at the end of the process, the consumer always "pulls" the product out of the chain, that is, purchases and consumes it. Naturally, many factors influence consumers and their decisions in the meantime. Purchasing is differentiated based on the buyer's gender, age, and life situation. Consumers differ from each other and also react differently to the effects they experience. However, we can discover common traits and try to group consumers according to different aspects. Organizations can increase their competitiveness by getting closer to their customers, understanding consumer preferences, and comprehending the motivations behind purchases, thereby being able to influence consumer attitudes. This way, they can be better prepared, which allows them to respond quickly, potentially giving them a competitive advantage. The direction of the research is given by the theoretical background I have established, aiming to understand the new types of consumer motivations and to identify consumer groups endowed with specific characteristics. This research holds valuable data that can be well integrated into the strategic thinking of supply chain participants, assuming that at the end of the material flow processes, consumer demand will find the product at the right place and time, and at some point, the consumer will "take the product off the shelf" because it meets their needs and real requirements. In light of the competitiveness of supply chains, the following research model highlights the importance of studying consumer behavior.

1.1 The research model

The research model shows the interrelationship of factors that justify an understanding of customer requirements.

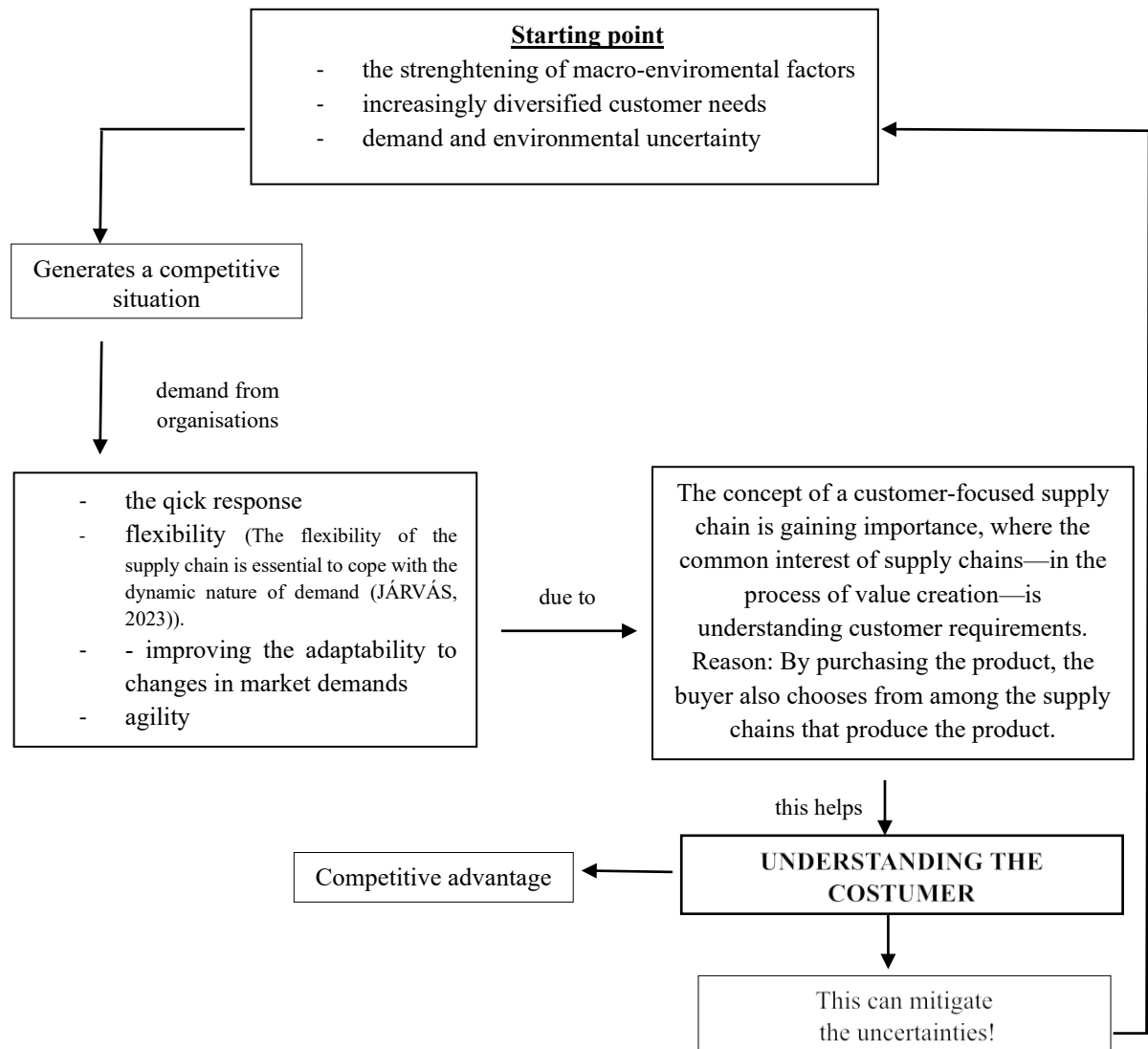


Figure 1: Research model, own design

When formulating my research questions, the primary consideration was what the most important things are for companies to know about their target audience, and what consumer information could be relevant factors in making strategic decisions. My goal was to examine the consumer from a perspective that is important for the functioning of supply chains. I was looking for what motivates them to purchase a particular product. I identified two things. One of the external factors that affect customers includes product visibility, product appearance, availability, price, and product information. If organizations know which factors most influence the consumer, they can adjust their strategies accordingly, pursue different directions, or maintain and strengthen their current communication. External factors affecting the consumer are controlled by organizations. I identified these external factors as "impact factors." The other one is internal factors, all those things that characterize consumers, which define their personality. These companies cannot

directly influence these, perhaps only indirectly. Consumer attitudes can be influenced positively, or through poor communication, mistakes, or a poorly constructed strategy, even negatively. They can provide tools and opportunities to consumers to influence the purchasing decisions of the generation socializing in the digital world, making it easier to reach them, thereby giving organizations an indirect influence over consumers. But they cannot influence the consumer's basic demographic characteristics, lifestyle, personal problems, or goals. However, they can differentiate consumers and seek correlations between attitudes and lifestyles, between genders, and identify regional differences, which enables them to conduct targeted marketing activities. Marketing, as a sales-supporting area, helps with faster inventory turnover. Information about consumers is useful for every member of the supply chain. I formulated the research questions based on the aforementioned relationships and described them in connection with the following model. To understand the consumer, to decipher their true values and motivations, it is not enough to consider the factors that are visible and observable on the surface; we must uncover the deeper layers to understand their purchasing behavior. Understanding the consumer's "hidden" values and goals can help us understand consumer reactions and behaviors.

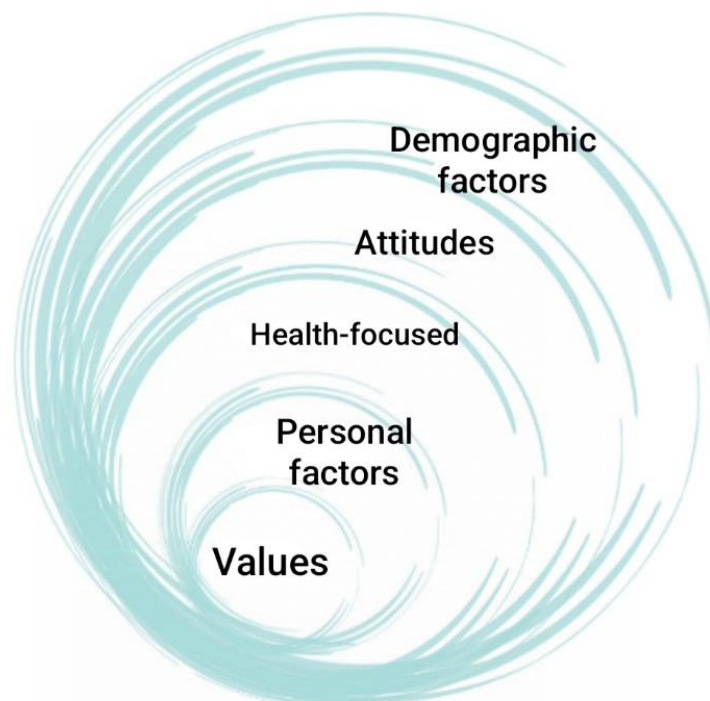


Figure 2: The consumer onion model, self-edited

2. MATERIAL AND METHODS

2.1 Hypotheses

H1: The traditional value system positively influences health awareness.

The behavior of consumers is influenced by the individual's lifestyle; they need to be understood, and according to research findings, the choice of a given product/brand world should be linked to the respective lifestyle groups (KOZÁK, 2011). Nowadays, health appears as a value in our lives, and we consider health as a super keyword (TÖRÖCSIK, 2016). At the same time, paying attention to health also stems from concern for quality of life. (RASMUSSEN, 2020). Health increasingly involves the pursuit of activity, good humor, and even happiness (CSÍKSZENTMIHÁLYI, 1997), which clearly directs attention towards "lifestyle medicines" (TÖRÖCSIK, 2007). Health-conscious consumers are "wellness-oriented," and their health-protective and disease-preventive behaviors often manifest in the consumption of dietary supplements. (WILLIS & STAFFORD, 2016). People engage in preventive behaviors such as physical activity or the consumption of dietary supplements (NÁBRÁDI, 2022). An interesting question is whether we choose based on values in a given situation or whether the situations themselves determine the values (TÖRÖCSIK et al. 2019). The pursuit of happiness, physical and mental balance, and security are characteristics of the traditional value system. The most important factors driving awareness are sustainability requirements, thoughtfulness, openness to nature (GYARMATI, 2021), and the pursuit of safety (VEÉR et al., 2018).

The hypothesis is related to the following research questions:

Values (VALE)

Health focus (HEAF)

H2: The product price is a stronger purchasing factor than the brand.

In product selection, advertisements, the patient's previous experiences, current pharmacy displays, promotions, and pharmacist recommendations play a significant role. (BUDAI, 2022). The external factors of the product, such as packaging, its color, and images, have a significant impact on consumers' purchase intentions. Researchers have found that the brand's packaging attracts attention when consumers are not well familiar with the brand. (OLAWIPO & IBOJO, 2015). According to research findings, the impact of OTC drug packaging on purchase intention is relatively lower compared to other factors (KEVREKIDIS et al., 2018). The accessibility and availability of medications are fundamental factors that influence the purchase of OTC drugs, especially in suburban and remote areas. (SRIVASTAVA & WAGH, 2018). In our country, the majority of consumers purchase OTC and dietary supplement products at pharmacies. Primarily differentiates based on price, presumably not recognizing the quality difference between two products serving the same purpose with the same active ingredient content, or between over-the-counter drugs and dietary supplements (LEHOTA et al., 2015; RAFAEL, 2019; NÁBRÁDI, 2022). Research shows that consumers who are loyal to a particular brand have a wider price acceptance range and are less price-sensitive. (KALYANARAM & LITTLE, 1994). Nowadays, most consumers are cutting back on their spending and are interested in cheaper products, buying less expensive items. According to the latest market survey by the market research organization IQVIA, 90% of consumers have changed their spending habits in recent years to better manage their finances. 39% of shoppers are characterized as "cautious spenders." Surveys show that globally, people's consumer behavior for the purpose of savings is characterized by the search for lower prices, and they are even willing to switch brands and products to achieve this. According

to a survey by the market research company, 72% of consumers are reducing their spending. (IQVIA, 2024/b).

The hypothesis is related to the following research questions:
Impact factors (IFAC)

H3: Professional advice has a significantly greater impact on purchasing decisions than other word-of-mouth recommendations, and this positively influences the intention to purchase at the pharmacy.

Consumer groups are characterized by seeking and considering the opinions of others when making purchasing decisions, and they are eager to listen to others' advice. The information that aids their purchasing decisions, which we refer to as external sources, is obtained from acquaintances, family members, or the market (BLACKWELL et al., 2006). These so-called external sources refer to interpersonal communication with others. (PADDISON & OLSEN, 2008). Cultural and social factors, including professional advice, family, and friends' recommendations (LODORFOS et al., 2006). Professional advice is described by Schaafsma et al. (2005) as follows: advice from a person considered an expert on the subject. According to Kotler (2004), family members constitute the reference group with the greatest influence on shaping consumer behavior. Word-of-mouth can be an important motivation in product choices, where it is essential that the relationship between the individual and the reference group is significant from both motivational and psychological perspectives. (KOTLER, 2004). I am seeking an answer to the question of which consumer groups make purchases under the influence of word-of-mouth advertising, which consumer groups are influenced, and within this, where this psychological connection is stronger: do people give more importance to the opinions of family and friends, or is professional advice more important to them?

The hypothesis is related to the following research questions:
Impact factors (IFAC)
Place of purchase (PLAC)

H4: Consumer attitudes show significant regional differences.

A new development in the study of consumer behavior is the radical differences that are now evident between Budapest and the countryside. These differences are no longer just evident in purchases, but also in the affinity, thinking, and attitude towards novelties (TÖRÖCSIK, 2016). The attitude is a relatively stable organization of beliefs, feelings, behavioral tendencies, and behavioral tendencies related to various objects, groups, events, or symbols, a psychological tendency that manifests in the evaluation of a given entity to a certain degree as favorable or unfavorable (ZHANG et al., 2021). The internal characteristics are being expressed through external behavior, which includes, among other things, purchasing and consumption. Companies do everything to influence behaviors through advertisements, utilizing research findings from psychology, marketing sciences, and economics, as well as the advancements of digitalization (PUSZTAHELYI & BUSKÓ, 2022). There are consumers who are motivated by the importance of health preservation, a behavior that stems from concern for quality of life. (RASMUSSEN, 2020). The purchasing behavior of others includes seeking professional help at pharmacies. A characteristic behavior of today's younger generation is that they only accept authentic people and things in their purchases (TÖRÖCSIK et al., 2014). It is characteristic of certain groups to seek out tried-and-true products. An extremely important characteristic of purchasing is how emotionally or intellectually involved we are (TÖRÖCSIK, 2007). If the emotional connection is strong and the intellectual connection is weak, we make brand loyalty decisions based on habit,

seeking out familiar products. In this case, consumers retrieve information from their internal memory, which the literature refers to as internal sources, derived from experience or existing knowledge. (PADDISON & OLSEN, 2008). There are consumer groups who, for various reasons, do not buy or consume certain products, even though they could. (MAKSIMOVIC & TÖRÖCSIK, 2023). Töröcsik says that when examining psychological factors, consumer fears must also be addressed (TÖRÖCSIK & JAKOPÁNECZ, 2010).

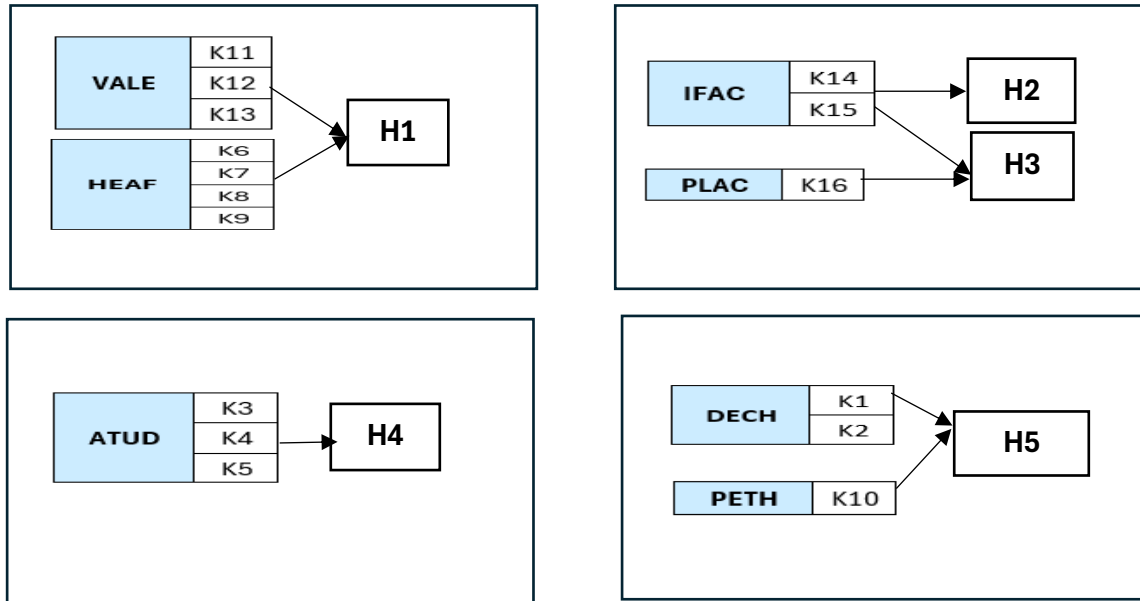
The hypothesis is related to the following research questions:
Attitudes (ATUD)

H5: There is a significant difference in the purpose of shopping among groups with different lifestyles, genders, and age groups.

The changed lifestyle leads to a decrease in living space, less movement, the use of performance-enhancing supplements, and improper nutrition. All these consequences can manifest, among other things, in psychological disorders, which can surface as headaches, allergies, frequent colds, digestive disorders, or even chronic fatigue. Stress, which has always been at the center of interest, is one of the biggest problems of the modern age. (URSZULY, 2024). Consumers most often try to remedy these symptoms with over-the-counter medications, which leads to an increasing prevalence of "self-medication." (AJITH, 2007). Nowadays, modern problems are increasingly surfacing, affecting more and more people. Due to our lifestyle, stress is increasing, we live in the bonds of expectations, and we are rushing. Working women with children face many expectations and burdens from both the workplace and the family (JUHÁSZ, 2017). Women not only face more negative life events throughout their lives, but they are also more sensitive in such situations and reflect more sensitively, becoming depressed more quickly than men under the same level of stress (DALGARD et al., 2006; YOU & CONNER, 2009). More and more people are struggling with allergies and digestive problems. According to the WHO, allergies currently rank third on the list of the most common chronic diseases and represent one of the threats to civilization. This is a heterogeneous group of diseases, including bronchial asthma and allergic rhinitis (FÁBOS, 2024). The period of menopause is accompanied by the development of numerous psychological symptoms for women, which were further deepened by the onset of the pandemic. Women aged 45–55 (N = 103) in perimenopause were examined, and it was found that statistically significantly higher rates of sleep disturbances ($p = 0.002$), hot flashes ($p < 0.001$), anxiety ($p < 0.001$), joint and muscle complaints ($p = 0.002$), and lack of exercise ($p < 0.001$) occurred among women who had contracted the coronavirus compared to the non-Covid-19-infected group (DOMBI et al., 2024; SAHIN, 2022). Research shows that generally, women are the driving force of consumption in a family, and women have a more positive relationship with shopping than men (TÖRÖCSIK, 2016). Kraft and Weber (2012) emphasize that gender differences play an important role in decision-making processes, as men and women generally have different purchasing motives and characteristics.

The hypothesis is related to the following research questions:
Demographic factors (DECH)
Personal factors (PETH)

2.2 The relationship between research questions and hypotheses



Figures 3: The relationship between research questions and hypotheses, self-edited

2.3 The presentation of the research, the method of data collection

In my research, I applied secondary and primary research methods. Secondary data collection provides the theoretical background for the research. The introduction of relevant literature and its points of connection to the research constitutes the first part of the dissertation, followed by the presentation of primary research findings. In addition to processing the relevant literature, statistical data closely related to the topic will also be presented. This part of the research is divided into the following subsections:

- the supply chains, their role in consumer value creation, and an overview of the pharmaceutical industry's supply chain
- identifying factors that influence consumer behavior
- Presentation of the market for over-the-counter medications and dietary supplements, current market trends

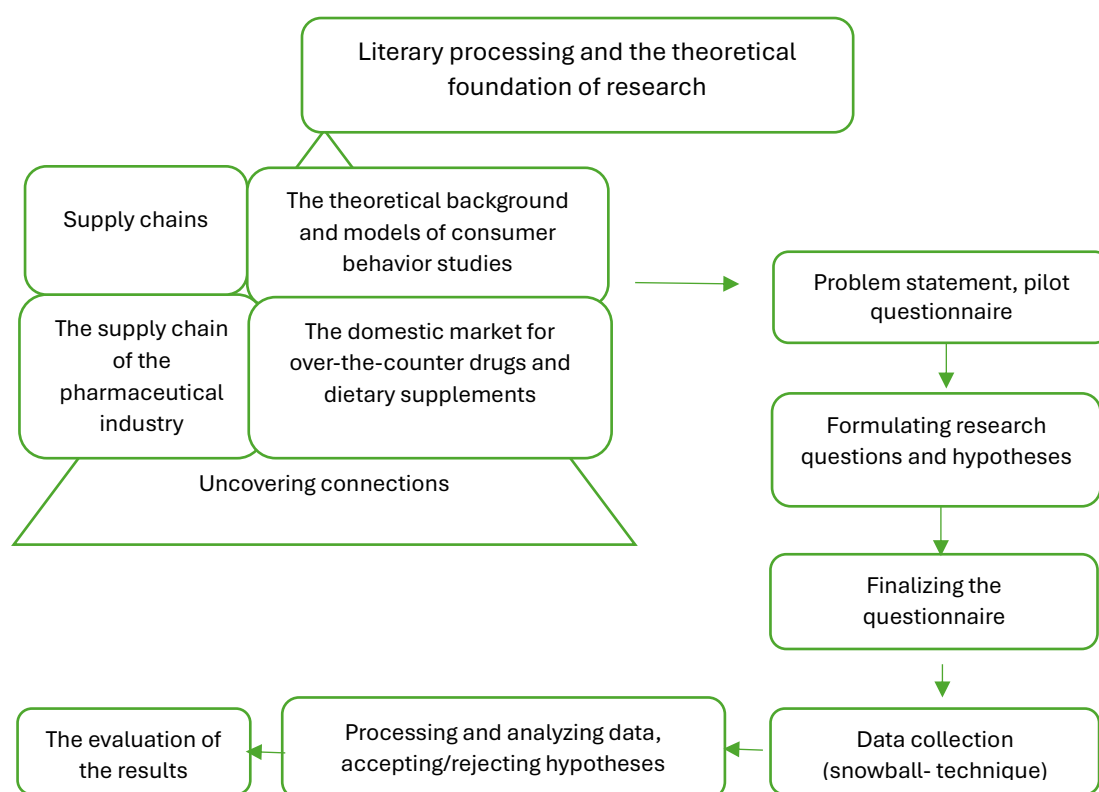
During primary data collection, I conducted quantitative research. Among the primary research methods, I chose the survey method, as questionnaire surveys are one of the specialized and frequently used methods in scientific data collection (HORVÁTH, 2004), and I applied it in my own work as well. The questionnaire study was conducted in two phases; first, I developed a standardized pilot questionnaire as the measurement tool. The pilot questionnaire laid the groundwork for the success of further research. After the results from the first round of responses, I performed data cleaning and made the questionnaire more structured. The increasingly extensive knowledge of the literature meant a lot, as it helped my work in the later revision, restructuring, and complex development of the questionnaire.

Phase 1 of quantitative research (pilot questionnaire): March 2022 – June 2022

Phase 2 of quantitative research (post-data cleaning questionnaire): November 2023 – March 2024

The questionnaire survey focuses on the population purchasing OTC and dietary supplements at domestic pharmacies. An important criterion was that the participants in the research should be

people who buy over-the-counter medications and dietary supplements at pharmacies. The consumer questionnaire targeted people of all ages and genders, specifically those who regularly purchase over-the-counter medications and dietary supplements at domestic pharmacies. The place of purchase was also a criterion, meaning that the respondents had to buy such products in Hungarian pharmacies. The group under investigation is difficult to define, so I used the snowball technique to collect data. I created the questionnaires in the Google Forms system and made them available to domestic consumers. In the first completion phase, 223 completions were received. After the pre-filling phase, I worked for a longer period on cleaning the questionnaire by incorporating secondary research data, and subsequently, I created a more structured, revised, and supplemented questionnaire, which I also shared online. The questionnaire was available from November 2023 to March 2024, concluding with a total of 717 responses. The sample is not representative, as the sampling procedure was conducted using the snowball method, therefore the results cannot be generalized. After closing the questionnaires, I recorded the data in an Excel spreadsheet, then transferred the data to version 29 of the SPSS program, and here I processed the answers and their connections. The process of the research is illustrated in the following figure.



Figures 4: The course of the research, self-edited

2.4 Presentation of the questionnaire

During the primary research, I conducted quantitative studies and sought answers to my questions using a questionnaire method. The main target group of my questionnaire study was those individuals who purchase over-the-counter medications and dietary supplements at domestic pharmacies. The questionnaire was closed in March 2024, with 717 responses received. I expected the results of the questionnaires to help me formulate suggestions regarding the direction consumer communications should take, how we can more easily reach the consumer and make our communication with them effective, in other words, how to find the consumer's "green button." The consumer questionnaire can be divided into three main sections. The first section includes demographic questions: gender, age, place of residence, educational attainment, marital status,

parental status, role in the labor market. Researchers classify demographic and psychographic factors among the most significant individual differences (BLACKWELL et al., 2006). In the second phase of the questionnaire, my goal was to examine consumer values and lifestyle. Among domestic researchers, Töröcsik et al. (2019) examined consumer groups based on lifestyle pace and value orientation, based on which they identified different lifestyle groups. The results of the research were published in 2019. The attitude statements regarding the value system published by the authors were used in my own research, and these constitute the main part of the statements related to the lifestyle examination in the research. As a supplement, I also used new attitude statements, but only in close relation to the original statements. The aim of this part of the questionnaire was to establish consumer lifestyle groups characteristic of the over-the-counter drug market, and possibly to discover and create new groups. My goal was to evaluate consumer behaviors in relation to the established lifestyle groups and to see what consumer habits are characteristic of people with different lifestyles in the examined market. The questions in the third and largest section pertain to the purchasing habits of over-the-counter medications and dietary supplements. This part of the questionnaire is based on Kotler's (2004) model of factors influencing consumer behavior. The questions can be categorized into the following larger groups according to the research perspectives:

- the importance of prevention, healthy lifestyle, and consumer awareness – examining whether the pandemic situation has heightened the importance of health preservation
- Exploring the role of reference groups in consumer behavior, differences between family and professional advice
- For what purpose are the purchases made and what products do consumers prefer?
- what are the factors influencing purchasing, how can the impact factors be identified
- what characterizes the consumer, what behavioral patterns, attitudes, approaches, mindset
- the place of purchase, the role of the pharmacy

I used a five-point Likert scale in the questionnaire, which also included closed-ended questions.

2.5 The hipotesis model

The relationship between the hypotheses is illustrated by the following research model.

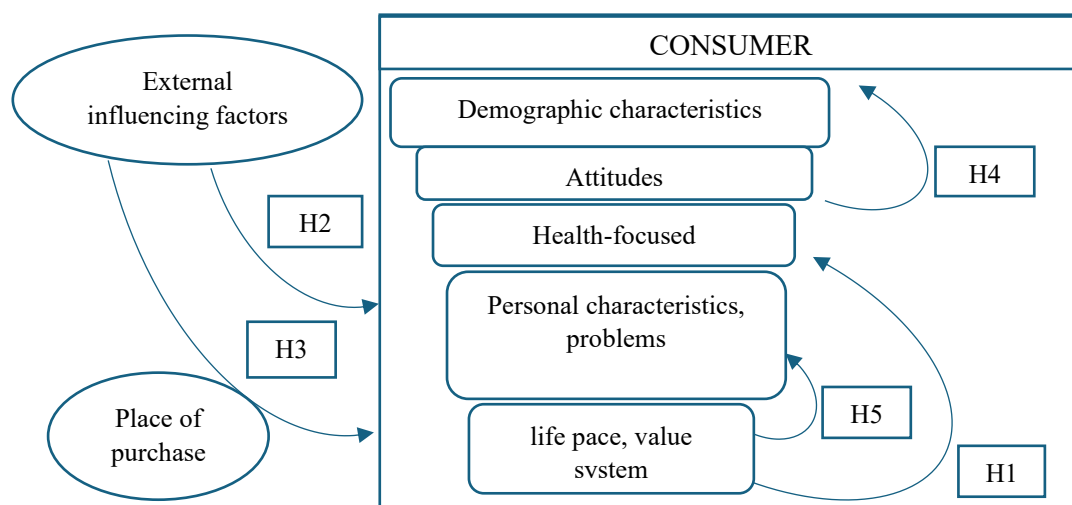


Figure 5: The relationship of hypotheses, own editing

2.6 The applied statistical methods

I processed the questionnaires and conducted the statistical analyses using the SPSS 29 program.

Table 1: Statistical methods used for processing data in empirical research

| Examination questions | Research objectives | Analysis methods |
|--|--|--|
| Presentation of the research sample | Grouping of respondents | Descriptive statistical methods |
| Defining lifestyle groups based on values and pace of life | The formation of clusters, determining cluster sizes | Cluster analysis |
| Examination and comparison of groups representing traditional and modern value systems from the perspective of health preservation | Post-hoc analysis of group mean differences | Tukey's post-hoc test |
| The examination of the importance of health preservation, awareness, and vitamin consumption | Analysis of intergroup differences | Crossroads signs |
| The classification of impact factors | The classification of impact factors | Principal component analysis |
| The reliability of the scale of impact factors | Checking the reliability of the scales | Cronbach's Alpha |
| Analysis of impact factors based on demographic characteristics and lifestyle groups | Analysis of intergroup differences | Tukey's post-hoc test |
| Comparison of impact factor values by gender and education level | Comparison of the means of the two groups | Two-sample T-test |
| Comparison of values between price and brand across groups | Analysis of differences between groups | Paired T-test |
| Analysis of word-of-mouth based on demographic characteristics and lifestyle | Post-hoc analysis of group mean differences | Tukey's post hoc test |
| Analysis of the differences between the opinions of family/friends and professional advice | Post-hoc analysis of group mean differences | Paired T-test |
| Analysis of gender differences and differences by education level in word-of-mouth communication | Comparison of the means of the two groups | Two-sample T-test |
| The classification of consumer attitudes | The classification of consumer attitudes | The classification of consumer attitudes |
| The study of attitudes among different groups | Analysis of intergroup differences | Tukey's post-hoc test |
| The regional differences in attitudes | Differences in attitudes among various regions | Paired T-test |
| The examination of fast-paced groups by gender and age based on modern problems and trends | Examining the purpose of purchases | Crossroads signs |

Source: self-edited

2.7 The presentation of the sample

The aggregated data of the empirical study is presented in the table below, with a total of 717 completions.

Table 2: The aggregation of the samples from the empirical study (n=717)

| | Sample (n=717) | in % |
|---|----------------|------|
| Genders: | | |
| Women | 468 | 65 |
| Men | 249 | 35 |
| Age: | | |
| -19 | 150 | 21 |
| 20-29 | 259 | 36 |
| 30-39 | 83 | 12 |
| 40-49 | 130 | 18 |
| 50-59 | 68 | 9 |
| 60+ | 27 | 4 |
| Educational qualifications | | |
| basic level | 33 | 5 |
| secondary level (vocational high school, gymnasium) | 455 | 63 |
| advanced level (college, university) | 216 | 30 |
| PhD | 13 | 2 |
| Labor market situation | | |
| student | 327 | 46 |
| I am currently a stay-at-home mom/dad with my children | 34 | 5 |
| active worker | 335 | 47 |
| retired | 21 | 3 |
| The number of people living in a household | | |
| I live alone | 80 | 11 |
| I am in a relationship/married | 102 | 14 |
| I live with my family (there are more than 2 people in the household) | 532 | 74 |
| Parental status | | |
| I do not have children | 453 | 63 |
| I have, but we do not live in the same household | 41 | 6 |
| I have, and we live in the same household | 221 | 31 |
| Type of settlement | | |
| Village | 100 | 14 |
| Large village | 13 | 2 |
| City | 247 | 34 |
| County town | 100 | 14 |
| Capital | 243 | 34 |
| Region | | |
| Northern Hungary | 65 | 9 |
| Northern Great Plain | 41 | 6 |
| Southern Great Plain | 51 | 7 |
| Pest | 173 | 24 |
| Budapest | 243 | 34 |
| Central Transdanubia | 67 | 9 |
| Western Transdanubia | 33 | 5 |
| Southern Transdanubia | 25 | 3 |

Source: self-edited

3. THE RESULTS AND DISCUSSION

3.1 Analysis of the relationship between health and value systems

H1: The traditional value system positively influences health awareness.

I identified nine lifestyle groups using factor analysis, which were represented on a two-dimensional map based on values and pace of life.

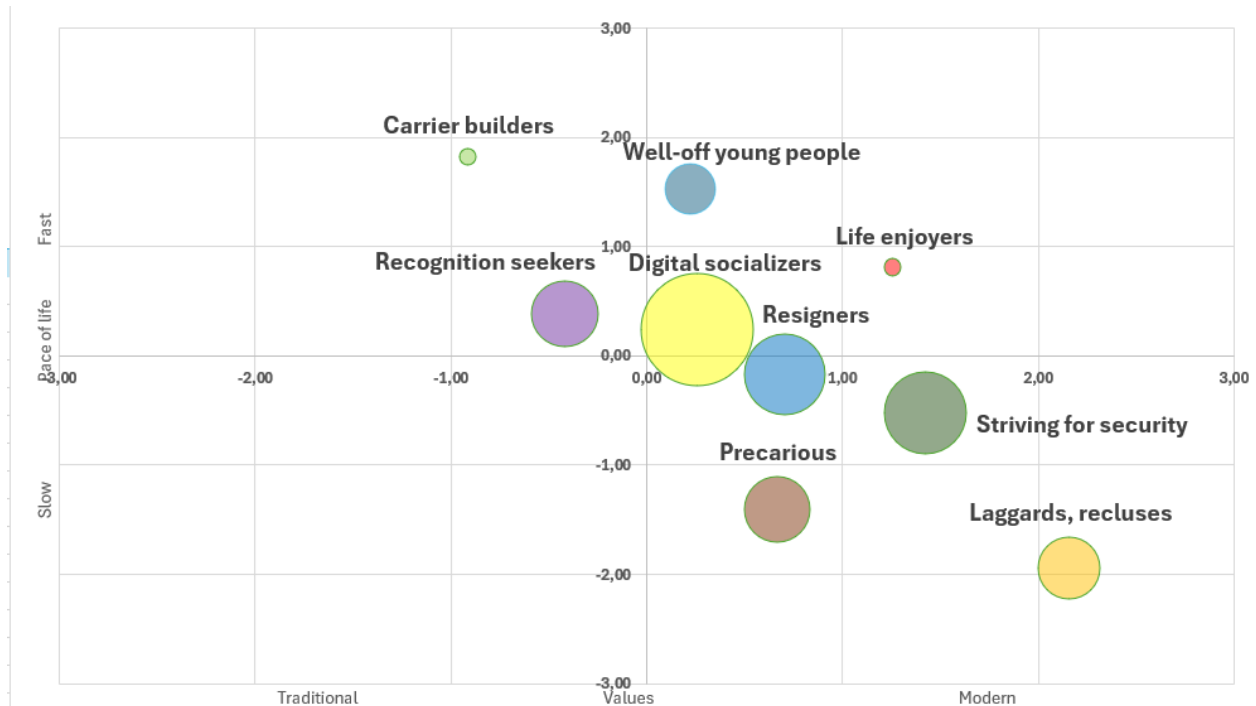


Figure 6: Lifestyle groups in Hungary in 2024, self-edited

The modern value system is characteristic of two groups, while the traditional value system is characteristic of seven groups. The pandemic situation has created such an unexpected and unpredictable life circumstance that, as a result, health, safety, predictability, and stability have become more important to people in their lives.

In terms of health awareness, **there is a significant difference between those who enjoy life and the following groups: digital socializers, laggards/recluses, well-off young people, career builders, security seekers, and resigners.** If someone pays attention to their health and takes more care of it, it does not mean and is not equal to them being a more conscious consumer and considering the intake of dietary supplements important for maintaining their health. **Those who consider themselves conscious consumers are mostly the laggards/isolators, the career builders, the digital socializers, and the resigned, who show a significant difference in terms of awareness** compared to the precarious and the recognition seekers. The precarious and those seeking recognition significantly lag behind in consumer awareness regarding the use of dietary supplements.

On the wellness-oriented map, it becomes apparent that there are groups who visibly care more about their health and pay increased attention to taking vitamins, such as career builders, the resigned, the laggards/recluses, and the digital socializers. The well-off young people and those seeking safety, who significantly care more about their health but take fewer vitamins than the aforementioned groups. **Pleasure-seekers care the least about their health, and their vitamin**

intake is also lacking. Those who seek recognition and the precarious take the fewest vitamins, do not consider themselves conscious vitamin consumers in this regard, yet they are stronger in terms of health awareness than the group of pleasure-seekers.

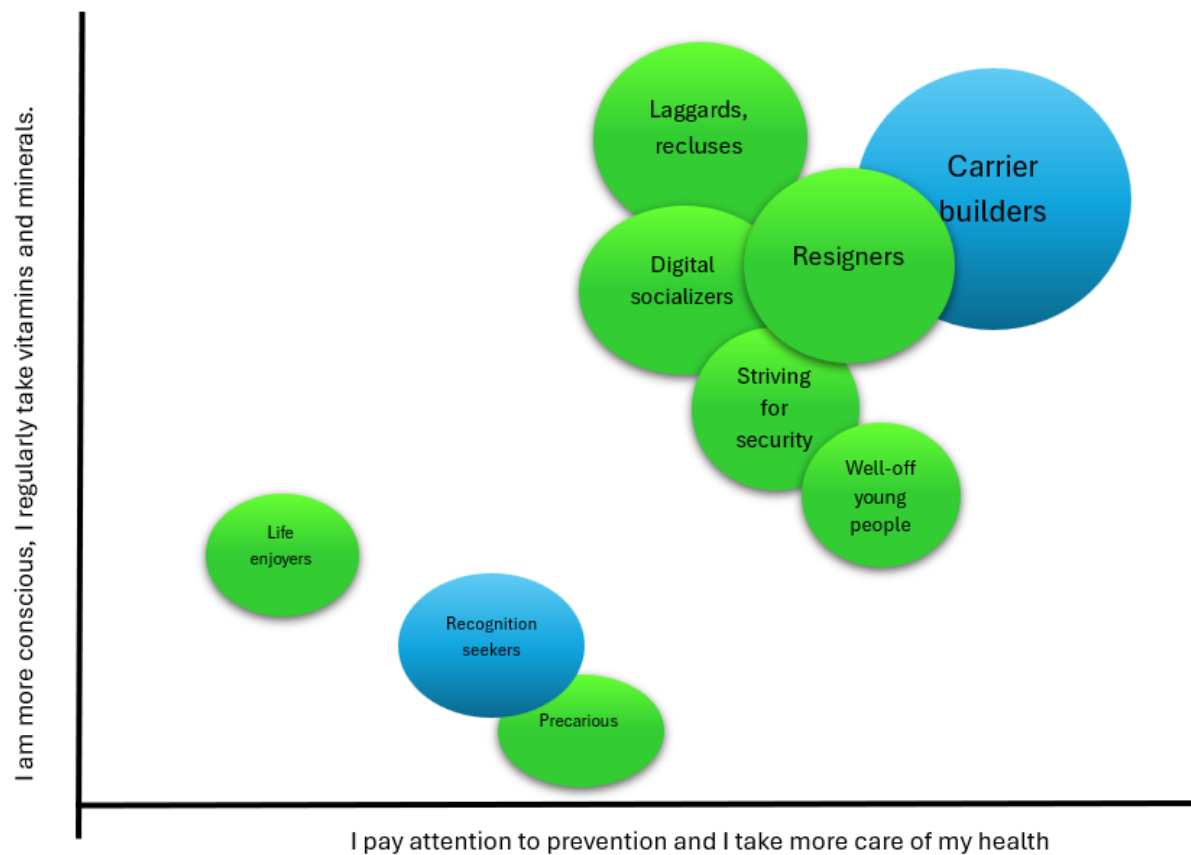


Figure 7: Wellness-oriented consumer map, self-edited

Those groups who pay attention to their health, care more about their health, and claim to regularly take vitamins for the purpose of supporting their health, are more conscious in their dietary supplement purchases. They are: career builders, resigners, laggards/recluses, and digital socializers. Comparing the percentage results of **health awareness and attention, the career builders stand out** among the four groups. They strongly claim that they care more about their health and, in terms of awareness, they show the second highest percentage, taking vitamins to maintain their health. The individual groups primarily purchase OTC and dietary supplement products for immune boosting purposes. For the purpose of pain relief, purchases are also often made to alleviate existing symptoms. I compared purchases made for health maintenance and immune boosting among lifestyle groups. **In the case of digital socializers, laggards/recluses, precarious individuals, and those striving for security, the $p\text{-value} < 0.001$, indicating that immune strengthening is significantly more important than health preservation.** There are also significant differences in the comparison of the two purchasing goals among those who desire recognition, well-off young people, resigned individuals, and pleasure-seekers. For career builders, both health preservation and immune strengthening are important. The group seeking recognition buys less for immune boosting purposes compared to the career builders, and I did not find a significant difference between the two purchasing goals in this group either.

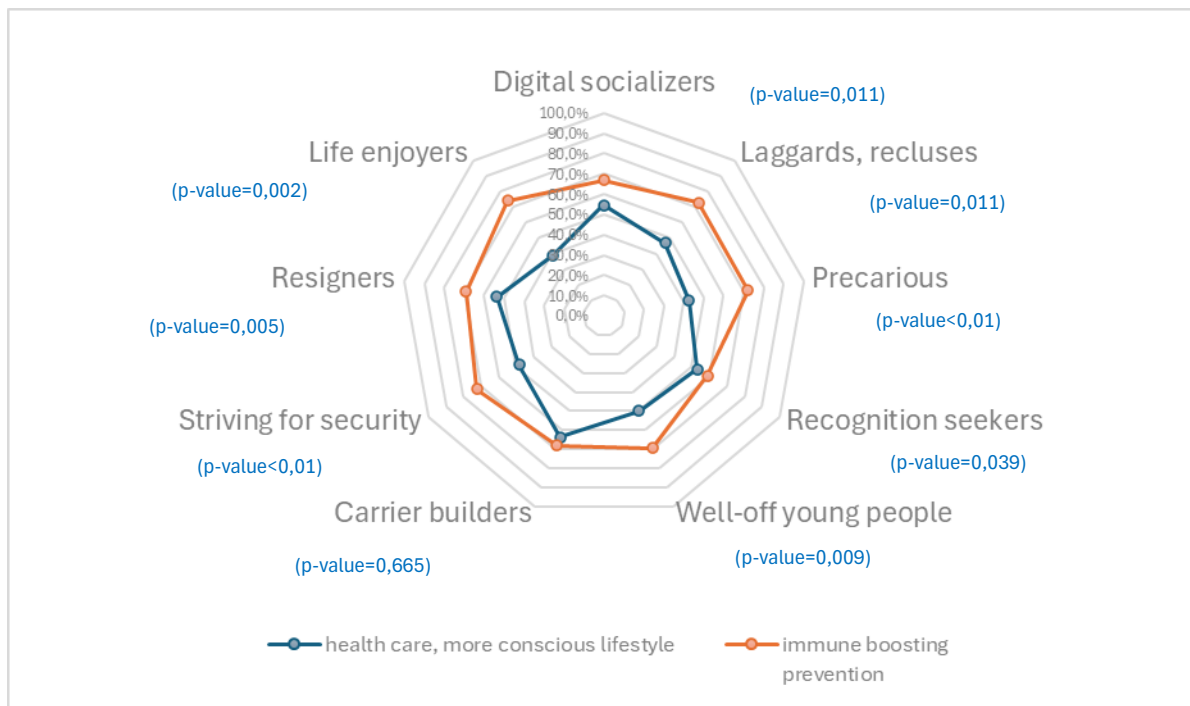


Figure 8: Purchases for health preservation and immune enhancement by clusters (n=683), self-edited

In terms of lifestyle and values, those who lead in health preservation and awareness:

- Career builders – fast-paced lifestyle, modern values
- Digital socializers – fast-paced lifestyle, traditional values
- Resigned – a slightly slower pace of life than the previous two groups, traditional values

Regarding health preservation and awareness, those who lag behind in terms of lifestyle pace and value system:

- Life Enjoyers – fast-paced lifestyle, traditional values
- Those seeking recognition – fast-paced lifestyle, modern values
- Precariat (insecure) – very slow pace of life, traditional values

The career builders, the digital socializers, and the resigned form the golden triangle of health consciousness. They pay attention to their health, significantly differing from other groups in terms of vitamin consumption. Conscious consumers, they regularly take vitamins. Career builders buy products to boost their immune system, and consuming health-preserving supplements is important to them. For Digital socializers, health is also important; they pay more attention to their health, take significantly more immune boosters and preventive products than health-preserving products. Career builders represent a modern value system. For some of the digital socializers, the modern value system is more characteristic, while for others, the values of the traditional value system are more prominent. The resigned are the representatives of the traditional value system. Health consciousness and attention to health are their common characteristics, and they are the most outstanding in this regard, but in this respect, they are connected by other common points, not by traditional values. It's not that health is more important to them because they represent traditional values, where safety, balance, and the pursuit of happiness are prioritized. Clearly, different influences, personal traits, personality characteristics, and beliefs affect them in terms of health consciousness.

3.2 The analysis of price as a factor of influence

H2: The product price is a stronger purchasing factor than the brand.

I identified the impact factors and grouped the impact factors using principal component analysis.

Table 3: Analysis of Variance of Principal Components – Rotated Component Matrix (n=717)

| | Components | | | |
|--|------------|--------|--------|--------|
| | 1 | 2 | 3 | 4 |
| The product is being advertised on TV | 0,72 | -0,14 | 0,173 | 0,186 |
| The packaging of the product | 0,653 | 0 | 0,382 | 0,173 |
| Vegan, gluten free | 0,622 | -0,012 | 0,194 | -0,031 |
| I can take it off the shelf, hold it, and examine it before buying | 0,613 | 0,275 | 0,093 | 0,113 |
| The price of the product | 0,199 | 0,824 | -0,042 | 0,028 |
| The sought-after product should be available | -0,239 | 0,66 | 0,183 | 0,234 |
| Price promotions, newsstand promotions | 0,543 | 0,6 | -0,017 | -0,004 |
| Previous experience with the product | -0,283 | 0,524 | 0,361 | 0,353 |
| The manufacturer of the product | 0,231 | -0,006 | 0,819 | 0,1 |
| The brand | 0,245 | 0,04 | 0,788 | 0,047 |
| Natural ingredients | 0,173 | 0,354 | 0,518 | 0,156 |
| Family, friends' opinions, suggestions | 0,17 | 0,125 | 0,079 | 0,816 |
| Professional advice: pharmaceutical recommendation | 0,106 | 0,111 | 0,116 | 0,808 |

Source: self-edited

The names of the main components:

1. **VISIBILITY** - The first component group includes product visibility elements such as TV advertisements related to the product, product shelf placements, product packaging, and vegan or gluten-free icons appearing on the product. Every external feature or attribute that makes the product more visible to customers. These external factors stimulate sales, bring the consumer closer to the product, and familiarize the consumer with the product.
2. **VALUE OF MONEY AND TIME** – In consumer purchases, price is an important factor, but equally valuable is the customer's time. During purchases, the price is important, but it's also crucial that the product is available, that you don't have to wait for it, and that you don't have to go to another place to get it, because time is money.
3. **BRAND IDENTITY** – It is expressed in terms of product identification, meaning how much the consumer can identify with the brand, the manufacturer, and everything the product represents, for example, that the product contains natural ingredients. This includes the previous experience related to the product, which made the consumer like the product and able to identify with it.
4. **WORD OF MOUTH** – Consumer decisions are often made based on the opinions of others. These suggestions appearing as external influences can be non-professional, such as the opinions and advice of family and friends, or they can be professional, which means the professional advice coming from the pharmacist.

On average, considering the entire sample, price and availability prove to be the most important main components. Which means that the price of the product is important to the customers, just as their time is valuable, so it is essential that the sought-after product is available in the pharmacies.

Table 4: The averages of the main component groups of the entire sample

| | | Visibility | Value of money and time | Brand identity | Word-of-mouth marketing |
|----------------|---------|------------|-------------------------|----------------|-------------------------|
| N | Valid | 695 | 696 | 699 | 702 |
| | Missing | 22 | 21 | 18 | 15 |
| Mean | | 2,221 | 3,761 | 3,309 | 3,53 |
| Std. Deviation | | 0,859 | 0,79 | 0,827 | 0,928 |

Source: self-edited

Based on the group averages, the following order can be established for the four main components:

1. Value of money and time (VAMT)
2. Word-of-mouth marketing (WOM)
3. Brand identity (BRAI)
4. Visibility (VISB)

I further examined the strength of the effects along the lines of the hypothesis. I have conducted my examinations according to age groups, genders, educational qualifications, labor market situations, lifestyles, types of settlements, and regions. In the OTC and dietary supplements market, it can be concluded that, even after various classifications, the product's price and availability have a significantly stronger impact on consumer purchases. The value of money and people's time are important, which is why they often say that time is money. After grouping the examined impact factors using principal component analysis, it can be concluded that the most important factors are the product price and product availability. In comparison, brand identity does not have as much impact on consumer purchases as price and availability, meaning that the customer can get the product at the right price and immediately. People are more likely to switch to another brand and another product if they can purchase it at a more favorable price. They will switch from the brand if the sought-after brand is not available, and another product may be added to their cart instead.

3.3 Analysis of the role of professional advice and its impact on pharmacy purchases

H3: Professional advice has a greater impact on purchasing decisions than other word-of-mouth recommendations, and this positively influences the intention to purchase at the pharmacy.

The principal component analysis presented in relation to my second hypothesis formed the basis of this study. One of the principal component groups created by the principal component analysis is word of mouth (WOM), which includes the opinions of family and friends as well as professional recommendations. Word-of-mouth has an impact on consumer decisions, so we need to address it. Among the established principal component groups, the examined word-of-mouth (WOM) is the second strongest impact factor based on group averages.

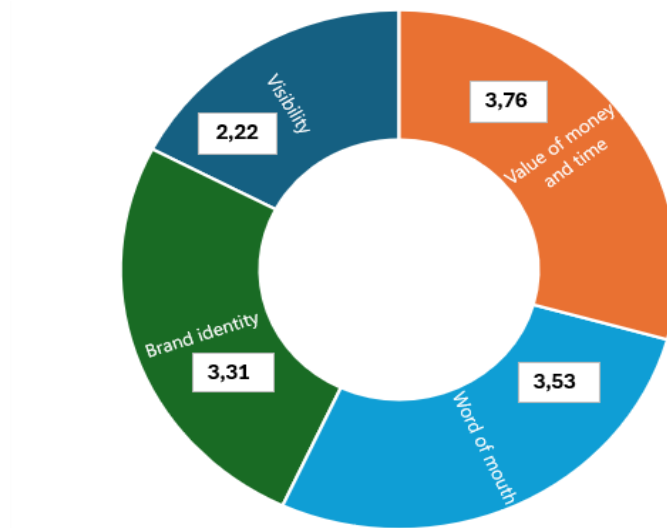


Figure 9: The averages of the main component groups (n=678), self-edited

There is a significant difference in the effect and influence of professional advice and non professional external advice when looking at the averages for the entire sample. The pharmacist's recommendation is a significantly more important factor in making a purchasing decision than the advice of family and friends (P-value <0.001).

Table 5: Differences between external advice (n=706)

| Word-of-mouth marketing | Mean |
|--|--------|
| professional advice: pharmaceutical recommendation | 3,58 |
| family, friends' opinions, suggestions | 3,48 |
| Diference | 0,1 |
| P-value | <0,001 |

Source: self-edited

Based on the averages projected onto the entire sample, I found a significant difference regarding word-of-mouth (WOM) in that professional advice has a stronger influence on consumer decisions than the opinions of family and friends. At the same time, upon examining the issue, I conducted several analyses by age groups, gender, educational attainment, labor market situation, type of settlement, and regions, where this difference was not always substantiated. The summary table of the analyses can be seen below.

Table 6: Table summarizing the results of the effects of word-of-mouth marketing

| | Groups | A significant difference can be detected | Family, friends' opinions, suggestions | Professional advice: pharmaceutical recommendation | P-value |
|----------------------------------|--|--|--|--|---------|
| Gender | Woman | yes | | x | 0,015 |
| | Man | no | | | |
| Lifestyle groups | Resigned | yes | x | | 0,007 |
| | Those striving for safety | yes | | x | 0,007 |
| | Digital socializers | no | | | |
| | Life enjoyers | no | | | |
| | Those who crave recognition | no | | | |
| | Well-off young people | no | | | |
| | Carrier builders | no | | | |
| | Laggards/recluses | yes | | x | 0,007 |
| | Precarious workers | no | | | |
| | | | | | |
| Age | -19 | | | | |
| | 20-29 | | | | |
| | 30-,39 | | | | |
| | 40-49 | yes | | x | 0,011 |
| | 50-59 | | | | |
| | 60+ | yes | | x | <0,01 |
| Labor market situation | student | | | | |
| | Stay-at-home mom | | | | |
| | active worker | yes | | x | 0,036 |
| | retired | yes | | x | 0,001 |
| Parental situation | I have grown up children, we do not live in the same household | yes | | x | 0,003 |
| Educational qualification | full group | no | | | |
| Region | full group | no | | | |
| Type of settlement | full group | no | | | |

Source: self-edited

I examined the significance of professional advice for customers at the pharmacy. It can be assumed that if professional advice is significantly more important to them, it will motivate them to shop at a pharmacy. For those who shop at a pharmacy, professional advice is significantly more important. For pharmacy shoppers, professional advice has a significantly stronger impact than the suggestions of family and friends.

Table 7: Differences between external advice for pharmacy shoppers (n=566)

| | Professional advice: pharmaceutical recommendation | Family, friends' opinions, suggestions | Diference | P-value | N |
|-------------------|--|---|-----------|---------|-----|
| Pharmacy shoppers | 3,69 | 3,51 | 0,18 | <0,01 | 566 |

Source: self-edited

3.4 Analysis of consumer attitudes

H4: Consumer attitudes show significant regional differences.

I formed the principal component groups using principal component analysis. From the established groups, five **attitude segments** were identified based on the consumer attitudes characteristic of them, representing five different **types of consumers**.

Table 8: Analysis of Variance of Principal Components-Rotated Component Matrix (n=702)

| | Components | | | | |
|--|------------|-------|--------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| Based on the TV advertisement, I would like to request a specific product at the pharmacy. | 0,926 | 0,062 | 0,129 | -0,076 | 0,136 |
| I believe that the product advertised on TV is definitely reliable. | 0,916 | 0,018 | 0,175 | -0,031 | 0,16 |
| I consider taking dietary supplements important for myself. | 0,079 | 0,85 | 0,017 | 0,006 | 0,056 |
| Usually, we have vitamin C, vitamin D, and immune boosters at home. | -0,152 | 0,708 | 0,061 | 0,379 | 0,075 |
| Health preservation is much more important to me than it was 5 years ago. | 0,103 | 0,695 | 0,162 | 0,114 | 0,085 |
| I know that I would like to ask for something for a sore throat, and I will ask the pharmacist what they recommend for this. | 0,087 | 0,106 | 0,873 | 0,098 | 0,106 |
| I ask for help when shopping at the pharmacy. | 0,206 | 0,099 | 0,852 | 0,085 | 0,045 |
| I go into the pharmacy with a specific product request, I know exactly which product I want. | -0,013 | 0,073 | 0,045 | 0,884 | 0,098 |
| If a product works well, I will buy it again later. | -0,085 | 0,264 | 0,156 | 0,766 | 0,147 |
| New products that I don't know, I'm afraid to try. | 0,126 | 0,099 | 0,166 | 0,038 | 0,84 |
| I don't buy a product that I don't know. | 0,151 | 0,081 | -0,013 | 0,205 | 0,809 |

Source: self-edited

















Names and abbreviations of main components:

- 1. MASS MEDIA Consumer (MASM):** They are the media consumers whose purchasing behavior is characterized by buying based on TV advertisements, and they are convinced that the products seen in TV ads are reliable, having a positive attitude towards these products.
- 2. HEALTH CONCIOUS Consumer (HEAC):** They are health-conscious consumers. They consider taking dietary supplements important because they are convinced that it supports their health.
- 3. NON COMMITTED Consumer:** They are the ones who are not yet committed to a specific brand or manufacturer. They ask for help when shopping at the pharmacy and seek the pharmacist's opinion.
- 4. TRUSTED BRAND Consumer (TRUB):** They are the brand consumers who enter the pharmacy with a specific product need, loyal to the product that has worked for them. They


have a positive attitude towards the products they have tried and were satisfied with, and they are happy to purchase these because their experience has built their trust in the product.

5. **NOT RISK Consumer (NOTR):** They are the consumers who are afraid to try new products; fear appears in their purchasing behavior, and their negative attitude towards the new is strong. In this way, they do not dare to take risks, they do not buy a product they are not familiar with. Summarizing the demographic characteristics of the attitude segments defined with the help of the established principal component groups, we can say the following about them.

Table 9: Demographic characteristics of attitude segments

| | | | | | | | | |
|---------------------------|---|--|--|---|-----------------------------------|---|----------------------|----------------------------|
| MASS MEDIA consumer | Gender | Age | Qualification | Labor market situation | Parental situation | Lifestyle | Region | Type of settlement |
| | Man  | Under 19 years old Over 60 years old | not advanced | retired student | has grown up children | Digital Socializers  | Western Transdanubia | County town |
| HEALTH CONSCIOUS consumer | Gender | Age | Qualification | Labor market situation | Parental situation | Lifestyle | Region | Type of settlement |
| | Woman  | Over 60 years old 30-39  | advanced  | retired stay-at-home mom | has grown up children | Well-off young people Carrier builders  | Southern Great Plain | Large village |
| NON COMMITTED consumer | Gender | Age | Qualification | Labor market situation | Parental situation | Lifestyle | Region | Type of settlement |
| | Woman  | Over 60 years old  | not advanced  | retired  | has grown up children | those striving for safety  | Central Transdanubia | Large village |
| TRUSTED BRAND consumer | Gender | Age | Qualification | Labor market situation | Parental situation | Lifestyle | Region | Type of settlement |
| | Woman  | Over 60 years old 30-39  | advanced | retired mother of a small child | yes, living in the same household | Carrier builders  | Southern Great Plain | Large village |
| NOT RISK consumer | Gender | Age | Qualification | Labor market situation | Parental situation | Lifestyle | Region | Type of settlement |
| | Woman | Over 60 years old 20-29 | not advanced  | retired student  | does not have children | Laggards/recluses | Northern Hungary | Large village, county town |

Source: self-edited

 = significant difference

The examined segments show significant differences by region, so we can say that in a given region, certain attitudes are significantly stronger compared to others.

In the case of the capital city Budapest, a significant difference between the attitude segments can be observed, with one exception: I did not find a significant difference between the risk-averse and the non committed consumer. In the capital, the positive attitude towards the reliable brand is the strongest. The Pest region presents the same picture as Budapest, so I found significant differences

among the attitude segments; in this region, I only did not find significant differences between the non-risk-taking and the non-committed consumers. In the Pest region and Budapest, health-related attitudes are completely the same; in this region as well, the positive attitude towards a reliable brand is the strongest.

In Western Transdanubia, the health-related attitude and the uncertain, non committed consumer behavior do not differ significantly. Furthermore, I did not find a significant difference between the fear of the new and the lack of commitment in this region either. In Western Transdanubia, the attitude towards the established brand also significantly characterizes consumer behavior.

In Central Transdanubia, however, the strong commitment to the established brand breaks down, as I did not find a significant difference between the established brand and health-related attitudes here. In this region, a positive attitude towards a reliable brand is as significant as positive beliefs related to health. Compared to the other attitude segments, the established brand is significantly stronger. In this region, the behavior related to health preservation is as characteristic as the positive attitude towards seeking help at the pharmacy, and no significant difference can be detected between the two. The attitude towards health preservation differs significantly only from the attitudes related to mass media and the behaviors associated with the fear of the new, being stronger than them.

In Southern Transdanubia, there is also no significant difference between a reliable brand and health preservation, and in this region, I did not find significant differences between risk-averse and non-committed consumer attitudes either. The positive attitude towards a reliable brand and the attitudes related to health preservation are significantly stronger than those of the other attitude segments.

In Southern Great Plain, I was able to demonstrate significant differences among all attitude segments. In the field, the strongest attitude is a positive approach towards a reliable brand, followed by health preservation, and then seeking advice in pharmacies to assist with purchases as a behavior of non committed consumers. The fear of the new is less characteristic in the region, and the influence of mass media is felt the least on consumer behaviors.

In the case of Northern Hungary, the positive attitude towards the reliable brand is significantly the strongest. I found significant differences between the individual attitude segments, with one exception in this region. I did not find a significant difference between the risk-averse and non committed consumer attitudes; the fear of the new and the lack of commitment are equally felt in consumer behavior.

In Northern Great Plain, the positive attitude towards a reliable brand is also significantly the strongest. Health preservation is significantly more prominent in consumer behaviors than fear of the new and the influence of mass media; however, it does not significantly differ from the extent to which seeking professional advice and having a positive attitude towards pharmacists' opinions characterize purchases. The opinion about professional advice and the fear of the new do not significantly differ from each other. The impact of mass media on the consumer's opinion of a given product is the least significant, falling significantly short among the examined attitude segments.

There are significant differences in consumer attitudes in the examined regions. Based on the results of regional attitude studies, the regional differences in influencing factors, and the regional differences observed in health preservation, I created a regional consumer profile map that makes these differences visible and outlines the consumer profiles at the regional level.

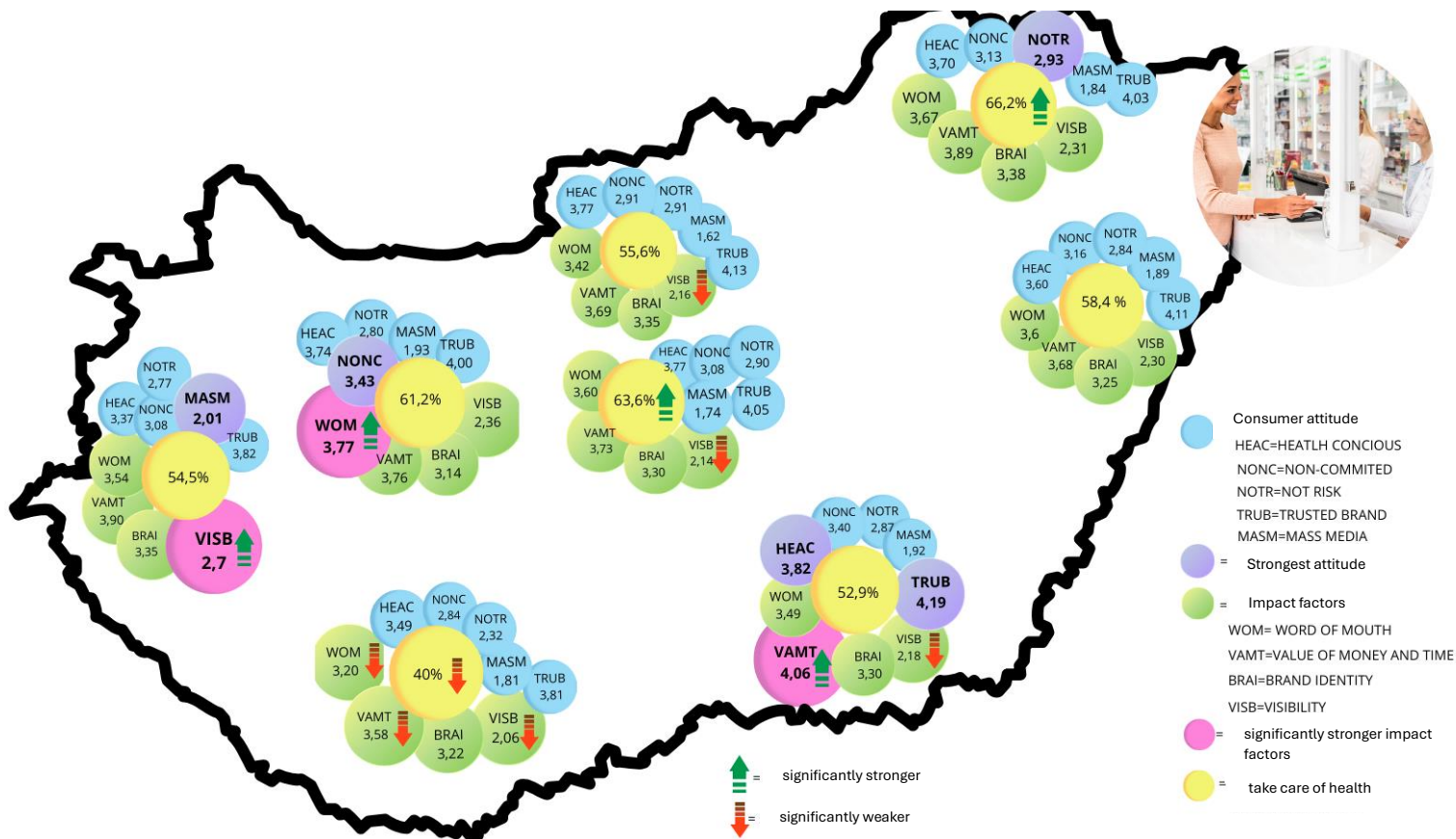


Figure 10: Regional consumer map, self-edited

3.5 Analysis of customer goals

H5: There is a significant difference in the purpose of shopping among groups with different lifestyles, genders, and age groups.

In the analysis, I grouped the problems characteristic of today's era, for which consumers purchase over-the-counter medications.

I have identified modern problems as follows:

- stress, poor sleep quality
- exhaustion, fatigue, memory problems
- allergy
- female problems, menopausal symptoms
- digestive problems, lactose and gluten intolerance

Today's trends, which also affect consumers and purchases, can be identified in the following groups:

- health preservation, more conscious lifestyle
- immunity boosting, prevention
- pain relief
- skin care

A significant difference can be observed between those who live a fast-paced life and enjoy life, and those who live a slow-paced life and are resigned, in terms of the products purchased for stress

reduction. Career builders purchase significantly more products for fatigue reduction than the group of those who lead a slow-paced life, seek security, are precarious, and lag behind. The allergy, as a complaint, is not related to the pace of life based on the results. For the purpose of addressing women's issues, career builders are the primary purchasers, with significant differences observed between career builders and well-off young people, between career builders and those seeking security, and between career builders and those who lag behind/withdraw. In the case of trends, they lead in skincare and show a significant difference between those who seek recognition and those who are resigned. Those who seek recognition show a significant difference compared to well-off young people and hedonists, and the resigned also show a significant difference compared to well-off young people and hedonists. Most painkiller consumers are pleasure-seekers and digital socializers, who show a significant difference compared to career builders. During the examination of health consciousness, we observed that career builders pay significantly more attention to their health compared to pleasure seekers, so perhaps this is the reason why they do not prefer pain relievers as much as pleasure seekers do. Pleasure-seekers do not concern themselves with prevention; they prefer to reach for painkillers. The results of the examinations are shown in the table below.

Table 10: Summary table of the results of the correlations between the fast pace of life and the purpose of shopping

| Modern problems | Significant difference | Hypothesis fulfilled |
|--|-------------------------------|-----------------------------|
| stress reduction, relaxation, better sleep | there is | yes |
| reducing fatigue, better memory | there is | partially |
| elimination of allergy | there is | partially |
| female problems, alleviation of menopausal symptoms | there is | no |
| treatment of digestive problems, lactose intolerance | there is not | |
| Trends | | |
| health preservation, more conscious lifestyle | there is not | |
| immune boosting, prevention | there is not | |
| skin care | there is | no |
| pain relief | there is | no |

Source: self-edited

During the examination of hypothesis, I am looking for differences between genders and age groups. In the context of modern problems, I found a significant difference in one area by age, which is the area of women's issues. The emergence of women's issues primarily affects the younger generation. A significant difference can be demonstrated between those under 19 and those aged 30-39 and over 50, as well as between those aged 20-29 and those aged 30-39 and over 50. In terms of purchases made for immune boosting, the 30-39 age group shows significant differences compared to both the younger and older age groups. The younger generation places less importance on immune boosting, while the 40-49 and 50-59 age groups show higher results based on average values. Skincare is significantly more important for the younger generation. The younger generation places significantly more importance on skincare than the older generation, with the highest average value in skincare being shown by the 30-39 age group. The youngest individuals purchase pain relievers with significantly higher intent than the older generation, typically those over 60 years old. The results of the age group studies are summarized in the table below.

Table 11: Summary table of the results of the correlations between the purposes of purchases by age group

| Modern problems | Significant difference | Hypothesis fulfilled |
|--|------------------------|----------------------|
| stress reduction, relaxation, better sleep | there is not | |
| reducing fatigue, better memory | there is not | |
| elimination of allergy | there is not | |
| female problems, alleviation of menopausal symptoms | there is | yes |
| treatment of digestive problems, lactose intolerance | there is not | |
| Trends | | |
| health preservation, more conscious lifestyle | ther is not | |
| immune boosting, prevention | there is | yes |
| skin care | there is | yes |
| pain relief | there is | yes |

Source: self-edited

I conducted the gender-based analysis according to modern issues and purchasing goals related to trends.

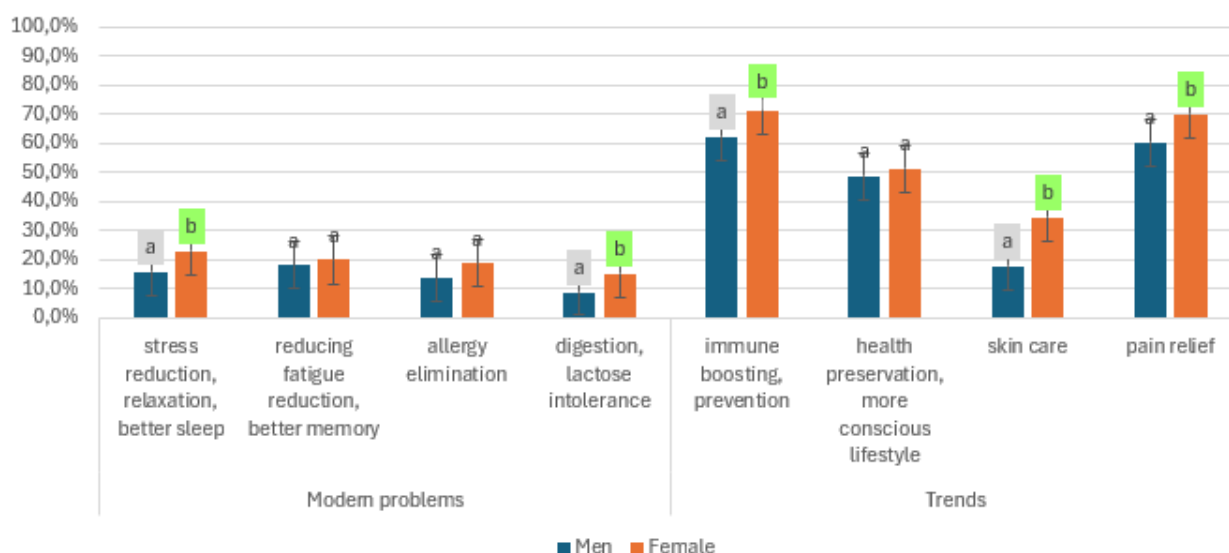


Figure 11: Differences between women and men in terms of modern issues and trends, self-edited

There is a significant difference in stress relief and digestion; these problems affect women more. But overall, it is evident that only a small percentage of people purchase products for this purpose, which is due to the proportion of categories introduced at the beginning of the analysis. It is evident that there are significant differences between women and men in terms of immune boosting, prevention, and pain relief. There is also a significant difference in skincare, as women spend significantly more on skincare and engage more with the topic, seeking information.

4. CONCLUSIONS AND RECOMMENDATIONS

The hypotheses established at the beginning of the research can be accepted as follows based on the examination results:

Table 12: Acceptance/rejection of hypotheses

| HYPOTHESES | ACCEPTANCE |
|--|----------------------|
| H1: The traditional value system positively influences health awareness. | not verifiable |
| H2: The product price is a stronger purchasing factor than the brand. | verifiable |
| H3: Professional advice has a greater impact on purchasing decisions than other word-of-mouth recommendations, and this positively influences the intention to purchase at the pharmacy. | partially verifiable |
| H4: Consumer attitudes show significant differences at the regional level. | verifiable |
| H5: There is a significant difference in the purpose of shopping among groups with different life paces, genders, and age groups. | partially verifiable |

Source: self-edited

4.1 Suggestions based on the hypotheses

H1: It is recommended to develop a target audience-oriented marketing strategy. When introducing a product to the market, we can achieve better results with a target audience-focused strategy and communication. From the perspective of increasing traffic, potential groups are those who pay significantly more attention to their health and simultaneously consider taking vitamins important. At career builders, activity, work performance, and health must be correlated. It is worth strengthening online communication towards the digital socializers. Providing professional support to the group of laggards/isolated individuals in this regard, as they are a marginalized group, know little about innovations, and do not follow trends. For them, professional support, information transfer in pharmacies, and raising awareness can be primary. It would be important to persuade and educate those who enjoy life, to develop positive attitudes towards health preservation, so that we can steer the group's conviction in a positive direction regarding the importance of health preservation. The lifestyle groups differ from each other in their value systems, so communication will be the key factor in how we address them, the values we incorporate into our marketing communication, and the values we can attribute to our product.

H2: The impact of such a strong influence of price can primarily be explained by the current market environment, which in turn highlights the importance of monitoring competitors for companies. It is very important for organizations to establish a dynamic market price monitor, where competitors' prices are continuously monitored across various channels and dynamically reflect changes. It is important to ensure product availability, that the product is there, and that there is available stock. Analyses need to be conducted on the sales data to compare regular price sales and promotional sales. What results can we achieve with a price promotion? Furthermore, which type of price promotions have a greater impact, volume-based or value-based promotions? Fundamentally, a good pricing strategy and a well-established market price will be decisive factors in the sales plans. Particular attention must be paid to ensure that the pricing of manufacturers and wholesalers is not undermined by retail with potentially excessively high margin percentages, as such pricing strategies can significantly damage the market and reduce the manufacturer's sales. It

is also important that the discounts and promotional purchase prices given in the supply chain are passed on to consumers by the retail units, as this can achieve an increase in sales. We need to build the pricing and marketing strategy together. At a well-known brand, organizing periodic extra discounts, promotional days, and unique offers can boost sales.

H3: The importance of pharmacist advice in the over-the-counter product market, although considered accepted, needs to be reinforced. For the enlightened and self-healing consumer, it would also be important to emphasize the role of professional advice. Pharmacies should use new tools to strengthen consumers' intention to purchase at the pharmacy, emphasize the importance of pharmaceutical expertise, and develop a different, persuasive communication strategy for the role of patient care as a priority task.

H4: Consumers show a positive attitude towards the reliable brand. It is very important to pay attention to the fact that a poor pricing strategy, or the lack thereof, due to an organization not tracking market movements, competitors' prices, and setting either the wholesale transfer price or the retail or shelf price too high, can damage the positive attitude towards a reliable brand. In communication with consumers, it is worth choosing a reliable brand strategy, having them try the product, so that the consumer can have positive experiences with it. The mass media has the least positive effect on purchases, which suggests that a significant portion of media spending may not achieve the impact we would expect. It can be reinforced that the direction is for a product at an affordable price to be available on the market for consumers, and we can associate trust with this product, which can be supported by the professional advice that consumers receive at pharmacies. We can achieve less trust in the brand through mass media tools; for this, we need other, more effective tools, among which the pharmacist's recommendation can prove to be a good tool.

H5: If the market can be well differentiated according to which age group, lifestyle group, male or female, is looking for a solution to which problem, then the target audience for a given product will be more clearly defined, allowing organizations to develop their marketing strategy with a stronger focus. They can choose a communication strategy that will allow them to address the most important target group involved in the issue. Since women significantly differ from men in terms of skincare and immune boosting, and they experience much more stress, health days created for women, where the focus is on women—modern, career-oriented, entrepreneurial women and those who find themselves in maternal roles—can provide an opportunity to better understand female consumers.

The figure below suggests solutions for tools that can be easily incorporated into purchase incentive and strategic planning.

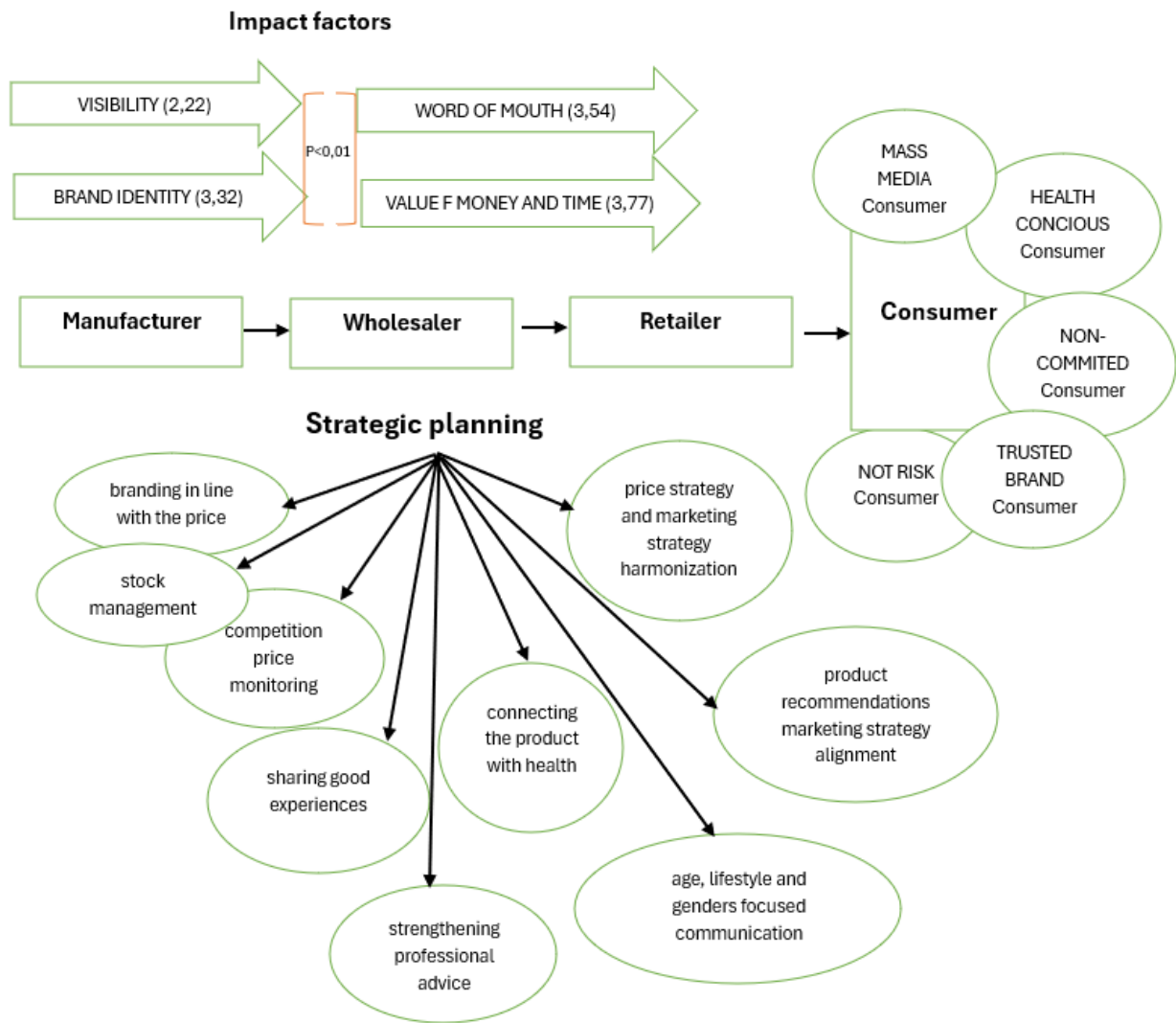


Figure 12: Purchase incentive strategic planning in the supply chain, source: self-edited

Projected onto the supply chain, the diagram above sets out the most important steps and actions related to strategic planning, which can be used to increase effectiveness by focusing on specific consumer groups.

5. NEW SCIENTIFIC RESULTS

1. Please provide the text you would like to have translated. Applying the Töröcsik lifestyle model (2018), I found that consumers' value system, primarily due to the Covid-19 period, has transformed: **the modern value system has shifted towards the traditional**. Today, people value security, work-life balance, proximity to nature instead of city noise, environmental protection, a calmer lifestyle, and the pursuit of happiness more.
2. I have shown that the effects of technological advancements, digitalization, and continuous environmental changes are felt in the consumer lifestyle pace, where **the groups of "Well-off Youth," "Recognition Seekers," and "Digital Socializers " maintain a faster pace of life** compared to the survey conducted six years ago (Töröcsik's lifestyle model, 2019).
3. I found **significant differences in the health-related attitudes of lifestyle groups** and demonstrated that caring about health does not correlate with higher vitamin supplementation.
4. I have created a **consumer wellness-oriented map** that categorizes lifestyle groups based on health care and vitamin consumption.
5. I have formulated a **goal-oriented marketing strategy** for significantly different behaviours of potential groups: **for career builders**, activity and job performance are linked to health, for **digital socializers** online communication is influential, the **laggards, recluses** group needs professional support, while persuasion and education are important for **life enjoyers** in developing positive attitudes towards health promotion.
6. **I have identified the factors influencing consumer decisions:** the strongest ones that affect consumer choices even after the Covid-19 period are **the product's price and availability**. Furthermore, I have shown that price is a significantly stronger factor than brand.
7. I have demonstrated that in this market, **professional advice is a significantly stronger decision-making factor** than the opinions of family members and friends. Professional advice has a significantly greater impact on women than on men. Professional advice is also significantly more important for those seeking security.
8. Professional advice is significantly more important than the opinions of family and friends for those who shop at the pharmacy.
9. I created the **"Regional Consumer Profile" map**, where I identified five different types of consumers: **Mass Media Consumer, Health-Conscious Consumer, Trusted Brand Consumer, Non-Committed Consumer, Risk-Averse Consumer**.
10. I have shown that **women who are part of the group of life enjoyers**, who lead a fast-paced lifestyle and represent traditional values, **purchase significantly more products for relaxation and stress relief** than men with a slow-paced lifestyle.
11. Based on the sample, I found that **women significantly more often reach for pain relievers**, pay more attention to immune boosting, and are more conscious about skincare than men.

6. PUBLICATIONS

Scientific journal article

Kozma, T., Király, É., Faragóné, L. K., Szabó-Geletóczki, R. (2023). A viszony ne legyen iszony. Avagy az üzleti partnerkapcsolatok szerepe az ellátási láncban. LOGISZTIKAI TRENDEK ÉS LEGJOBB GYAKORLATOK 9 :1 pp. 41-49., 9 p. | DOI: 10.21405/logtrend.2023.9.1.41

Szabó-Geletóczki, R., Kozma, T. (2023). Törés a gyógyszeripari ellátási láncban, gyógyszerhiány vagy készlethiány? LOGISZTIKAI ÉVKÖNYV 29: 4 pp. 222-235., 14 p. (2023)

Szabó-Geletóczki, R., Kozma, T., Pónusz M. (2022). Market Changes in the Pharmaceutical Industry. ACTA UNIVERSITATIS SAPIENTIAE EUROPEAN AND REGIONAL STUDIES 2022: 22 pp. 50-72., 23 p.

Szabó-Geletóczki, R., Kozma, T., (2022). A gyógyszeripari ellátási lánc szereplőit érintő COVID hatások, a piacon bekövetkező változások. LOGISZTIKAI TRENDEK ÉS LEGJOBB GYAKORLATOK 8:1 pp. 9-15., 7 p.

Szabó-Geletóczki, R., Kozma, T. (2022). A készletezés menedzsmentje egy hazai Pharma vállalatnál. POLGÁRI SZEMLE: GAZDASÁGI ÉS TÁRSADALMI FOLYÓIRAT 18: 1-3 pp. 274-296., 13 p.

Szabó-Geletóczki, R., Szabó, E., Rudnák, I. (2022). Stockpile management through the everyday operation of pharmaceutical company. VADYBA: JOURNAL OF MANAGEMENT 38: 1 pp. 51-62., 12 p.

Specialized Study (Book Excerpt)

Szabó-Geletóczki, R., Kozma, T. (2024). Modern Kori kihívások a patikákban (ESETTANULMÁNY). LOGISZTIKAI ÉVKÖNYV, pp 71-78 | DOI 10.23717/LOGEVK.2024.7

Conference paper in conference proceedings

Kozma T., Király É., Faragóné L. K., Szabó-Geletóczki R. (2023). A vállalatok ellátási láncbéli és logisztikai gyakorlata, a kapcsolati hálók vizsgálata. KÖZGAZDÁSZ DOKTORANDUSZOK ÉS KUTATÓK IX. NEMZETKÖZI TÉLI KONFERENCIÁJA KONFERENCIAKÖTET, Doktoranduszok Országos Szövetsége. 282 p. pp. 117-127., 11 p.

Kozma T., Faragóné, L. K., Szabó-Geletóczki, R. (2023). Relationship factors between supply chain actors. CONFERENCE PROCEEDINGS OF THE 7TH FEB INTERNATIONAL SCIENTIFIC CONFERENCE. Strengthening Resilience by Sustainable Economy and Business - Towards the SDGs. Maribor, Szlovénia: University of Maribor Faculty of Economics and Business (2023) 722 p. pp. 217-225., 9 p.

Szabó-Geletóczki, R., Kozma, T. (2022). A gyógyszeripar ellátási lánc, a COVID hatásai a lánc működésére. KÖZGAZDÁSZ DOKTORANDUSZOK ÉS KUTATÓK VIII. NEMZETKÖZI TÉLI KONFERENCIÁJA KONFERENCIAKÖTET. Doktoranduszok Országos Szövetsége, Közgazdaságtudományi Osztály (2022) 238 p. pp. 181-190., 10 p.

Szabó-Geletóczki, R., Rudnák, I., (2020). A Lavazza kapszulás kávék forgalmazójának marketing- és értékesítési stratégiája. XXVI. IFJÚSÁGI TUDOMÁNYOS FÓRUM. Keszthely, Magyarország: Pannon Egyetem Georgikon Kar, pp. 1-6., 6 p.