

THE IMPACT OF NEUROMARKETING ON CONSUMER BEHAVIOUR

Ali Ismajli *, Besime Ziberi **, Ardita Metushi *

* Faculty of Economics, AAB College, Prishtina, the Republic of Kosovo

** Corresponding author, Faculty of Economics, AAB College, Prishtina, the Republic of Kosovo

Contact details: AAB College, St. Elez Berisha, No. 56 Fushë Kosovë Industrial Zone 10000, Prishtina, the Republic of Kosovo



Abstract

How to cite this paper: Ismajli, A., Ziberi, B., & Metushi, A. (2022). The impact of neuromarketing on consumer behaviour. *Corporate Governance and Organizational Behavior Review*, 6(2), 95–103. <https://doi.org/10.22495/cgobrv6i2p9>

Copyright © 2022 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). <https://creativecommons.org/licenses/by/4.0/>

ISSN Online: 2521-1889

ISSN Print: 2521-1870

Received: 20.01.2022

Accepted: 06.04.2022

JEL Classification: D0, D3, D4

DOI: 10.22495/cgobrv6i2p9

One of the biggest interests for companies in today's market is considered consumer preference, why they make the choice of one product over another. The main aim of this study is to analyse the impact of neuromarketing in the process of identifying the preferences and needs of consumers. Neuromarketing tools provide insights into measuring the effectiveness of advertising campaigns in making an impact on the consumers in online retailing (Singh, 2020). In this study, neuromarketing has been analyzed, understanding the structure of the brain and its functions, the importance of perception, as well as consumer behavior during the purchasing process. In general, it is assumed that these choices are developed in a logical way, selecting the option that represents the greatest utility (Blazquez-Resino, Gutierrez-Broncano, & Gołab-Andrzejak, 2020). The method used for primary data collection is the questionnaire, which addresses elements that are important in choosing a product for a customer. This study concludes that neuromarketing contributes to the discovery of consumer preferences thus helping companies to be closer and meet the needs of consumers. The recommendation of this paper is to use neuromarketing in identifying customer preferences.

Keywords: Neuromarketing, Preference, Perception, Consumer Behavior, Decision-Making

Authors' individual contribution: Conceptualization — A.I., B.Z., and A.M.; Methodology — A.I., B.Z., and A.M.; Data Curation — A.I., B.Z., and A.M.; Writing — Original Draft — A.I., B.Z., and A.M.; Writing — Review & Editing — A.I., B.Z., and A.M.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Recently marketing is being developed a lot in improving consumer understanding. One of the biggest mysteries that exist in the market today is how and why a consumer decides to buy a product. Why does the consumer decide to buy one product instead of another? Marketers studying many areas, especially consumer behavior and the decision-making process, have managed to see another area that is growing nowadays. Here also appears the need for neuromarketing, a new field within marketing that deals with the study of the brain and marketing. Neuromarketing is the newest emerging field that is on the steps to achieving this goal. The combination of neuro and

marketing implies the merging of two fields of study (neuroscience and marketing) (Morin, 2011a). Neuromarketing has been used in the study of the purchasing decision process and also consumer behavior, focused on improving the information available about products and sales marketing actions, making them more effective from a clear direction of where and how the consumer is most sensitive to a stimulus (Jordão, De Souza, de Oliveira, & Giraldo, 2017). The paper focuses specifically on the emergence of neuromarketing and its impact on changing consumer preferences. To better understand neuromarketing, the paper presents the client's perception and emphasizes the importance of the internal, psychological factors that affect each person and their decisions in almost all real-life

situations. In addition, the paper will elaborate on the behavior of consumers and their decision-making process with its focus on favorites, determinants of choice, and purchases. The other focus of this paper will be to get acquainted with the methods and techniques of neuromarketing by looking at their advantages and disadvantages, and finally, we will see the use of neuromarketing and the benefits during its application in the necessary areas. The purpose of this paper is to recognize and understand the concept of neuromarketing in the evaluation of consumer decision-making during the purchase, analyzing the importance of consumer preferences as part of neuromarketing in order to help the development of this field of study. As well as the focus of the work is emphasized, the consumer preference of what drives them to choose one product over another when the perception will play an important role as well as the stages that the consumer goes through when buying a product.

One of the strongest benefits of neuromarketing is that it provides a common language for sales and marketing functions. In many companies, sales and marketing departments do not share a common platform to communicate, and the business pays the heavy price of a shared home (Renvoise & Morin, 2007). Future products and services will be made in accordance with all our expectations, and companies will invest in product research and development where there is a certainty that demand will be high (Gurgu, Gurgu, & Tonis, 2019). Most of the time, the failure of a product or business of a company is the difference between what the customer expects from the products and what the company offers to the customer. This means that, before the company starts the business, they need to know very well what the customer expects.

To better understand how a consumer chooses a product, we need to understand the decision-making process, focusing heavily on the perception of a product, as well as consumer behavior when purchasing a product. Thus, the main aim of this study is to analyse the impact of neuromarketing in the process of identifying the preferences and needs of consumers.

The main objectives of the study are as follows:

1. To analyze the use of neuromarketing for understanding customer preferences.
2. Assess the importance of neuromarketing in the impact of purchasing decision-making.

The research questions raised in this study are:

RQ1: What is the consumer based on buying a product?

RQ2: Who influences consumer preference during the decision-making process to purchase a product?

RQ3: What helps neuromarketing companies with the importance and effect of product advertising?

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical research. Section 4 presents the results of the study. Section 5 presents the conclusions and recommendations.

2. LITERATURE REVIEW

The concept of marketing means that an organization aims all its efforts to satisfy customers with a profit. A marketing orientation means trying to realize the concept of marketing (Perreault & McCarthy, 2005).

The concept of marketing proposes that the reason for success lies in the ability of the company to create, deliver and communicate a better value through its marketing proposal, compared to competitors for its target segments (Panda, 2007). Marketing is also an enigma in the sense that while some people see it as a force for good, others see it as a force for evil. As with most things, the reality is that it can be either or both, depending on the uses, in which people place marketing ideas and practices (Hart, 2016).

Marketing is a social process by which individuals and groups get what they need and want through the creation, delivery, and exchange of cheap value products and services with others (Kotler & Keller, 2006). In general, perception is simply the process of 1) selecting, 2) organizing, and 3) interpreting information inputs in order to produce meaning that would aid in consumer decision-making (Madichie, 2012).

There are many examples of manipulating perceptual processes in marketing. Wrapping in aluminum foil is good not only for attracting attention; the use of this material for wrapping a product also increases the brand value in the eyes of consumers, suggesting a high prestige and status (Krajnovic, Sikiric, & Jasic, 2012).

A happy customer is one who is satisfied with the experience he/she has with a product or service. Customer perception is built around the experience a customer has with a product. Customer perception can make or break your brand (Clootrack, 2020). In marketing, "customer perception" refers to customers' awareness, their impressions, and their thoughts about your business, products, and brand. Customer perception is shaped by many variables, including direct and indirect interactions with your offerings (Simmons, n.d.).

Consumer behavior reflects the totality of consumer decisions regarding the purchase, consumption, and disposal of goods, services, activities, experiences, people, and ideas by (human) decision-making units (Hoyer & MacInnis, 2010). The role of marketers is to influence consumer behavior, both short-term and long-term, in favor of the brands they manage. We need to maintain our customer base, increase purchasing frequency, and turn non-users into users (Barden, 2013). The use of neuroscience techniques in product marketing has two important roots: first, the likelihood that neuromarketing will become an economical and faster way of marketing compared to conventional ones; second, the belief that it will provide answers that are not otherwise available (Joy, 2018). Areas of neuromarketing search applications have many and varied applications, such as creating products in which taste, structure or aroma are vital, architecture and plan for new constructions, movie trailers, advertising utility, website design — all of these can be the result of a pervasive realm of emotion, interest, belief, loyalty, or fear (Joy, 2018).

Neuromarketing is an interdisciplinary field that aims to understand consumer behavior by studying the brain through the use of various techniques, such as neuroimaging. The research aims to measure the impact on an individual market stimulus and thus provide new ways to understand how the consumer stores, incorporates, processes, and uses the wide range of information received on

a daily basis (Jordão et al., 2017). Neuromarketing is the application of neuroscience to marketing. Neuromarketing involves the direct use of brain images, scanning, or other brain activity measurement technology to measure an entity's response to specific products, packaging, advertising, or other marketing elements (Devaru, 2018).

Although these three parts of the brain communicate with each other and constantly strive to influence each other, each has a specialized function (Renvoise & Morin, 2007):

- The young brain thinks. Processes rational data.
- The middle brain feels. It processes the emotions and feelings of the gut.
- The old brain decides. It takes into account the input from the other two brains, but the old brain is the actual cause of the decision.

For many customer decisions, problem representation involves several interrelated sub-problems, each with its own sub-goals section, organized as a goal hierarchy (Kumar & Tyagi, 2004). The whole set of decisions produces a set of behavioral goals or a decision plan. Some purchasing choices require extensive troubleshooting efforts, while other purchases are made automatically in a routine manner (Kumar & Tyagi, 2004).

Neuromarketing is generally used to objectively identify consumer preferences (Fortunato, Giraldi, & de Oliveira, 2014). Consumer preferences are subjective individual tastes, likes and dislikes, and predispositions (Booker, 2017). When you are building or marketing a product for your target customers, you need to consider their personal preferences to get the best possible results (Booker, 2017). Customer preferences are defined as subjective (individual) tastes, measured by the usefulness, of different batches of goods (Saji, 2020). Another study showed that the presence of celebrities or people considered physically beautiful in advertisements activates an area of the brain involved in the process of recognizing and building trust (Fortunato et al., 2014).

Neuromarketing loosely refers to the measurement of physiological and neural signals to gain insight into customers' motivations, preferences, and decisions, which can help inform creative advertising, product development, pricing, and other marketing areas (Harrell, 2019).

One of the most important challenges for companies who offer neuromarketing services is to stick to ethical principles when performing the investigations thus the human brain from a neuromarketing perspective is to shade more light or to better understand the consumer brain (Devaru, 2018).

Advances in neuroscience teach how the human brain works, deep inside the skull to examine how advertising and marketing messages affect the brain. Also, it exposes many of the little things that happen in the minds, usually, unconsciously, that may make or break the success of any marketing campaign (Parchure, Parchure, & Bora, 2020).

Therefore, the conclusion would be that celebrities or attractive people influence consumer preferences, resulting in the purchasing decision (Fortunato et al., 2014). These findings help companies modify and choose their ads to include

elements that help the brand be more easily maintained or help retain the attention of consumers (Fortunato et al., 2014). Advertising is a means of communication with users of a product or service. Advertisements are messages paid for by those who send them and are intended to inform or influence the people who receive them, as defined by the UK Advertising Association (The Economic Times, n.d.). Advertising is the attempt to influence the buying behavior of customers or clients with a compelling sales message about products and/or services (Ward, 2018). In business, the purpose of advertising is to attract new customers by defining the target market and approaching them with an effective advertising campaign (Ward, 2018). Another widely reported use of neuromarketing is in the development of products and services according to the wishes of consumers (Fortunato et al., 2014). Neuromarketing is upon us. Companies are beginning to provide their customers with brain-based information about customer preferences, claiming to bypass focus groups and other marketing research techniques on the premise that directly viewing a customer's brain while viewing products or branding is a much better predictor of consumer behavior (Murphy, Iles, & Reiner, 2008).

The practice has shown that neuromarketing techniques have a direct impact on promotion. For example, if it is online advertising, neuromarketing techniques depend on things, such as the content of the ad and the duration of the promotion (Wellington Garikai, 2017). Neuromarketing also has a direct impact on product development. For example, if it is product distribution, neuromarketing techniques will depend on things such as product positioning and product availability. Each type of promotion is influenced differently by neuromarketing techniques (Wellington Garikai, 2017).

Overall, there are three main reasons that suggest the need to review subconscious responses in consumer decision-making (Horská & Berčík, 2017):

- Decisions are often based on subconscious processes and influences.

- Emotions strongly influence decision-making, decisions are not made after careful and rational consideration of the impact of each possibility.

- Decisions are not made after receiving complete information; on the contrary, decision-making occurs almost immediately and mainly immediately after obtaining the pieces of information available for possible elections.

Due to the presented review of the related literature, this study raises the following hypotheses:

H1: Consumers demand and buy products that meet their needs, desires, and requirements based on the quality of that product and where the quality of the products directly affects the decision to buy.

H2: In the decision-making process to buy a specific product, a consumer preference is influenced by the importance of obtaining information about that product.

H3: The application of neuromarketing influences and helps companies to modify and select their advertisements that are relevant and have an effect on the choice of a product by the consumer.

3. RESEARCH METHODOLOGY

The research methodology used in this study is based on the following research elements.

Data sources: In this paper, two types of secondary and primary data sources were used.

Research methods: In this paper, the quantitative method of data collection was used, whereas the questionnaire was used for data collection. This has made it easier to test the hypotheses put forward. Another method, used in this paper, is the descriptive method, through which consumer behavior, neuromarketing, and its use are described.

Questionnaire design: The questionnaire contains a total of 17 questions and is divided into two parts. In the first part of the questionnaire, we presented questions about the socio-demographic data of the consumer. In the second part of the questionnaire, the Likert scale was used which measures the importance of the attributes obtained in the study with 5 points in total where 1 represents the evaluation "not at all important" and 5 represents the evaluation "very important". The completed questionnaire will remain absolutely confidential.

Data collection: In this study, for the very nature of the search, the survey used questionnaires created online through the program docs.google.com, which were completed online by consumers in the Prishtina region. The advantage of this technique was that the completion of this questionnaire was online and all consumers had access at all times and its completion was without pressure as it was only their opinion and all their data was confidential.

Sample selection: The quantitative method of data collection contains in itself the analysis of primary data collected through the questionnaire. The sample size used in the paper is 500 respondents. This can be considered a very good representative to consider the opinion of consumers for a better choice for the presentation of a product. The sample is composed of customers of commercial businesses in the Prishtina region. In the case of this research, consumers in the Prishtina region can be considered as very good representatives in their contribution to completing the questionnaire as we will be closer to thinking about how to choose a product.

Data processing and presentation method: The collected data are processed through Excel. The data collected from the questionnaire are presented with graphs where each graph contains a descriptive analysis.

As an alternative method for primary data collection, the qualitative research method may be used. Consider that the qualitative research methods of data collection do not involve the collection of data that involves numbers or a need to be deduced through a mathematical calculation, rather it is based on non-quantifiable elements like the feeling or emotion of the researcher. A good example of such a method is an open-ended questionnaire. But this method is quite difficult in big samples such as in our case.

4. RESULTS

During this part, all the customer responses received from the questionnaire were discussed and the hypotheses presented will be confirmed or refuted.

The analysis of the survey data was processed through Excel and all customer responses were presented through graphs containing the descriptive analysis.

Regarding the demographic part, it results that 352 or 70% of the respondents are female, 178 or 30% of the respondents are male. According to the status of the respondents, 288 or 58% of the respondents are single; 190 or 38% of the respondents are married; 15 or 3% of the respondents are divorced; 7 or 1% of the respondents are widowed.

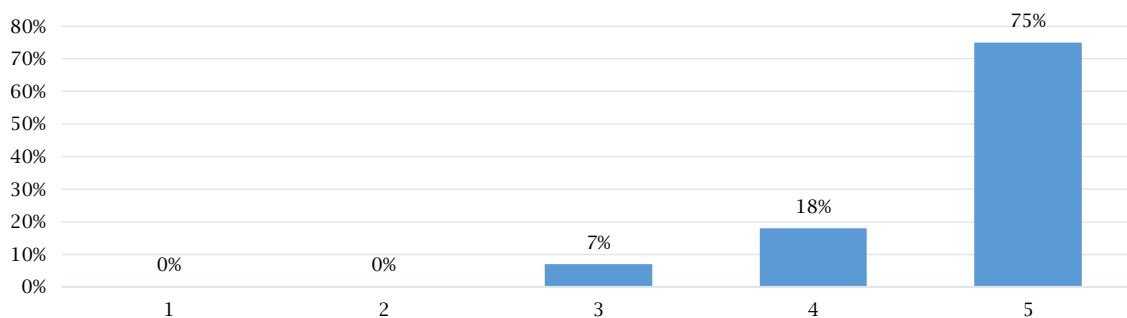
The age of the respondents in this survey is as follows: 13 or 2% of the respondents are under 18 years old, 201 or 40% are 19-25 years old, 198 or 40% are 26-35 years old, 70 or 14% are 36-45 years old and 18 or 1% over 45 years old.

Twenty-three (23%) of respondents have secondary education, 46% have a university education, and 31% have postgraduate education.

Regarding the employment of the respondents: 24 or 5% of the respondents are simple employees, 29 or 6% are specialists, 76 or 15% are managers, 58 or 12% are company managers, 37 or 7% are directors, 5 or 1% are housewives, 3 or 1% are retired, 44 or 9% are self-employed, 20 or 4% are unemployed, 148 or 30% are students and 56 or 11% are in another profession.

Eighty-eight (88) or 18% of respondents have a monthly income of 200-350 euros, 100 or 20% have a monthly income of 350-500 euros, 86 or 17% have a monthly income of 500-650 euros and 226 or 45% have a monthly income over 650 euros.

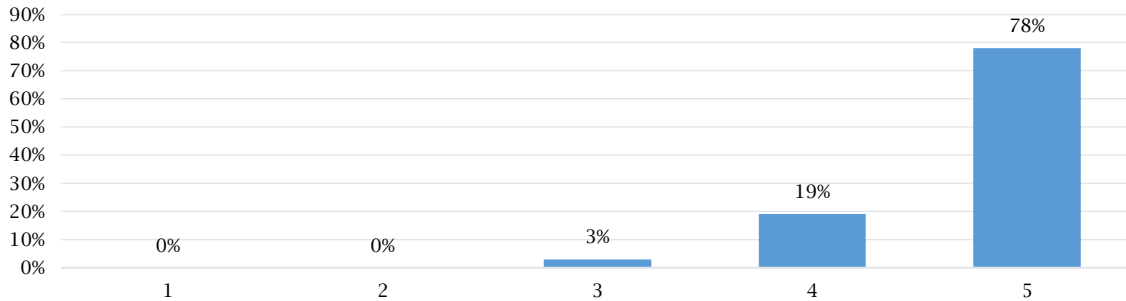
Figure 1. The importance of product quality in its choice



Three hundred seventy-six (376) or 75% of respondents think that the importance of product quality in their choice is very important, 90 or 18% think that the importance of product quality in its

choice is important and 34 or 7% think that the importance of product quality in its choice is moderately important.

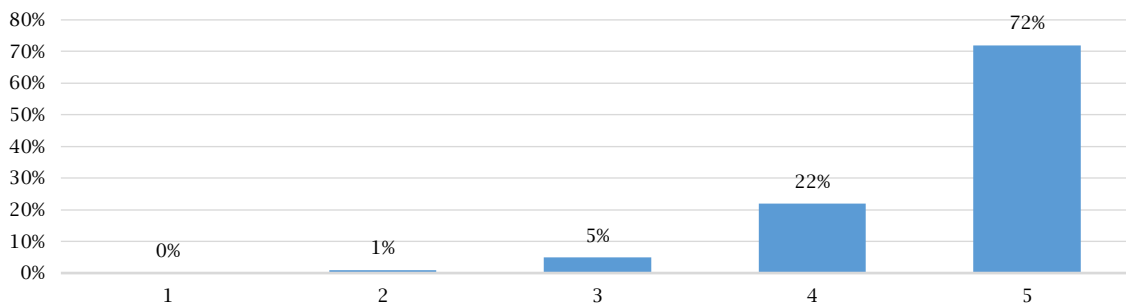
Figure 2. The importance of the color of the product packaging in its choice



Fourteen (14) or 3% of respondents think that the importance of the color of the product packaging in its choice is moderately important, 97 or 19% think that the importance of the color of

the product packaging in its choice is important and 389 or 78% think that the importance of the color of the product packaging in its choice is very important.

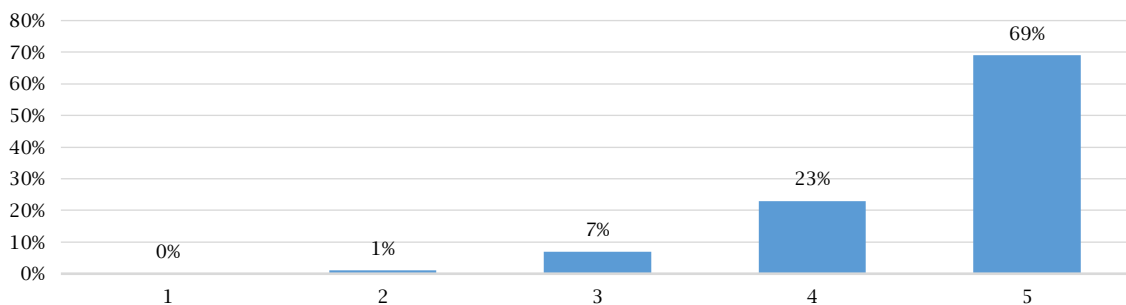
Figure 3. The importance of product information in choosing it



- One (1) or 0% of the respondents think that the importance of information about the product in its choice is not important at all.
- Three (3) or 1% of the respondents think that the importance of information about the product in its choice is less important.
- Twenty-six (26) or 5% think that the importance of information about the product in its choice is moderately important.

- One hundred and ten (110) or 22% think that the importance of information about the product in its choice is important.
- Three hundred and sixty (360) or 72% think that the importance of information about the product in choosing it is very important.

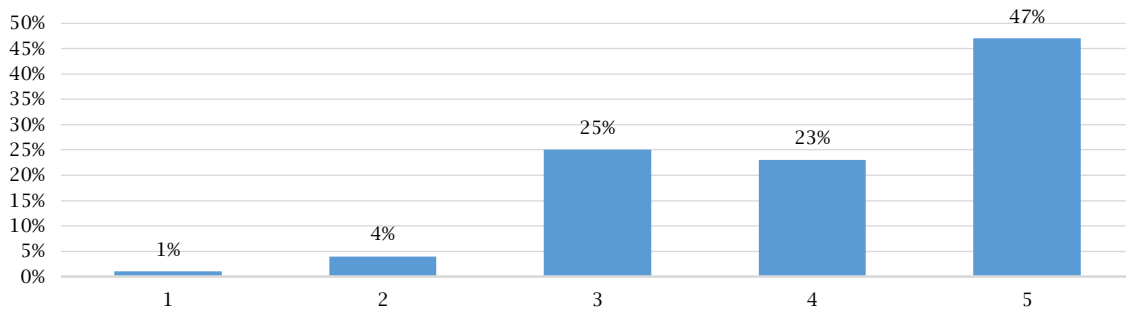
Figure 4. The importance of the selling price of the product in its choice



Three (3) or 1% of the respondents think that the importance of the selling price of the product in choosing it is less important; 33 or 7% think that the importance of the selling price of the product in choosing it is on average important; 117 or 23%

think that the importance of the selling price of the product in choosing it is important; 347 or 69% think that the importance of the selling price of the product in choosing it is very important.

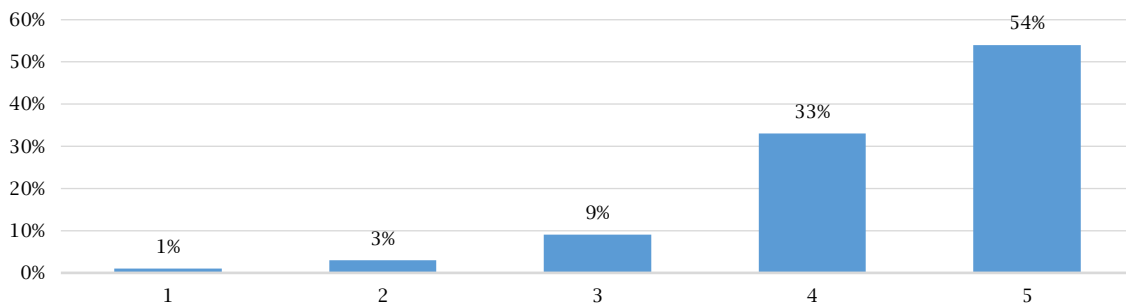
Figure 5. The importance of the way the product is presented with the information provided in its choice



Six (6) or 1% of the respondents think that the importance of the way the product is presented with the information provided in its choice is not important at all. Twenty-one (21) or 4% think that the importance of the way the product is presented with the information provided in its choice is less important. One hundred and twenty-six (126) or 25% think that the importance of the way the product

is presented with the information in its choice is on average important. One hundred and fourteen (114) or 23% think that the importance of the way the product is presented with the information in its choice is important. Two hundred and thirty-three (233) or 47% think that the importance of the way the product is presented with the information provided in its choice is very important.

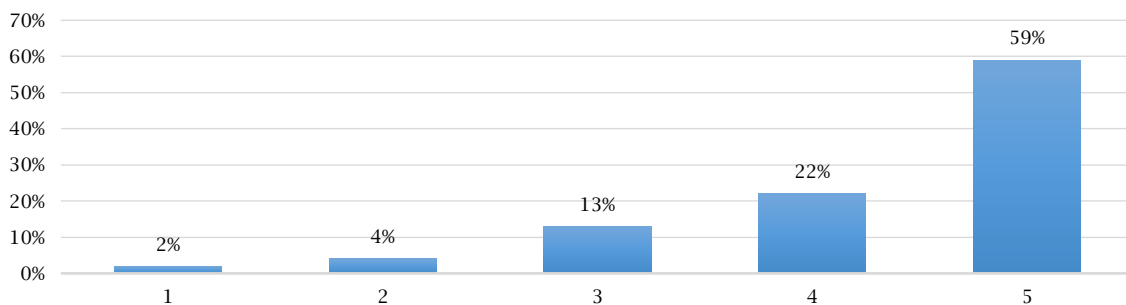
Figure 6. The importance of displaying promotional discounts when advertising products in its selection



The data of this graph shows the following results: 3 or 1% of respondents think that the importance of promotional discounts when advertising the product in its choice is not important at all. Seventeen (17) or 3% think that the importance of promotional discounts when advertising the product in its choice is less important. Forty-three (43) or 9% think that the importance of promotional discounts when advertising the product

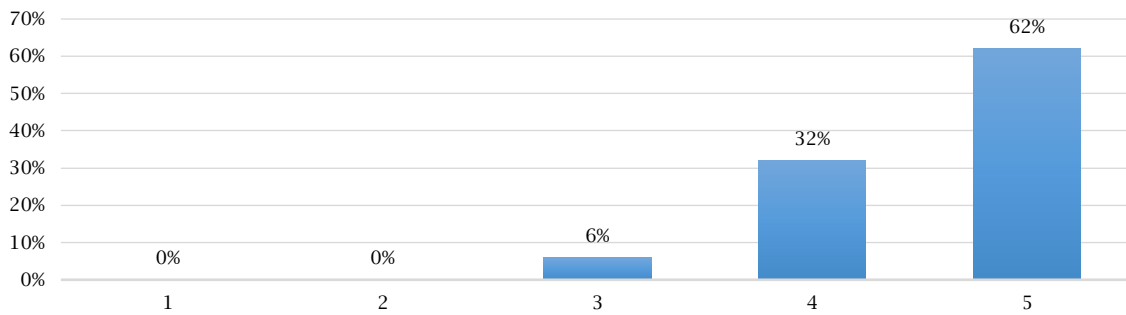
in its choice is moderately important. One hundred and sixty-six (166) or 33% think that the importance of promotional discounts when advertising the product in its choice is important. Two hundred and seventy-one (271) or 54% think that the importance of promotional discounts when advertising the product in its choice is very important.

Figure 7. The importance of advertising the product in its choice



Eight (8) or 2% of respondents think that the importance of product advertising in its choice is not important at all. Nineteen (19) or 4% think that the importance of product advertising in its choice is less important. Sixty-seven (67) or 13% think that the importance of product advertising in its choice

is moderately important. One hundred and eleven (111) or 22% think that the importance of product advertising in choosing it is important and 295 or 59% think that the importance of product advertising in choosing it is very important.

Figure 8. The importance of service quality in product selection

According to the data of this graph, the respondents gave these results: 28 or 6% of the respondents think that the importance of service quality in product selection is moderately important. Eight (8) or 32% think that the importance of service quality in product selection is important and 311 or 62% think that the importance of service quality in product selection is very important.

5. CONCLUSION

In this study, 352 or 70% of the respondents are female, and 178 or 30% of the respondents are male. The study finds out that 75% of the respondents consider the importance of product quality as the most important in their buying decision. Thus, we can accept the first hypothesis (*H1*). Also, 18% of the respondents consider the importance of the color of the product packaging as very important in their buying decision.

In the question of what respondents think about the importance of information about the product, 72% consider it very important. Thus, we can accept the second hypothesis (*H2*).

On the other hand, 69% of the respondents consider the importance of the price of great importance in their buying decision. Also, 54% of the respondents consider the importance of promotional discounts when advertising the product as crucial in their buying decision. In general, we can conclude that the application of neuromarketing influences and helps companies to modify and select their advertisements that are relevant and have an effect on the choice of a product by the consumer as this was also raised as the third hypothesis (*H3*) of this study.

In recent years marketing has undergone many changes. Marketing is more focused on individuals and their needs. As the change of marketing, perspective sends you to a field that has been a mystery until today, the need has arisen for a new branch of marketing called "neuromarketing". The latter has emerged as a product of the introduction of neuroscience methods into marketing. We can conclude that neuromarketing as a new branch offers opportunities for data disclosure regarding decision-making and buyer preferences that were not known until now. Trying around a product creates a positive or negative perception under the influence of many other variables. An important perception is the color of the product packaging which greatly affects its choice and increases the value and authority of

a product. The consumer decision-making process is one of the most important steps in marketing, as we can see the journey of consumers in the buying phase. Here we can conclude that, based on the recognition of the need, the consumer begins to gather information about that product where the importance of information about the product and the presentation of the product with information affects the choice of alternatives. And then comes the most important moment for the consumer which consists of buying the product, but it does not end everything here because it continues with the evaluation of the product after its purchase. Consumer decision-making is the process of solving a problem until its need is met. Neuromarketing is used to identify customer preferences. Neuromarketing helps in the selection of advertisements to include the necessary elements that help in keeping in mind the consumers. The attention is very great when advertising the product and the information about promotional discounts greatly influences the choice of the product. One of the biggest benefits of neuromarketing is that it provides secure information for marketers by making it easier for them to work with consumers by meeting their needs and wants. The opportunity to place a product on the market is much easier after neuromarketing reveals what attracts the consumer to choose a product. The failure for the company is much smaller with neuromarketing as it is so much closer to the customer that its products will be placed at a competitive advantage.

Marketing used by businesses should focus more on individuals and their needs. Consumers are attracted by the color and are often defined by the appearance of the product package so it is recommended to businesses that when presenting products you pay attention to the color of the product packaging. Commercial businesses are recommended to apply neuromarketing by contributing to the identification of customer preferences. Thus, neuromarketing helps businesses to be closer and meet the needs of customers. To facilitate consumer decision-making for choosing a product, it is recommended to businesses provide more information about the product. It is also recommended to businesses to be very careful in setting prices because it is considered an important factor in the evaluation and selection of the product. Focus more on observing consumer behavior by identifying their needs and wants in the market. Use neuromarketing methods and techniques to

facilitate the identification of customer preferences and needs and understand the problem of marketing.

This paper is of great interest for future researchers as it studies a new field of application, such as neuromarketing, and at the same time, becoming familiar with the neuromarketing tools, it contributes to increasing the performance of

enterprises. This study has its own limitations as a result that neuromarketing is a very important and complex field to study in its entirety. Observation methods and focus groups in smaller examples and for different cases would lead to clearer results on how consumer behavior differs towards their personal attitudes in the purchasing decision process.

REFERENCES

1. American Marketing Association (AMA). (n.d.). *Definitions of marketing*. Retrieved from <https://www.ama.org/the-definition-of-marketing-what-is-marketing/>
2. Armstrong, G., & Kotler, P. (2013). *Parimet e marketingut*. Tiranë, Shqipëri: UET Press.
3. Ariely, D., & Berns, G. (2010). Neuromarketing: The hope and hype of neuroimaging in business. *Nature Reviews Neuroscience*, 11, 284–292. <https://doi.org/10.1038/nrn2795>
4. Barden, P. (2013). *Decoded — The science behind why we buy*. John Wiley & Sons. <https://doi.org/10.1002/9781119208341>
5. Bhasin, H. (2019, April 22). What is neuromarketing? Advantages of neuromarketing. *Marketing91*. Retrieved from <https://www.marketing91.com/what-is-neuromarketing/>
6. Bitbrain. (2019, January 9). All you need to know about neuromarketing. *Bitbrain Technologies*. Retrieved from <https://www.bitbrain.com/blog/what-is-neuromarketing>
7. Blazquez-Resino, J. J., Gutierrez-Broncano, S., & Goñab-Andrzejak, E. (2020). Editorial: Neuroeconomy and neuromarketing: The study of the consumer behaviour in the COVID-19 context. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.822856>
8. Booker, B. (2017, September 12). 6 simple ways to test consumer preferences. *Attest*. Retrieved from <https://www.askattest.com/blog/insight/6-simple-ways-to-test-consumer-preferences#:~:text=What%20Are%20Consumer%20Preferences%3F,get%20the%20best%20possible%20results>
9. BrainSigns. (n.d.). NeuroMarketing — What does neuromarketing mean? *BrainSigns*. Retrieved from <https://www.brainsigns.com/en/services/neuromarketing>
10. Ceku, B., Aliu, H., & Deari, H. (2011). *Parimet e marketingut*. Tiranë, Shqipëri: Progres.
11. Cherry, K. (2020, July 22). What is the hippocampus? *Verywell Mind*. Retrieved from <https://www.verywellmind.com/what-is-the-hippocampus-2795231#citation-1>
12. Clootrack. (2020). What is customer perception? *Clootrack*. Retrieved from https://clootrack.com/knowledge_base/what-is-customer-perception/
13. Devaru, S. D. (2018). Significance of neuromarketing on consumer buying behavior. *International Journal of Technical Research & Science*, 3(3), 114–121. Retrieved from https://ijtrs.com/paper.php?issue_id=29&issueVolume_id=7
14. Dooley, R. (2005). What is neuromarketing? *Neuromarketing by Roger Doodley (et al)*. Retrieved from <https://www.neurosciencemarketing.com/blog/articles/what-is-neuromarketing.htm#:~:text=Neuromarketing%20is%20a%20new%20field,brain's%20responses%20to%20marketing%20stimuli>
15. Dooley, R. (2011). *Brainfluence: 100 ways to persuade and convince consumers with neuromarketing*. Hoboken, NJ: John Wiley & Sons, Inc.
16. Fortunato, V., Giraldi, J. d. M. E., & de Oliveira, J. (2014). A review of studies on neuromarketing: Practical results, techniques, contributions and limitations. *Journal of Management Research*, 6(2), 201–220. <https://doi.org/10.5296/jmr.v6i2.5446>
17. Fransworth, B. (2018, July 17). What is GSR (galvanic skin response) and how does it work? *iMotions*. Retrieved from <https://imotions.com/blog/gsr/>
18. Genco, S. J. (n.d.). What eye-tracking can and can't tell you about attention. *NMSBA*. Retrieved from <https://nmsba.com/neuromarketing-companies/neuromarketing-2021/what-eye-tracking-can-and-cant-tell-you-about-attention>
19. Genco, S. J. (n.d.). Why and how do neuromarketers measure brainwaves using EEG? *NMSBA*. Retrieved from <https://nmsba.com/buying-neuromarketing/neuromarketing-techniques/why-and-how-do-neuromarketers-measure-brainwaves-using-eeeg>
20. Genco, S. J., Pohlman, A. P., & Steidl, P. (2013). *Neuromarketing for dummies*. Hoboken, NJ: John Wiley & Sons, Inc.
21. Glimcher, P. W., & Fehr, E. (2013). *Neuroeconomics, decision making and the brain*. Elsevier Science. <https://doi.org/10.1016/C2011-0-05512-6>
22. Gurgu, E., Gurgu, I.-A., & Tonis, R. B. M. (2019). Neuromarketing for a better understanding of consumer needs and emotions. *Independent Journal of Management & Production*, 11(1), 208–235. <https://doi.org/10.14807/ijmp.v11i1.993>
23. Harrell, E. (2019, January 23). Neuromarketing: What you need to know. *Harvard Business Review*. Retrieved from <https://hbr.org/2019/01/neuromarketing-what-you-need-to-know>
24. Hart, S. (2016). *The marketing book* (7th ed.). Routledge. <https://doi.org/10.4324/9781315890005>
25. Haskell, H. (2016). 7 ways to engage your customer's reptilian brain. *Neuromarketing by Roger Dooley (et al)*. Retrieved from <https://www.neurosciencemarketing.com/blog/articles/reptilian-brain-2.htm>
26. Horská, E., & Bercík, J. (2017). *Neuromarketing in food retailing*. Wageningen Academic Publishers. <https://doi.org/10.3920/978-90-8686-843-8>
27. Hoyer, W. D., & MacInnis, D. J. (2010). *Consumer behavior* (5th ed.). Victoria, Australia: Cengage Learning.
28. Jordão, I. L. D. S., De Souza, M. T., de Oliveira, J. H. C., & Giraldi, J. d. M. E. (2017). Neuromarketing applied to consumer behaviour: An integrative literature review between 2010 and 2015. *International Journal of Business Forecasting and Marketing Intelligence*, 3(3), 270–288. <https://doi.org/10.1504/IJBFMI.2017.085371>
29. Joy, M. M. (2018). The potential and challenge of using neuromarketing as a marketing tool. In *Proceedings of National Conference New-Age Marketing NCNAM-2018*. Retrieved from <https://www.researchgate.net/publication/324029219>

30. Kotler Marketing Group. (n.d.). *Dr. Philip Kotler answers your questions on marketing*. Retrieved from https://www.kotlermarketing.com/phil_questions.shtml#answer3
31. Kotler, P. (2003). *Marketing insights from A to Z — 80 concepts every manager needs to know*. Hoboken, NJ: John Wiley & Sons, Inc.
32. Kotler, P., & Keller, K. L. (2006). *Marketing management* (12th ed.). Upper Saddle River, NJ: Pearson Education.
33. Krajnovic, A., Sikiric, D., & Jasic, D. (2012). Neuromarketing and customers' free will. In *Proceedings of the 13th Management International Conference, Budapest, Hungary, 22-24 November 2012* (pp. 1143-1163). Retrieved from <https://www.bib.irb.hr/609323/download/609323.MIC4212.pdf>
34. Kumar, A., & Tyagi, C. L. (2004). *Consumer behaviour*. New Delhi, India: Atlantic Publishers.
35. Kwantlen Polytechnic University. (n.d.). *29. Consumer decision making process*. Retrieved from <https://kpu.pressbooks.pub/introconsumerbehaviour/chapter/consumer-decision-making/>
36. Lumen. (n.d.). *The role of customers in marketing*. Retrieved from <https://courses.lumenlearning.com/wmopen-introbusiness/chapter/the-role-of-customers-in-marketing/>
37. Madichie, N. O. (2012). Consumer perception. In R. Kapoor & N. O. Madichie (Eds.), *Consumer behaviour: Text & cases* (pp. 154-175). Tata McGraw Hill Education Private Limited. Retrieved from https://www.researchgate.net/publication/328676646_Consumer_Perception
38. Marketing Schools. (2020, November 23). *Neuromarketing: Explore the strategy of neuromarketing*. Retrieved from <https://www.marketing-schools.org/types-of-marketing/neuromarketing.html>
39. Morin, C. (2011a). *Neuromarketing and ethics: Challenges raised by the possibility of influencing buy buttons in consumers' brains*. Retrieved from <https://www.academia.edu/969187/Neuromarketing>
40. Morin, C. (2011b). Neuromarketing: The new science of consumer behavior. *Society*, 48, 131-135. <https://doi.org/10.1007/s12115-010-9408-1>
41. Morin, C., & Renvoise, P. (2018). *The persuasion code — How neuromarketing can help you persuade anyone, anywhere, anytime*. Hoboken, NJ: John Wiley & Sons, Inc.
42. Mothersbaugh, D. L., & Hawkins, D. I. (2015). *Consumer behavior: Building marketing strategy* (13th ed.). New York, NY: McGraw-Hill Education.
43. Murphy, E. R., Iles, J., & Reiner, P. B. (2008). Neuroethics of neuromarketing. *Journal of Consumer Behaviour*, 7(4-5), 293-302. <https://doi.org/10.1002/cb.252>
44. Neuroscientifically Challenged. (n.d.). *Know your brain: Amygdala*. Retrieved from <https://www.neuroscientificallychallenged.com/blog/know-your-brain-amygdala>
45. Nilashi, M., Yadegaridehkordi, E., Samad, S., Mardani, A., Ahani, A., Aljojo, N., ... Tajuddin, T. (2020). Decision to adopt neuromarketing techniques for sustainable product marketing: A fuzzy decision-making approach. *Symmetry*, 12(2), 305. <https://doi.org/10.3390/sym12020305>
46. Norman, D. A. (2004). *Emotional design — Why we love (or hate) everyday things*. New York, NY: Basic Books.
47. Panda, T. K. (2007). *Marketing management*. New Dehli, India: Excel Books India.
48. Parchure, N. P., Parchure, S. N., & Bora, B. (2020). Role of neuromarketing in enhancing consumer behavior. In *American Institute of Physics Conference Series*, 2273(1), 060005. <https://doi.org/10.1063/5.0024517>
49. Perreault, W. D., & McCarthy, J. E. (2005). *Basic marketing: A global-managerial approach* (15th ed.). New York, NY: McGraw-Hill/Irwin.
50. Professional Academy. (n.d.). *Marketing theories — Explaining the consumer decision making process*. Retrieved from <https://www.professionalacademy.com/blogs-and-advice/marketing-theories---explaining-the-consumer-decision-making-process>
51. Renvoise, P., & Morin, C. (Eds.). (2007). Three brains: One decision maker. In P. Renvoise & C. Morin (Eds.), *Neuromarketing: Understanding the buy buttons in your customer's brain* (Chapter 1, pp. 2-3). Thomas Nelson. Retrieved from <https://www.academia.edu/36432494/NEUROMARKETING>
52. Saji, J. (2020, May 30). What does consumer preference actually mean? *Medium*. Retrieved from <https://medium.com/@jessicatreesasaji/what-does-consumer-preference-actually-mean-5ae6a3c93055>
53. Simmons, Z. (n.d.). What is customer perception. *Discuss.io*. Retrieved from <https://www.discuss.io/what-is-customer-perception/>
54. Singh, S. (2020). Impact of neuromarketing applications on consumers. *Journal of Business and Management*, 26(2), 33-52. [https://doi.org/10.6347/JBM.202009_26\(2\).0002](https://doi.org/10.6347/JBM.202009_26(2).0002)
55. The Economic Times. (n.d.). *Definition of 'Advertising'*. Retrieved from <https://economictimes.indiatimes.com/definition/advertising>
56. The Human Memory. (2020, November 25). *Neocortex*. Retrieved from <https://human-memory.net/neocortex/>
57. The University of Queensland. (n.d.). *The limbic system*. Retrieved from <https://qbi.uq.edu.au/brain/brain-anatomy/limbic-system>
58. Ward, S. (2018, December 15). Advertising and the ways to go about it. *The Balance Small Business*. Retrieved from <https://www.thebalancesmb.com/advertising-2947182>