

A BETTER CONSUMER UNDERSTANDING – A NEUROMARKETING APPROACH

Manju Khosla

Associate Professor

Department Of Commerce

Gargi College, University of Delhi, Delhi

Email id - manju.khosla@gargi.du.ac.in

ABSTRACT

The consumer mind-set is complex and not easily interpreted by anyone, as it encompasses their thoughts, statements, actions, and emotions. Therefore, marketers not only aim to identify and satisfy consumer needs but also consider their feelings. The exploration of consumer emotions is termed neuromarketing, a concept introduced by Dutch marketing professor Ale Smids at Harvard University in 1990. Neuromarketing is becoming a strategic method that enables the mapping of consumer brain activities and offers insights into their sensory and motor responses to various business marketing strategies. Techniques in neuromarketing aid in examining the human brain to forecast decision-making through brainwave activities, with methodologies such as eye tracking and skin response being scientifically analysed using fMRI (functional magnetic resonance imaging). This medical technology assesses brain function by observing changes linked to blood flow. Marketing experts utilize fMRI technology to identify fluctuations in brain activity and seek to comprehend which areas of the brain are activated when consumers make purchase decisions. On-going research aims to investigate, identify, and elucidate how businesses can integrate neuromarketing as a tool for understanding consumer behaviour. This research paper will be beneficial for marketers, academics, and organizations, as neuromarketing provides a fresh perspective on marketing practices and consumer psychology.

Keywords - consumer, behaviour, sensorimotor, emotional, neuromarketing, marketing,

Introduction

Understanding consumer behaviour is the top priority for marketers because it is increasingly difficult to grasp in today's ever-changing and challenging landscape. Consumer behaviour varies across different contexts, so research allows us to categorize it into two main factors: psychological factors, which encompass attitudes, preferences, memories, values, emotions, desires, lifestyles, and perceptions; and reference groups, which include the influence of peers, family, society, and culture. These elements stimulate consumer responses and guide their actions. Marketers are developing multiple strategies to comprehend consumer behaviour; they also aim to engage

with consumers more effectively. Recently, marketers introduced a strategy known as neuromarketing, which explores the science behind consumer behaviour. This neuromarketing approach utilizes brain mapping, scanning, and imaging techniques to analyse responses to the 7 P's of marketing. In the marketing realm, neuromarketing serves as a vital resource for understanding audiences and crafting offerings that align with their preferences. Technological advancements, tools, and techniques enable marketers to satisfy consumer desires. Methods such as eye-tracking, brain imaging, empathic design, and galvanic skin response have been developed to monitor brain activity. In a fiercely competitive market, marketers must stay attuned to consumer tastes and preferences ahead of their rivals. Steve Jobs, the founder of Apple, famously said, "Get closer than ever to your customers. So close in fact, that you tell them what they need well before they realize it themselves." This statement underscores the necessity for marketers to anticipate consumer thoughts and expectations before the consumers themselves do. This study centres on neuromarketing and investigates how consumer psychology influences purchasing decisions through newly emerged marketing scientific techniques. Neuromarketing resonates with consumer senses and emotions, a concept also referred to as sensitive design of emotions. Presently, one of the significant hurdles in the market understands the rationale behind why consumers choose to buy particular products. How do they determine the best option among all available choices? Marketers focus on researching consumer behaviour and their decision-making processes. Additionally, the paper will discuss consumers' preferences, choice determinants, and purchasing behaviour during decision-making. The aim of this paper is to elucidate the concept of neuromarketing, along with its benefits and drawbacks, and to explore its influence on purchasing and decision-making. The study will also highlight the factors driving consumer preferences when selecting between products. Companies are increasingly investing in research and development of products to meet future expectations. Frequently, products or services fail due to a mismatch between customer expectations and what the company provides. This highlights that understanding customer expectations is the first crucial step before launching any production or business initiative. To gain better insights, companies need to grasp the decision-making processes of consumers and the factors influencing their final purchase choices. Therefore, the goal of this study is to evaluate how neuromarketing affects the identification of target customers' preferences, needs, and desires.

Significance of the study

Grasping the idea of neuromarketing is crucial for all types of organizations. It is inherently intangible, relating to the consumer's emotions and cognition, which creates a lasting effect. Marketers consistently prioritize comprehending consumer behaviour, as deciphering it within a fluctuating environment poses significant challenges. Consumers exhibit varying behaviours in different contexts. Consumer behaviour can be classified into two main categories: psychological factors, which encompass attitudes, preferences, memory, values, emotions, desires, lifestyles, and perceptions, and reference groups, which include peers, family, societal influences, and cultural context. These elements activate the consumer's brain, prompting them to act in unique ways. By recognizing the evolving behaviour of consumers over time, marketers design strategies to engage effectively with them.

Review of literature

Thabani Nyoni and Wellington G. Bonga [1] – This paper examines how consumers make decisions in a rational manner while carefully weighing their options regarding a specific phenomenon. Researchers in this paper aim to gain a deeper understanding of consumer behaviour through a neuromarketing lens. The discussion starts by outlining the pre-neuromarketing era, during which marketers relied solely on their own perspectives to interpret consumer choices, followed by an explanation of rational choice theory and how individuals navigate decisions among various alternatives. Additionally, the paper details key characteristics of the human brain,

supported by a diagram illustrating its anatomy, along with Paul McLean's Brain Model. The article further investigates the decision-making process through the lenses of System 1 and System 2 thinking, as well as the Elaboration Likelihood Model. It also highlights the differences in decision-making between male and female brains and emphasizes the significance of the subconscious mind in the decision-making process.

Vlăsceanu Sebastian [2] - This article aims to clarify two emerging viewpoints regarding the consumer decision-making process: neuroeconomics and neuromarketing. Both fields focus on the relationship between the human brain and the decision-making process. The researcher begins by outlining the theoretical aspects of decision-making after introducing two prominent models of consumer behaviour. The first model is the Marshallian model, and the second is the Pavlovian model. This paper illustrates that neuromarketing is a practical area due to its significance in the marketing industry. In neuroeconomics, the main goal is to enhance the understanding of economic behaviour to shed light on the decision-making process.

Kateřina Bočková, Jana Škrabánková and Michal Hanák [3] - This study utilized secondary data, for which the researcher developed a questionnaire. This research focuses on neuromarketing and seeks to analyse and comprehend human behaviour in market contexts and exchanges through the application of neuroscientific techniques. The paper starts with an overview of neuroscience and its intersection with marketing. A total of 1,857 companies participated in this study. The questionnaire comprised 20 questions, out of which 17 were formatted with binary options of "yes" or "no," while 3 were designed to be open-ended. The research described brain functioning by examining variations in the brain's electric and magnetic fields (EEG, MEG, and TMS), along with some metrics evaluated indirectly by observing their metabolic outcomes (PET, fMRI, biometric methods). The paper also discussed the potential applications of neuromarketing and the role of neuroscience in marketing communication.

Mirosława Pluta-Olearnik and Patrycja Szulga [4] – This paper discusses the significance of emotions and the subconscious mental state of consumers during the decision-making process. The aim of this article is to examine consumer behaviour by utilizing neuromarketing tools and to highlight the crucial role emotions play in purchasing decisions. This research article integrates knowledge from various disciplines and seeks to elucidate the factors contributing to the growth of neuromarketing, such as advancements in neuroscience and technology, increasing interest in marketing, heightened competition, and a rise in the number of consumers. The paper also posits the potential benefits of neuromarketing knowledge and tools. The researchers clearly clarified the concepts of eye-tracking and emotional recognition. Furthermore, the paper illustrated how various companies have employed neuromarketing tools by providing relevant examples and also addressed the ethical considerations surrounding neuromarketing.

Ahmed h. alshari, nor zafir md salleh, rohaizat baharun, and mohd effandi yusoff [5] - This paper explored consumer behaviour using a neuromarketing perspective. It starts with an overview and the background of neuromarketing. Additionally, the study highlighted the advantages of neuromarketing technology in marketing research. The paper proposed various neuromarketing tools for measuring both brain and bodily responses (including fMRI, PET, EEG, MEG, TMS, SST, ET, FEMG, IAT, GSR, facial coding, and psychological reactions). Finally, the researchers discussed the ethical concerns surrounding the neuromarketing approach and outlined an ideal future scenario.

Emily Glaenger [6] – The research examined the distinction between consumers' brains and minds, as well as the impact of neuromarketing on their decision-making processes. The paper also proposed the advantages of neuroimaging for marketing and discussed various methods for visualizing brain activity. The researcher described neurons and neuroimaging technology, along with the brain's anatomy and functional regions, using

visual aids. Additionally, the paper covers various neuromarketing tools, including fMRI, EEG, physiological measurements, chemical analysis, and other instruments. This study investigates: a) how neuromarketing underpins each case and b) whether neuromarketing proves to be more effective than conventional marketing strategies.

Heena Arora and Pooja Jain [7] -The study illustrates how a neuromarketing tool aids in comprehending consumer psychology, and once this understanding is achieved, businesses will aim to tailor their goods or services to meet consumer desires, thereby striving for a leading position in the market. This research is grounded in an exploratory design, where researchers utilize specific questions to investigate the connection between neuromarketing and consumer psychology during the final purchasing decision process. Additionally, the paper aims to clarify the concept of neuromarketing and its ramifications in the realm of marketing research. The paper concludes with a proposed model developed through the application of the neuromarketing tool, along with a summary and managerial implications derived from the study.

Ali Ismajli, Besime Ziberi and Ardita Metushi [8] - This research concentrated on the current market interest that depends on consumer preferences and the underlying reasons for choosing the appropriate product. The study aims to examine how neuromarketing influences consumer behaviour during the purchasing process. The research utilised primary as well as secondary data. Primary data was gathered through a survey consisting of 17 questions. Information was obtained from 500 participants. The gender distribution among respondents was 30% male and 70% female. In the conclusion section, the researchers thoroughly analysed the responses related to factors such as product quality, packaging colour, product labelling, pricing, product presentation, promotional discounts, and advertising, which all play a role in influencing customer decisions.

Keshav Bhatia [9] - This research starts with the definitions of neuroscience and neuromarketing. Next, the researcher discusses how neuromarketing is applied and its interaction with consumer psychology. The paper also covers the history and the instruments of neuromarketing, including fMRI, EEG, and GSR. Additionally, the study lists several companies that utilize neuromarketing tools, such as Hyundai, eBay, Microsoft, Google, and Yahoo. Finally, the research suggests considerations for neuromarketing and marketing research, along with its criticisms and implications.

Susheela Devi B Devaru [10] - This research highlights the importance of neuromarketing in influencing consumer behaviour. The objective of this paper is to clarify the role and significance of neuromarketing research instruments in the advancement of neuroscience. The researcher seeks to describe how neuromarketing tools such as eye tracking, EEG, fMRI, facial coding, sensory marketing, and psychological techniques are utilized in market research. Additionally, this study discusses the ethics of market research and the applications of neuromarketing in advertisements and commercials.

Research Gap

In earlier research, it was observed that most studies focus on conventional methods for grasping consumer preferences. Therefore, I have selected this topic, an enhanced comprehension of the neuromarketing concept, since there are limited studies on it. This research will be advantageous for marketers, scholars, and organizations as it represents a growing area where professionals utilize neuroscience techniques to analyse marketing practices and consumer behaviour.

Objectives

The objectives of the study are outlined below:

1. To examine how neuromarketing can be utilized to gain insights into customer preferences.
2. To evaluate the significance of neuromarketing in influencing purchasing decisions.
3. What insights do neuromarketing firms gain regarding the significance and impact of product advertising?

Major areas where Neuromarketing is being used

Marketers utilize technologies like FMRI and EEG to observe changes in activity across different regions of the brain, as well as to monitor physiological changes such as heart rate, respiratory rate, and galvanic skin response. They are eager to understand the reasons behind consumer decisions and identify which part of the brain triggers these choices. Marketing analysts apply neuromarketing to obtain a clearer measurement of a consumer's preferences or the desire to possess something that their peers lack. Neuromarketing is not a distinct form of marketing; rather, it is a novel approach to studying marketing, thus falling under the umbrella of market research. The following six key areas represent the current applications of neuromarketing:

- **Branding:** Brands exist as concepts in the consumer's mind, gaining strength from the relationships they establish. Neuromarketing offers robust methods for assessing brand associations.
- **Product design and innovation:** Neuromarketing evaluates consumer reactions to product concepts and packaging designs that largely elicit automatic, emotional responses beyond conscious awareness.
- **Advertising effectiveness:** A significant portion of advertising affects us through subconscious means, even if we are unaware of it. Neuromarketing elucidates this phenomenon.
- **Consumer decision-making:** Neuromarketing demonstrates how retail environments directly affect consumers and reveals that purchasing decisions are not strictly rational.
- **Online experiences:** The digital landscape presents new hurdles for our traditional cognitive processes, and neuroscience highlights the various implications.
- **Entertainment effectiveness:** Entertainment generates mental experiences that can shape people's attitudes, preferences, and behaviours.

Companies that have used Neuromarketing techniques:

- Hyundai, an automotive manufacturer, has utilized neuromarketing methods to assess its sporty silver model (2011) and carried out a study involving 30 participants, including both men and women. Dean Macko, the brand strategy manager at Hyundai Motor America, directed consumers to focus exclusively on specific features of the vehicle such as the bumper, windshield, and tires. To achieve this, the company employed electrode-equipped caps placed on the heads of the participants to monitor their brain activity for an hour. The information gathered from this process helped pinpoint the preferences of customers. The company conducted this activity prior to the launch and adjusted the car's exterior based on the results.

- **eBay** utilized Neuromarketing in its online payment platform, PayPal, and discovered that emphasizing the speed of its service resonates more emotionally with its customers than highlighting information security, which was its previous focus.
- **Microsoft** employed Neuromarketing techniques in their Xbox platform campaigns to evaluate their effectiveness. The company's goal is to gauge the brain's response during the first 30 and 60 seconds of TV commercials in comparison to Xbox ads shown during gameplay. When viewers watched a car brand advertisement on television, the majority of brain activity was concentrated in the ad's initial half. In contrast, Microsoft found that during Xbox Live in-game ads, brain activity increased significantly when the car was repeatedly shown, reinforcing claims about the ad's memorability.
- **Google** applied neuromarketing techniques to assess the impact of two types of online advertising for YouTube. They discovered that the advertisements are more impactful as they do not disrupt the content, allowing users to remain on the site and increasing the likelihood of clicks converting to sales.
- **Mercedes-Benz Daimler** has also used Neuromarketing for its campaign in which the front of the car simulates human faces, linking directly to the consumer's brain. The result of that sales rose by 12% in the first quarter.
- **Facebook:** It researched how its ad system influences the unconscious perceptions and emotions of individuals.
- **Unilever ice cream** utilized neuromarketing in its promotional strategy, discovering that ice cream elicits more enjoyment than chocolate or yogurt.

Methodology

This paper relies on secondary data. To gain insights into consumer behaviour, it examines the neuromarketing approach, and for this reason, information has been gathered from published research articles, book chapters, websites, and newspaper sources.

Limitations of the study

The research relies solely on secondary data. Information was gathered from various sources including research articles, websites, journals, and magazines. Data are scarce on this subject.

Conclusion

To gain profits and maintain a competitive edge, a neuromarketing strategy allows businesses to comprehend consumer behaviour. It is essential for the company to first grasp customer preferences and tailor its products or services accordingly to ensure an emotional connection with the target audience. By employing a neuromarketing strategy to analyse consumer behaviour, companies can foster trust with their intended market, making it a transformative factor for all types of business organizations. Companies always remember that their customers are paramount, and by meeting their needs and desires, they ensure their survival; otherwise, failure is inevitable, leading to substantial effort in this area. The success of a business organization relies on a thorough understanding of its consumers.

References :

- 1) Thabani Nyoni and Wellington G. Bonga. (2017). "Neuromarketing: The journey to better consumer understanding", *Dynamic Research Journals, Journal of Economics and Finance*, Vol. 2, Issue 5, pp. 01-10.
https://www.researchgate.net/publication/317304025_Neuromarketing_The_Journey_to_Better_Consumer_Understanding
- 2) Vlăsceanu Sebastian. (2014). "New directions in understanding the decision-making process: neuroeconomics and neuromarketing", *Procedia - Social and Behavioral Sciences*, No., 127, pp. 758 – 762.
<https://www.sciencedirect.com/science/article/pii/S1877042814024410>
- 3) Kateřina Bočková , Jana Škrabánková and Michal Hanák. (2021) "Theory and practice of neuromarketing: analyzing human behavior in relation to markets", *Emerging Science Journal*, Vol. 5, No. 1, pp. 44-56.
<https://pdfs.semanticscholar.org/fa3f/7a4db8addb81c5feb4ea56674b7d357a392f.pdf>
- 4) Mirosława Pluta-Olearnik and Patrycja Szulga.(2022). "The importance of emotions in consumer purchase decisions — a neuromarketing approach", *Marketing Of Scientific And Research Organizations*, Vol. 44, Issue 2, pp. 87–104.
<https://intapi.sciendo.com/pdf/10.2478/minib-2022-0010>
- 5) Ahmed H. Alsharif , Nor Zafir Md Salleh and Rohaizat Baharun , And Mohd Effandi Yusoff. (2021). "Consumer behaviour through neuromarketing approach", *Journal of Contemporary Issues in Business and Government* ,Vol. 27, No. 3, pp. 344-354.
<https://cibgp.com/au/index.php/1323-6903/article/view/1607>
- 6) Emily Glaenzer. (2016). "Are the brain and the mind one? neuromarketing and how consumers make decisions", *Honors Thesis* , Colby College. Science, Technology and Society Program, pp. 1-51.
<https://digitalcommons.colby.edu/honorstheses/812/>
- 7) Heena Arora and Pooja Jain. (2020). "Neuromarketing: A tool to understand consumer psychology," *Psychology and Education Journal*, Vol.,57, Issue – 9, pp., 3754-3762.
<http://psychologyandeducation.net/pae/index.php/pae/article/view/4583>
- 8) Ali Ismajli , Besime Ziberi and Ardita Metushi.(2022). "The impact of neuromarketing on consumer behaviour", *Corporate Governance and Organizational Behavior Review* ,Vol. 6, Issue 2, 2022, pp. 95-103.
https://www.researchgate.net/publication/359826105_The_impact_of_neuromarketing_on_consumer_behavior
- 9) Keshav Bhatia. (2014) "Neuromarketing: Towards a better understanding of consumer behavior", *Optimization*, pp. 1-17.
https://www.researchgate.net/profile/Keshav-Bhatia-3/publication/272823068_Neuromarketing_Towards_a_better_understanding_of_consumer_behavior/links/54f040c00cf2432ba65919a2/Neuromarketing-Towards-a-better-understanding-of-consumer-behavior
- 10) Susheela Devi B Devaru. (2018). "Significance of neuromarketing on consumer buying behavior", *International Journal of Technical Research & Science*, Vol., 3 Issue III, pp. 114-121.
https://www.ijtrs.com/uploaded_paper/significance%20of%20neuromarketing%20on%20consumer%20buying%20behavior.pdf