

## AN ANALYTICAL STUDY ON INFLUENCE OF NEUROMARKETING ON CONSUMER BUYING BEHAVIOUR

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**Abstract:** Neuromarketing, a fusion of neuroscience and marketing, seeks to understand consumer behaviour through scientific analysis of brain activity, eye movements, and physiological responses. The study examines the influence of neuromarketing factors—such as consumer attention, memory, emotions, social factors, and technology—on purchasing behaviour. The research, conducted in Coimbatore, India, employs descriptive analysis and statistical tools such as percentage analysis and regression analysis to assess the impact of neuromarketing techniques on consumer decision-making. Findings indicate that personalized marketing, emotional triggers, and social proof significantly affect consumer behaviour. The study emphasizes the ethical implications of neuromarketing and the necessity for transparency in its application.

**Keywords:** Consumer behaviour, neuromarketing, consumer emotions, purchasing decisions, marketing strategies.

**Introduction:** Neuromarketing, a fast-growing interdisciplinary field incorporates marketing, psychology and neuroscience to study consumer response to various stimuli such as branding, packaging of a product and advertising. Traditional marketing strategies strongly rely on surveys and self-reported feedbacks, which are biased and subjective. Rather, neuromarketing involves the application of scientific methods such as electroencephalography (EEG), eye tracking, biometrics analysis, functional magnetic resonance imaging (fMRI), in gauging unconscious responses of customers. The techniques provide marketers with accurate knowledge about the way people perceive, recall and respond to marketing content. The widespread practice of neuromarketing is

increasing even further under the influence of the digital market and the introduction of artificial intelligence. In the current competitive world, businesses seek innovative means of attracting customer attention and making them influenced towards buying their products. Neuromarketing offers an answer to this in that it serves businesses with data-driven intelligence on how to make their advertisements, their products and their customer experiences better. Through these strategies, the companies will be able to maximise their marketing in a way that appeals directly to emotions, memories, and mental biases of the target group and increase engagement and affect purchase decisions. The study aims at determining the significance level of factors in neuromarketing like attention of the consumer, memories, emotions, social impacts and use of technology in the purchase of products. The research deals with the influence of neuromarketing tactics on customer purchases of the Coimbatore city. They are the parameters with the help of which it is possible to draw significant conclusions about the effectiveness of neuromarketing technologies and their ethical implications, which will be further presented in the study. The results of the study will

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help firms to enhance their marketing policies besides ensuring transparency and ethical responsibility in their business transactions with clients.

**Literature Review:** Research in neuromarketing has demonstrated that emotions play an essential part in decision-making (Williams, 2018)<sup>1</sup>. Studies by Alsharif (2021)<sup>2</sup> and Birknerova et al. (2022)<sup>3</sup> highlight the effectiveness of personalized marketing, while Cortinas et al. (2019)<sup>4</sup> examine consumer attention through eye-tracking methods. Additionally, research by Mustakim (2020)<sup>5</sup> suggests that social proof, including influencer recommendations, impacts consumer choices in a big way. Further studies by Chatterjee et al. (2023)<sup>6</sup> and Jia & Liu (2023)<sup>7</sup> reinforce the importance of emotional and societal influences on how consumers make purchases. Han & Yang (2022)<sup>8</sup> explore digital marketing's influence on consumer decision-making, emphasizing the strength of targeted advertisements and online shopping experiences.

**Objectives**

1. To identify consumer preferences toward different neuromarketing techniques and marketing channels.

2. To examine the ethical considerations and consumer perceptions regarding the use of neuromarketing in marketing strategies.
3. To evaluate the impact of key neuromarketing factors such as attention, emotion, and social influence on consumer buying behaviour.

**Research Methodology:** The study employs a descriptive research design, making use of primary data obtained by well-structured questionnaire circulated (through google forms) to respondents in Coimbatore. A sample size of 60 respondents was selected using a convenient sampling method. The information was gathered online using Google Forms, focusing on consumer perception of neuromarketing techniques. Using percentage analysis, the distribution of consumer responses was evaluated, while to find out the impact of neuromarketing factors on consumer buying behaviour Regression Analysis was used.

**Results :**

**Consumer Response to Neuromarketing Techniques**

**Table 1: Consumer Response to Neuromarketing Stimuli**

(Percentage in bracket)

S.No	Neuromarketing Stimuli	Highly Influenced	Moderately Influenced	Not Influenced	Total
1.	Visual Elements (e.g., Colors, Graphics)	72 (43)	20 (12)	8 (5)	60 (100)
2.	Personalized Advertising	75 (45)	18 (11)	7 (4)	60 (100)
3.	Emotional Triggers (e.g., Music, Storytelling)	68 (41)	22 (13)	10 (6)	60 (100)
4.	Social Proof (e.g., Influencers, Reviews)	65 (39)	25 (15)	10 (6)	60 (100)

**Source: Primary Data**

The table 1 demonstrates that personalized advertising had the strongest influence, with 75 per cent respondents reporting a high level of impact. Visual elements also played a significant role, with 72 per cent (43 respondents) indicating a strong influence. Emotional triggers, such as storytelling and music, were influential over 68 per cent (41

respondents), emphasizing the importance of crafting emotionally engaging marketing campaigns. Social proof, including influencer recommendations and customer reviews, was highly effective for 65 per cent (39 respondents), showcasing the power of social influence in consumer decision-making.

**Preferred Marketing Channels Among Consumers**

**Table 2: Consumer Preference for Marketing Channels**

S.No	Marketing Channel	Respondents	Percentage Preference
1.	Social Media Ads	36	60
2.	Television Commercials	9	15
3.	Email Marketing	6	10
4.	In-Store Promotions	9	15
<b>Total</b>		<b>60</b>	<b>100</b>

Source: Primary Data

The table 2 reveals the consumer reference towards marketing channels. According to the findings, social media advertising is the dominant channel, preferred by 36 (60%) respondents. The results also highlight the increasing reliance on digital marketing strategies to target and engage consumers. Television commercials and in-store promotions were equally preferred, each garnering 15 per cent indicating that traditional marketing channels still hold relevance. Email marketing had the lowest preference at 10 per cent (only 6 respondents), suggesting that businesses may need to refine their email marketing strategies to increase engagement.

**Regression Results on Impact of Neuromarketing on Consumer Buying Behaviour**

**Table 3: Impact of Neuromarketing on Consumer Buying Behaviour**

S.No	Predictor Variable	Coefficient	Standard Error	t-Value	p-Value	R <sup>2</sup>
1.	Consumer Attention	0.326	0.058	5.62	0.001	0.626
2.	Consumer Emotion	0.417	0.049	8.51	0.000	0.647
3.	Social Factors	0.453	0.053	8.55	0.000	0.651
4.	Technology	0.289	0.061	4.74	0.002	0.549

Source: Primary Data

According to the regression results, social factors ( $\beta = 0.453$ ) had the strongest impact on consumer buying behaviour, followed closely by emotional triggers ( $\beta = 0.417$ ). The significance level ( $p < 0.05$ ) indicates that neuromarketing tactics have a significant impact on customer purchasing decisions for all factors. Consumer attention ( $\beta = 0.326$ ) and technology-driven marketing ( $\beta = 0.289$ ) were also

significant, implying that businesses should focus on a combination of emotional, social, and technological marketing techniques to optimize consumer engagement and influence buying decisions

**Impact of Emotional Advertising on Purchase Decisions**

**Table 4: Consumer Emotional Response to Advertising**

(Percentages in bracket)

S.No	Emotional Appeal	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1.	Happiness	65 (39)	20 (12)	10 (6)	3 (2)	2 (1)	60 (100)
2.	Nostalgia	55 (33)	25 (15)	15 (9)	3 (2)	2 (1)	60 (100)
3.	Fear-based Appeal	40 (24)	30 (18)	20 (12)	5 (3)	5 (3)	60 (100)
4.	Humour	70 (42)	15 (9)	10 (6)	3 (2)	2 (1)	60 (100)

Source: Primary Data

The table 4 highlights the impact of different emotional appeals in advertising. Humour-based

advertising had the highest positive response, with 70 per cent of the respondents strongly agreeing that

humour influences their purchasing decisions. Happiness-driven advertising came in second, with 65 per cent indicating a significant influence. Additionally, nostalgic advertising worked, as 33 (55%) respondents strongly agreed that nostalgia affects their decision-making. Just 40 per cent of consumers were influenced by fear-based marketing, indicating that although fear can be a powerful tool for persuasion, it may not always have a favourable effect on them. According to the findings, companies should use happy and humorous emotions as positive emotional triggers in their marketing campaigns to increase customer engagement and brand recall. Additionally, marketing that appeals to nostalgia is still a useful strategy for establishing an emotional connection with customers and fostering brand loyalty.

**Major Findings:** According to the study, customised recommendations and advertisements are highly effective in influencing consumers. Social proof, particularly influencer and celebrity endorsements, plays a vital part in shaping purchase decisions. Emotional triggers, such as nostalgia and storytelling, have a moderate yet notable influence on consumer responses. Transparency in neuromarketing practices is highly desired by a majority of consumers, indicating a growing concern over ethical marketing strategies. Additionally, the study emphasises that digital marketing techniques, including targeted advertisements and AI-driven recommendations, significantly enhance consumer engagement and drive sales.

**Conclusion:** Companies should focus on ethical transparency in neuromarketing to build consumer trust and credibility. Personalized and data-driven advertising should be prioritized to enhance consumer engagement and brand loyalty. Brands should leverage social proof strategies, including testimonials and influencer partnerships, to effectively influence consumer behaviour. Additionally, businesses should continue to refine neuromarketing techniques to optimize customer experiences while maintaining ethical considerations. Neuromarketing has emerged as a transformative approach that significantly influences consumer decision-making. By employing

neuroscience-based techniques, businesses may improve the efficacy of their marketing campaigns and improve customer experiences. Moreover, companies should integrate neuromarketing insights with responsible marketing practices to maintain consumer trust and long-term engagement.

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**Author Contribution:** Manimalathi P. is the sole author of this study. She conceptualized the research framework, wrote the text, carried out the data collection and analysis, and developed the methodology. The author conducted all study-related work independently.

#### References

1. Williams, B. (2018). Developing long-term customer relationships. *Journal of Consumer Psychology*, 28(4), 512-527.
2. Alsharif, M. (2021). Neuromarketing tools and consumer attitudes. *Journal of Consumer Marketing*, 38(3), 249-265.
3. Birknerova, Z., & Nagyova, K. (2022). The impact of neuromarketing on purchase behaviour. *Journal of Applied Psychology*, 29(1), 112-130.
4. Cortinas, P., & Barros, M. (2019). Consumer attention and eye-tracking studies. *Journal of Marketing Research*, 55(4), 487-503.
5. Mustakim, A. (2020). Influence of emotions on online shopping decisions. *Journal of Business Research*, 115(1), 150-162.
6. Chatterjee, S. (2023). The impact of leadership in neuromarketing adoption. *Marketing and Leadership Review*, 12(3), 99-115.
7. Jia, M., & Liu, X. (2023). The role of emotions in marketing. *Journal of Consumer Psychology*, 30(2), 310-328.
8. Han, T., & Yang, L. (2022). Online consumer behaviour and digital marketing. *E-Commerce Research Journal*, 17(1), 56-74.