

THE ROLE OF NEUROMARKETING TOOLS OF AI TO UNDERSTAND CUSTOMER PSYCHOLOGY, INSIGHT WITH AMAZON INDIA

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Abstract :

Neuromarketing is a tool of Artificial Intelligence (AI) that has emerged as a powerful interdisciplinary approach that integrates neuroscience, psychology, and marketing to gain deeper insights into customer psychology. The rapid growth of e-commerce in India has intensified the need to understand customer psychology beyond traditional marketing research methods. Traditional marketing research techniques often rely on self-reported data, which may not accurately capture consumers' subconscious thoughts and emotional responses. This study examines the role of neuromarketing tools in understanding customer psychology in the context of Amazon India. Therefore, this research explores the application of neuromarketing tools including electroencephalography (EEG), eye-tracking, galvanic skin response (GSR), and facial coding to analyse customer attention, emotional engagement, and cognitive load while interacting with Amazon India's digital platform. The study highlights how visual elements, product images, ratings and reviews, pricing cues, scarcity messages, and delivery information affect customer responses at a subconscious level. The findings indicate that neuromarketing tools provide more accurate insights into online consumer behaviour than traditional methods, helping Amazon India optimize product listing pages, user experience, and promotional strategies. Overall, the study demonstrates that neuromarketing-driven insights enhance customer engagement, reduce decision-making complexity, and increase purchase intent in the Indian e-commerce environment. By uncovering the gap between what consumers say and what they really feel, neuromarketing provides marketers with more accurate and actionable insights. The findings suggest that the application of neuromarketing tools significantly improves customer engagement, brand recall, and decision-making efficiency, thereby contributing to more consumer-centric marketing strategies.

Key words : Neuromarketing, EEG, neuroscience, Online consumer behaviour.

Introduction to Neuromarketing :

Neuromarketing is an emerging field that combines neuroscience, psychology, and marketing to understand how consumers think, feel, and make purchasing decisions. Unlike traditional marketing research methods such as surveys, interviews, and focus groups,



neuromarketing focuses on measuring consumers' subconscious responses to marketing stimuli. These responses often play a crucial role in influencing buying behaviour but are difficult to capture through self-reported data. In the context of Amazon India, the application of neuromarketing techniques enables more customer specific strategies leading to improved engagements, strong purchasing intentions.

Amazon India :

Amazon India operates in a highly competitive and dynamic market where understanding customer psychology is vital for success. Consumers have exposure to numerous product choices, reviews, discounts, and advertisements, making their decision-making process mix and emotionally driven. To enhance customer engagement and conversion rates, Amazon India focuses heavily on user experience design, personalized recommendations, product optimization, and visual presentation. The platform's data-driven approach makes it an ideal context for applying neuromarketing tools to analyse consumer attention, emotions, and purchase behaviour in an online environment.

EEG (Electroencephalography) :

Electroencephalography (EEG) is a widely used neuroscience technique. EEG records brainwave patterns produced by neuronal activity and provides real-time insights into cognitive and emotional processes. Due to its high resolution, EEG is particularly effective in capturing immediate responses such as attention, engagement, mental workload, and emotional signals. Understand emotional peaks, attention levels, and mental effort during product exposure or advertisement viewing.

Review of Literature :

The role of Neuromarketing tools in understanding customer psychology:

- Neuromarketing has gained significant attention in recent years as researchers seek to understand consumer behaviour beyond traditional marketing research techniques. Conventional methods such as surveys and interviews often fail to capture subconscious emotions and cognitive processes that strongly influence purchase decisions. Hence neuroscientific tools are more accurate to understand customer psychology.
- A SMIDTS (Professor of Marketing Research, [RSM Erasmus University](http://www.rsm.nl)) 2002 was among the first researchers to introduce the concept of neuromarketing, emphasizing the application of neuroscience to analyse consumer decision-making processes. Later studies by Ariely and Berns (2010) highlighted that many consumer choices are driven by emotional and subconscious processes rather than rational evaluation. These findings challenged the reliability of self-reported data and supported the need for neuroscientific approaches in marketing research.
- Later, Lee, Broderick, and Chamberlain (2007) argued that neuromarketing provides deeper insights into attention, emotion, and memory, which are critical components of customer psychology. Their study emphasized that understanding these factors helps marketers design more effective advertisements and branding strategies.



- Overall, the literature confirms that neuroscientific tools has significantly transformed business forecasting by understanding customer psychology more accurately, timely and informed decision making. These studies provide a strong theoretical and empirical foundation for examining the role of neuromarketing to better understand the customer psychology.

Research methodology :

The objective of the study is to understand how neuromarketing tools supports understanding customer psychology and decision making in an organisation.

Data Sources :

Secondary data was collected from :

- Published case studies
- Industry reports (Amazon)
- Journals

Methods of Analysis :

The secondary data was analysed using **qualitative content analysis**. Relevant information was categorized under the key themes such as consumer attention, emotional engagement, decision-making, memory, and online purchase behaviour. Comparative analysis was conducted to identify similarities and differences across various studies, enabling meaningful interpretation of findings in relation to the research objectives.

Comparative analysis :

Comparison between traditional vs AI based surveys :

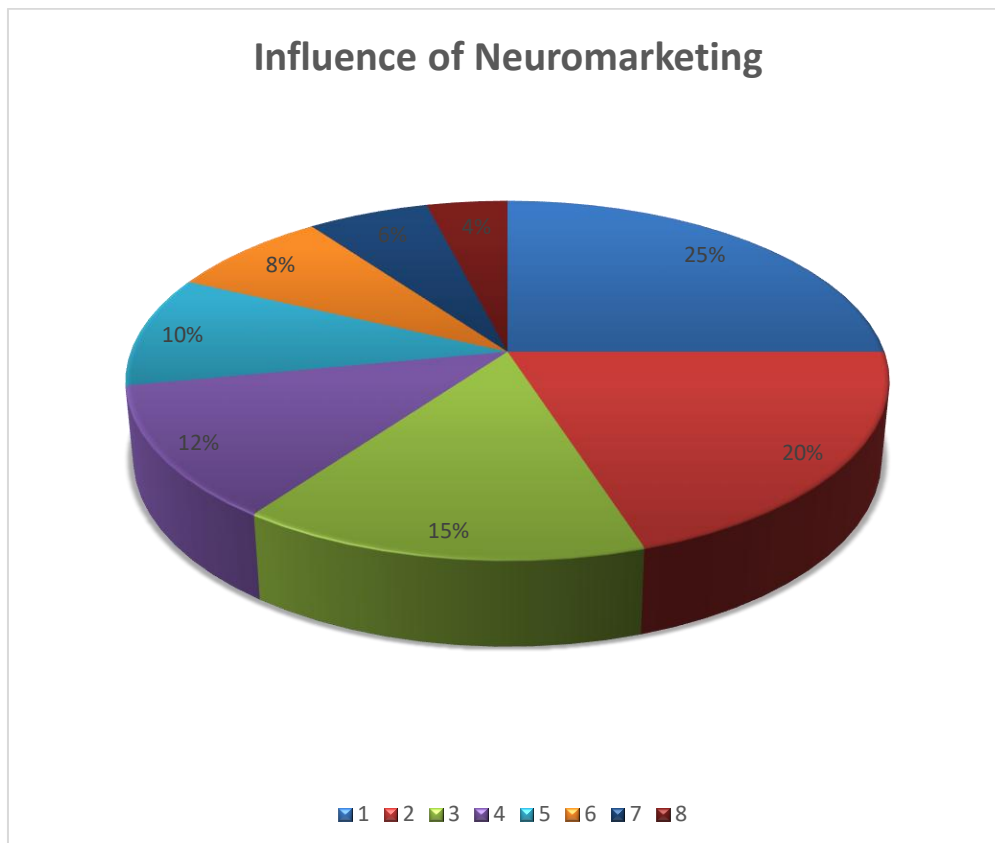
Aspect	Traditional Surveys	AI based Surveys (Neuromarketing)
Nature of Data	conscious responses	Subconscious, behavioural, and emotional data
Accuracy	May be biased or socially influenced	Higher accuracy due to real-time measurement
Decision-Making Insight	Focuses on stated preferences	Reveals actual decision-making patterns
Data Collection Method	Questionnaires and interviews	EEG, eye-tracking, facial coding, GSR, AI analytics
Suitability for E-commerce	Moderate	Highly suitable (e.g., Amazon India)

The collected secondary data were analysed using comparative analysis was used to compare traditional surveys with AI based surveys insight with Amazon.



Influence of AI based marketing (Neuromarketing) :

Area of influence	Percentage
Better Understanding of Customer Behaviour	25%
Predictive Analytics & Forecasting	20%
Improved Customer Engagement	15%
Recommendation and Personalized marketing	12%
Real time decision making	10%
Reduced biasness	8%
Cost and time efficiency	6%
Accuracy	4%
Total	100%



The chart clearly shows that the adoption of Neuromarketing has significantly improved decision making in an organisation. Better understanding shows the highest influence, indicating that neuromarketing has more accurate predictive analysis using personalised marketing and forecasting. As managers able to rely on data driven insights rather than tradition



methods alone.

The chart highlights that AI cannot replace human decision making but acts as a strong system. It enables timely strategic decisions. This analysis confirms that neuromarketing plays important role in digital platform provider insight with Amazon India. It illustrates the major areas where neuromarketing gets greater benefits.

Based on secondary data analysis, the study proposes the ROLE OF NEUROMARKETING IN UNDERSTANDING CUSTOMER PSYCHOLOGY is an ideal solution for digital platform providers. Humanly judgements remain the core to decision making to assure ethical considerations and contextual understanding.

Conclusion :

1. **AI-Based Marketing Provides Deeper Customer Insights** : The analysis of secondary data indicates that AI-based marketing tools, including neuromarketing techniques such as EEG, provide deeper insights into customer psychology compared to traditional survey methods.
2. **Personalization is the Most Significant Benefit** : Secondary data analysis reveals that personalized recommendations contribute the highest impact in AI-based marketing. Platforms like Amazon India effectively use AI to recommend products based on browsing history, previous purchases, and behavioural patterns, resulting in higher engagement and conversion rates.
3. **AI Enhances Predictive Accuracy of Consumer Behaviour** : AI-based predictive analytics accurately forecast customer preferences, demand trends, and purchase intent. This enables e-commerce platforms to optimize inventory, pricing strategies, and promotions more efficiently.
4. **Reduced Biasness** : AI-based surveys and neuromarketing tools minimize response bias commonly associated with traditional surveys. By relying on behavioural and psychological data, these tools provide more efficient and objective insights into customer psychology.
5. **Improved Customer Experience and Engagement** : The reviewed literature concludes that AI-driven result improves user experience by simplifying navigation, reducing confusion, and enhancing satisfaction. This is particularly beneficial in large e-commerce platforms such as Amazon India.

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