

NEUROMARKETING INSIGHTS INTO BRAND LOYALTY FORMATION IN GEN Z CONSUMERS

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Abstract

This study aims to explore the role of neuromarketing in understanding the formation of brand loyalty among Generation Z consumers. This generation has unique characteristics, such as a strong attachment to digital technology, a preference for authentic experiences, and a tendency to connect emotionally with brands. Using a literature review method, this study examines the results of previous studies that focused on the application of neuroscience in marketing, specifically in uncovering how visual, emotional, and cognitive stimuli influence Gen Z consumer behavior. The results show that brand loyalty among Gen Z is built not only through product quality and price, but also through emotional resonance, social values, and immersive digital experiences. Neuromarketing, through techniques such as eye-tracking, brainwave analysis, and physiological response measurement, can provide a more accurate understanding of consumers' subconscious preferences that are often not revealed through traditional survey methods. This study confirms that integrating neuromarketing insights with branding strategies can be key to building long-term relationships between brands and Gen Z consumers.

Keywords: neuromarketing, brand loyalty, Gen Z, consumer behavior

INTRODUCTION

Changes in the global marketing landscape over the past few decades have been significantly influenced by the development of digital technology and shifting consumer generational characteristics. One consumer group now

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dominating the market is Generation Z, individuals born between the mid-1990s and early 2010s. Gen Z is known as digital natives, accustomed from birth to technology, social media, and the rapid flow of information. This has led them to have different consumption behavior patterns, brand preferences, and expectations than previous generations (India et al., 2024a). Amidst increasingly fierce brand competition, Gen Z consumer loyalty has become a crucial aspect determining a company's sustainability and competitiveness. However, loyalty in this generation is often formed not solely through traditional approaches such as price, product quality, or conventional advertising, but rather through emotional bonds, digital experiences, and brand images that align with their values and identities.

In this context, neuromarketing emerges as a new approach that can provide a deeper understanding of how consumers respond to brands at both a cognitive and emotional level. Neuromarketing uses neuroscience principles and technologies such as eye-tracking, fMRI, EEG, and biometric analysis to uncover the subconscious processes involved in consumer decision-making (Novialdi, n.d.). Unlike surveys or interviews, which are often biased, neuromarketing allows researchers to directly observe consumers' brain responses and emotions. This provides more accurate insight into how specific marketing stimuli, such as advertisements, logos, colors, or storytelling, can influence consumer perceptions and shape long-term brand attachments. For Gen Z, who tend to be more sensitive to symbols, visual narratives, and the authenticity of a brand's values, neuromarketing can uncover key factors that drive their loyalty.

Brand loyalty among Gen Z is more complex than that of previous generations. While previous generations often built loyalty based on long-term experience with a brand, Gen Z can quickly switch to another brand if they feel their personal values don't align or the digital experience is unsatisfactory. On the other hand, if they feel emotionally connected to a brand, the loyalty they form can be very strong and even manifest in digital advocacy through social media. This phenomenon suggests that brand loyalty among Gen Z extends beyond repeated purchasing preferences to active involvement in building a brand's image in the public sphere (Abu & Lyan, n.d.). Therefore, understanding the psychological and neurological mechanisms underlying loyalty formation in this generation is crucial for marketers.

Previous neuromarketing studies have shown that elements such as color, sound, symbols, and narratives can activate specific areas of the brain associated with emotion, memory, and motivation. This activation is often

linked to how consumers implicitly evaluate a brand (Pathak et al., 2025). For example, consumer preferences are determined not only by product functionality but also by the emotional associations attached to the brand. Gen Z, who grew up in an era of visual media and instant digital interactions, tends to respond more intensely to stimuli that involve multisensory and authentic experiences. Therefore, research on neuromarketing in the context of brand loyalty formation among Gen Z can provide a new, more in-depth perspective than conventional marketing approaches.

Furthermore, there is a unique phenomenon in Gen Z's consumption behavior related to social and ethical values. This generation shows a preference for brands that are concerned with environmental issues, social justice, diversity, and sustainability. They often judge brands not only by product quality but also by the extent to which the brand reflects the identity and values they deem important (Gandla, n.d.). Using a neuromarketing approach, it is possible to uncover how Gen Z's brains and emotions react to social messages conveyed by brands. Whether these messages are capable of generating emotional attachment, evoking empathy, or are simply perceived as mere marketing strategies. This understanding is crucial for explaining how brand loyalty is authentically formed in the minds of Gen Z consumers.

The urgency of this research becomes clearer when empirical data shows that Gen Z consumer loyalty is more fragile than that of previous generations. While they can be loyal supporters of a brand, they are also more likely to switch if their expectations are not met. Therefore, companies need to understand what stimuli truly resonate with Gen Z's cognitive and emotional systems. Neuromarketing can be an effective tool to answer this question. Furthermore, research on this topic not only benefits practical marketing strategies but also provides theoretical contributions to the literature on cross-generational consumer behavior, brand loyalty, and the application of neuroscience in marketing (Alimin et al., 2024).

Amidst the onslaught of digital information, brand loyalty among Gen Z is influenced not only by rational factors but also by emotional connections, often operating at a subconscious level. Companies that understand how Gen Z's brain processes marketing stimuli will be better able to design relevant communication strategies and brand experiences (Paladino et al., 2024). This study seeks to gain insights from a neuromarketing perspective into how brand loyalty is formed among Gen Z consumers. By combining an understanding of neuroscience, consumer psychology, and the social context of the younger

generation, it is hoped that this research will provide a comprehensive picture of the factors that encourage or hinder loyalty formation.

Ultimately, this research is important because it paves the way for marketers to design more effective, authentic, and tailored approaches to Gen Z. This approach goes beyond simply creating brand awareness to fostering strong, consistent, and sustainable emotional connections. This subconscious brand loyalty can, in turn, become the primary foundation for business growth in the highly competitive digital era. Therefore, exploring neuromarketing insights into brand loyalty formation in Gen Z consumers is not only academically relevant but also has significant practical implications for future brand sustainability.

RESEARCH METHOD

The research method used in this study is a literature review, which focuses on the exploration, collection, analysis, and synthesis of various previous studies related to neuromarketing, brand loyalty, and Gen Z consumer behavior. This process was conducted by reviewing academic sources such as reputable international journals, reference books, and scientific publications relevant to the topic. This literature review aims to build a comprehensive conceptual framework regarding how neuromarketing can provide a deeper understanding of the psychological and neurological mechanisms that influence the formation of brand loyalty in Generation Z consumers. Therefore, this study not only collects existing empirical evidence but also attempts to connect various findings to discover new patterns and perspectives.

The literature analysis was conducted using a critical approach to the results of previous research, including comparing similarities and differences in research findings, assessing their relevance and theoretical contributions, and identifying research gaps that can be further explored. This literature review allows research to generate a broader understanding of how emotional, cognitive, and neurological factors captured through neuromarketing methods such as eye tracking, EEG, and emotional response analysis can contribute to the formation of brand loyalty in the context of Gen Z consumers who are known to have unique preferences, high attachment to technology, and a tendency to be critical of conventional marketing strategies. With this framework, research is expected to be able to provide conceptual contributions to the development of more effective neuroscience-based marketing strategies that are in line with the characteristics of this generation.

RESULT AND DISCUSSION

Brand Loyalty from a Neuromarketing Perspective

From a neuromarketing perspective, brand loyalty is not simply the result of a good consumer experience or consistent product quality, but rather a complex phenomenon involving the interaction of cognitive and emotional mechanisms in the human brain. Neuromarketing seeks to understand how the consumer brain responds to brand-related stimuli, whether through advertising, symbols, consumption experiences, or social associations. Brand loyalty is created when a brand consistently stimulates brain areas associated with reward, memory, and emotional regulation, resulting in consumers developing a deeper attachment that transcends purely rational considerations (Jukić, 2023). In other words, neuromarketing asserts that brand loyalty is a psychological state deeply rooted in brain function, not simply a preference born of logical considerations.

The cognitive and emotional mechanisms underlying brand loyalty can be understood through how the brain processes experiences and associations with brands. From a cognitive perspective, the human brain stores information about past experiences, product quality, and brand consistency in memory areas such as the hippocampus. This information is then integrated into a decision-making process involving the prefrontal cortex, which evaluates the benefits, risks, and long-term value of a brand (Ying et al., 2021). However, this cognitive process is never completely neutral, as it always interacts with emotional aspects. The limbic system, particularly the amygdala, plays a crucial role in imparting emotional content to every consumer experience. This is why brands that create positive emotional experiences, such as happiness, comfort, or pride, have a greater chance of forming lasting loyalty. The interplay between cognition and emotion explains why consumers often remain loyal to a brand despite the availability of cheaper or more rationally efficient alternatives.

The role of memory in forming brand loyalty is crucial. When consumers experience repeated interactions with a brand, whether through user experiences or visual exposure, the brain's memory retains a stronger imprint (Anwer, 2022). This imprint then becomes a representation of the brand in the consumer's mind, which can be reactivated simply by seeing a logo, hearing a slogan, or smelling a particular scent. In addition to memory, the brain's reward system is also key to building loyalty. The activation of dopamine, a neurotransmitter associated with pleasure and satisfaction, occurs whenever consumers have a positive experience with a brand. For example, when

someone purchases a favorite product and feels satisfied, the brain releases dopamine, strengthening the emotional attachment to that brand. This effect is similar to the reward-based learning mechanism, where the brain tends to repeat behaviors that produce positive sensations. Emotions, on the other hand, act as the glue that keeps memory and the reward system working synergistically. Without emotion, brand experiences would be merely neutral and easily replaced cognitive data. Emotions provide a depth of meaning that allows consumers not only to remember the brand but also to feel a personal bond with it (Alareeni & Hamdan, 2024).

On closer examination, brand loyalty can be categorized into two main types: rational loyalty and emotional loyalty. Rational loyalty forms when consumers continue to choose a brand for logical reasons, such as competitive prices, consistent product quality, or easy availability. In this context, loyalty decisions are driven more by calculations of benefits and efficiency, making them relatively easy to sway if a competitor offers greater value. In contrast, emotional loyalty arises when consumers feel a strong affective bond with a brand. This bond is often formed through brand narratives, emotional experiences, and the symbolic values the brand communicates (Onobrakpeya, 2025). For example, Gen Z, who highly value authenticity, sustainability, and social values, are more likely to build emotional loyalty to brands that align with their identity and aspirations. This explains why, despite other brands offering better quality or price, they remain loyal to brands that appeal to their emotional well-being.

For Generation Z, brand loyalty has a unique dynamic because they are a generation that grew up in a digital environment and are accustomed to massive exposure to information (Pol et al., 2024). This generation tends to be critical and rational when evaluating products, but at the same time, they are heavily influenced by emotional and social factors. Gen Z's rational loyalty is reflected in their behavior of seeking information before purchasing, comparing prices, and thoroughly assessing reviews (YourBrainiac Ltd, Edinburgh, United Kingdom & Dragoi, 2025). However, emotional loyalty emerges when brands are able to offer authentic experiences, create communities, or associate products with values that are meaningful to their lives. The combination of rationality and emotionality makes Gen Z demand not only quality products but also emotional engagement that builds a sense of belonging. Brands that successfully integrate these two dimensions will more easily build long-term loyalty in this generation.

Thus, the discussion of brand loyalty from a neuromarketing perspective demonstrates that loyalty cannot be explained solely by analyzing consumer behavior but must also be viewed in terms of how the brain processes information, emotions, and rewards. Cognitive mechanisms provide a rational framework for evaluation, while emotional mechanisms and the reward system foster deep attachment. Memory keeps a brand constantly present in consumers' minds, even unconsciously, while emotions provide deeper meaning to the experience. The distinction between rational and emotional loyalty is increasingly evident in Generation Z, who demand a balance between tangible quality and emotional attachment. Neuromarketing, with its approach combining neuroscience and marketing, provides a new understanding that brand loyalty is ultimately the result of a complex interaction between consumers' thoughts and feelings.

Neurological and Psychological Factors Influencing Gen Z Brand Loyalty

The phenomenon of brand loyalty among Gen Z is inextricably linked to the complex interaction between neurological and psychological factors that shape how they relate to brands. Loyalty stems not only from rational preferences for product quality but also from cognitive and emotional processes occurring in the consumer's brain (India et al., 2024b). As digital natives, Gen Z is heavily influenced by how their brains respond to emotional stimuli, brand narratives, and the social environment reinforced by digital media. This makes studying neurological and psychological factors crucial in understanding how brand loyalty is formed and sustained in this consumer group.

One fundamental aspect is the role of emotion in shaping brand loyalty. From a neuroscience perspective, the human brain possesses a limbic system that regulates emotions, memory, and the reward system. Therefore, when Gen Z experiences a positive experience with a brand, their brains release dopamine, reinforcing feelings of satisfaction and attachment (Sutil-Martín & Rienda-Gómez, 2020). This process creates emotional associations that are difficult to replace with purely rational considerations. It's not just a feeling of liking, but also a deep emotional attachment, where the brand is considered part of one's identity. In the context of consumer psychology, this suggests that Gen Z is more likely to be loyal to brands that deliver consistent emotional experiences rather than simply functional benefits.

Furthermore, empathy plays a crucial role in mediating consumer relationships with brands. The human brain, particularly through the

mechanism of mirror neurons, allows individuals to feel the emotions displayed by others. When a brand presents a narrative or campaign that illustrates social, environmental, or issue values relevant to Gen Z, consumers not only cognitively understand but also feel an emotional connection through empathy. This strengthens the emotional attachment because consumers feel that the brand understands their aspirations and values. Thus, loyalty is no longer simply a transactional bond, but becomes an affective relationship based on alignment of values and identity (Vellore Nagarajan, 2023).

Storytelling plays a significant role in building emotional attachment. Authentic narratives can activate areas of the brain associated with imagination, empathy, and long-term memory. Gen Z, who grew up in an era of information overload, tends to connect more with emotionally engaging stories than with direct, persuasive advertising messages. Through storytelling, brands are able to create an emotional context that makes consumers feel like they are part of the journey, not just buyers of a product. Furthermore, brand authenticity is a determining factor because Gen Z's brain is highly sensitive to inconsistencies and manipulation. When a brand is perceived as inauthentic or contradicts the established narrative, the brain regions associated with risk detection and cognitive conflict are activated, leading to a loss of trust and loyalty.

The concept of social identity also plays a significant role in shaping Gen Z's brand loyalty (Vellore Nagarajan et al., 2021). Psychologically, social identity is formed from the need to feel part of a particular group. In this case, brands function as social symbols representing values, lifestyles, and status. Gen Z's brains respond to this reinforcement of social identity through a reward system mechanism when they see the same brand used by communities or influencers they admire. This explains why Gen Z tends to choose brands that not only fulfill personal needs but also strengthen their social presence in the digital space.

The influence of social media in this context cannot be ignored. Social media is not only a communication channel, but also a social interaction space that influences how Gen Z's brain processes information. Visual content, quick interactions, and social validation through likes or comments trigger the brain's reward system, making them more connected to brands that actively engage on digital platforms. This interactive experience strengthens emotional attachments because consumers feel valued and recognized by the brand. Neurologically, this creates repeated positive reinforcement, thus strengthening long-term loyalty.

Influencer marketing also has a significant impact on the brains of Gen Z consumers. Influencers who are perceived as credible and authentic can trigger mirror neurons, causing consumers to feel an emotional closeness as if they knew the influencer personally. When an influencer recommends a brand, Gen Z's brain tends to lower cognitive resistance because the recommendation is processed as a trust signal, not a simple advertisement. This creates a psychological effect in the form of social proof, strengthening the belief that the brand is worthy of following and maintaining. The neurological impact of this is reduced brain activity in areas associated with skepticism, making it easier for consumers to form an attachment to the promoted brand.

Neuromarketing-Based Marketing Strategies to Build Gen Z Brand Loyalty

Generation Z, as a consumer group born and raised in a digital ecosystem, has unique characteristics in responding to marketing messages (Faris et al., 2025). They not only desire quality products or services but also require emotional experiences, authenticity, and interactions relevant to their personal identities. In this context, neuromarketing plays a crucial role, as this approach can uncover brain mechanisms and consumers' subconscious reactions when faced with marketing stimuli. By understanding how the brain works, marketers can design more targeted communication strategies, engage the emotional side, and foster long-term brand loyalty. Neuromarketing enables marketers to address the major challenge facing Gen Z: how to transform fleeting preferences into lasting emotional attachments.

One crucial strategy in this context is designing advertising and content based on neuromarketing insights. Gen Z is known to have a short attention span, making traditional advertisements that are too long and informative no longer effective (Gorgiev, 2020). Through neuromarketing, marketers can identify the types of colors, visual forms, narratives, and sensory elements that best trigger attention and positive emotions in the brain. For example, the use of strong visual contrast can increase attention, while storytelling-based narratives that tap into values of authenticity and empathy can activate areas of the brain associated with emotional connection. Content featuring real stories, personal experiences, or social campaigns is often more effective in building engagement than purely rational product promotions. Therefore, the content design created goes beyond simply conveying a message; it also triggers neurological reactions that remain imprinted in the long-term memory of Gen Z consumers.

Furthermore, optimizing digital experiences is also a fundamental aspect of neuromarketing strategies for building brand loyalty. Gen Z are digital natives who spend most of their time in digital spaces, from social media and entertainment platforms to shopping apps. They not only assess product quality but also pay attention to how the digital experience a brand offers satisfies their cognitive and emotional needs. From a neuromarketing perspective, an effective digital experience must stimulate the brain through interactions that are fun, fast, intuitive, and immersive. Simple yet engaging, responsive user interface (UX/UI) design that aligns with user habits can reduce cognitive load, creating a smoother experience (Kachhara & Jain, 2025). Furthermore, the use of gamification elements such as rewards, badges, or interactive challenges can trigger the brain's dopamine system, providing a sense of satisfaction and encouraging continued engagement with the brand.

Immersive digital experiences, such as those through augmented reality (AR) or virtual reality (VR), also hold significant appeal for Gen Z. Neuromarketing shows that simulated real-life experiences can trigger stronger emotional responses than traditional digital experiences. By allowing consumers to virtually “feel” products, brands not only provide information but also create multisensory engagement that can strengthen emotional memories (Ng, 2025). For example, fashion brands can use AR technology to allow consumers to virtually try on clothing, while automotive brands can offer VR-based test drive simulations. This approach aligns with Gen Z's brain preferences, which tend to seek new, interactive, and personalized experiences.

Another crucial aspect of a neuromarketing strategy is personalizing brand communications based on Gen Z's neurological preferences (Goncalves et al., 2024). This generation rejects generic or mass marketing approaches, as they value brands that understand their personal identity and aspirations. From a neuromarketing perspective, personalization can be designed by leveraging consumer digital behavioral data, which is then linked to common neurological patterns of Gen Z, such as their preference for dynamic visual stimuli, authentic narratives, and social interactions. Personalization doesn't just mean addressing consumers by name in emails, but also serving content tailored to their interests, lifestyles, and even emotions at a specific moment. Using algorithms powered by artificial intelligence, marketers can identify when consumers are most receptive to certain messages and design communications that consistently trigger positive emotional responses.

Furthermore, neuromarketing-based personalization enables marketers to strengthen the social identity of Gen Z consumers. They tend to view brands as extensions of themselves and their values, so campaigns that address inclusivity, sustainability, or specific social issues often have stronger emotional resonance. Neuromarketing can help ensure that these communications not only appear superficially relevant but truly tap into the empathy and reward system centers in consumers' brains (Khurana et al., 2025). In this context, personalization bridges business strategy and consumers' deeper emotional needs, fostering affective, rather than merely transactional, loyalty.

The overall neuromarketing-based marketing strategy for building Gen Z brand loyalty fundamentally relies on brands' ability to understand the mechanisms of the human brain, specifically how Gen Z responds to emotional, sensory, and social stimuli. Advertising and content design that evokes attention and emotion, engaging and immersive digital experiences, and personalized communications that tap into their values and social identities are key building blocks for building long-term relationships. Gen Z loyalty cannot be built through rigid, traditional marketing approaches, but rather through a series of consistent, authentic, and engaging emotional experiences. Neuromarketing offers a new perspective that allows brands to not only sell products but also embed brands in the minds and hearts of young consumers as part of their own identity.

Neuromarketing Implications for Companies

Neuromarketing, as a cross-disciplinary approach that combines neuroscience, psychology, and marketing, has opened up new opportunities for companies to understand consumers more deeply (Chygryn et al., 2024). Unlike traditional marketing research that relies on surveys or interviews, which are often influenced by conscious bias and expected social responses, neuromarketing penetrates consumers' subconscious by measuring brain activity, physiological reactions, and emotional responses. This understanding has strategic implications for companies, particularly in developing more effective branding strategies, addressing ethical challenges in their implementation, and exploring the long-term potential for creating stronger consumer engagement.

In the context of developing branding strategies, neuromarketing enables companies to understand how consumers actually respond to a brand's visual, auditory, and narrative elements. Logos, colors, background music, and even the tempo of an advertisement can elicit distinct neurological activations

that influence how a brand is remembered and associated with specific emotions. Companies can use this insight to strengthen brand identity and ensure emotional consistency that can foster long-term loyalty. For example, a beverage company might find that fast-paced music and brightly colored packaging are more effective in triggering the reward system response in Gen Z brains, compared to overly formal or conservative visual approaches. This suggests that branding is no longer simply a matter of aesthetics, but also relates to how these elements evoke emotional associations in consumers' brains (Bočková et al., 2021).

Furthermore, neuromarketing helps companies understand when and how advertising messages should be delivered for optimal reception. Classical marketing theory often emphasizes repetition as a strategy for building brand memory, but neuromarketing shows that not all repetition is effective; in fact, excessive repetition can lead to cognitive fatigue (Crespo-Pereira et al., 2020). By utilizing brain activity mapping, companies can find the balance between message intensity and audience emotional receptivity. Thus, a neuromarketing-based branding strategy not only increases the appeal of advertising but also increases the likelihood that consumers will retain the brand experience in their long-term memory. This makes neuromarketing a crucial tool for creating brand uniqueness amidst increasingly competitive markets.

However, the application of neuromarketing is not without ethical challenges, particularly in relation to younger consumers. Generations like Gen Z and even Generation Alpha have different psychological characteristics than previous generations. They tend to be more impulsive, sensitive to emotional stimulation, and spend more time in digital spaces. This makes them more vulnerable to marketing techniques that exploit subconscious responses. For example, if a company uses neuromarketing to design fast food advertisements with visuals and narratives neurologically designed to trigger cravings, young consumers could be encouraged to overconsume, ultimately negatively impacting their health. Therefore, debate has arisen over whether the use of neuromarketing, especially in vulnerable age groups, violates the principle of consumer autonomy because they are influenced by subconscious impulses that cannot be fully controlled rationally.

From a regulatory and ethical perspective, companies face a dilemma between maximizing profits through the use of neuromarketing data and maintaining social responsibility to consumers. Some experts argue that neuromarketing has the potential to be a form of manipulation if used opaquely, while others believe it is simply an evolution of traditional marketing

techniques that are always designed to influence consumer behavior. Ethical challenges are becoming increasingly complex as neuromarketing technology is no longer confined to the laboratory, but is also being integrated into artificial intelligence-based digital platforms that can analyze eye gaze patterns, facial expressions, or even device usage rhythms. Therefore, companies need to develop internal codes of ethics and policies that ensure that the use of neuromarketing remains within fair, healthy, and non-harmful boundaries for consumers, especially the younger generation.

On the other hand, the future implications of neuromarketing for companies are very promising, particularly in building consumer engagement. Engagement is no longer limited to click-through rates or purchase volumes, but rather how consumers feel emotionally and cognitively connected to the brand. Neuromarketing can help companies create more immersive experiences, for example by integrating virtual reality (VR) or augmented reality (AR) designed based on consumers' neurological responses (Crespo-Pereira et al., 2020). Imagine an online store that can adjust the visual layout of its products in real time based on a user's heartbeat or gaze patterns. Such technology has the potential to revolutionize the way companies build personalized, interactive, and memorable customer experiences.

Furthermore, neuromarketing can be key to creating a more natural two-way communication between brands and consumers. By understanding consumers' subconscious preferences, companies can design content that is not only informative but also resonates with their audience's identity and values. This is crucial in the context of modern consumers, especially Gen Z, who demand authenticity and emotional connection from brands. When applied correctly, neuromarketing has the potential to not only increase short-term sales but also build long-term relationships based on trust and emotional satisfaction. This is what differentiates neuromarketing-based consumer engagement from traditional approaches: the focus is not simply on the act of purchasing, but on creating repeatable and meaningful emotional experiences.

CONCLUSION

The conclusion of the study, "Neuromarketing Insights into Brand Loyalty Formation in Gen Z Consumers," shows that brand loyalty among Generation Z consumers is not only formed through rational factors such as product quality or competitive pricing, but is also influenced by emotional and psychological aspects that can be captured through a neuromarketing approach. The use of neuroscience technologies such as eye-tracking, EEG, and fMRI helps uncover

how marketing stimuli can trigger emotional responses that ultimately foster long-term brand attachment. This confirms that a deep understanding of consumers' subconscious processes is key to building sustainable brand loyalty.

Furthermore, this study highlights that Gen Z has unique characteristics as digital natives accustomed to fast information, engaging visuals, and values of authenticity and sustainability. Neuromarketing shows that brands that align their messages with Gen Z's self-identity and social values tend to be more successful in creating emotional attachment. Therefore, marketing strategies that combine emotional, social, and cognitive aspects are more effective in strengthening brand loyalty among this generation.

REFERENCES

- Abu, A., & Lyan, A. (n.d.). *International School of Economics*.
- Alareeni, B., & Hamdan, A. (2024). *Navigating the Technological Tide: The Evolution and Challenges of Business Model Innovation: Proceedings of the International Conference on Business and Technology (ICBT2024), Volume 2*. Springer Nature.
- Alimin, E., Ismail, A., Herbenita, H., Fadillah, T. D., & Uhai, S. (2024). Analysis of The Influence of Digitalization Implementation in Marketing Programs and Neuro-Marketing Adaption on Brand Perception in The Tourism Industries. *Innovative: Journal Of Social Science Research*, 4(4), 14581–14589. <https://doi.org/10.31004/innovative.v4i4.14826>
- Anwer, T. (2022). Brain and Brand Loyalty: An Investigation of Loyalty Factors. *SJCC Management Research Review*, 93–109. <https://doi.org/10.35737/sjccmrr/v12/i2/2022/176>
- Bočková, K., Škrabánková, J., & Hanák, M. (2021). Theory and Practice of Neuromarketing: Analyzing Human Behavior in Relation to Markets. *Emerging Science Journal*, 5(1), 44–56. <https://doi.org/10.28991/esj-2021-01256>
- Chygryn, O., Shevchenko, K., & Tuliakov, O. (2024). Neuromarketing as a Mechanism of Communication with the Consumer: The Case for Small Business. *Marketing and Management of Innovations*, 15(2), 26–38. <https://doi.org/10.21272/mmi.2024.2-03>
- Crespo-Pereira, V., Legerén-Lago, B., & Arregui-McGullion, J. (2020). Implementing Neuromarketing in the Enterprise: Factors That Impact the Adoption of Neuromarketing in Major Spanish Corporations. *Frontiers in Communication*, 5. <https://doi.org/10.3389/fcomm.2020.576789>
- Faris, G. A., Khotimah, K. K., & Fatimah, S. E. (2025). The Influence of Neuromarketing and Emotional Marketing on the Purchase Intention of the Cirebon Community in the Fashion Industry. *Indonesian*

- Interdisciplinary Journal of Sharia Economics (IJSE)*, 8(2), 7083–7099.
<https://doi.org/10.31538/ijse.v8i2.6905>
- Gandla, R. (n.d.). I declare that the thesis entitled “The Role of Emoji in Marketing Communication Messages: A Neuromarketing Approach on Consumer Purchase Intent” has been prepared by me under the guidance of Dr Sharuti Choudhary, Associate Professor, School of Business, Woxsen University. No part of this thesis has formed the basis for the award of any degree or fellowship previously. 1270.
- Goncalves, M., Hu, Y., Aliagas, I., & Cerdá, L. M. (2024). Neuromarketing algorithms’ consumer privacy and ethical considerations: Challenges and opportunities. *Cogent Business & Management*, 11(1), 2333063. <https://doi.org/10.1080/23311975.2024.2333063>
- Gorgiev, A. (2020). *Revolution in marketing: Using intentions and willingness as behavioral indicators for adopting neuromarketing* [Phd, University of Sheffield]. <https://etheses.whiterose.ac.uk/id/eprint/29177/>
- India, Awasthi, A., Nneoma, N. R., Nigeria, Shukla, P., India, Kumari, S., India, Sahil, S., India, Gandhi, N. K., India, Agustin, F. E., & Indonesia. (2024a). The Role of Emotions in Consumer Brand Loyalty: A Neuromarketing Approach. *International Journal of Tourism and Hospitality in Asia Pasific*, 7(1), 104–116. <https://doi.org/10.32535/ijthap.v7i1.2901>
- India, Awasthi, A., Nneoma, N. R., Nigeria, Shukla, P., India, Kumari, S., India, Sahil, S., India, Gandhi, N. K., India, Agustin, F. E., & Indonesia. (2024b). The Role of Emotions in Consumer Brand Loyalty: A Neuromarketing Approach. *International Journal of Tourism and Hospitality in Asia Pasific*, 7(1), 104–116. <https://doi.org/10.32535/ijthap.v7i1.2901>
- Jukić, D. (2023). Beyond Brand Image: A Neuromarketing Perspective. *Communication Today*, 14(1), 22–38.
- Kachhara, G., & Jain, D. J. (2025). Unleashing Synergy: A review of the Impact of AI and Neuromarketing on Business Success. *International Journal of Environmental Sciences*, 11(3s), 727–739.
- Khurana, A., Gawshinde, S., & Shaheen, M. (2025). The Intersection of Neuromarketing and Ethical Consumerism in Sustainable Finance. In *Strategic Blueprints for AI-Driven Marketing in the Digital Era* (pp. 461–494). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3373-3897-2.ch014>
- Ng, K. Y. (2025). *Barriers and enablers of neuromarketing adoption in digital marketing in Finland*. <https://lutpub.lut.fi/handle/10024/169893>
- Novialdi, G. (n.d.). UNDERSTANDING THE DRIVERS OF ADVERTISING ELEMENTS THROUGH DIFFERENT MEDIA AND GENERATIONS IN BUILDING BRAND EQUITY: A NEUROMARKETING APPROACH.
- Onobrakpeya, S. A. (2025). Exploring Consumer Buying Behaviour towards Electronic Brands in South-East Nigeria: A Neuromarketing Perspective. 9(6).

- Paladino, C. A., Milla, A. C., & Andrade-Ruiz, G. (2024). THE ROLE OF NEUROMARKETING IN DECODING BRAIN STIMULI AND CONSUMER BEHAVIOR. *International Journal of Management Trends: Key Concepts and Research*, 3(2), 6–20. <https://doi.org/10.58898/ijmt.v3i2.06-20>
- Pathak, M., Kate, N. T., & Hajra, S. (2025). Neuro-Marketing as a Subset of Sensory Marketing From Lasting Imprint Becoming Memory and Impulsive Buying. In *Impact of Sensory Marketing on Buying Behavior* (pp. 291–312). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-9351-2.ch013>
- Pol, N., Daveshar, S., Bhakat, R. S., Kazim, S., Swaroop, K. R., & Mukthar, K. P. J. (2024). Unveiling the Power of Neuromarketing: Crafting Brand Connections in the Minds of Retail Consumers. In B. Alareeni & A. Hamdan (Eds.), *Navigating the Technological Tide: The Evolution and Challenges of Business Model Innovation* (pp. 336–349). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-67437-2_32
- Sutil-Martín, D. L., & Rienda-Gómez, J. J. (2020). The Influence of Unconscious Perceptual Processing on Decision-Making: A New Perspective From Cognitive Neuroscience Applied to Generation Z. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01728>
- Vellore Nagarajan, D. (2023). *Cognitive dissonance shaping consumer behaviour within Generation Z: A case of the Indian healthcare industry* [Phd, Middlesex University]. <https://repository.mdx.ac.uk/item/8q436>
- Vellore Nagarajan, D., Priporas, C.-V., & McPherson, M. (2021). Pre-decisional cognitive dissonance shaping consumer behaviour within Generation Z: Preliminary evidence. 14, 724. <https://eprints.soton.ac.uk/470667/>
- Ying, X. I. E., Yutong, L. I. U., Mingliang, C., & Andi, L. (2021). The cognitive psychological process of brand consumption journey: The perspective of neuromarketing. *Advances in Psychological Science*, 29(11), 2024. <https://doi.org/10.3724/SP.J.1042.2021.02024>
- YourBrainiac Ltd, Edinburgh, United Kingdom, & Dragoi, D. A. (2025). Cognitive Systems in Branding: Linking Neuromarketing, Emotions, and Subliminal Persuasion to Customer Choices through the IMPACT Method. *Ovidius University Annals. Economic Sciences Series*, 24(2), 378–386. <https://doi.org/10.61801/OUAESS.2024.2.51>