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**EFFECTIVENESS OF NEUROMARKETING IN FOOD
COMPANIES: HIJACKING BRAINS**

By

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Acknowledgment

I am personally thankful to NCI for giving me the opportunity for allowing me to research on this topic. It has given me exposure and great knowledge about various departments. I truly gained a first-hand experience which helped me to grasp and relate to the theoretical knowledge much better

My advisors were the ones that assisted me the most throughout the entirety of my research project. The information that was provided in this research was cited from a number of papers and journals that were generated by other researchers and which were widely accessible on the internet. These articles and journals were made by a variety of different people. In addition, I would want to express my gratitude to all of the other scholars whose contributions to the field helped me finalise my results and make my dissertation a reality. I'd also like to express my appreciation to my contemporaries for their assistance with this study and for spreading the news about it. In conclusion, I would like to express my appreciation to NCI for granting me permission to do this study. I gained a better understanding of the numerous neuromarketing strategies that are utilised in the process of promoting organic food thanks to this research.

Submission of Thesis and Dissertation

National College of Ireland
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Degree for which thesis is submitted: MSc in International Business

Title of Thesis: Effectiveness of neuromarketing in food companies: hijacking brains

Date: 15th August 2022

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Abstract

This study looks at how food companies are using neuromarketing strategies to figure out what customers want. The first chapter gives an overview of the research topics by setting clear goals, objectives, and questions. Along with that, this chapter explains why research is done and how important it is to keeping research credible. The second chapter is about literature. Different authors talk about theories and ideas that are already out there, and each topic will end with an argument. In this part of the chapter, we'll talk about the different theories about neuromarketing. We will talk about the different theories about neuromarketing and how they relate to advertising. In the third chapter, "Research Methodology," the types of research approach, philosophy, design, strategy, and methods for gathering data are explained. Philosophy positivism will be used as a deductive research method for philosophy research. On the other hand, archival research and descriptive research designs would be used. Interviews would be used as the main way to gather information for this research. In the fourth chapter, "Findings and Analysis," the study's results and outcomes are talked about. In this chapter, researchers will talk about what they found, what they learned from the study, how neuromarketing affects food companies, and how using neuromarketing tools helps companies understand what consumers are thinking. In the fifth chapter, "Conclusions and Recommendations," researchers came to the conclusion that using neuromarketing strategies would help food companies get more customers and keep them more interested. Along with that, this chapter suggested some ways to keep up with all the challenges and make things better.

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1. Introduction

1.1 Background of the study

Neuromarketing is characterized by the use of physiological measurement and neurological signals to enhance understanding of customer motives, decisions, and preferences. It has assisted with advertising creativity, pricing, product development, and other marketing issues. Brain scanning is the measurement of brain activity, whereas physiological monitoring is the measurement of eye movement and other surrogates. Per minute, buyers bypass more than 300 distinct products, indicating that the brand can draw potential customers. Neuromarketing demands particular knowledge and tools to compete with other marketing strategies. In neuromarketing, executives must comprehend the most crucial characteristics and available strategies. Packaging plays a significant function in enticing new clients to food companies. Packaging-related neuromarketing strategies have acquired prominence in the current market. Several corporations, including Kantar, Nielsen, and Ipos, have included neuromarketing in their commercial offerings. The packaging marketing strategy is one of the most significant marketing tactics for attracting and retaining customers. Packaging can create product value and influence customer buying decisions (Covino *et al.*, 2021, p. 187).

Neuromarketing is generating fresh market demand at present. Customers are drawn by packaging design. With the use of specialized photos, videos, and eye-catching material, advertisements can attract more potential clients. Choosing brand colors for packaging conveys a brand image to customers and can evoke a broad range of emotions. Marketers and creatives are focusing on new perspectives, and neuromarketing can provide an alternative vision to conventional research. Neuromarketing typically employs technologies for monitoring brain activity and biometrics to identify the physiological responses of individuals to marketing messages. 95% of decisions are made unconsciously, and emotions drive human behaviour. Consequently, the goal of this study is to investigate the impact of neuromarketing in food firms on customer behaviour. As a result, neuromarketing provides a clear route to comprehending shifting customer behaviours. Neuromarketing and consumer behaviour can help clients achieve better results for less money (Ioanid and Scarlat, 2021, p. 370).

1.2 Research Aim

This research aims to understand the effectiveness of neuromarketing in the food industry. Neuromarketing is becoming one of the important aspects for marketers to grab audience attention. Neuromarketing represents a direct path for understanding changing consumer behaviours that outline marketing goals.

1.3 Research Objectives

- To identify the concepts, theories, and principles associated with neuromarketing.
- To highlight the neuromarketing techniques used by the marketers.
- To understand the benefits and challenges of applying neuromarketing in the food industry.
- To mention the significance and impact of neuromarketing in the food industry.
- To recommend the best practices of neuromarketing to food companies.

1.4 Research Question

- What ideas, theories, and basic rules are involved in neuromarketing?
- What are some of the ways that marketers use neuromarketing?
- What are the pros and cons of using neuromarketing in the food business?
- What does neuromarketing mean and how does it affect the food business?
- What are the best ways for food companies to use neuromarketing?

1.5 Research Rationale

This study is about neuromarketing, which is represented by brain-scanning technologies such as electroencephalography (EEG) and magnetic resonance imaging (MRI) for watching people's brains about packaging design, product design, targeted advertising, and more. Top organizations have utilized neuromarketing for more than a decade to find new insights into consumer requirements. Utilizing tried-and-true methods, neuromarketing can increase visibility to attract

new customers. With the aid of this study, it would be possible to obtain trustworthy data on neuromarketing and its effectiveness in influencing customer behaviour. Neuromarketing tends to create marketing that is more enticing and inspiring for customers (Stasi *et al.*, 2018, p. 650).

1.6 Significance of the research

As per the view of Naimet *al.*, (2022, p. 87), this research is essential for understanding the efficacy of neuromarketing in food firms. In recent years, neuromarketing has emerged as one of the most popular methods for persuading customers to acquire a product. Brands are concerned about consumer demand and brand loyalty is decreasing. If the product and services are unable to meet specific consumer requirements. Neuromarketing is a new method for identifying customer characteristics and extracting information regarding their motives, emotional responses, attitudes, and cognitive processes for implicit research methods. Neuromarketing approaches are capable of holistically comprehending client requirements. This research focuses mostly on identifying neuromarketing approaches that can attract prospective clients. This study's objective is to discover contemporary neuromarketing strategies utilized by marketers to comprehend consumer behaviour. By completing this research, information regarding neuromarketing approaches and their benefits to marketers might be gathered.

1.7 Dissertation Structure

This research contains five chapters, 1) Introduction, 2) Literature Review, 3) Methodology, 4) Findings and analysis, and 5) Recommendation and conclusion.

The initial chapters explain research themes by elucidating research aims, objectives, and questions necessary to comprehend neuromarketing concepts. Along with that chapter, it outlines the significance and rationale for performing this research.

The second chapter is a literature review that collects pertinent information about neuromarketing by presenting various arguments from different authors. Therefore, this chapter contains all the necessary information on neuromarketing information. This research concludes with a discussion of the literature gaps that tend to characterize topics that are not present in this study but are discovered for future investigation.

The third chapter is devoted to methodology, which is one of the most vital components of the methodology section. This chapter describes each layer descriptively and provides supporting evidence to help the reader comprehend the notion. This research employs positivism as its research philosophy and a deductive research methodology. In addition, descriptive research design and archival research techniques are employed. For the data gathering techniques, a secondary data collection approach would be employed to perform the research and collect pertinent data. Secondary data collection entails acquiring pertinent information from secondary literature sources such as books, articles, journals, and newspapers.

The fourth chapter is devoted to findings and analysis, in which this study will conduct a thematic analysis by developing several topics. In this analysis, all information collected would be analysed and discussed.

The fifth and last chapter is the conclusion and recommendations, where the research would reach a conclusion and future directions for the research would be outlined.

2.0 Literature Review

2.1 Concepts, theories and principles associated with neuromarketing

As opined by Duque *et al.*, (2020, p. 525), neuromarketing first emerged in 2002 in the field of advertisement and marketing. Every year moreover 400 billion dollars are invested in advertising and promotional campaigns. Still, it is complicated and challenging for advertising and marketing professionals to test the effectiveness of advertisements on customers' brains, because marketers are dependent on customers' willingness to discuss and describe the advertisement, and how they felt during the advertisement. As per the Alsharif *et al.*,(2021, p. 13) authors view, it was not sometimes easy for customers to describe their feelings in words and sometimes customers are not willing to share full information about their feelings because marketers had to face that incompleteness of information. Neuromarketing offers a useful solution for measuring the effectiveness of advertisements without customers' participation and describing their feeling when they are exposed to an advertisement. Neuromarketing significantly improved the content of the advertisement and is useful for increasing the effectiveness of advertisement campaigns.

Neuromarketing is the result of a merger between two different fields, only belonging to the field of science and marketing is part of social science. In other words, it is the use of neurology for marketing purposes to have better insight into customers' reactions to a particular advertisement. This field cannot be attributed to a single person because it appeared in 2002 in the United States when companies like Bright house and Sales Brain initially offered neuromarketing research with consulting technology and knowledge from neuroscience. In 2003 the first outcome of neuromarketing research was provided by reading Montague, A professor of Neurosciences at Baylor College of medicine that was published in 2003. A group of people were given a choice to drink Pepsi or Coca-Cola during the study and their brains were fMRI scanned. The results of the study were interesting but professor Montague failed to give rational results. But it was revealed during the study that some parts of consumers' brains light up while given a choice about different brands whether they are conscious of the study or not. It was also suggested through the study that strong brands which are more influential have the power to capture the frontal cortex of customers' brains. The frontal lobe of the human brain is considered the seat of executive functions that manage attention, jurisdictions and short-term memory, playing a critical part in a consumer's thinking and planning process. As per the study when consumers know they drink Coca-Cola, they will reveal it by showing a preference for coke over Pepsi.

Because of inefficient results, the first neuromarketing study was heavily criticized. In 2004 a journal called Nature Neuroscience published an article "Brain scan" in which the ethical aspects of neuroscience were questioned. Morality and ethical attributes of neuroscience were the prime focus of this article (Alsharif *et al.*, 2021, p. 13).

Understanding consumer brain

As mentioned by Mouammine *et al.*, (2019, p. 34), for decades, advertising professionals and researchers have focused on measuring and explaining the effectiveness of advertisement with traditional approaches which failed miserably. Advertisements have short as well as long-term effects on consumers but traditional measures do not seem sufficient for measuring the effectiveness of the advertisement. The result in the consumer's mind was unknown in the case of traditional tactics for measuring advertising effectiveness. Under traditional approaches, researchers assume that consumers can understand and describe their cognitive mindset and also there are some inherent drawbacks in research methods which will affect the accuracy of results.

This situation is challenging for marketers to understand consumer reactions, so the emergence and application of neuroscience in marketing research seems problem-solving to have better insight into consumers' brains through neuroimaging techniques. Such techniques help marketing researchers to have better insight and understand the result of a message if it failed to track customers' attention or failed, which provides a way to increase the efficiency of advertisement and share a strong message with consumers that have a strong and positive impact on their brains (Spence *et al.*, 2019, p. 275).

As reported by Attié *et al.*, (2021, p. 638), the importance of neuromarketing has increased over the last decade but it has not gained full attention from warrior business organizations. The result of stagnating growth of neuromarketing is caused because of a lack of professionals from this mixed field of science and marketing and also several organizations do not practice it because of the questionable nature of its ethical use and practices. The fear of public exclamations about the ethical and privacy issues of neuroimaging has demotivated more research to conduct studies in neuromarketing. Still, the field of neuromarketing is getting mainstream. Starting from 2002 there are several improvisations in this field, while the advertisement agencies are understanding the importance of evaluating and estimating the effectiveness of advertisement campaigns through using brain-based tools, such as eye-tracking of consumers, EEG and fMRI.

Measurement of the brain responsible for the advertisement

As stated by Robaina *et al.*, (2021, p. 938), there are different ways to measure the response of customers exposed to an advertisement. But only three ways will be non-invasive for mapping consumer brain activity. As stated by Mansor *et al.*, (2020, p. 22), EEG- electroencephalography is an effective way to measure the effects of different advertisements, it can be useful to measure the effectiveness of advertisement, digital communications, store display and environment and any other designed changes to increase customer attention. This can be useful for marketing to conclude in real-time by monitoring different reactions of customers to their planned change. It is a painless test during which some small sensors are attached to the scalp of the subject which record the movement of electrical signals and these signals and monitored by a professional through a machine. For that purpose, customers are exposed to an advertisement or any planned changes caused by the market.

Magneto encephalography is also a non-invasive test used to measure the magnetic field caused by consumers' brain electrical currents. It is similar to EEG, which emerged in the mid-sixties; it has played an important role gained significantly in the field by useful improvements in measuring the magnetic waves produced by consumers' brains. As a fact, brain functions are electrochemical signals between neurons. Any exchange of data between neurons produces a magnetic field which can be mapped and studied through the use of MEG.

fMRI-Functional magnetic resonance imaging is used to detect the changes in the flow of blood and its oxygenations that are caused by any neural activity. It is used by marketing research to monitor unconscious emotions and reactions after exposing a customer to an advertisement of any other planned changes such as store designing, website designing and other branding tactics. The purpose of this test is to measure the results of exposure of consumers with an advertisement to understand whether it is effective to gain customer attraction or not. The main objective of any fMRI for a researcher is to find if the exposure made any bold signal on that basis the effectiveness of the advertisement will be decided by the researcher (Gurgu *et al.*, 2020, p. 208).

2.2 Neuromarketing techniques used by the marketers

As stated by Robaina *et al.*, (2021, p. 938), Neuromarketing uses functional magnetic resonance imaging and electroencephalogram techniques to target people's brains and find physiological signals with the aid of targeted advertising, packaging, and design. According to Ragab and Arisha, (2018, P. 1), Neuromarketing approaches have gained popularity over the past couple of decades as a means of acquiring clients. However, neuromarketing brand uses the following specialized tools and techniques:

Eye-following (Gaze)

This method focuses on customer requirements and observation. With eye gazing, buyers would be able to determine which typefaces, colours, designs, and advertisements are most likely to attract their attention to a business. Additionally, eye-taking is capable of confusing the populace. If the brand desires brand recognition, it will be able to determine the rate of customer recognition. Thus, the brand can determine whether it has a high level of recognition or needs enhancement so that consumers recognize it more quickly. The brand would be able to

affordably build website design, advertising, and packaging with the assistance of eye tracking. In addition, this strategy is simple to manage and sensitive to client feelings (Basias and Pollalis, 2018, p. 91).

Facial coding

This technique focuses mostly on facial expressions to assess emotional responses. It helps the audience to recognize a variety of emotions and feelings, including happiness, worry, surprise, terror, and contentment. Neuromarketing has transformed the interpretation of facial emotions into a scientific endeavour. With neuromarketing techniques, eye movements and brain activity are measured to read faces with unparalleled accuracy. Using sensors, the brand would be able to discern emotions and facial expressions based on precise measures of muscle action. A modest smile or grin cannot convey the actual truth about an individual's emotions. Using facial coding, marketers can interpret and decipher the subtle emotions that outline the opinions of individuals (Wohlin. and Runeson, 2021, P. 106678).

Pupillometry

The conclusion of this method is dependent on the condition of the subject's students. It can determine if pupils are dilated and the level of client engagement. Brands would be able to determine ways to update advertising, product packaging, and website design with the use of these strategies. However, this strategy is inexpensive and simple to implement, making it useful for marketing. Because it not only reveals what consumers enjoy but can also optimize amazing chances from websites to packaging. Using visually appealing websites or commercials can enhance audience involvement, hence boosting brand recognition and revenue (Stasi *et al.*, 2018, p. 650).

Biometrics

By measuring heart rate, skin respiration, and conductance, this approach indicates the level of engagement and type of response. Biometrics enables the tailoring of advertisement content to audience preferences. By utilizing eye tracking, marketers may create advertising and content (Luna-Nevarez, 2021, p. 559).

Electroencephalogram

By analysing the electrical signals emitted by neurons within the brain, this method reveals client engagement and recall. These costly tactics enable marketers to adopt changes rapidly to improve the quality of advertising and branding. Electroencephalogram is precise and time-sensitive, which stimulates a fast reaction for determining customer emotions. By employing these strategies, marketers would be able to comprehend client preferences and attract prospective target audiences.

Functional Magnetic Resonance Imaging (fMRI)

Functional Magnetic Resonance Imaging (fMRI) is one of the most costly methods that can provide in-depth information on audience emotional responses, recollection, and customer engagement. For this procedure, a laboratory is required. fMRI measures blood flow in the brain during intense cerebral activity, hence facilitating the collection of data that may be used to enhance branding and determine prices. However, fMRI can identify the active regions of the brain with less time precision (Spence, 2020, p. 9).

2.3 Benefits and challenges of applying neuromarketing in the food industry

Neuromarketing is currently in demand, as it assists marketers in identifying prospective clients. Adoption of neuromarketing approaches has not only yielded benefits but also provides the following obstacles for marketers:

Benefits

Discover fresh viewpoints

Marketers and creatives discover novel ideas and perspectives. Neuromarketing differentiates itself from traditional tactics, such as print and broadcast advertising, for capturing the attention, emotions, and responses of an audience. Most creatives and designers concentrate on the deeper significance of novel concepts. Thus, neuromarketing can concentrate on more specific recommendations. It illustrates how designers can produce a more effective advertisement by

offering crucial information and precise elements designed to elicit an emotional response to the product, advertisement, service, and packaging (Ganiet *et al.*, 2018, p. 338).

Uncover emotional and non-conscious responses

Regularly, humans experience a range of emotions, some of which are transient and barely perceptible. These feelings and emotions influence the purchasing decisions of consumers. With the aid of neuromarketing techniques, marketers may identify customers' emotional responses.

Measuring common scales

Customers can be evoked by collecting consumers' conscious descriptions, emotional responses, and range of attention. Collecting responses from various individuals would enable the discovery of additional requirements or understatement. Several inconsistencies can be smoothed out with the help of average or big sample data, but obtaining people's feelings needs artificial effort.

Measuring fleeting reactions

Based on studies, it has been determined that neuro metrics enable television advertisements to capture instantaneous responses. Providing important diagnostic information is not the only way to attract potential consumers. Neuromarketing can establish obvious connections between physiological responses and specific instances including video, website features, and product package design, amongst others. With the use of emotion measurements, individuals can provide exhaustive data on respondents' reactions to marketing materials or videos to enhance those aspects that can affect unfavourable feedback (Isa *et al.*, 2019, p. 687).

Improving reliability results

With the use of neuromarketing, marketers would be able to comprehend the customer's unconscious mind. Thus, it can provide a deeper knowledge of the processes involving automatic reactions that occur on the subconscious level of the mind of each consumer. Due to unconsciousness, customers can lie, but their brains are unable to exert control. Neuromarketing is capable of penetrating the unconscious realm to acquire more trustworthy data regarding consumer motivation and true reaction to the product, packaging, and design. All of the information can be utilized to satisfy customer preferences and increase brand loyalty.

Value for money

Presently, new digital technologies and software significantly reduce marketers' capacity to give higher-quality information. Professional market research can benefit from the quality and depth of insights provided by online software solutions.

Challenges

Ethical concerns

It has been determined through studies that neuromarketing can penetrate the customer's mind. Neuromarketing performs tasks that can be performed by competent psychologists. Neuromarketing uses smart results to learn behavioural patterns.

Availability of specific skills

Insights of higher quality can be attained through the accumulation of specialized knowledge. It is necessary to have a scientific background to interpret neuro-tools such as waves and graphs. Technology has made it easier to comprehend client requirements, yet marketers must still exert more effort.

Expensive equipment

According to studies, neuromarketing equipment is thought to be costly, creating a dilemma for marketers. The cost of a whole set of neuromarketing equipment ranges from \$1,500 to \$50,000. The expenditures are quite high and expensive, making it difficult for small marketers to embrace. Access to expensive equipment is essential for the collection of high-quality data, which is a plus despite the additional cost. In the food sector, the price range for each ingredient and product is continually expanding. Therefore, it can be difficult for marketers to adapt to new technologies like neuromarketing.

Privacy

All GDPR-related demand is generated by individuals who desire control over data shared with them. Nobody wants the data to be compromised and all-important information must be

safeguarded. The leakage of personal data is one of the most critical factors; therefore, it is essential to strengthening the technological process in terms of data protection. The more data collected, the better the consequences of neuro-tools would be. In addition, it would assist collect further information on the customer and clear up any questions. People are still contemplating invading the private and intimate lives of consumers' minds.

2.4 Significance and impact of neuromarketing in the food industry

The significance of neuromarketing is that it understands the consumer changing behaviour with the help of neuro research. The pace of technological advancement has been increasing rapidly in recent years. As a result, consumer spending patterns and behaviour are changing as well in the food industry. Thus, neuromarketing helps the food industries to understand the customer's changing behaviour toward food. Marketing has a key goal to understand the consumer. In neuromarketing, neuroscientific research is applied to improve marketing effectiveness and ultimately increase sales through consumer behaviour. The combination of neuroscience with marketing, therefore, means that marketing meets the science of evidence-based marketing (Moya *et al.*, 2020, p. 1856). The customer's mood is changing frequently because of the changing world. The customers might hold one view consciously while subconsciously believing something else known as cognitive dissonance. This is because food companies can't depend on focus groups and consumer surveys. Here neuromarketing comes into play to understand human bias. Hence, neuroscientific research enables companies to gain a deeper understanding of their target audiences than they can themselves. As a result, marketing tactics become more effective, and sales increase. As a result, neuromarketing has a significant role to play in the food industry to attract the attention of their target audiences and be on the customer's minds on top of the place. Neuroscience is a completely new discipline that compiles economics, behavioural psychology, and consumer neuroscience. By using this method, food companies can obtain effective insights about customer purchase intentions, as well as maintain a competitive edge and thrive in an increasingly competitive market (Missoet *al.*, 2018, p. 566). The food companies apply neuroscience to their campaigns in neuromarketing. In this way, marketers are directly able to measure customer responses to advertising, product design, packaging, and other marketing elements using scanning, brain imaging, or other technologies that measure brain activity.

2.5 Impact of neuromarketing on the food industry

The impact of neuromarketing is that it understands the customer's reactions to different marketing elements. Thus, neuromarketing comprehensively understands consumer buying behaviour. The neuroscience study examines how the human brain reacts to marketing and products.

With neuromarketing, the companies measure the lower-level effects of designs that capture the attention of people, increasing their ability to retain information the longer they are exposed to it. Mostly the designers and creatives emphasize that the creation has high-level meanings. However, neuromarketing creates a significant impact on granular recommendations. This includes demonstrating the insights on the imagery design for attracting attention, editing an advertisement to create the information catchier, to include accurate design elements that will enforce the emotional engagement in a product, service, ad, or package (SAHIN *et al.*, 2020, p. 997).

Neuromarketing also has an impact on the fleeting emotions and feelings that the customers feel most of the time in their daily lives. The customer may fail to recognize these emotions because it goes in a fast moment. However, these emotions and feelings influence the customer's behaviour while selecting the product to buy. Thus, neuroscience helps the company to understand these emotional triggers the customers face. Hence, neuromarketing measures the customer's experience that changes over time. Marketing is all about understanding the consumer's behaviour, motivations, and needs. With the help of neuromarketing, the company can create alignment with the customer's emotional needs and physical behaviour by delivering an experience (Ioanidet *al.*, 2021, p. 370). Neuromarketing has used its high-level research to analyse the customer's response neurologically to real campaigns. The researcher of neuromarketing detects emotional responses such as pleasure and fear. Hence, it allows the researcher to monitor instinctual emotions like happiness, anger, excitement and based on the customer's fluctuations.

2.6 Various examples associated with neuromarketing

Colour Psychology- Colour psychology suggests that to capture the attention of the customer, the company needs to use appropriate colours. For instance, if the company is selling men's outfits then pink and purple are not the right colours to use to reflect the brand. Therefore, selecting the right colour is important when running a business.

*Audio Branding-*The branding efforts should not only be limited to visuals but also audio. Hence, audio branding has a powerful way that can create retention in the customer's mind. If the company comes up with an advertisement that has a catchy sound and attractive lyrics, it would be seamless for the customer to remember the brand name. The audio logos of successful companies are short and easy to remember. Hence, the company used the application of neuromarketing that aligned with the company's products and services. This way the company can create a consistent image in the customer's mind through perfect voice modulation, volume, and catchy slogans (Spence *et al.*, 2020, p. 9).

*Focus on Senses-*Neuromarketing focused on the sensory brands. There has been a noticeable difference in the way a product feels in the hands compared to what it appears to be from the screen or outside. Hence, the companies can use sensory branding to appeal to the consumer's senses: sight, smell, sound, taste, and touch. Neuromarketing can then focus on olfactory marketing as sensory marketing. The purpose of scent marketing goes beyond diffusing a pleasant aroma throughout a space, according to research (UZUNOĞLU *et al.*, 2020, p. 3097). Based on neuroscience, it involves taking the brand identity, marketing messages, and target audience of a company and creating a scent that brings them all together. One of the companies that have used Olfactory marketing is Abercrombie & Fitch, a famous clothing brand. One of the first clothing brands to incorporate olfactory marketing into marketing the products. Adding to its collection of woody and intense smells, Abercrombie has its product line of scents.

Pricing- Pricing has a significant effect on the customer. Since price determines the overall company's revenue and profit. Based on neuromarketing research, it has been evidenced that smart pricing strategies create a big difference. The company faced challenges to decide whether to either round or not to round while setting the price. In studies, it was found that the brain processes rounded prices more easily while the brain has a harder time processing odd prices

(Fadaeiet *al.*, 2021, p. 189). It is up to the company and the brand to decide whether they will use emotional appeals, rational arguments, or a combination of both. Moreover, according to their research, pricing should be predetermined, so the company can select its path.

Appropriate Font- Selecting the right font is another example of neuromarketing. If the company used the wrong font that does not reflect their company, Furthermore, it has been observed through neuromarketing research that different font serve different purposes. Consumers' brains will respond instantly to the simple font, while complex fonts will make them work harder to grasp the meaning and memorize the information. Therefore, companies should choose fonts that are easy to read and work well for instruction and call-to-action. The more the CTA will be clear, the more customers will click the link. Unique fonts, on the other hand, are visually more attention-grabbing than simple fonts and should only be used for important details.

Effective Packaging- The consumer's experience will be improved if the company used the application of neuromarketing in its packaging. Well-known companies such as Campbell's Soup, and Chips Ahoy reinforce neuromarketing for excellent product packaging. The use of eye tracking and EEG helps companies to eliminate the design elements that do not resonate and appeal to the audience.

2.7 Literature Gap

The dissertation paper has only outlined the challenges, benefits, and effectiveness of Neuromarketing in food companies rather than focusing on the innovation in the Neuromarketing concept for prompter brain hijacking of the customers. In addition, the researcher had experienced a tie shortage to gather more informative content on Neuromarketing acceptance concept by other business industries and its impact on their business growth and sustainability.

2.8 Conceptual Framework

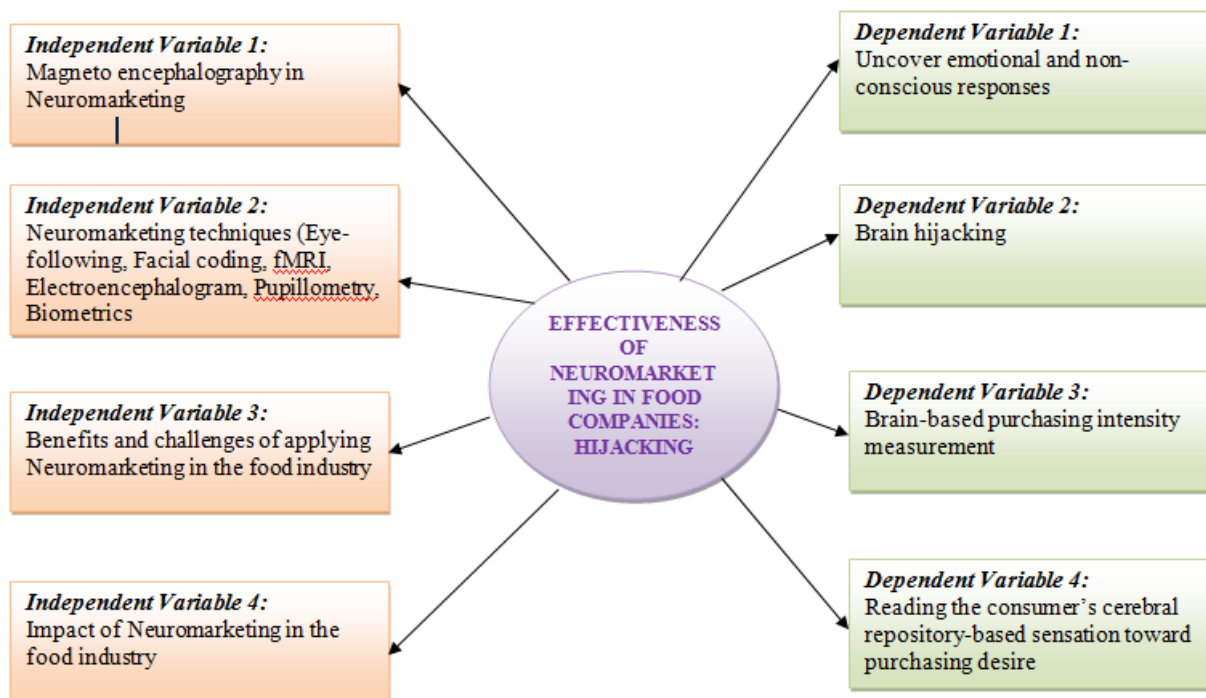


Figure 1: Conceptual framework of the research topic

(Source: Developed by the learner)

3.0 Methodology

3.1 Research onion

Research onion can identify research objectives by collecting valid information with the help of searching evidence, collecting approach, and sequential extraction. Research onion defines each

layer of the data collection process such as research philosophy, design, strategy, design, approach, and data collection methods. By researching onion, the researcher can collect information while maintaining authenticity, integrity, and validation (Al-Ababneh, 2020, p. 75).

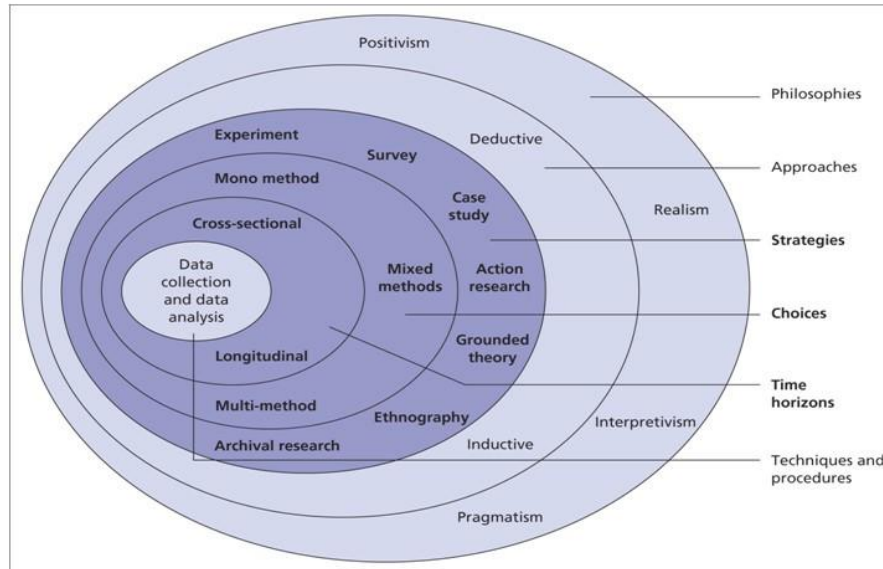


Figure 1: Research Onion

(Source: Al-Ababneh, 2020, p. 75)

3.2 Research Philosophy

A research philosophy refers to a systematic research procedure for collecting a huge range of relevant and valid information in an argumentative approach. There are two types of research philosophy mainly used, positivism and interpretivism. Interpretivism research philosophy tends to define the substantial interpretation of scientific aspects for identifying the accuracy of collected data. On the other hand, positivism research philosophy defines real-time information with scientific observation and sensual tactics. This research would be using positivism research philosophy for conducting the research (Dodds and Hess, 2020, p. 203).

The justification for using positivism research philosophy is to entitled relevant information and realistic data related to neuromarketing in food companies. Several numerical, statical, and database information for identifying the effectiveness of neuromarketing among food companies. Positivism research philosophy collects information by factual observation. Moreover,

positivism research philosophy tends to explore social realities which would be able to collect authentic and relevant information. With the help of positivism research, philosophy researchers would be able to observe neuromarketing techniques and strategies used by other food ventures. Thus, it would help marketers to understand the demand for neuromarketing techniques among the customer and compete with other food ventures. The purpose of using positivism research philosophy is to discover objective laws which would be able to define the impact of neuromarketing techniques in the food industry (Babii, 2020, p. 77).

3.3 Research approach

As per the view of Zawacki-Richter *et al.*, (2020, p. 161), the Research approach refers to a plan and procedures for conducting the research by a wide range of detailed observations for data collection, analysis, and interpretation. The plan refers to different decisions for effective research outcomes. There are two types of research approaches, mainly deductive and inductive research approaches. Inductive research approaches ensure collecting relevant information by considering research objectives. In the other context, deductive research refers to the extraction of relevant information by analytical observation and a science-based approach. This research would use a deductive research approach with the alignment of research deliverables and re-structure objectives.

The justification for using deductive research approaches is to collect in-depth information which is associated with independent and dependent research variables. Deductive research approaches tend to collect statistical information which would be able to maintain research credibility with effective research outcomes. Since deductive approach refers to the connection between concepts and variables. Deductive approaches encounter theories, hypotheses, and observation before reaching any conclusion. However, deductive research approaches are associated with scientific investigation and prevent taking false information. The purpose of using deductive research approaches is to reach relevant and logical conclusions. Therefore, neuro marketers would be able to make important decisions based on the statistical information and prevent any obstacles (Ryder *et al.*, 2020, p. 255).

3.4 Research design

Research design is considered an overall strategy that is mainly chosen to integrate different components of logical study. Research design ensures researchers effectively fulfil research objectives. There are generally two types of research design used, descriptive and explanatory. Explanatory research design is defined as collecting relevant information by actual cause of finding approaches with restricted samples. Descriptive research design represents collecting relevant information by identifying consequences, root-cause, possible outcomes, and real-time impact. This research will use a descriptive research design for collecting in-depth research outcomes (Basias and Pollalis, 2018, p. 91).

The justification for using descriptive research design is to collect relevant and accurate information for discovering, "what", "why," "how", and "where. With the help of descriptive research design, researchers would be able to discover individual aspects related to neuromarketing techniques in the food industry. The purpose of using a descriptive research design is to collect relevant and systematic information for resolving all the queries. Since descriptive research design encounters a huge range of information for investing and discovering more variables. The main reason for choosing a descriptive research design is to develop an in-depth understanding of neuromarketing techniques marketers' use for increasing sales and to understand customer requirements toward the brand. However, Descriptive research design overlooks a huge range of information for discovering in-depth understanding. Descriptive research design follows a systematic research process thus it can clearly describe neuromarketing concepts for maintaining research efficiency with effective research outcomes (Wohlin and Runeson, 2021, p. 106678).

3.5 Research strategy

A research strategy is a step-by-step action plan which tends to provide clear direction and conduct systematic research for delivering quality results. Research strategy tends to provide a clear pathway for conducting research outcomes. There are seven types of research strategies mainly used: survey, experiment, case study, action research, grounded theory, archival research, and ethnography. This research will use an archival research strategy that indicates the concept of research background by considering research objectives. However, the archival research

strategy mainly focused on reliable sources, peer-reviewed journals, and government websites for collecting reliable and accurate information about neuromarketing techniques used by marketers (Budianto, 2020, p. 1339).

The justification for using the archival research strategy is to deliver relevant information for maintaining research proficiency by collecting a wide range. Archival research methods represent a huge range of activities for investigating relevant information about food companies. Archival research strategy refers to historical documents which have already been collected to maintain research credibility. Archival research strategy encounters a broad range of data related to neuromarketing strategies used by markers in the food industry. With the help of an archival research strategy, it minimizes risk factors by addressing research issues with defining relevant solutions for mitigating all the challenges marketers experience due to adopting neuromarketing techniques (Moya *et al.*, 2020, p. 1856).

3.6 Data collection method

Data collection methods are one of the crucial parts of the methodology section for collecting reliable and authentic information. There are two types of data collection methods generally used, primary and secondary data collection methods. Primary data collection methods define collecting problem-relevant information by collecting first-hand approaches and self-experiment. On the other hand, secondary data collection methods are associated analysis and extraction of relevant information which has already been collected. This research would use primary data collection methods for maintaining research credibility and reliability, therefore the product line manager and sales manager of PepsiCo were chosen as participants for the interview-based response (Nilashi *et al.*, 2020, p. 23).

The justification for using primary data collection methods is for collecting direct information without analysing any existing sources. Primary data collection methods are authentic, reliable, and able to collect information based on research objectives by addressing particular research problems. Primary data collection is defined by specific information and researchers can control collected data. This research was interviewed to directly collect direct information from PepsiCo's line manager and product manager. Therefore, it would be easier for researchers to maintain research authenticity. Six interview questions have been set for interviewing the

managers. PepsiCo line managers and sales managers are aware of neuromarketing techniques thus it tends to collect up-to-date information. Moreover, in primary data collection methods, researchers are in charge of collecting information thus able to decide which techniques would be used for data collection methods (Naim, 2022, p. 87).

3.7 Sampling technique

Sampling is a technique that allows researchers to collect information about population alignment with research findings for a subset population without analysing a person. Probability Sampling methods are costly and time-consuming compared to the non-probability approach of research sampling techniques. A probability sampling technique can be employed and make it easier for collecting accurate information about neuromarketing techniques. Sampling also helps to develop research objectives for effective research outcomes (Covino, 2021, p. 187).

3.8 Ethical consideration

This research is using "Seven Code Ethics" for data extraction and generating ethical research processes. By following these protocols researchers would be able to maintain a bias-free attitude, mutual understanding, respectful coordination, and zero discrimination approaches. This research implemented an "Anti-discrimination policy" and "Equality Bill 2021" for providing equal opportunity against gender partiality and discrimination related to culture, ethics, race, age, and socioeconomic aspects. The reason for using the "Information Technology Act 2000" and "Data Protection Bill 2021" for avoid any possibility of stealing, phishing, plagiarism, false information, and breaching. The legislation influences researchers to collect, extract and store information related to neuromarketing techniques used by PepsiCo marketers. However, research ethics can avoid any leaking information and secure all the collected information (Ioanid and Scarlat, 2021, p. 370).

3.9 Limitations

This research is using primary data collection methods and time is the only limitation of this research. Primary data collection takes time and extra expenses for conducting interviews and arranging everything. The deadline will create pressure for collecting information and finishing

the entire research. However, researchers often fail to analyse all information which tends to reduce research credibility and reliability. Along with that, researchers have a tight budget, and arranging primary data collection methods is very expensive. Limited time and capital can prevent accessing relevant information (Iloka and Anukwe, 2020, p. 239)

3.10 Timescale

Criteria	W1	W2	W3	W4	W5	W6	W7	W8
<i>Literature Review</i>								
<i>Philosophy and Approach</i>								
<i>Strategies and choice</i>								
<i>Data collection</i>								
<i>Findings and analysis</i>								
<i>Review and Submission</i>								

Figure 2: Gantt chart

(Source: Developed by the authors)

4.0 Findings and Analysis

Findings

Q1. What do you think about the neuromarketing acceptance by modern food marketers?

Product line manager: *“The concept of Neuromarketing is emerging and growing at a pace. Marketers are interested to know the reaction of consumers like how they feel about the product and how they see the advertisement. Use of Neuromarketing in the food industry will have great impacts and marketers will prefer to use neuro-based tools to increase customer experience”.*

Sales manager: *“Having knowledge about consumers' brains response towards the product or advertisement for a marketer is a great achievement. Marketers always want to know how*

customers feel and react to their products, so they can modify the product accordingly and focus on their strengths”.

The contemporary business world and industry 4.0 revolutionary phase have stimulated the adoption of the concept “Neuromarketing”. It is recognized as the measurement of neural and physiological signs to get some responses from the customer’s ends that drive the customer’s preferences, decisions, and motivations. The prime purpose of this kind of smart marketing concept is to imply neuro-scientific-based research on consumer behaviourism in product purchases. By adopting this kind of market promotion tool and technique, the food industry can read the consumer’s perceptions, coming from their brain sensation (Moya et al., 2020, p. 1856). This brain scanning technology is used by food marketers to visualise how their targeted customer’s brain can respond to the eye-catching ads, product design, colour, and packaging design.



Figure 3: Global Neuromarketing market data

(Source: Neuromarketing Solution Market Size, 2022)

The above-mentioned statistical data and graphical representation entitled that the global Neuromarketing market size is estimated to be US\$1,179.4 million in 2019 while is predicted to

hit up to a CAGR of 10.2% in 2019-2027 timeframe. Through this marketing style, the cognitive-based Neuroscientific approaches are analysed in the consumer's brain, the prime benefit of using this kind of marketing tool is to get deeper ideation of the customer behaviour toward food product selection by reviewing their Peripheral and Central nervous system. This kind of marketing tool not only identifies the customer's buying intention limit but also signifies the subconscious decision-making attitude based on the attractive and informative advertise-based content.

Analysis

The Neuromarketing techniques and strategies acceptance level in the modern business era is highly adopted by the business sector including the food marketers. The strategic managers and the business leaders in the food industry are eventually investing in Neuromarketing tactics to determine the customer's tastes, preferences, needs, desires, expectations, and requirements regarding food consumption. The industry is paying attention to the use of different methods such as facial expression detection, gazing technology, and an electroencephalogram. Based on these techniques, food marketers can eventually understand the customer's emotional level and psychology to purchase the degree of the food products (Misso et al., 2018, p. 566). In case the marketers use the "bright packaging colours" and "informative content" such as fat level and calorie level on the package, then there is a high probability of purchasing that particular product.

On the other hand, smart techniques are added to the Neuromarketing concept to capture a large range of customers. The customer's brain responses and cognitive thinking level can be fluctuated based on particular stimuli such as 1) packaging style, 2) biodegradability rate of the wrappers, 3) packaging colour, 4) food container design and shape, and 5) free offering of wooded spoon and tissues. In this context, neural manipulation is articulated to determine and influence the consumer's buying desire. For example, the food is sold in a unique heart-shaped paper-based container rather than the normal round-shaped bowl and it attracts the kid and women community especially. Different unique shapes are used as food containers to attract customers easily.

The neuroscience-based brain influence can be done in case the food sellers serve the food on a differently designed, shaped, and coloured bowl, plate, and containers. This shaping kind of gazing approach directly hits the women and children's emotion-based purchasing intention state especially. From the market analysis, it has been revealed that the Neuromarketing concept acceptance level among business marketers is gradually growing. In order to stabilise the business in the domestic market and eventually move the business to the global level, the food industry is paying attention to the "social media-based Neuromarketing" concept. On the social media web pages, the food marketers not only provide content-based and video-based product relevant information but also offer audio-visual-based content such as the close shot of the product.

Besides, the shapes and types of the container or wrappers, and the scented packaging concept also have a great value in the food industry to attract a larger customer base. This kind of stimulation influences the consumer's emotional intelligence level and psychological quotient value in the customer's purchase desire increasing. By surfing the social media pages, the visualisation sensation directly knocks on the brain's door and an encoded electrochemical signal is transmitted to the skin and eye as a response (Shahriari et al., 2020, p. 268). It is indicating that the customers can have a gazing attitude, Goosebumps, and excitement in their voices to lock the food product for consumption. Eventually, the food brands are decoding the consumer's minds by investing their capital in the Neuromarketing adoption process to determine the consumer's food product purchasing intensity to the particular food items.

Q2. Do you think that with the help of neuromarketing modern food marketers can capture a wide consumer base?

Product line manager: *"Traditional methods are not efficient enough to understand and to know what and how consumers feel about the products, but with the help of neuromarketing it is possible to know consumer's reaction. That can be worthy to know for marketers".*

Sales manager: *"Use of neuromarketing tools is increasing and marketers are interested to know about the consumer preference, so it can help food brands to expand and increase their consumer base".*

Findings

According to Stasi et al. (2018, p. 650), the consumer's food preferences and choices are fully dependent on a complex set of feelings, values, emotions, and attitudes. These are not easily captured by the food marketers through a traditional survey, interview, or feedback-based assessment processes. By applying the Neuro-scientific-based analytical method, the consumer's spontaneous reactions and emotional intelligence power are determined to predict the consumer's crowd density in the in-store and online shops. Neuromarketing concepts allow the food business owners to use manual-based assumptions on the customer's crowd density and estimated sales intensity in a month rather than using the latest technologies such as Big Data and Artificial intelligence.

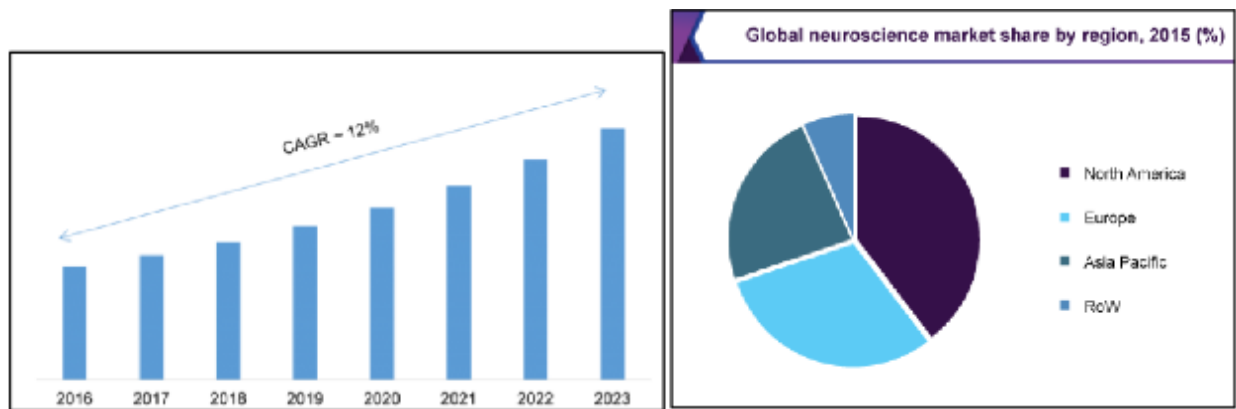


Figure 2: Neuromarketing market acceptance level in the business industry

(Source: Gurg *et al.*, 2020, p. 218)

Based on the above-mentioned graphical illustration, it has been discovered that the Neuromarketing concept is eventually adopted by business enterprises across the globe. The graphical illustration showcased that the Neuromarketing type of smart promotional tool in the contemporary business world has a high level of market acceptance in Europe and North America. The reason for having a high market size is the utilisation of this kind of marketing tool in the food market of Europe and North America. The Neuromarketing concept in the food businesses such as PepsiCo, Nielsen, and Kantar is considered a priority basis as it transparently shows the activities in the consumer's brains.

Analysis

The Big Data and CRM (Customer Relationship Management) software in the recent era have been out of the bag for a certain timescale and henceforth, the strategies are automatically combined with Neuromarketing (Ghuman, 2022). For instance, the red add-to-cart button in the e-Commerce portal activates the nucleus acumens and the brain's pleasure chamber, indicating the widened scope of buying intensity and purchasing frequency of the food products. The Neuromarketing strategy is also recognised as the booster and motivator of the consumer's purchasing desires. Through the utilisation of the EEG or Electroencephalography method in Neuromarketing, the cognitive-based judgmental styles, and decision-making power of the food consumers can be measured.

In this context, the magnetic resonance power can simply track the electrical functionalities and blood flow fluctuation rate of the targeted audience. The entire scenario would simply guide for the food marketers to assemble ideologies regarding food preferences such as the demand for organic food, vegan item, fatless product, gluten-free items, and patient-centric food to attract them. Besides, the Neuromarketing strategy also ensures the food wrapper colour, shape, size, and acceptance of light scented wrapper to boost the food sales and scope of higher profitability in the competitive marketplaces. For example, it has been discovered that PepsiCo uses the Neuromarketing strategy to deliver their "Potato Chips" relevant products in shiny bags and wrappers (Burkitt, 2022). In order to attract its EEG-cap-wearing customers, this food enterprise has switched to the shiny packaging concept across the United States.

On the other hand, it has been revealed that any marketers can hook up to 30 consumers at a time with the EEG-based brain reading arctic with a \$50,000. Through the utilisation of neuroscience, Neuromarketing has tapped the pleasure centres of the customers to convert their non-buying attitude to purchasing mode. Considering the example of Junk Food Giant, Frito-Lay, it has been discovered that the enterprise has accepted the Neuromarketing concept since 2008 (Knowledge, 2022). The Sales Manager, Product Line Manager, and the Research and Development team discovered that they can attract their customers by delivering a message like "turning the consumer's fingertips orange through the Cheetos residue". This message created enthusiasm and excitement among the customers as the sensation directly projects on the pleasure centre of the brain. Therefore, it can be acclaimed that Neuromarketing has a tremendous impression on consumers' buying desire enhancement for the sales growth in the food industry.

Q3. How gazing technology and facial expressions in neuromarketing can hack the food consumers mind?

Product line manager: *“The tools and techniques used in Neuromarketing and surprising for both customers as well as for the marketers, having insight into the consumer's mind will help the marketers to provide them products as per their expectations”.*

Sales manager: *“ Neuromarketing helps to identify the strong attributes of the product through various methods that can help the marketers to focus on strong points which leads to gaining consumer’s trust”.*

Findings

The Neuromarketing technique is directly connected with visual aiding, visual processing, and visual branding in the business to attract a larger customer base. The food or wrapper colour, packaging size, position, container shapes, and orientation are the bottom-up factors in the visual attention of the customers. Eye movement ensures the human through the process and strategic processing in their brains. Different variables are used in the eye movement process to extract the consumer's buying desire and purchasing intensity for the specific products in the business world. Considering the case scenario of the food industry, it has been accredited that the crucial factors for eye gaze are 1) Eye pressure detection level, 2) Gaze direction, 3) Eye position, 4) Eyelid closure, 5) Pupil size and dilation, and 6) Eye recognition. By interpreting each factor in the visual attention approach, eye tracking can be done, and based on this the customer’s predictive attitude towards the food purchase can be measured.

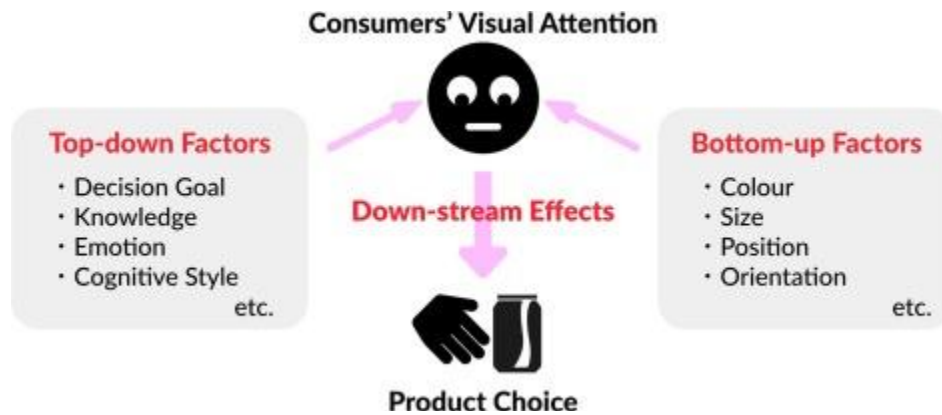


Figure 3: Gazing or Eye-tracking Technology in Neuromarketing

(Source: Motoki *et al.*, 2021)

According to the survey report analysis by Greenbook Directory, it has been discovered that the implication of the eye-tracking strategy in the Neuromarketing approach was entitled to around 38%. It is also expected to be grown up to 19% in future Neuromarketing approaches in the business world and organisational sustainability (Mordorintelligence.com, 2022). The facial expression in the Neuromarketing concept can be considered by the food marketers to determine the facial code of the individual. In this context, facial muscle relaxation and contradictions are divided into Action Units. Based on the satisfaction of the eye-catching ads, surprising content, shiny wrapper, attractive discounts, distinct shapes, and attractive container shapes simply generate muscle relaxation on the face, indicating a probability of positive optimization of buying the products from the food industry.

Analysis

From the overall finding of this thematic heading, it can be found that the Gazing technology. Eye-tracking technology and facial expression-based coding are highly important in the Neuromarketing concept in the food industry. During the searching of the food products on the food manufacturing and selling firm's website, e-commerce portal, and social media pages, a high-quality camera is used to capture the facial coding. After that, the encoded faces are analysed, and picked the most satisfactory faces to determine the sales boost and profit scale level in both the global and domestic markets (Nilashi *et al.*, 2020, p. 25). Through the implication of this method in Neuromarketing, the customers can be associated with the visual aids via an emotional and cognitive responsive attitude toward the customer community.

On the other hand, eye-tracking promotes the analysis of the individual's cognitive thinking level and decision-making power to purchase products from the food industry. The Neuromarketing concept offers "Audio-based Branding", "Pricing Determinants' ", and "Colour Psychology" to attract the customers as they are already gazing and moving with their eyes. Eventually, this visualisation is transferred to the pleasant point of the brain and stimulates the customers to unlock their purchasing desire. On the other hand, face-based decoding is also used in the Neuromarketing concept to determine the cognitive-based decisions on the item's purchase level in the food industry (Naim, 2022, p. 88). In the in-store or offline shopping approach, the food industry is trying to use the face decoding-based Neuromarketing approach rather than the written or virtual feedback terms. In this context, the food marketers can easily capture the buying desire level and food consumption frequency rate by analysing the individuals' facial muscle contraction and relaxation level. This kind of smart promotional tool is eventually adopted by business enterprises to improve their customer retention rate, satisfaction level, and overall sales boom in the competitive marketplace.

Q4. What is your opinion that an effective Neuromarketing strategy accelerates the neuron-oriented decision-making approaches of PepsiCo food marketers in wider customer attractions?

Product Line Manager: *"Fourth industrial revolution and business internationalisation concept has provoked the concept of the Neuro-science-based marketing that is emerging from the customer's brain sensation. The brain scanning technology is used to thoroughly scan the product design, shape, size, quantity, packaging colour or texture, eye-catching ads, and brand message and review them by their emotional and sensational decision-making styles."*

Sales Manager: *"PepsiCo offers smart Neuromarketing tactics through which the customers can use their cognitive thinking and brain responses in the decision-making process to purchase the food items. That is why we sometimes use the bright coloured wrapper, scented packaging, and brief video-based promotions on TVs and social media platforms."*

Considering the interview-based responses, it has been discovered that the main reason behind the Neuromarketing strategy in the business is to stay competitive in the competitive markets. The food marketers such as PepsiCo are trying to sustain their market position and brand value in

the global and domestic market through the implication of the neuron-sensitive purchasing behavioural desire of the customers. The decision-making process to buy PepsiCo items by the customers is articulated through the sensation and responses coming from the central repository system. This kind of marketing approach is feasible and emerging in the recent industry 4.0 segments to capture a large range of domestic and global audiences. In this context, food marketers including PepsiCo are using the Neuromarketing concept in their social media-based advertising and content market strategies. The visual-based gazing directly project on the brain system of the consumers and the responses are visible by facial muscles contradictions and relaxation processes.

On the other hand, the response can be generated by creating activities such as the “Direct Clicking on the Product Buy-in” option on PepsiCo’s third-party-based e-Commerce portal. The attractive colours, container shapes, shining wrappers, small paper bag-based packaging, innovative brand message on the bags or wrappers, and eye-catching discounts are used to make a successful Neuromarketing concept. The Product Line Manager also stated that this kind of brain scanning technology discloses the hidden emotional responses in front of the marketers to identify the true purchasing desire of the PepsiCo products. On the other hand, the Sales Manager considered that the Neuromarketing concept adoption triggers the market stimuli of the PepsiCo products. The scented packaging of the specific product line attracts the customers as the smell-based sensation directly hits their brain chambers and forces them to purchase the products. Especially, the youth generation, kid community, and women customers are addicted and showcased their emotional response to purchase the products. It would help the Sales Manager to develop the sales graph in the specific fiscal timeframe and also determine the overall predicted profit level of PepsiCo.

Q5. Why do you think that the Neuromarketing concept is on-demand in PepsiCo’s sales growth?

Product Line Manager: *“PepsiCo uses the e-commerce platforms such as Amazon to develop Neuro-sensitive content and brand message on this portal so that cognitive-based and central repository-based judgemental can be articulated in the product purchase.”*

Sales Manager: *“PepsiCo uses the shiny bags or wrappers while selling their potato chips to attract the EEG or electroencephalogram cap-wearable consumers. Henceforth the gazing sensation is directly hit on the central repository and an emotional desire to purchase the product can be considered.”*

The recent business internationalization age provokes PepsiCo to enhance its global growth and sustainability by accepting the modern Neuromarketing type of smart promotion technique. This food marketer is using Amazon’s E-Commerce platforms to sell their products through the Neuromarketing-based concept. The brand message, attractive videos, can or container shaping, and combo discounts-based information is uploaded on the e-Commerce portal to easily capture the customer’s attention. This kind of attractiveness-based sensation directly projects on the central repository system of the consumer’s brain through the neural network and influences their cognitive-based decision-making process. This process reflects the emotional sensation of buying food items from PepsiCo.

In this context, PepsiCo management uses the Neuromarketing concept to increase their sales density and customer retention rate on the specific product line. PepsiCo's potato chips-based product is more popular among the community as it is sold in shiny wrappers to attract EEG-holder consumers. This kind of Neuromarketing-based example senses the customers to get the wrappers rather than focusing on the product’s tastes and quantity. The PepsiCo marketers use this strategy as the customers overlook the quantity and quality and have more interest in the wrapper style. Henceforth, this kind of feasible Neuromarketing concept has been accepted by PepsiCo for its innovative and sustainable sales growth in the competitive business atmosphere.

On the other hand, the interview responses also demonstrated that the research and development team of PepsiCo is consistently working on the Neuromarketing strategy selection to attract more loyal customers. In this context, this food marketer is eventually adopting the strategies such as Gift-based items selling through which the potato chips are sold to the customers by adding small stickers or small play cars in the packet. This kind of Neuromarketing strategy would simply attract the consumers, especially the kid community, to purchase them regularly. As a result, PepsiCo's potato chips-based sales density and customer traffic would be maximized.

Q6. What are your perspectives that PepsiCo management has experienced poor human rational thinking after the Neuromarketing ideology adoption process?

Product Line Manager: *“PepsiCo management has faced severe challenges in the Neuromarketing concept by eliminating the ideation of the rational-based human thinking approach. This kind of modern marketing style in the contemporary business world makes the consumer's robots react according to the visualized marketing stimulus of PepsiCo in front of them.”*

Sales Manager: *“PepsiCo experienced the criticisms and negative comments from their customers regarding the fake in their Neuromarketing-based advertisement. As many of the customers are unaware of Neuro-science-based marketing styles, they have zero belief in the Neuromarketing content and rely on judgment-based traditional decision-making approaches.”*

From the interview responses, it has been revealed that the selected food marketer has experienced a massive struggle such as the absence of rational-based thinking of the consumers during the Neuromarketing frame. Through this thinking style, the consumer's judgemental attitude is suppressed and the emotional responses are prioritized. It is also the key drawback of the Neuromarketing strategy of PepsiCo as their customers can be easily captured by similar rival firms through the offering of more attractive marketing methods. In case the similar rival or competitive food marketers of PepsiCo offers a more glossy, colourful, and brief brand message based on the flavour-based variation of Potato Chips, then PepsiCo's customers would be attracted to that. In Neuromarketing-based promotion, the emotional sensation gets priority rather than the quantity and quality offered by the food firms. That is why the emotional response-oriented purchasing activity can have a risk as it may fluctuate PepsiCo's Potato Chip-based product's sales density in case its rival firms offer more unique Neuromarketing strategies such as charming scented packaging, kid special gifts, and paper bags or lid-based buckets.

On the other hand, PepsiCo's Neuromarketing strategy is in question as the majority of the consumers are unknown of this emerging promotional method. Besides, the customers doubt whether the Neuromarketing-based purchasing decisions are valid or not and they think rationally that the PepsiCo marketer is cheating the customers. This marketer promises to provide mouth-watering, health benefits, and the right quantity of materials in the packet, but the

promises are not maintained properly. The quality and quantity are not the focused matter for PepsiCo as they are trying to sell their degraded quality items with a non-promised quantity by dragging the customer's attention on the wrapper's styles and fragrances. This kind of fake commitment sometimes revives the customer's rational thinking approach over their emotional responses and creates a customer declination attitude toward PepsiCo products up to a certain context.

Q7. Do you think that Neuromarketing enhances PepsiCo's branding styles and modifies its brand value?

Product Line Manager: *“Neuromarketing concept of PepsiCo uncovers the non-conscious and emotional responses of the customers and reveals the true desire level of the item purchase. The social media-based Neuromarketing concept influences the larger global and domestic consumers of PepsiCo with a less time investment procedure.”*

Sales Manager: *“Neuromarketing kind of smart promotional tool is identified as a branding tool as it unlocks the individual customer's emotion level and estimates the consumer's purchase-based behavioural desire. By using the logo, container shapes, packaging colour, and wrapper's shininess, the brand can be rapidly popular among its targeted global audience.”*

The Neuromarketing type of brain scanning tool is used by PepsiCo and other food marketers to glorify their brand names and company goodwill at the global level. This marketing concept simply visualizes the hidden emotions and sensations of the consumers upon the product purchasing frequency and intensity level. Neuromarketing is modifying PepsiCo's brand value as it motivates its targeted audience through the evaluation of the neural sensation-based advertisement and content delivery approaches. Through this concept, these food marketers gather true ideation regarding the product purchase desire, buying intensity, and purchasing frequency. This marketing style has a more beneficial impact on generating the predictive analysis of the monthly and annual sales growth of the specific product lines of PepsiCo. More sales growth would also improve PepsiCo's Research and Development team's innovation level toward the Neuromarketing concept. As a result, there would be a high probability of modifying and strengthening the brand value and brand recognition of PepsiCo.

The Neuromarketing concept in PepsiCo has already generated a unique logo to distinguish their brand from the crowd for a higher sales score acquisition. After hearing the brand name of PepsiCo, the customers are automatically attracted to their offered products as the neural sensation-based emotion strategy is considered here. The brand name stabilization through the neuroscience-based marketing approach has helped this food marketer to improve their brand sustainability and brand reputation across the highly saturated marketplace. Neuromarketing of this food firm not only offers its popularity but also creates a possession of a wide range of loyal customers. The customers are only attracted to PepsiCo's diversified food items due to their high brand valuation and brand awareness level. This has a direct footprint on its overall sales growth, profit maximization, business market expansion, and turnover stability in a specific timescale. Henceforth, it can be acclaimed that the firm's brand name and values are up-grading by sharing neuron-sensitive information with the targeted customer base.

Q8. What is your point of view that the face reading and gazing technology in PepsiCo's Neuromarketing can simply hack the food lover's minds?

Product Line Manager: *"The facial muscle contradictions and relaxation type of facial code analysis of PepsiCo's customers are used in the neuron-sensitive marketing process. The attractive discounts, surprising contents, shiny wrappers, and distinct shape of the cans or containers can change the facial expression of the individuals and stimulate them internally to purchase the product."*

Sales Manager: *"Consumer's visual attention can be fixed on a particular PepsiCo product so that the eye movement is only focused on its quantity, characteristics, colour, freshness, and wrapper-based brand message."*

The Sales Manager and Product Line Manager of PepsiCo have considered the Eye Gazing and Face Reading type of Neuromarketing techniques used to read the food lover's and consumer's minds. While the attractive content is disclosed in front of the public, the neuron-based sensation directly hits the cerebral blood flow and stimulates the emotional sensation from the brain. As a result, the food items' purchase desire level and intention rate are easily uncovered and hacked by PepsiCo, resulting in getting a realistic ideology of the specific product's sales score. Through the gazing technique, the consumers are just stunned and stick their eyes on the surprising

content. The eye movement on the entire content of the food item is done in a quick surfing style and then the PepsiCo marketer tracks their eyes to read what is going on in their mind. By tracking the thinking styles and hidden decisions regarding the product purchase intention, the product sales prediction can be demonstrated. The eye position, gaze direction, and eye pressure detection scenario are also entitled to reading the consumer's minds.

On the other hand, the face reading technique is also added to the Neuromarketing strategy for PepsiCo to identify their sales fluctuation frequency on the specific product. By uploading the close shots, wrapper-based calorie information, brand message, discount style, and coupon-based or voucher-based discount rate, PepsiCo marketers can simply track facial expressions and muscle movement. In case the muscle contradiction on the consumer's face is visualized, then it can be simply stated that the product has been unable to satisfy his/her. If the muscle relaxation is revealed on the consumer's face, then it can be acclaimed that the product is accepted in the customer's imaginary wish list or cart list. The muscle relaxation time and intensity tracked through the PepsiCo marketers ensure the customer's satisfaction level with the products. While the PepsiCo customers are visiting their physical food outlets, then the eye gazing and face reading type of Neuromarketing strategies are well-executed. Based on the eye position and facial muscle expression, the Sales Personnel can simply track the consumer's minds and their intended level of consuming the particular food.

Q9. What is your statement on this, “In which aspect does the fMRI (Functional Magnetic Resonance Imaging) techniques widens PepsiCo's business growth and profit maximization”?

Product Line Manager: *“fMRI technique addition in the Neuromarketing captures the PepsiCo consumer's both unconscious and conscious responses and emotions in a deeper aspect to estimate the customer behaviour. It indicates how much the customers are desired to get the particular products and also measure us to determine the sales growth and customer crowd density on the specific product.”*

Sales Manager: *“We use the fMRI technique that can measure the brain activities of our consumers via the detection of the modifications interconnected with cerebral blood flow. It also*

maps the spatiotemporal distribution of neural functionalities under the brain to deliver the cognitive thinking-based purchasing decision.”

Considering the responses from the Product Line Manager and Sales Manager, it has been discovered that the fMRI technique is considered in PepsiCo’s Neuromarketing strategy to attract customers and improve their customer retention rate. Through the implication of this technique, this marketer can unlock both unconscious and conscious emotions and sensations of the customers toward the specific food items. This kind of technique is empowered in the Neuromarketing approach to detect the fluctuations in intensity and frequency of cerebral blood flow of the consumers so that the entire brain sensation and functionalities can be predicted. The technique creates a crucial balance between neuronal activation and cerebral blood circulation and henceforth, the emotion-based decisions to purchase the products can be hacked by PepsiCo Marketers.

In case the consumers are excited to buy the specific product then their cerebral blood flow speed is increased. Then the more emotional responses would be coming from the consumer's brain chamber and the purchase desire of those consumers would be heightened. In contrast, the normal blood flow ensures that the consumer's emotional feelings are not dominated by PepsiCo's brand name, logo, surprising contents, and scented or unique wrapper and lid-based bucket approach. After watching the video-based advertisement, audio-based listening, and eye-gazing-based visualization of the product information stimulate the consumers, and then the cerebral blood flow rate can be increased. From this speedy blood flow, the emotional sensation can be quickly disclosed in front of PepsiCo marketers. Throughout the fMRI process, the marketers can easily hack the consumer’s purchasing intention level.

The cerebral blood circulation promotes the ideation of spatiotemporal distribution to the neuron-based activities and cognitive thinking style to take a self-discussion scenario on whether the stimulated product should be purchased or not. That is why the approach in PepsiCo’s Neuromarketing has been beneficial for its sales growth and market sustainability, even in highly competitive markets. This approach in Neuromarketing has considered the implication of the particular statistical information through which the consumer’s purchasing desire tendency and buying frequency level can be determined. As a result, PepsiCo Company can be easily informed

about their loyal customer range and predict the profitability and business scalability level in challenging markets.

5.0 Discussion

According to Solomon (2018, p. 9140), Neuromarketing in the fourth industrial revolutionary phase has a both beneficial impact and a drawback-based footprint in the contemporary business world. The Neuromarketing concept adoption among food marketers is eventually growing. According to the statistical report analysis, it has been discovered that the Neuromarketing size and trends in the global context are booming with an estimated rate of US\$1,179.4 million in 2019. The data also indicates the market size would be heightened by a CAGR or Compound Annual Growth Rate of 10.2% in the 2019-2021 timescale (Neuromarketing Solution Market Size, 2022). In this context, the industry is eventually concentrating on the adoption of unique strategies such as electroencephalogram, face reading, gazing technologies, and fMRI. Through the evaluation of these techniques, the neuron-based sensation is circulated in the brain chamber and emotion-oriented decisions towards the food item purchase are done.

The fundamental purpose of using the Neuromarketing strategy in the contemporary food markets such as PepsiCo is to determine the customer's product purchasing intention by uncovering their brain activities. As opined by Nilashiet *al.* (2020, p. 25), Neuromarketing in the business is required to not only improve the business brand name but also stimulate the customer's buying desire through surprising and attractive content. The neuron-based sensation directly projects to the brain chamber and emotion and sensational responses are coming to influence the buyer's purchasing attitude. Through the face reading approach in Neuromarketing, food marketers including PepsiCo can simply read and track the facial gestures, expressions, postures, and muscle contradiction or relaxation style. Based on facial signalling, the marketers can simply hack the food lover's purchasing mind rate toward the specific product line. On the other hand, the eye-gazing tactic is also applied in Neuromarketing to track the eye movement and eye position of the consumers and exhibit what is going on in their minds regarding the food purchase (Neuromarketing influence decision, 2022).

The fMRI-based Neuromarketing technique is also adopted by PepsiCo marketers to gather both unconscious and conscious emotional responses from the customer regarding the product purchase. In contrast, Mansor and Isa (2020, p. 24) stated that the business owners and food marketers generally avoid this strategy in the neuron-based sensational activities detection of the consumers. The prime drawback is the presence of high cost of the fMRI equipment and the result accuracy cannot be considered in case of the absence of professional experts. However, PepsiCo has used this strategy in its Neuromarketing due to the possession of strong capital resources. Henceforth, the cerebral blood flow rate and blood circulation speed based on statistical data are disclosed in front of the marketers. The data determines this food firm's feasibility rate on the exciting fMRI-based neuron-sensitive marketing method and also predicts its market potential at the global level.

As opined by Yadegaridehkordiet *al.* (2020, p. 305), the Neuromarketing-oriented smart promotional tool in the contemporary business industry has experienced huge criticism due to its non-appearance of a rational-based thinking approach. The customers sometimes found the PepsiCo products unhygienic and fake in promised discounts and extra in the quantity. That is why the customers lose their faith and trust in their offered products and eventually, the customer crowd density on the specified product line is decreased. Therefore, the particular product's obsolete degree is increased, and up to a certain range, some products such as "PepsiCo's Holiday Spice" and "Pepsi Fire" discontinued tier journey (Pepsi Products That Were Massive Fails, 2022). This circumstance created a massive profit fall for PepsiCo's sales growth and also disrupted its brand image in front of its targeted domestic and global audience. However, the Sales Manager, Marketing Team, Research, and Development Team, IT team, Customer-support team, and Audit Team has coordinated connectivity to develop a more concrete neuromarketing-based brain scanning technique. Based on the unique strategies, the food marketers are trying to read the buyer's desire by unlocking their brain-based sensations and emotion toward the specific product.

As opined by Robaina-Calderín and Martín-Santana (2021, p. 931), the neural network-based sensation directly hits while the innovative and eye-catching advertising strategies are considered by the marketers. The sensation goes through the blood, hits the cerebral repository system, influences the brain's emotions, and discloses the sensations in front of the marketers. As a

result, the marketers can easily capture and hack the buyer's purchasing tendency and also estimate the specific product line's sales density. Babaç and Yüncü (2022, p. 58) stated that Neuromarketing although popular still is not widely applied among business marketers due to its high-cost structure and lack of expertise in implementing them properly. Based on the overall interpretation, it has been revealed that the PepsiCo marketer has adopted the Neuromarketing strategy in their business profitability stabilisation by easier diagnosing the neuron-based sensational responses of the customers. Neuromarketing is a popular way to figure out what customers want and why they want it. Research has shown that PepsiCo is using techniques from neuromarketing to get customers more involved and make more sales. This research has defined the different types of strategies that neuromarketing marketer's use, which will help PepsiCo's management use those strategies.

6.0 Conclusion and recommendation

6.1 Conclusion

Based on the research above, we can say that neuromarketing is the use of physiological measurements and neurological signals to figure out why customers make the decisions they do and what they like. To compete with other strategies, neuromarketing needs specific knowledge and tools. But neuromarketing is one of the most popular new ways to market right now. It tends to attract customers with eye-catching packaging design, videos, ads, and other things. This research has five different parts: an introduction, a review of the literature, a method, a look at the results and an analysis of them, and a conclusion with some suggestions. All of these parts are about how food companies use neuromarketing. In the first chapter, some statistics are used to introduce a research topic. In this chapter, the goal of the research on food companies' neuromarketing strategies has been made clear. It is clear that neuromarketing and how people act as consumers help food companies reach their goals with less money (Stasi *et al.*, 2018, p. 650). Also, this chapter has clearly stated the research's goals, objectives, and questions, which is important for keeping the research's credibility. Each of the goals listed is very well thought out, which helps to keep research reliable and real. Along with that, this research explains why and how food companies use neuromarketing strategies and what that means. Lastly, this chapter

talks about the whole structure of the research that has been talked about in the whole research study.

The second chapter is a review of the literature, which explains the different ideas, theories, and principles that are part of neuromarketing. This chapter also showed how marketers use techniques to bring out the benefits and problems of neuromarketing in the food industry. By reading literature chapters, it is easier to get a clear idea of how food companies use neuromarketing. In the second chapter of this research, different parts of neuromarketing techniques are described in detail. From these chapters, it looks like marketers are using neuromarketing techniques more and more to attract potential customers. With these marketing strategies, food companies can draw in and keep customers' attention. With all of the neuromarketing ideas in this chapter, a literature gap was also brought up. This gap is likely to be filled in a future study.

In the third chapter, "Methodology," each step of the data collection process is explained, and the best parts are chosen based on the topic of the research. One of the most important parts of a research methodology is the chapters, which usually describe the different ways the research will be done. In addition, these chapters talk about the philosophy, approach, design, strategy, data collection methods, and analysis of research. They also talk about the ethics of research and its limits. For positivism research philosophy, deductive research approach, descriptive research design, and archival research strategy. For collecting information about neuromarketing strategies in the food industry, the main methods for collecting data have been chosen. This research used surveys, questionnaires, interviews, and many other first-hand sources to get useful information. Also, this chapter makes it clear that research ethics must be followed when doing this research, as well as the limits of research. Since primary data collection methods are easy and take less time, they tend to come with several risks and limits. So, the researcher needs to do those things if he or she wants to get good results from the research (Ioanid and Scarlat, 2021, p. 370)

In the fourth chapter, "Finding and Analysing," researchers look for important information and figure out what it means. This research was done with the help of questionnaires, so we'll talk about questionnaires in this section based on literature topics. Each question is about a different idea, and statistical evidence is used to find out the most up-to-date information. This chapter looked at the different ideas and methods that different food businesses use to attract and keep

customers interested in their brands. Also, it has been found that marketers are more likely to use neuromarketing techniques to make more money and increase their profits (Babaç and Yüncü, 2022, p. 49).

6.2 Linking with the objectives

This study has five different goals that have to do with how food marketers use neuromarketing strategies. One of the most important parts of a research project is the research objectives, which show how the whole project fits together. Five research goals were mentioned in this study. The first goal is to define the ideas, theories, and rules that are part of neuromarketing. With this research idea, scientists would be able to figure out how the food industry uses neuromarketing strategies in different ways. In the second goal, techniques that marketers use to connect with people's brains are talked about. The third chapter talks about the pros and cons of how marketers use neuromarketing strategies. This goal has been laid out in the research and findings, so it's safe to assume that neuromarketing techniques work well in the food industry. With the help of the third objective, it has been found that using neuromarketing strategies comes with several challenges. This goal was mentioned in the section on the literature review to show all of the problems that marketers face because of neuromarketing strategy. The third goal is about how important and important neuromarketing techniques are in the food business. This topic has been talked about in detail throughout the research, mostly in the literature and in the results. Since this is the case, effective research needs to have a clear understanding of the importance and effects of neuromarketing techniques in the food industry. Without an understanding of how neuromarketing techniques affect the food industry, it would be hard to keep the reliability of research. In the fifth chapter, best practices for using neuromarketing in the food industry are suggested so that the situation can be put into place and all the barriers can be lessened. In the literature section, this goal has been found. By recommending the best ways to do things, neuromarketing techniques could be used to attract more potential customers.

Future Scope

Neuromarketing is one of the most popular marketing methods, and it can also help marketers figure out why a customer likes a brand. Marketers use different ways to get people to buy their products. Eye-tracking, Facial Expression Monitoring, Electrodermal activities, and a lot more are some examples. Traditional marketing barriers have been broken down, and now marketing

techniques focus more on meeting customer needs. Neuromarketing can figure out what customers want and why they like a brand. So, marketers are happy to use neuromarketing techniques because they make customers more interested in the brand. Neuromarketing can connect with the current market by using different techniques to gather data.

6.3 Recommendations

Strategies which can be applied by food companies to practice neuromarketing-

Apply eye gaze- As evidenced by Nilashi *et al.*, (2020, p. 23), it has been confirmed through research that companies using several individuals in advertisements like models to get customer attention towards the products are not much effective to get customer attention towards the message of the product. It becomes important to direct the customers' attention through the model toward the main purpose of the advertisement. Companies have to divert customers' attention by showing the pleasure and enjoyment a person can have by consuming their product. Advertisements should be designed in such a way that the focus of customers should not be on models or actors in an advertisement but the product by using models in such a way to have a direct impact on consumers' minds about the product.

Improve packaging through neuroimaging- As observed by Iloka *et al.*, (2020, p. 27), packaging is the most important branding tool to increase customer attraction to the products. Neuroimaging can be useful for companies to modify and increase efficiency in their packaging styles. It has been revealed through research that packaging mostly in food companies has a broad impact on customers, while choosing among different substitute products available to customers, they prefer the one which has attractive packaging and labelling. Customers perceive packaging with the quality of products and create a relevant brand image in their minds. Companies like Fitro-lay have used neuromarketing techniques to improve their packaging. So brands must adopt neuromarketing tools to place products with packaging that has great positive impacts on customers. Brands have to use customers' mental status about their product and improve it accordingly as per customers' expectations. That can help to increase sales and maintain customers' expectation level of the brand.

Use of relevant colours- As opined by ALSHARIF *et al.*, (2021, p. 345), colouring has a great impact on customers, mostly for food items. The relevant colour of a food product generates emotions which leads to customers' decision-making about the product, whether to buy it or not. Companies like Coca-Cola have been using the red colour which has a different impact on customers for decision making. Neuromarketing will be useful for brands to utilize colours in a powerful way to grab customer attention. It can be used as an important tool for increasing sales and attracting new customers. Companies can make specific decisions about the selection of colours about the variety of products that offer and make a difference between each product with its specification and colour differentiation.

*Efficient advertisement-*Initially brain imaging was only used for academic and scientific purposes. However, neuromarketing can act as a great way to compare the efficiency of different advertisement campaigns. Measuring the effectiveness of advertisement is quite a subjective and challenging task for marketers, the impact of an advertising campaign can be measured through the adoption of neuromarketing tools. Moreover, marketers can create advertising campaigns which will have a positive impact on customers, and the efficiency and effectiveness of advertisements can be improved. Brain scan technology like MRI and electroencephalography can be used to know how customers' brains respond to different advertising campaigns, it is also helpful to know about the customer's further decision about the products and through these techniques, markets have great advantages to increase the efficiency of advertisements (Brenninkmeijer *et al.*, 2020, p. 62).

Understand consumer behaviour through neuromarketing- Marketers make countless efforts to understand and evaluate customer behaviour. Different traditional modern tools used for understanding customer behaviour seem to be useful from different perspectives. Understanding customer behaviour and psychology make it easy for marketers to satisfy their customers, with the help of neuromarketing understanding customer behaviour can be taken to the next level. The centre of focus in neuromarketing is the customer's brain which seems to be more effective for understanding and evaluating customers' psychology, it gives an overview of how customers think and how they react to a particular event. Previously used tools for understanding consumer behaviour were mostly based on assumptions and estimations but with the use of neuromarketing, brands can have an overview of customers' reactions with exactness and

marketers can rely on the data collected through neuromarketing techniques. The scientific techniques like eye tracking, brain activity and heart rate, used in neuromarketing seem to be more beneficial for understanding customer behaviour. With a wide scope, brands must use this to increase their ability for satisfying a large range of customers (Singh *et al.*, 2020, p. 33).

Neuromarketing as a pricing tool- Neuromarketing is associated with the psychological and neural signals of customers' brains, which gives an insight into customers' motivational factors, preferences and decision-making patterns. Pricing as a significant marketing tool has major psychological impacts on customers. It has been noticed that customers relate the price of the product to various aspects like quality and quantity and competitive tools. Brands can use neuromarketing to understand customers' reactions and responses concerning the price. Determination of prices is very important for brands to generate revenue and also maintain customer satisfaction. So, having an insight into customers' brains will help brands determine effective pricing for the products. Companies like Frito-lay use neuromarketing for Cheetos to understand and evaluate the effectiveness of advertising campaigns through focus groups (Golnar *et al.*, 2019, p. 90).

Layout designing- Display of products is significant to get customers' attention. A properly designed display of products with different features must be displayed in such a way that customers would not be able to avoid its presence. When a customer visits a store, a properly designed display of products will have a positive impact on their minds. Companies must adopt neuromarketing techniques to create the best possible design of a store to grab customer attention and also sequenced display of products makes it easy for customers to choose the products they are looking for. Companies are using these tools for also designed websites so they will understand the impacts created on customer minds by different presentations of virtual displays of brands. In-store displays inspire and inform customers about the products available. Neuromarketing can play a significant role in increasing the efficiency of in-store displays and also helps brands to design their websites in such a way that grabs customers' attention. The use of neuromarketing is increasing for such purposes by so many successful brands like HP, Hyundai, and PayPal Cheetos (BočkováBočková *et al.*, 2021, p. 44).

Enhancing customer trust

As per the view of Naim, (2022, p. 87), Trust is an important part of getting to know your customers and building relationships with them. Both sides need to keep their trust in check, and brands need to be open and honest to keep their customers loyal. Marketers can offer free trials with few rules to build trust. But customers would feel valued and cared for, which made them more loyal to the brand in the long run. Before buying a product or service, customers looked at information that was clear and easy to understand. Customers will trust you more if you share private information about your products and services (Niedziela and Ambroze, 2021, p. 104124).

Smile Goes a Long Way

Most marketers focus on photography when they make personal websites. This shows the brand's personality and makes it easier to choose the best options. Instead of choosing serious photos, customers are more likely to be drawn to those with smiles. Customers are more likely to buy certain products when they see images that make them feel better (Yasir and Haq, 2022, p. 227).

Font type

One of the most important parts of product design is picking font styles that look good and are appealing. The font style needs to be easy to read, different from other brands, and unique. But it wouldn't help to use creative and complicated fonts if customers couldn't read them. Customers should be able to read the fonts easily and be able to recognize the brand. Research has shown that the font size is the main reason why most people don't recognize the brand and end up buying something else instead. For example, rounded fonts work better with sweet dishes, while angular fonts work better with savoury dishes. One of the best ways to draw customers' attention to a brand is to use different font styles.

The descriptions

Customers are currently more cautious about spending money on goods and services. Customers are becoming more cost-conscious and are purchasing only essential items. Due to health, safety, and security concerns, customers check for product descriptions before making purchases. Instead of offering false components, brand marketers must list every item used in the product. The product name can persuade buyers to acquire the goods. Therefore, marketers are advised to supply as much product-related information as feasible. Consequently, they would envision and feel the urge to purchase the product (Moya *et al.*, 2020, p. 1856).

The takeaway

Neuromarketing is one of the most powerful and effective strategies for establishing and retaining customer trust and brand connection. Consequently, it eventually raises sales, allowing the brand to gain more revenue. Branding and packaging of a company's products not only convert visitors but also earns customers' loyalty for life. In addition, new neuromarketing approaches are regularly discovered in the present market, which marketers must recognize to comprehend customer needs.

Leverage the “Scarcity Effect”

As opined by Hsu and Chen, (2019, p. 2725), People have a propensity to desire scarce or limited resources. More limited items or services are typically more enticing. This is known as the "Scarcity effect" and is utilized mostly in neuromarketing. Utilizing the scarcity effect tends to transform an ordinary shopping experience into one that is stimulating, hence increasing product demand. The effectiveness of neuromarketing approaches depends on the capacity of marketers to transform ordinary products into must-have items. Since the product is scarce, it motivates customers to place a higher value on it. Consequently, this type of product has a specific place in the market and remains in demand. The majority of the corporation has successfully implemented neuromarketing strategies, such as Amazon's labelling of the majority of its products with the phrase "limited time offer." Other brands entice shoppers by referencing certain things that have sold out and labelling them "Exclusive" and "Collectable."

Press the Pain Buttons

Collecting customer thoughts is one of the most eye-opening developments in neuromarketing. During the purchasing choice, according to neuromarketing, consumers pay greater attention to things that could be detrimental as opposed to those that could be enjoyable (Mohajan, 2018, p. 23).

Incorporate human component

Adding the "Human" component to branding distinguishes a message from the millions of corporations that sound alike. Adding a face to the company's name makes the business appear more genuine and approachable to customers. A human touch in the marketing plan can make the company more accessible and approachable to consumers. Thus, it can establish a relationship with the target audience, including the logo and image of the business. Therefore, marketers must include humans in their content to increase customer trust and attract future customers (Newman and Gough, 2020, p. 4).

The preceding advice defines several neuromarketing approaches that combine marketing efforts and neuroscience concepts. Using all of the suggested approaches would assist marketers in attracting new clients. Since neuromarketing determines responses to specific subjects of certain marketing elements such as advertising and packaging, it applies to the marketing field (Zangirolami-Raimundo *et al.*, 2018, p. 356).

6.4 Future Scope

The research study would provide a more concrete and valid information of the minimum to maximum investment style of Neuromarketing in the business enterprise to easily read the consumer's brain. The researchers would further acknowledge how the other business industries are using this Neuroscience-based marketing concept in estimating the customer's mind to purchase the particular products or services. In future, the researchers would also extract information on whether the Neuromarketing concept would adopt the rational-based thinking rather than emotional thinking style to purchase the products or services or not. As this marketing concept requires expensive equipment to catch the reader's mind, the future research would be also articulated to determine the estimated amount of adopting the Neuromarketing by the SME-based businesses.

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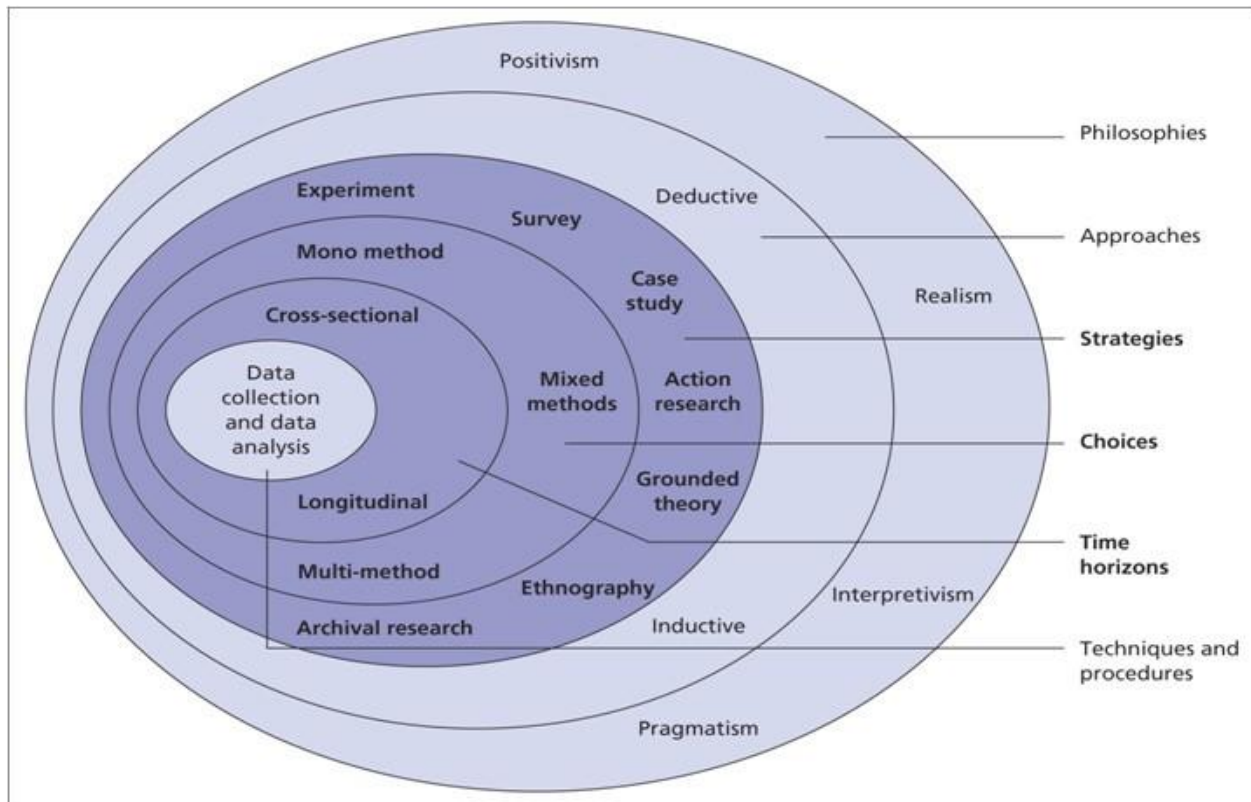
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Appendix

Appendix-1



Appendix-2

Criteria	W1	W2	W3	W4	W5	W6	W7	W8
Literature Review								
Philosophy and Approach								
Strategies and choice								
Data collection								
Findings and analysis								
Review and Submission								

Appendix-3

NEUROMARKETING SOLUTIONS MARKET ANALYSIS

Market Size (2019)
US\$ 1,179.4 MN

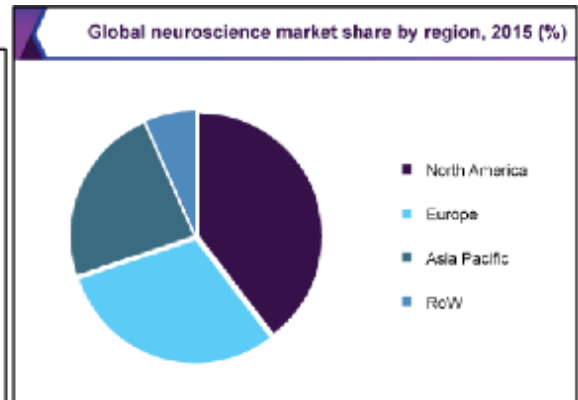
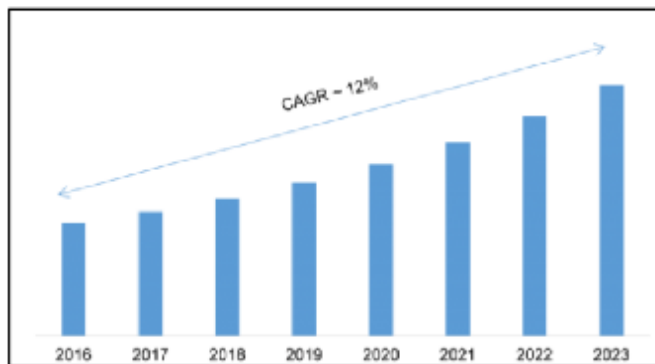
Market Size (2027)
US\$ 2677.9 MN

CAGR (2019-2027)
10.2%

North America region dominated the global neuromarketing solutions market in 2019, accounting for 40.8% share in terms of value, followed by Europe and Asia Pacific, respectively.



Appendix-4



Appendix-5

