The Mediating Role of Neuromarketing in Achieving Customer Satisfaction based on Market Orientation: An Exploratory Study for a Sample of Workers in Asia Cell Telecom

MOHAMMAD MAHMOOD AL-MULLA HASAN, BASHAR THAKER AL-QOTAJE,
MOHAMMED AHMED AL-HAMAMY
Department of Marketing Management,
College of Administration and Economics,
University of Mosul, Mosul,
IRAQ

Abstract: - The interaction of three dimensions forms the theoretical and field framework for this study, namely (market orientation, neuromarketing, and customer satisfaction), as market orientation represents the development of market intelligence about the current and future needs and desires of customers to satisfy those needs, with the distribution of this information to all departments of the organization and the creation of a response comprehensive. In contrast, neuromarketing is represented as researching brain patterns and some physiological consumer responses to marketing stimuli represented by electroencephalography, skin galvanic responses, eye tracking, work services, and facial coding. Therefore, this research represents great importance by identifying three important facts in the science of marketing management, which represent goals that organizations of all kinds seek to achieve and apply to keep pace with competition and confront it. on her, Asia Cell Company was a field for conducting the field side of the study, and the researchers sought to include several questions expressing the problem of the study, which were the basis for building the field side of the study, including (i)Is there a significant effect of market orientation on customer satisfaction and neuromarketing? (ii)Is there an indirect, significant effect of market orientation on customer satisfaction through neuromarketing? To answer these questions, a hypothetical scheme for the study was formulated that reflects the relationships and influences between the two dimensions of the study, which resulted in a set of main and sub-hypotheses that were tested using a number of statistical methods for the data collected in the questionnaire, which numbered (150), and all of them were retrieved. A set of conclusions that were distributed in terms of the theoretical side and the field side, the most important of which are: The increase in the interest of the researched company in customer satisfaction came when the organization adopted the market orientation as its approach. Neuromarketing reinforced these results when it entered a mediating variable, as we note that relying on market orientation and building appropriate strategies. In the light of this approach and through the techniques adopted by the company and provided by neuromarketing, will lead to increased customer satisfaction with the services provided by the researched company. Based on the conclusions reached by the study, both theoretical and field, proposals were presented that are consistent with these conclusions.

Key-Words: - Market Orientation, Neuromarketing, Customer Satisfaction, Orientation towards the customer, Asia Cell Telecom, Iraq.

Received: April 4, 2023. Revised: October 11, 2023. Accepted: November 4, 2023. Published: November 17, 2023.

1 Introduction

Market orientation entered the marketing literature as a necessity after the change and instability that the organization knew at the level of the competitive environment and the consequent difficulty in gaining and maintaining customers for longer periods but the developments in the twentieth century forced the organization to change the restricted marketing thoughts to other thoughts which are more flexible and comprehensive, this new thought is known as the market orientation. Moreover, it differs from the previous trends as it relates to all departments within the organization and is not limited to marketing management only. This requires organizations to

E-ISSN: 2224-2899 2540 Volume 20, 2023

search for new tools and ways to deal with these variables, the most important of which is neuromarketing, which is considered today as a new resource for business organizations to gain a competitive advantage and achieve customer satisfaction in the business world that knows fierce competition, and this will be reflected on the organization's ability to survive in the markets that compete by satisfying its customers, the customer's satisfaction is the main axis to documenting the permanent interconnected relations between the customer and the organization by achieving the customer's conviction that the product presented to him is in conformity with his expectations and needs and the organization aims to build long-term future relationships based on mutual benefit between the two parties.

Therefore, the current research aims to achieve customer satisfaction in Asiacell Communications Company through this organization's adoption of a market orientation and the impact of this orientation on customer satisfaction with the presence of an intermediary variable, which is neuromarketing, which is a continuation of what was presented by the study, [1]. This confirmed the possibility of a positive relationship that market orientation can have with various marketing concepts such as innovation and performance.

To achieve the objectives of the research, the research was divided into four sections, with the first one covering the methodological aspect of the study, the second devoted to the theoretical section of the study, the third section devoted to the practice field, and the fourth was concluded with conclusions and suggestions.

2 Methodology

2.1 Research Problem

The issue of market orientation has become the focus of academics and management of organizations for its role in assisting the organization in achieving its goals, and although some organizations possess the requirements of excellence and achieving customer satisfaction, they fail and the reason for that is due to the lack of understanding of the relationship between market orientation and customer satisfaction, which has an impact In achieving the competitive advantage, since the market orientation is part of the strategic thought of the organization, it is possible to

look at this concept after the process of formulating the organizational strategy that reflects the needs and satisfaction of the customer, and the strategic view of market orientation reflects the degree through which the organization seeks to obtain information about customers, use them, and prepare the necessary strategies for customers' needs. Fostering a market orientation necessitates marketing information systems, with a primary emphasis on the customer, and it draws its true power from all of the organization's employees. Therefore, neuromarketing was one of those tools that helped in identifying customer preferences by studying customer behavior and how to choose the brand. The brand that they want to acquire from other brands, with this description, the reality of this research is attracted by three variables that overlap with each other scientifically (market orientation, satisfaction, and neuromarketing), to look through them at the research problem, which can be limited to a set of questions, as follows:

- 1. The first main question: Is there an effective relationship between market orientation and customer satisfaction?
- 2. The second main question: Is there an effective relationship between market orientation and neuromarketing?
- 3. The third main question: Is there an indirect, significant effect of market orientation on customer satisfaction through neuromarketing?

2.2 The Importance of the Research and Its Objectives

The importance of the research emerges from the importance of its objectives, which are represented by a set of answers to the questions raised in its problem on the one hand, and regarding its hypotheses that will be examined later on the other hand, the details of which can be presented in two aspects as follows:

2.2.1 Theoretical

Theoretical or the theoretical importance that can be manifested through the answers referred to as it may provide a theoretical aspect as a whole that can benefit researchers if they want to develop an intellectual framework that establishes the concept of market orientation on the one hand and develop another intellectual framework for both neuromarketing and customer satisfaction, which

may benefit those interested These two topics of researchers and writers.

2.2.2 Field

Field or the field importance that may help answer the research question as it will confirm or deny partially or completely the sensitivity and impact of these dimensions among them, based on the research objectives appear in:

- 1. Presenting a practical study of the research field on the nature of the relationship between these dimensions.
- Providing appropriate justifications for various organizations, including Iraqi organizations, about the dimensions of the research, and studying them in their theoretical and field framework.

2.3 Research SCHEME

THE RESEARCH MODEL SHows a group of logical relationships that may be in the form of quantity or quality and bring together the main features of the reality you are interested in. The systematic treatment of the research problem requires the design of a hypothetical model that clarifies the logical relationships between the dimensions of the research and expresses the results of the research questions raised in the research problem (Figure 1).

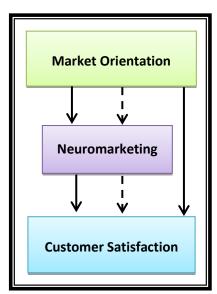


Fig. 1: The research scheme

2.4 Research Hypotheses

In line with the objectives of the research and a test of its plan, the research relied on a set of main and sub-hypotheses as follows:

- 1. The first main hypothesis is that there is no effect relationship between market orientation and customer satisfaction
- 2. The second main hypothesis: There is no effect relationship between market orientation and neuromarketing
- 3. The third main hypothesis: There is no significant indirect effect of market orientation on customer satisfaction through neuromarketing.

2.5 Research Methodology and Technologies

The research adopted the descriptive analytical approach as its main approach, due to its suitability in describing the dimensions of the research. Based on that, it relied on the techniques of this approach in obtaining appropriate data to complete the research. through books, letters, treatises, and research by some writers and researchers, as well as through The International Information Network (Internet), and the questionnaire prepared by the researchers was relied upon in the light of the sources made available to him, which will be examined in the theoretical aspect of the research, which included the following axes: **The first**: I specialize in obtaining data that describe the characteristics of the respondents, whose opinions are drawn from the random sample of the research. who will be described based on them later. The second: specialized in obtaining appropriate data for the completion of the research, and it included (30) indicators, covering the research variables. The questionnaire was subjected to validity and reliability tests, and after completing the collection of the questionnaire forms, and emptying the data, the Cronbach coefficient (Gronbach Alpha) was used to determine the degree of stability of the tool Measurement in this research and it was found that the percentage of congruence in the answers of the research sample individuals reached at the total level (81.08%), which proves a good degree of stability of the questionnaire compared to (Standard Alpha) of (60%) for human studies, [2], Table 1.

Table 1. Cronbach alpha test results

	variable	Alpha value
1	Market Orientation	79.41
2	Neuromarketing	82.11
3	Customer Satisfaction	79.65
4	total level	81.08

Source: prepared by the researcher based on the results of the electronic calculator

It should be noted that the aforementioned form was distributed to a random sample in Carrefour branches, which numbered (150) individuals and the researcher will look at the descriptions of this sample at the beginning of the field framework for his research later. Finally, with regard to analysis techniques: the ready-made system program (SPSS-24) was adopted, by which frequencies, arithmetic mean, and standard deviations of the answers were extracted as they relate to each of the phrases included in the questionnaire, as well as some tests chosen by the researcher as appropriate tests in the study of relationships. between different search variables.

2.6 Research Limits

The spatial limits of the research were represented by the individuals of the research sample who are within the geographical borders of the city of Mosul, whom the researchers were able to reach and distribute the questionnaire forms. This research starts with the initiation of data collection tasks from the surveyed community and ends with the completion and printing of the research.

3 Market Orientation

The concept of market orientation entered the marketing literature as a necessity after the change and instability that the organization experienced at the level of the competitive environment and the consequent difficulty in gaining and maintaining customers for longer periods. The developments that accompanied the end of the twentieth century obligated the organization to change this marketing thought, whose limitations appeared to be more flexible and comprehensive thinking. This new thought is known as the market orientation. The latter differs from the previous trends as it is related to all departments within the organization and is not limited to marketing management only, [3]. Many

empirical studies confirmed the existence of a relationship and a positive effect for market orientation on innovation and high business performance, [1]. Market orientation can considered as a cultural or behavioral construct among workers to make customers at the center of the organization's operations, which entails following a philosophy that leads to the success of the organization's policies that embrace its thought and flexibility after the failure of marketing orientation policies due to strong competition, change in customer tastes, and giving customers a lack of sufficient attention and interest in responsibility. The task of the organization's leadership is to know the current and future needs of customers, [4]. Firms with a high degree of market orientation can enhance their performance by understanding and satisfying customer needs as well as understanding the market condition via gathering of information on competitor's action, [5].

Table 2. The views of some researchers on the concept of market orientation

Researcher	Concept						
[4]	The philosophy of business management relies on broad acceptance within the organization and focuses on integrating and coordinating all marketing functions, which are, in turn, aligned with other administrative functions within the organization.						
[5]	The way that business organizations work is by designing their products or services according to the customer's needs and desires.						
[6]	The philosophy of the organization's management towards directing and adapting its activities, operations, and products to satisfy customers through cooperation and internal integration contributes to providing the highest value for the customer.						
The researchers	A set of activities related to generating information about the customer's needs and desires in the market and disseminating it among the organization's departments is necessary to maintain and develop a long-term vision through which the organization can achieve its goals.						

Source: Prepared by the researchers based on the above sources

The three main components of market orientation are customer orientation, orientation to competitors, and internal coordination.

These components are represented in establishing beliefs related to the necessity of accurately and future determining current customer requirements and needs, collecting information related to competitors' current strengths and weaknesses and their potential capabilities, and integrating the activities of all departments in the organization as well as coordinating in the exploitation of available resources to create added value for customers, [7]. There are many definitions of market orientation, which the researcher summarizes through the following Table 2.

3.1 The Characteristics of Market Orientation

Despite the short period of the emergence of market orientation in the marketing literature, which dates back to the late twentieth century, several studies have dealt with this concept and linked it to many issues related to the activity of the organization, such as performance, profitability, creativity, and other topics. This attention is because market orientation has many characteristics that can correct many of the marketing errors that occurred in previous trends, [3], [4], [6], [8].

- 1. Market orientation depends on constantly flowing information that is updated with everything new, as it enables the creation of the highest value for the customer continuously.
- 2. Ensuring their survival and growth through their ability to maintain and develop a long-term vision constitutes one of the most essential components of the organization's success by identifying market needs, customers' desires, and the volume of current and future competition, through which organizations can reach their goals.
- 3. To respond to sudden changes in the market and reduce the degree of suspicion through communication between decision-makers in the organization, the speed of employing its elements is essential.
- 4. Preparing the necessary strategies to meet the customer needs and implementing those strategies to ensure a speedy response to the customers' desires are essential.
- 5. The participation of all departments in special activities to develop a full understanding of the

- current and future needs of customers is important.
- 6. The contribution to creating an accumulation of knowledge and continuous learning is important, which is achieved by continuously collecting information about customers and competitors, and using this information to create high value for the customer and a competitive advantage for the organization.
- 7. Improving the process of identifying the current and potential needs of customers and targeting them better leads to increasing the effectiveness of communications, and activating sales and marketing processes.

3.2 The Dimensions of Market Orientation

The dimensions of market orientation differ from the viewpoint of researchers. From a cultural perspective, it is seen as a set of values and beliefs towards three components, while from a behavioral perspective, it is viewed as a set of activities and divided procedures. It has three components.

1. The cultural dimension

- **A. Orientation towards the customer**: It is not just a function of production and human resources, but a real management philosophy to guide the entire organization.
- **B.** Competitor Orientation: It is an attempt to accurately understand the strategies followed by competitors and their ability to satisfy the customer by using knowledge to create superior value, providing strong foundations for gathering intelligence about competitors, and creating organizational behavior that improves the products delivered by the organization to the customer, [9].
- **C. Internal coordination**: Internal coordination involves the process of generating and sharing information among different departments within the organization, enabling them to stay informed about everything concerning the organization's customers and competitors. This, in turn, ensures that all departments respond in a coordinated and organized manner, avoiding dispersion and wasted efforts. It also reflects the necessary integration that should exist among various organizational departments concerning market intelligence and response, [10].

2. The behavioral dimension

- **A. Information generation**: It refers to collecting and evaluating customers' needs and preferences and the surrounding environmental forces that affect the development and improvement of these needs, [11].
- **B. Dissemination of information**: It refers to the steps and procedures through which market information is exchanged within the organization. The dissemination of information must be at all administrative levels of the organization, which means that all departments of the organization will share that collected information. The speed in the transfer and dissemination of information is a decisive factor in implementing the market orientation and achieving the goals of the organization. Organization, [11].
- **C. Response to information**: This indicates the organization's capacity to formulate essential plans and programs to address customers' desires and needs, which have been identified through the information generation process. From a planning perspective, it also illustrates how market requirements influence the identification of market segments and the development of marketing programs, [8].

4 Neuromarketing

4.1 The Concept of Neuromarketing

Decoding the 'shopper brain' black box is of great interest for consumer and market researchers, as it promises a better understanding of the underlying brain processes leading to purchase behavior, [12]. The development of new tools that help to identify the subconscious preferences of customers and thus improve marketing techniques depends on three objectives: increasing the preference of brands, consolidating media messages in the customers' awareness and minds, maximizing their impact and content, and activating brands, [13]. Neuromarketing focuses on the study of customer behavior through the application of neurological processes and techniques in sequence to form a comprehensive concept of the neural basis. This helps to explain the customer's psychological situation scientifically, which plays an important role in the customer's purchase decision. It also provides a broad appreciation of the effectiveness and impact of a set of marketing methods in relation to the relationship between the brand and purchasing power, [14].

Accordingly, neuromarketing is considered a 'giant leap' that will revolutionize the industry. It adopts the idea that customers act subconsciously in choosing products or services based on messages from the subconscious mind that include their interests and preferences. This new field or approach will help organizations to create more effectively designed products and marketing campaigns that are more responsive to the brain, [15]. Many researchers referred to the concept of neuromarketing, as shown in Table 3.

Table 3.The views of some researchers on the concept of neuromarketing

Researcher	Concept
[12]	Neuroscience techniques to understand how consumers make purchasing decisions. It aims to develop more effective marketing strategies by understanding human brain responses to advertisements and brands
[16]	A method of modern marketing research that examines consumer behavior through the use of advanced medical devices that visualize the brain while it is exposed to a product, service, or advertisement, to try to know the various neural interactions that occur when it responds to these stimuli. This is to discover the most influential factors that affect the individual when making a purchase decision and their exploitation by institutions
The researchers	It is a process of studying and understanding the customer's behavior, accessing their subconscious areas, to understand their way of thinking and provide products that meet their needs, as well as improving communication with them

Source: Prepared by the researcher based on the above sources

4.2 The Importance of Neuromarketing

Neuromarketing occupies a large place in modern research, [16]. This science has been of great importance, especially in giant organizations that aim to pioneer. It depends on technology instead of

E-ISSN: 2224-2899 2545 Volume 20, 2023

traditional methods, predicting the customers' desires, avoiding developing products that do not meet their needs, and modifying marketing strategies according to this basis to increase the satisfaction, happiness, and well-being of customers, [17], [18], [19], [20]. The importance of neuromarketing is:

- 1. A successful marketing method because it responds to the desires of the brain.
- 2. Enhancing customer loyalty for products that have received positive signals from the brain towards them
- 3. Developing the best brands, comparing different packaging designs, and developing more effective pricing strategies.
- 4. It provides an important financial return by reducing ineffective advertising campaigns and enhancing the credibility and attractiveness of the brand.
- Accuracy in studies and research compared with traditional marketing in the field of studying consumer behavior as well as product development.
- 6. Research results showed that neuromarketing has great success through the information it provides, which includes the way of presenting advertisements and the method of selling through advertisements that depend on what the customer prefers.
- 7. Enhancing the strengths of products and services as well as addressing the strengths after reaching them by analyzing brain cells when exposed to firm devices.

4.3 Neuromarketing Techniques

Neuromarketing techniques are categorized as follows,

- 1. Functional magnetic resonance imaging technology: This technology uses a scanner to measure the level of oxygen in the blood flow to the brain, allowing for deeper images of the brain and measurement of sensory perception, memory coding, trust, loyalty, and preference. However, it is also considered one of the most expensive techniques, [21].
- 2. Electroencephalography (EEG): This technique has been used for a long time to measure brain waves by recording the variation of the electric field with the help of electrodes. It is effective for recording in neurons and can be used to measure changes in brain waves based on the state of consciousness of the person, [19].

- 3. Eye tracking technology: This technology focuses on changes in the eye pupil to measure the focus of attention and is used to study behavior and cognition. It is effective for measuring visual fixation, and eye movement patterns, and testing packaging design, advertising, and product placement, [22].
- 4. Electro-face technology (EMG): EMG technology measures emotional expressions, social communication, and emotional valence. It is used in consumer feedback tests and brand tests, [23].
- 5. Magnetic brain technology (MEG): MEG is used to measure the magnetic field generated by the electrical activity of the brain and can indicate the depth of the location in the brain with enhanced spatial and temporal resolution. It is used in testing new products and testing advertisements, [19].

5 Customer Satisfaction

5.1 The Concept of Customer Satisfaction

The shifts in the marketing philosophy were a major reason for the interest in the concept of customer satisfaction. A new march began to race towards improving products and paying attention to quality. The process started with the organization of the customer, and marketing started from him and ended with him, [24]. Satisfaction has become pivotal in studying customer behavior to identify markets and develop marketing plans. Customer satisfaction expresses a psychological manner that comes after purchase, resulting from the customer's comparison of the actual product performance with his expectations to choose the product or brand from the available alternatives, [25]. Therefore, the success of any organization is linked to the customer, as it is the most important element for which it was found, and achieving customer satisfaction is its main goal. The organization must try to provide the customer's needs and aspirations to maintain and gain new customers. [26]. Many researchers referred to the concept of customer satisfaction, as shown in Table 4.

Table 4. The views of some researchers on the concept of customer satisfaction

	Consent
Researcher	Concept
[27]	The degree of saturation of a product can be determined by evaluating the extent to which customers are willing to tolerate it, which is done by comparing their perception with the expected performance
[28]	The degree of saturation that a service achieves is determined by comparing its expected performance with its perceived performance
The researchers	The customer's opinion of a product determines whether it is accepted or rejected, based on a comparison between the actual performance of the product and the benefits the customer expected to receive when purchasing it

Source: Prepared by the researcher based on the above sources

5.2 The Importance of Customer Satisfaction

Customer satisfaction is of great importance in any organization's policy. It is one of the most effective criteria for judging its performance, particularly for those organizations oriented toward quality, [27]. The importance of customer satisfaction is:

- 1. If the customer is satisfied with the performance of the organization, he will talk to others, which will generate new customers. [28].
- 2. Customer satisfaction is considered a measure of the quality of service provided. It helps the organization to provide indicators to evaluate its efficiency and improve it for the better, [27].
- 3. An organization that takes care of customer satisfaction can protect itself from competitors, especially about price competition, [29].
- 4. An organization that seeks to measure customer satisfaction will be able to determine its market share, [29].
- 5. Customer satisfaction represents negative feedback for the organization about the service provided to it, which leads the organization to develop its service provided to the customer, [29]
- 6. Customer satisfaction helps the organization to provide indicators to evaluate its efficiency and improve it for the better, [28].
- 7. The customer's satisfaction with the service provided to him by the organization will reduce

- the likelihood of the customer going to other competing organizations, [27].
- 8. Customer satisfaction helps the organization to provide indicators to evaluate its efficiency and improve it for the better, [27].

5.3 Methods of Measuring Customer Satisfaction

- 1. Market share: the percentage of the market in terms of units or revenues achieved by the business organization in a specific market defined by geographical boundaries, [30]. The relationship between market share and customer satisfaction is explained logically, and the market share is positively related to customer satisfaction. Therefore, organizations should convert their sales figures to a market share, which reflects how well the company's strategy is implemented in terms of growth and customer satisfaction, [31].
- 2. Customer retention rate: the best way to maintain or grow the share by retaining existing customers. The measure of satisfaction depends on the rate of growth of the amount of activity carried out with current customers. This measure may also be relative or absolute, and it reflects the customers with whom the organization has maintained permanent relationships, [32].
- 3. To grow the amount of activity, the organization makes an effort to expand its base of customers (to win the largest number of customers). To ensure the organization's continuity and success, it must satisfy customers to maintain them and, at the same time, search for the best way to attract new customers. This leads to an increase in its market share and, consequently, an increase in the number of its benefits. [33].
- 4. The previous metrics cannot be utilized to determine a customer's profitability, which, in turn, reflects their satisfaction or dissatisfaction arising from the alignment or misalignment of actual service performance with expectations. High satisfaction levels and a significant market share are the sole avenues for profit expansion. Organizations gauge the extent of their interactions with customers, but they are concerned with the profitability of these engagements. Profitability can be assessed by calculating the net profit generated from each customer, [32].

E-ISSN: 2224-2899 2547 Volume 20, 2023

6 The Practical Aspect of the Research

6.1 The Results of the Descriptive Statistical Analysis for the Research Variables

A. Results of the descriptive statistical analysis of the market orientation variable: Table 5 presents the results of the descriptive statistical analysis for the variable of market orientation for the research sample in terms of (the parameters of the arithmetic mean, and the level of dispersion of those responses from the hypothetical mean of the measuring tool and its value (3) as well as the analysis of the relative importance of the sub-paragraphs in terms of their percentage weight), as the orientation variable achieved The market average for the researched sample was (4.24), with a standard deviation of (0.738), and percentage weight of (84.8%), as shown in the Table 5.

B. The results of the descriptive statistical analysis of the neuromarketing variable:

Table 6 presents the results of the descriptive statistical analysis of the neuromarketing variable of the researched sample in terms of (the parameters of the arithmetic mean, the level of dispersion of those responses from the hypothetical mean of the measurement tool, and its value (3) as well as the analysis of the relative importance of the subparagraphs in terms of their percentage weight), as the neuromarketing variable achieved the general average of the mean was (4.30), with a standard deviation of (0.687), and the weight percentile was (86%), as shown in the Table 6.

C. Results of the descriptive statistical analysis of the customer satisfaction variable:

Table 7 presents the results of the descriptive statistical analysis of the customer satisfaction variable for the research sample in terms of (the parameters of the arithmetic mean, and the level of dispersion of those responses from the hypothetical mean of the measurement tool and its value (3) as well as the analysis of the relative importance of the sub-paragraphs in terms of their percentage weight), as the customer satisfaction variable achieved for the researched sample had an overall mean of (4.33), with a standard deviation of (0.669), and percentage weight of (86.6%), as shown in the Table 7.

Table 5. Statistical description of the market trend variable paragraphs

	Paragraphs	mean	S.D	weight, percentile	Order
1	The organization regularly monitors laws and economic, social, and technological changes in the markets in which it competes?	4.23	0.760	0.846	6
2	The company regularly monitors the opportunities and threats that could affect it in the markets in which it competes?	4.19	0.898	0.838	7
3	The company regularly studies changes in demand for existing and potential customers?	4.49	0.625	0.898	1
4	The company regularly analyzes the factors affecting the purchasing behavior of customers?	4.47	0.643	0.894	2
5	The company is working on personalizing its dealings with distributors?	3.87	0.889	0.774	10
6	The company is trying to predict the behavior of its main competitors in the markets in which it operates?	4.17	0.737	0.834	8
7	Does the company have the ability to meet the needs of its customers compared to other competitors?	4.10	0.824	0.820	9
8	Each employee is aware of the main objectives of the company and how to contribute to achieving them?	4.29	0.628	0.858	4
9	The company encourages the exchange of information between all departments and sections?	4.27	0.656	0.854	5
10	The company uses the information obtained to make a decision?	4.34	0.727	0.868	3
	Overall index	4.24	0.738	0.848	

Source: Prepared by the researchers based on the results of the spss program

E-ISSN: 2224-2899 2548 Volume 20, 2023

Table 6. Statistical description of the paragraphs of the neuromarketing variable

	Paragraphs	Mean	S.D	weight, percentile	order
1	The company has specialized experts to study and analyze the psychological behavior of its customers	4.27	0.786	0.854	7
2	the organization's information system includes a branch of neuromarketing information	4.57	0.603	0.914	1
3	The company has specialists in studying the mind, nerve signals, and the way customers think	4.41	0.656	0.882	3
4	the company can build knowledge bases for the behavior of its customers to develop its products	4.42	0.639	0.884	2
5	The company uses the services of specialized organizations in neuromarketing research to carry out its marketing research	4.23	0.625	0.846	8
6	the company has a strategy for training and qualifying human resources in neuromarketing	4.29	0.715	0.858	4
7	Does the company have databases about consumer behavior in terms of psychological, emotional, and neurological aspects?	4.21	0.735	0.842	9
8	The organization can attract a sample of clients to conduct neuromarketing research	4.02	0.733	0.804	10
9	The company's senior management is interested in using neuromarketing research and considers it an essential component of its strategies	4.28	0.695	0.856	6
10	The company allocates a budget to provide neuromarketing technology to study the behavior of its customers	4.29	0.682	0.858	5
	Overall index	4.30	0.687	0.860	

Source: Prepared by the researchers based on the results of the SPSS program

Table 7. Statistical description of the paragraphs of the customer satisfaction variable

	Paragraphs	Mean	S.D	weight, percentile	order
1	The company's website contains all the information and services that the customer needs	4.22	0.740	0.844	7
2	The company is interested in analyzing and studying the reasons for losing its customers	4.06	0.739	0.812	10
3	That the services provided by the company exceed the expectations of its customers?	4.51	0.587	0.902	2
4	The company knows the needs and desires of customers through the research and development department	4.19	0.693	0.838	8
5	The company tries to achieve customer satisfaction by meeting his needs and expectations as soon as possible	4.55	0.544	0.910	1
6	The company is keen on permanent communication with current and potential customers to know their needs	4.42	0.621	0.884	4
7	The company offers a variety of services that meet the needs of its customers	4.30	0.719	0.860	6
8	The company responds quickly to solve any problem with the customer	4.40	0.654	0.880	5
9	The company tries to strengthen and enhance relationships with customers to retain them	4.44	0.677	0.888	3
10	The company points out the strengths and weaknesses that are practiced in the purchasing process	4.16	0.715	0.832	9
	Overall index	4.33	0.669	0.866	

Source: Prepared by the researchers based on the results of the SPSS program

Through the results of Table 5, Table 6 and Table 7 we notice that there is a general agreement among the individuals surveyed about the importance of the research dimensions, through the high indicators of statistical measures for all dimensions, which indicate the ability of these individuals to answer the questions raised in the questions of the questionnaire, as well as the importance These are the dimensions of the researched organization

6.2 Research Hypothesis Testing

1. The first main hypothesis: There is no significant effect of market orientation on customer satisfaction Through Table 8, which shows the values of the standard regression coefficients, confidence limits, and the value of P, it is noted that the relationship between the market orientation variable and the customer satisfaction

variable was a direct relationship, through the positive sign of the regression coefficient, whose value amounted to (0.670), where this value indicates that Increasing one unit of the market orientation variable leads to an increase in the customer satisfaction variable by (0.670) units. The true value of this coefficient ranges between the lower and upper values (0.542 and 0.861), respectively, with a standard error (S.E.) of (0.036), in addition to that it can be inferred through the value of p (0.00), which appeared less than (0.05).

Through the foregoing, we reject the null hypothesis and accept the alternative hypothesis, which states (that there is a significant effect of market orientation on customer satisfaction). The results can also be illustrated using the AMOS program, as shown in the following Figure 2.

Table 8. The values of the impact analysis of the market orientation variable on the customer satisfaction variable

influencing variable	influence	the variable affecting	D.		Confidence 95	D	
	path	it	Estimate	S.E.	Lower Bound	Upper Bound	Р
market orientation		customer satisfaction	0.670	0.036	0.542	0.861	0.00

Source: Prepared by the researchers based on the outputs of the AMOS program

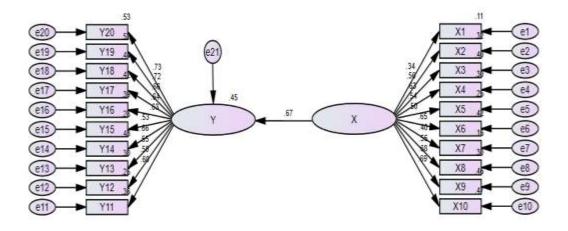


Fig. 2: The impact relationship of the market orientation variable on the customer satisfaction variable

E-ISSN: 2224-2899 2550 Volume 20, 2023

Table 9. The values of the impact analysis of the market orientation variable on the neuromarketing variable

influencing variable	influence	the variable affecting it	Estimata		Confidence 95	D	
	path		Estimate	S.E.	Lower Bound	Upper Bound	P
market orientation		Neuromarketing	0.770	0.028	0.529	0.818	0.01

Source: Prepared by the researchers based on the outputs of the AMOS program

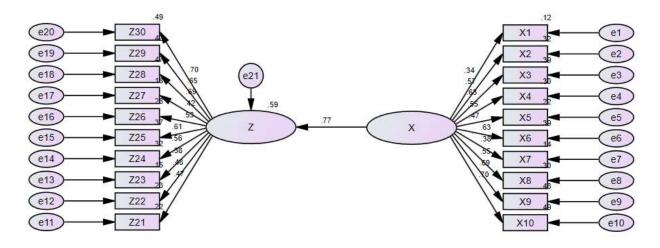


Fig. 3: The effect relationship of the market orientation variable on the neuromarketing variable

2. The second main hypothesis: There is no significant effect of market orientation in neuromarketing Through Table 9, which shows the values of the standard regression coefficients, confidence limits, and the value of P, it is noted that the relationship between the market orientation variable and the neuromarketing variable was a direct relationship, through the positive sign of the regression coefficient, whose value amounted to (0.770), where this value indicates that Increasing one unit of the market orientation variable leads to an increase in the neuromarketing variable by (0.770) units. The true value of this coefficient ranges between the lower and upper values (0.529 and 0.818), respectively, with a standard error (S.E.) of (0.028), in addition to that it can be inferred through the value of p (0.01), which appeared less than)0.05(

Through the foregoing, we reject the null hypothesis and accept the alternative hypothesis, which states (that there is a significant effect of market orientation in neuromarketing). The results can also be illustrated using the AMOS program, as shown in the following Figure 3.

3. The third main hypothesis: There is no significant effect of market indirect, orientation on customer satisfaction mediated by neuromarketing. Through Table 10, the direct effect between the market orientation variable and the customer satisfaction variable by mediating the neuromarketing variable was a direct effect through the indication of the regression coefficient estimator between them, which is equal to (0.410), and this effect was significant in terms of the P value, which was (0.01), which is less From (0.05), as for the indirect effect between the market orientation variable and the customer satisfaction variable by mediating the neuromarketing variable, it was also direct through the value of the regression coefficient, which was equal to (0.540), and this effect was significant in terms of the P value, which was (0.00). It is less than (0.05), meaning that there is a direct and indirect effect, i.e. partial mediation, between the market orientation variable and the customer satisfaction

E-ISSN: 2224-2899 2551 Volume 20, 2023

variable mediated by the neuromarketing variable. Schedule (10).

Table 10. Testing the direct and indirect effect between the market orientation variable on the customer satisfaction

variable by mediating the neuromarketing variable

independent variable	influence path	intermediate variable	influence path	dependent variable	effect type	Estimate	S.E.	Confidence Intervation Lower Bound		P	Mediation type
market	>	neuromarketi ng	>	customer satisfaction	Indirect influence	0.540	0.108	0.220	0.648	0.00	Partial
orientation			-		direct impact	0.410	0.142	0.192	0.504	0.01	mediation

Source: Prepared by the researchers based on the outputs of the AMOS program

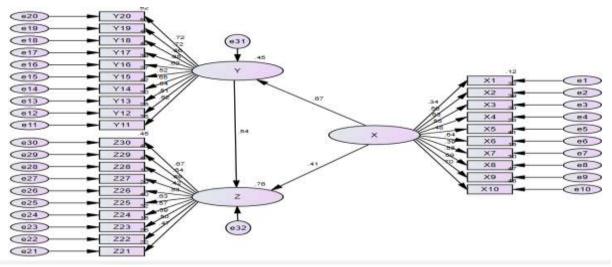


Fig. 4: The effect relationship of the market orientation variable on customer satisfaction through neuromarketing Source: Prepared by the researchers based on the outputs of the AMOS program

Through the foregoing, we reject the null hypothesis and accept the alternative hypothesis, which states (that there is an indirect, significant effect of market orientation on customer satisfaction through the mediation of neuromarketing). The results can also be illustrated using the AMOS program, as shown in the following Figure 4.

Through what was indicated by the results of testing the relationships between the research variables, it was noted that the relationships between the research variables were significant and positive, and this justifies the importance of these variables for organizations, and this was confirmed by the study, [1], that the market orientation has an important and vital role Whether it is applied with other marketing concepts, and this is what was indicated in the current research. The results of this research also

indicated the importance of neuromarketing, which is consistent with the study, [20], which emphasized that neuromarketing is a successful marketing method that can help organizations provide actual indicators to evaluate their efficiency and improve them for the better, which helps to enhance the satisfaction of their customers with them and have the ability to protect themselves from competitors.

Therefore, according to what was noted above, we note the interest of the researched organization in the satisfaction of its customers and working to meet their needs and desires in accordance with modern aspirations, as well as in accordance with the changes that occur in the pattern of their requests to obtain its services, and all of this comes through the ability of this organization to keep pace with market trends in

the communications sector by introducing services New or working to develop existing services

The new management today that seeks to enhance the satisfaction of its customers begins from the market and ends with the market, and then the main goal becomes to see itself as a competitive position in the market among competitors. On the other hand, neuromarketing came to work on analyzing the personal reactions of customers and then making important decisions that achieve satisfaction. The customer, step by step, and this is what the current study explained, which has not been studied in previous literature

7 Conclusions and Suggestions

According to the foregoing results of the research, it was possible to draw the most important conclusions to reach the recommendations that will be presented by the current research within two paragraphs:

7.1 The Conclusions

- 1. Creating the highest value for customers on an ongoing basis, as the market orientation depends on the continuous flow of information to prepare the necessary strategies to meet the needs of customers and implement them in a manner that guarantees a rapid response to the desires of customers.
- 2. Neuromarketing works on developing the best brands, comparing different package designs, and developing more effective pricing strategies, as we find that many advertisements are characterized by the characteristics of a cheerful, happy, and energetic life, which increases the interest in neuromarketing requirements.
- 3. The ability of the organization to achieve customer satisfaction with the services it provides will reduce the possibility of customers turning to other competing agencies. This helps organizations provide metrics to better assess and improve their efficiency.
- 4. The results of the description and diagnosis of the three variables of the study (market orientation, neuromarketing, and customer satisfaction) showed that they were in a positive direction according to the answers of the respondents, and this indicates the ability of the respondents to diagnose and know the concepts adopted by the current study, and all of this came

- through the results of the medium. Arithmetic and standard deviation of the answers of the respondents.
- 5. The results of the direct influencing relationships between market orientation and customer satisfaction on the one hand, and between market orientation and neuromarketing on the other hand, showed that market orientation can explain the increase in the change in customer satisfaction or the change in neuromarketing due to the effect of market orientation, and this leads to the ability. The researched company on increasing customer satisfaction when the company adopts the market orientation and works to enhance it on the one hand, or in the ability of the company itself to rely on neuromarketing in light of its adoption of the market orientation approach on the other hand.
- In light of what was obtained from the indirect effectual relationship between market orientation and customer satisfaction when neuromarketing is a mediating variable between the two, we note that the study company's increased interest in customer satisfaction came when the organization adopted market orientation as its approach. Neuromarketing reinforced these results when It entered an intermediate variable, as we note that relying on market orientation and building appropriate strategies in the light of this approach and through the techniques adopted by the company and provided by neuromarketing will lead to increased customer satisfaction with the services provided by the researched company.

7.2 Suggestions

- 1. Develop a customer-focused market orientation strategy that enables organizations to continuously create high value for their customers.
- 2. Integrating neuromarketing into vour organization's branding strategy This will translate into creating a more effective brand by understanding your target audience's subconscious responses to various stimuli. Using this approach, you can develop more attractive packaging designs, more effective pricing strategies, and ads that resonate with your audience on a deeper level.
- 3. The organization must foster a customer-centric culture, where everyone in the organization is

E-ISSN: 2224-2899 2553 Volume 20, 2023

focused on delivering value to customers and this requires training, continuous communication, and appreciation for employees who provide excellent customer service. Organizations can improve their ability to retain customers and reduce the possibility of customers turning to other competing agencies. This, in turn, can lead to increased revenue, customer satisfaction, and long-term success.

Acknowledgment:

The authors are very grateful to the University of Mosul, College of Administration and Economics, for their provided facilities, which helped to improve the quality of this work

References:

- [1] Ozkaya H. E., Droge C., Hult G. T. M., Calantone R., & Ozkaya E. (2015). Market orientation, knowledge competence, and innovation. *International Journal of Research in Marketing*, vol.32(3), pp.309-318.
- [2] Afifi, A.A., Clark, V.: (1984). Computer-Aided Multivariate Analysis, Life time learning Publications, Belmont, *California-A division of Wadsworth, Inc.*, London.
- [3] Ben Aliouch, Tawfiq, (2017). The role of market orientation in enhancing customer loyalty, a case study: Jazy Company, master's thesis, *Farhat Abbas University*, Algeria.
- [4] Salah El-Din Bonn, 2017, The role of the promotional mix in achieving customer satisfaction Study of a sample of Mobilis customers at the level of the state of M'sila, master's thesis, *Mohamed Bou Deif University of M'sila*, Algeria.
- [5] Shamsudin M. F., & Hassim A. A. (2020). Mediating role of organizational innovation on market orientation and business performance: SEM-AMOS approach. *International Journal of Advanced Science and Technology*, vol.29(2), pp.3607-3613.
- [6] Šályová S., Táborecká-Petrovičová J., Nedelová G., Ďaďo, J. (2015). Effect of marketing orientation on business performance: A study from Slovak foodstuff industry. *Procedia Economics and Finance*, vol.34, pp.622-629.

- [7] Mahmoud Naji Abdel-Sattar Hammadi, Ahmed Abbas, 2021, The role of market orientation in reducing marketing deception: an exploratory research of the opinions of a sample of virtual store customers, *Tikrit Journal of Administrative and Economic Sciences*, Vol.71, Issue 55, Part 1.
- [8] Alian Goudey, Gael Bonnin, (2010). Marketing pour ingenieurs *Dunod*, Paris, France.
- [9] Bin Qasmiya Mohammed Al-Amin. (2017). The effect of the market orientation in the marketing mix of the economic institution: a study of a sample of Algerian enterprises. *Journal of Business Administration and Economic Studies*, No. 3.
- [10] Nurhilalia., Kadir A. R., Mahlia M., Jusni., & Aditya H. P. K. P. (2019), Neuromarketing Companies in Harnessing the Market Research. *Amfiteatru*
- [11] Al-Murshidi, Khalid Abdulmohsen, Al-Otaibi, Abdulaziz Abdulrahman, 2017, Market Orientation and Competitive Advantage, An Applied Study on Saudi Joint Stock Companies, *The Arab Journal of Management*, Vol.37, Issue 2.
- [12] Meyerding S. G., & Mehlhose C. M. (2020). Can neuromarketing add value to the traditional marketing research? An exemplary experiment with functional near-infrared spectroscopy (fNIRS). *Journal of Business Research*, vol.107, pp.172-185.
- [13] Sheibani Abd al-Rahman, Talush Faris, (2015). The role of neuromarketing in achieving the effectiveness of advertising policy, master's thesis, *Oum El Bouaghi University*, Algeria.
- [14] Harit Kumar, Neha Mathur, Sangeeta Jauhari,2017" Consumer's Perception Towards Neuromarketing In India With Special Reference To Kano Model" 1Research Scholar, AISECT University, Hopal, India 2Dean, Department of Management, AISECT University, Bhopal, India, Vol.5, Issue 4, April
- [15] Al-Taie, Youssef Hajim, Al-Hakim, Laith Ali, Zwain, Ammar Abdel-Amir, 2009, Neuromarketing Strategy, Assumptions and Futures, *Al-Ghari Journal of Economic and Administrative Sciences*, Vol. 2, Issue 12.
- [16] Maroush Ikram, Molhassan Ayatollah. (2021). The dialectic of the ethical dimension in neuromarketing: an exploratory-analytical

- approach. *Strategy and Development Journal*, vol.11(3), pp.103-121.
- [17] Fugate D.L. (2008). Marketing Services more effectively with Neuromarketing Research: A look into the Future. *Journal of services Marketing*, vol.22(2), pp.70-173.
- [18] Pop, N. A., Dabija, D. C., & Iorga, A. M. (2017). Ethical Considerations regarding Stakeholders in Neuromarketing Research. Empirical Insights from NMSBA Corporate Members, TAAN Advertising Agencies and Romanian Companies. Ethics and Neuromarketing: Implications for Market Research and Business Practice, 123-146.
- [19] Kamel Suhad Barqi, Mahdi Hawra Thamer, 2019, The Concept and Mix of Neuromarketing: A Philosophical and Theoretical Study, *University of Karbala*, College of Administration and Economics.
- [20] Morin C., & Renvoisé P. (2018). The persuasion code: How neuromarketing can help you persuade anyone, anywhere, anytime. *John Wiley & Sons*.
- [21] Bercea M., & Cuza A. (2013). Quantitative versus qualitative in neuromarketing research. *Munich Personal*, RePEc Archive No. 44134.
- [22] Bokmachi Lamia, Arjani Abdelaziz, 2017, Neuromarketing and its effect on consumer behavior: a comparative study between mobile phone customers, Jazi Mobilis, master's thesis, *Jijel University*.
 - [23] Antar Abdel Samie Fahmy, p. (2020). The impact of using neuromarketing techniques on the quality of tourism services. Scientific Journal of Commercial and Environmental Studies, 11, Issue One, Part Two, pp.793-820. https://journals.ekb.eg/article_98079_0ce35511_2dda15231c186bbb1811422a.pdf (Accessed Date: November 15, 2023).
- [24] Al-Rabeawi, Saadoun Hammoud Jatheer, Al-Abadi, Faris Ahmed Abd, 2020, Reflection of the Service Meeting Environment in Enhancing Customer Satisfaction, *Journal of Economics and Administrative Sciences*, Vol.26, No. 117.
- [25] Bouras Rahma, 2021, Marketing innovation and its impact on customer satisfaction in the economic institution, master's thesis, *University of Mohamed Bou Deif M'sila*, Algeria.
- [26] Ben Shabha, Nour El Hoda Heba, 2020, The impact of insurance service quality on

- customer satisfaction, CAAT Agency, a case study of the Algerian Insurance Company, master's thesis, Mohamed Bou Deif University of M'sila, Algeria.
- [27] Lakhdar Emara, Mustafa Younesi, 2021, The Impact of Diversity of Islamic Banking Services on Achieving Customer Satisfaction A Field Study at Al Baraka Bank of Algeria, *Journal of Strategy and Development*, Vol. 11, No. 2.
- [28] Sardana, S., & Bajpai, V. N. (2020). E-banking service quality and customer satisfaction: An exploratory study, India. International Journal of Services and **Operations** Management, vol.35(2), pp.223-247. Souissi Taha Abd al-Rahman, Abd al-Oadir Qirsh, 2021, the role of new products in gaining customer satisfaction, an exploratory study of a sample of customers in Riyadh Djelfa, stores in Journal of Business Administration and **Economic** Studies, Vol.7(1), pp.1163-1180 https://www.asjp.cerist.dz/en/downArticle/313/ 7/1/154040 (Accessed Date: November 15, 2023).
- [29] Hassouneh, S. F. S. (2021). Availability of factors influencing customers satisfaction and their effect with the services in Palestinian Islamic banks in Ramallah (Doctoral dissertation, Al-Quds University).
- [30] Rego, L. L., Morgan, N. A., & Fornell, C. (2013). Reexamining the market share—customer satisfaction relationship. Journal of Marketing, vol.77(5), pp.1-20.
- [31] Bouzar Safiya, Berkane Amina, 2019, The Role Of Quality Tourism Services In Achiving Customer Satisfation Case Study Najah Agency For Tourism And Travel Tipaza, Revue Des Sciences Commerciales, Vol.18, N°2,

 https://www.asjp.cerist.dz/en/downArticle/360/18/2/104946 (Accessed Date: November 15, 2023).
- [32] Altiee Bahaa Habeeb M., &, Hasan Mohammad Mahmood Al-Mulla, 2018, The Contribution of Marketing dimensions for service excellence in mental status, building strategies and their impact on customer satisfaction A case study in a fast food restaurant KFC branches in Erbil, Tikrit

E-ISSN: 2224-2899 2555 Volume 20, 2023

Journal of Administration and Economics Sciences, Vol.14, Issue 44, part 2, pp.60-77

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

The authors equally contributed in the present research, at all stages from the formulation of the problem to the final findings and solution.

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

No funding was received to conduct this study from any academic body, governmental or private organization, and the funding was provided by the researchers.

Conflict of Interest

The authors have no conflicts of interest in this research.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0 https://creativecommons.org/licenses/by/4.0/deed.en_US