

**Examining factors plays role in implementation of Neuromarketing in Iran**

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Abstract

This study was carried out to examining factors plays role in implementation of neuromarketing in Iran. This study was a descriptive survey and the survey instrument was a researcher-made questionnaire. Statistical society was all of managers in industrial companies of Tehran. Sample size (245 persons) determination is based on the Krejcie and Morgan table and cluster random sampling method was used. After data collection, data analysis was performed using SPSS. Results showed that type of customer, management knowledge and product type plays role in implementation of neuromarketing in Iran.

Key Words: Neuromarketing,

Introduction

Unconscious mental processes are major influences in people's deliberation. Among the newest techniques for the measurement of marketing stimuli are neuroimaging techniques, which make an image of the patient's brain using non-invasive means (Breiter et al., 2015). When used in marketing to understand consumer behaviour in relation to markets and commercial trade, these methods are called neuromarketing techniques (Georges et al., 2013).).

The use of neuromarketing activities has aroused some controversy. On one hand, critics of the subject believe that the use of such techniques would affect consumers' ability to choose not to consume marketed products, leaving the individuals unable to resist such efforts and making them easy targets for the company's campaigns (Wilson, Gaines & Hill, 2008). On the other hand, defenders of neuromarketing activities, such as Lindstrom (2009a, 2009b) and Dooley (2010), discuss the benefits deriving from the technique to both consumers and organisations. According to these authors, consumers would benefit from the creation of products and campaigns directed to them and would have their decisions facilitated rather than manipulated, while organisations would save large portions of their budgets that are currently used on inefficient and ineffective campaigns, ensuring greater competitiveness and



improvements to customers. There is yet another segment of researchers who believe that neuromarketing would be much more science fiction than reality because it is impossible to find people with identical thoughts in the world, as thought is changeable and varies according to personal experiences, values and character (Hubert, 2010).

Neuromarketing utilizes brain-imaging technology, such as electroencephalography (EEG) and functional magnetic resonance imaging (fMRI) machines, to understand consumers' neurological responses to marketing stimuli (Chen et al., 2015).

Neuromarketing can be best defined as any marketing or market research activity that uses the methods and techniques of brain science or is informed by the findings or insights of brain science. (Stanton et al., 2016). Neuromarketing nowadays uses brain-imaging techniques including fMRI, EEG, facial coding, biometric indicators and implicit measures to measure an individual's response to marketing elements. As shown in several studies human decision-making is an unconscious process, taking place outside of conscience awareness. Therefore, neuroimaging techniques can be used to acquire information about unconscious decision-making processes improving marketing strategies. The advantage of measuring unconscious decision-making is that the obtained information is unaffected by biases, therefore more accurate information on consumers decision-making processes can be obtained. This knowledge is for example applied in product design, enhancing promotions and advertising, pricing, store design and the improvement of the consumer experience (Plassmann et al., 2015).

This study was carried out to examining factors plays role in implementation of neuromarketing in Iran.

Methodology

The present study is a descriptive one. Theoretical bases of the study were collected by reputable sites, books and related articles. The information and data for hypothesis testing were gathered by a researcher-made questionnaire. Statistical society was all of managers in industrial companies of Tehran. Sample size (245 persons) determination is based on the Krejcie and Morgan table and cluster random sampling method was used. In this study, Validity and reliability of the questionnaire was approved. Validity of the questionnaire was accepted by expert opinion of university and reliability of that was calculated by Cronbach's alpha and the value of that was 0.82.

Before completing the questionnaire by the participants, basic description of the study and its objectives as well as additional details about the questions presented to them. Enough time to complete the questionnaire was provided to participants. Write the name and characteristics of participants for the questionnaire was not compulsory, so they can fully express their opinions. After gathering information from the questionnaires, the data were analyzed and results are discussed with the findings of previous studies. All of data were analyzed by SPSS software.



Results

Table 1 shows descriptive statistics of participants. As showed by the table, males with 53.5% participants are the highest sex of them. Bachelor participants with 35.5% make the most and participants with job experience Higher than 20 years are highest in the group of job experience.

Table 1: Descriptive statistics of participants

Statistics						
Sex	Female			Male		
	114	46.5%		131	53.5%	
Education	Diploma		Bachelor		Masters or higher	
	33	13.5%	87	35.5%	65	28.5%
Job Experience	Less than 10 years		Between 11-20 years		Higher than 20 years	
	51	20.8%	124	50.6%	125	51%
Age	30-30 years		36-45 years		Higher than 40 years	
	46	18.7%	94	38.4%	105	42.9%

Since the test statistics is higher than table critical value at 95 percent and corresponding confidence interval is positive, so the hypothesis was accepted, namely type of customer, plays role in implementation of neuromarketing in Iran.

Table 2: The mean comparison based on the one-sample t test.

Variables	Average	SD	t	sig	Confidence intervals 95%	
					Lower bound	higher bound
Type of customer	1.74	1.88	0.189	0.325	0.101	0.177

Since the test statistics is higher than table critical value at 95 percent and corresponding confidence interval is positive, so the hypothesis was accepted, namely management knowledge plays role in implementation of neuromarketing in Iran.

Table 3: The mean comparison based on the one-sample t test.

Variables	Average	SD	t	sig	Confidence intervals 95%	
					Lower bound	higher bound



Management knowledge	1.99	2.45	2.88	0.001	0.088	0.145
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Since the test statistics is higher than table critical value at 95 percent and corresponding confidence interval is positive, so the hypothesis was accepted, namely product type plays role in implementation of neuromarketing in Iran.

Table 4: The mean comparison based on the one-sample t test.

Variables	Average	SD	t	sig	Confidence intervals 95%	
					Lower bound	higher bound
Product type	1.95	3.05	3.77	0.001	0.145	0.189

Discussion

As shown by the findings, type of customer, management knowledge and product type plays role in implementation of neuromarketing in Iran. Today neuromarketing lies at the intersection of behavioural psychology, economics and consumer neuroscience. Consumer neuroscience studies cognitive and affective sides of human behaviour. It uses a variety of brain scan techniques (such as FMRI, PET and EEG), eye tracking and physiological measurements (heart rate, breathing rate and galvanic skin reaction) to understand the unconscious drivers of choice and preference. Because consumers are not aware of these drivers, they cannot be detected by traditional techniques such as focus groups, interviews and questionnaires. One can think that this brings the end to the traditional methods in market research, but it is more appropriate to view them as “upgraded” with methods such as eye tracking (Chen et al., 2015).

This unprecedented access to consumers’ consciousness raises many ethical questions: from issues of invasive strategies (medical equipment usage for discovering what consumer is not aware of), to preference and choice manipulation (free will and discovery of the buy buttons) where marketing is trying to influence consumer decisions without consumers being aware of it, to exploitation of emotions to subliminal messages (consumers create emotional bonds with the brand as they are identifying with the marketing message). The fact that these techniques are used for profit-making, rather than scientific research, makes them even more ethically questionable (Levallois et al., 2012).

In addition to the term neuromarketing, the tags neuroeconomics, consumer neuroscience, and decision-neuroscience are often seen as well. Neuroeconomics describes the modelling and understanding of human choice behaviour and integrating information acquired from neuroscience. Neuroeconomics currently has contributed to the understanding of concepts



such as ambiguity and risk. The understanding of these concepts attributes to the understanding of choice behaviour. Consumer neuroscience is used to describe consumer decision-making behaviour. By integrating neural explanations from neuroscientific research to more traditional consumer research as information acquired from questionnaires (explicit measures). Decision neuroscience is a term describing the integration of the scientific fields of neuroscience, psychology, economics and statistics (Breiter et al., 2015).

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