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THE EFFECT OF NEUROMARKETING WITH COGNITIVE APPROACH ON THE GROWTH OF CHAIN STORES SALES

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ABSTRACT

The study was conducted to examine the effect of neuromarketing (NM) with cognitive approach on the growth of chain stores` sales. The method was a survey of descriptive-correlational type. The population were the customers of chain stores in Bandar Abbas. Using the Cochran sample size formula, the sample size was determined as 384 people. Given the extensive population, multi-stage cluster sampling was used. A researcher-made questionnaire was conducted to collect data, whose content validity and Cronbach's alpha coefficients were calculated. The Cronbach's alpha calculated for the research tool was 0.84. The results indicated that NM and its tools such as using customer senses, customer satisfaction, stimulating customer loyalty, considering the subconscious mind of the customer, and logical intelligence of the customer affect the growth of chain stores` sales in Bandar Abbas. The effectiveness of NM, according to the customer memory, has not been approved regarding sales growth. Based on the results, it is recommended that the marketing management section of chain stores plan and put this marketing approach on the agenda to use NM methods and tools when having group meetings, brainstromings and other ideological methods.

Keywords: *NM, The Growth of Sales, Customer Memory, Customer Sence, Customer Logic Intelligence, Customer Satisfaction, Customer Loyalty.*

INTRODUCTION

Globalization process and the pace of technological advancements have brought about a rapid change in markets. Succeeding in the challenging markets of the future calls for preparation for conscious and rapid responses. NM is a new marketing approach where the behavioral studies of the consumer is connected with neurology. NM is among the interdisciplinary and emerging studies assisting better understanding of brain functions and thus enhancing marketing and sales operations (Tavallayi et al., 2015). NM refers to market and marketing research activities that use methods and techniques related to neuroscience (Bayan et al., 2014). NM gives responses to the questions that cannot be reached using the traditional marketing method (Akbari, 2013). The brain is responsible for all consumers` decisions (Zoravicki wicki, 2013). Awareness of the functioning of the brain and understanding the decision-making assist the marketers to increase their sales smartly by reaching consumer sences and tendecnies (Jalali, 2015). The body senses all input information from the outside world with the help of senses, the brain interprets it and produces chemical and physical reactions translating them into thinking and behavior (Heidarzadeh, 2016). The decision is

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emotional before being rational or being based on reasoning. The feeling is the most important sales motive , sales agent and also purchase agent.

M Georges[1] (2014) states that the way the marketers consider for presenting and selling products is provided to them by cognitive science and a map analysis of the brain. Moreover, NM tells us what goes on in the human brain and who is experiencing a marketing stimulus.

According to M Georges, cognitive sciences and studying brain maps can help marketers do their job more command. NM provides the right knowledge of human subjects to marketers through indicating what goes on in the human brain when they experience a marketing stimulus. Using cognitive science in marketing helps to understand how the brain reacts to marketing stimuli in different places and how these reactions turn into decision making and behavior (Cohen, 2015). According to marketing approach, NM will try to adapt all marketing mixes to the way in which consumer intelligence works. The effectiveness of marketing approaches is through satisfying customer's senses, emotions, memory, and subconscious. According to M Georges (2014), NM organizes its approach in six stages designed to convince the brain and also satisfies the products or services offered on marketing. These six stages are satisfying the customer senses, customer satisfaction, gaining customer loyalty, satisfying customer memory, satisfying customer subconscious, and ultimately satisfying the customer rational intelligence (Georges, 2014). Satisfying customer senses includes creating satisfaction in the customer's senses. Five senses act as receivers specializing in the transmission of environmental information

According to M Georges, NM should consider and control customer senses. The nose, ears, and touch senses are of equal importance to the eyes if not more. According to him, these initial senses make less conscious decisions and seem less controlled by reason. For instance, the olfactory nerve has a direct and prior bond with limbic system, pleasure center and memory. In a few seconds, we decide whether a smell is good or bad (Cohen, 2015). According to George, the second step refers to customer satisfaction. Satisfying in this six-step process of NM includes meeting the basic needs of the customer and creating satisfaction. According to Georges, satisfying them is to let them secrete dopamine[2] and other positive hormones after satisfying their senses in the first step. When dopamine is secreted in great quantities, pleasure is created hence the desire to purchase the products increases. Then, it is the sensory marketing mission to stimulate consumer senses, which strives to increase the pleasure and distinction and experience of shopping. Moreover, he claimed that his goal is to overcome the customer, and that the brain is a learning machine: the brain learns to appreciate the reward.

Georges (2014) called the third step as to gain customer loyalty by satisfying them through managing their feelings. He stated that the customers talk through their hats. Half of their decisions are irrational and emotional. Marketing deals with the customers' emotions and their reasons for purchasing. Marketing should manage stress, fear, hatred, attraction, pleasure, sadness, repentance, regret, and confidence of the customers. Furthermore, he thinks that the six main senses - fear, pleasure, sadness, wonder, regret and anger - are the inspirational elements of marketing and the gates to customer memory (Cohen, 2015).

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[2]Dopamine is a substance synthesized from its precursors from the brain and kidneys, whose most important role is creating pleasure and rewards.

The fourth step of this process is to satisfy the customer's memory. Feelings open the gates to the customer, but these feelings must remain in mind. This is because without memory, one cannot make a decision to purchase - he thinks that through repetitions, stories become more enjoyable and through simultaneous inputs the customer memory can increase (Jalali, 2015). The iteration of a stimulus or even similar stimulus positively affects the nature and authenticity of a memory subconsciously Heidarzadeh(2016).

M Georges (2014) considers the fifth stage of NM methods as satisfying the subconscious. According to him, after successful completion of the fourth step and entering into the customer's memory, this is the best time to guide the customers towards decision making initially subconsciously and then consciously. According to Georges, at this stage, the leader role of the seller should increase and play with the customer's shortcuts and instincts. Moreover, one should work on the customer imitation play with his shortcuts and instincts (Cohen, 2015). The customer's subconscious satisfaction is based on the information we receive more than the ability of the brain to consciously absorb them, in contrast to the conscious mind of our subconscious counterparts to all vital processes of our body, what we have learned and recorded is even if we are unaware of it Heidarzadeh(2016).

The sixth stage of NM method is satisfying the customer's rational intelligence. Customer logic can set aside emotions, instincts, individual needs and even senses.

Georges considers this stage as critical and believes that customer logic can relieve emotions, instincts, urgent needs and even senses. Thus, the final stage is the last stage and the customer logic should be pleased. According to him, at this stage, the customer is being helped to make the right decision and the customer's decision wings are modified.

Organizations have always sought to make it possible in a competitive environment to create value for customers through their operational processes. Marketing and sales units have a critical role in this value creation as the two main pillars of the organization (Najmi et al., 2012). Scientific studies on the sales started almost since 1960. While there are many definitions for marketing, sales definition has not been widely discussed. The American Marketing Association (1995) defines sales as “Any activity intended to encourage a customer to buy a product or service, and can be directed directly through individuals or via telephone, email, and other media.” Kotler et al. (2006) describe the direct sales process as “Establishing direct and face-to-face interaction with one or more potential customers to provide and explain a product or service, respond to questions about it and obtain an order from the customer.” The sales unit mission is not the mere selling of the product or service, but it plays a key role in generating knowledge for the organization towards its customers and recognizing their needs, as sales are the interface between the customer and the company. Moreover, the sales unit gains clever and valuable information from the market environment so that the organization can take the necessary measures and reactions about the new advances in the competitive environment. Furthermore, the sales unit should decide how many resources and time it gives to potential customers or current customers to evaluate their needs and to express the value and benefits of the product to the customer (Kotler, 2007). The organization can establish a valuable relationship with its customers through sales force with successful implementation of its sales activities, and by increasing its market share and profit from sales, makes its business performance better. Overall, the sales and marketing units both entail a

common goal, which is the growth of sales and profitability for the organization and also creating the added value for customers (Najmi et al., 2012).

Theories and models used in consumer studies have changed drastically over the last few years given the interest of marketers in deciding on consumer purchasing and understanding their intentions (Bagozzi et al., 1999). Researchers and professionals look for new and combined ways of purchase decision of the consumers to help in the growth of sales and effectiveness of promotional messages. Thus, using neuroscience in marketing has become widespread, and in recent years, we have witnessed a significant increase in the scientific ability of neuroscientists. These specialists directly examine the cortical activity in time, place, and frequency. On the other hand, the integration of psychological and physiological sciences has brought about the use of techniques for great advancements in understanding the activities of the brain and recognizing its different parts. Nowadays, many social science scholars use neuroimagening as a standard tool or a research approach. In particular, the use of this concept reached to climax when economics started using neuroimagening techniques in its own research, and a new discipline called neuroeconomic was created (Kenning & Plassmann, 2005). Although both the scientific fields of marketing and neuroscience had many commonalities in many areas, marketing science had long not been aware of the advantages of using brain-imaging techniques. There are many possible reasons for non-use of NM methodologies and brain imaging in marketing. First, according to marketing researchers, neuroscience was a horrible and frightening category. In addition, many professional marketers considered the impossibility of having access to imaging techniques in their specialized units. One of the advances being made in this regard is the combination of different sections of the marketing and business groups with neuroscience and the formation of interdisciplinary specializations (Lee et al., 2007). The mix of this interdisciplinary expertise can be considered as a combination of anatomy of the nerves, neurology, psychology of neuroscience, neural gland ology, and neuroscience economy (Gazzaniga et al., 2008). In addition, using NM methods is beyond the traditional methods like focal groups, questionnaires and interviews as the purpose of this approach is to access the minds of customers. Nowadays, organizations have gone a step further and they want to discover the motives and intentions leading to human behavior. NM is a new phenomenon showing new results to organizations and marketing professionals.

As the marketing space is very competitive, an increase in the competitiveness of chain stores to attract customers and making it more profitable is necessary. In this regard, the present study tried to examine the effect of NM methods with cognitive approach on the growth of the efficiency and sales for which this goal was examined in chain stores atmosphere. The main question of the study is how NM affects the growth of chain stores sales.

METHODOLOGY

The study was causal-correlational, quantitative in nature and field regarding type. As the study considered cross-sectional, it is limited to the time span from March 2018 to August 2018. Data collection was done using survey. The population included all citizens referring to chain stores in Bandar Abbas, who were selected to study Tara, Tunnel, Refah, and Etka chain stores. The reason for selecting these stores was their marketing practices, where the researcher's field observations showed the professional use of marketing principles by these

stores. The sample was calculated by measuring the size of the population in the formula for calculating Cochran's volume and by inquiring the number of customers and customers of the stores by inquiring about the central management of the stores and placing this as the population. The total number of clients and customers, on average, was 38,000 people registered from March 2018 to August 2018. By adding the population size in Cochran formula, the sample was calculated to be 380 participants, and finally, 384 members of the population were given a structured interview to prevent sample loss.

Equation 1: Estimating the sample size

$$n = \frac{38000(1.96)^2./5\times./5}{(38000-1)./05^2+(1.96)^2./5\times./5} = 380$$

The questionnaire used to collect data was researcher-made. The validity and reliability of the questionnaire were confirmed by the content validity and Cronbach's alpha. The alpha coefficients calculated for the sales growth was 0.82 and for NM scale, it was 0.801, both of which showed the reliability of the questionnaire.

Data analysis was done in Spss, version22, software and Amos. Descriptive results showed that the highest frequency of gender was for women (209 out of 384) and most of the respondents were married (196 out of 384). Additionally, the descriptive statistics of the research showed that the age group of 26-35 years old formed 24.2% of the sample size, with the highest frequency (93 out of 384 of the sample) and of the 384 respondents of the research questions, 160 (41.7% of the sample) studied at undergraduate level. The results of the testing the hypotheses are presented in Table 1. Regression test was used to examine the research hypotheses.

Table 1: The results of testing the research hypotheses

Model	Coefficient of multiple determination	Coefficient of determination	T value	Sig.	B	Beta
NM	0.866[a]	0.749	1143.000	0.000[b]	0.779	0.866
The customer's senses	0.572[a]	0.325	185.429	0.000[b]	1.105	0.572
Customer satisfaction	0.196[a]	0.036	15.200	0.000[b]	0.205	0.196
Customer Loyalty	0.318[a]	0.122	0.118	0.000[b]	0.316	0.318
Customer memory	0.019[a]	-0.002	0.134	0.715[b]	0.021	0.019
The customer's subconscious	0.359[a]	0.136	13.495	0.000[b]	1.746	0.359
Customer logical intelligence	0.496[a]	0.117	23.532	0.000[b]	1.654	0.496

According to the results of testing the hypotheses, NM explains a very high percentage- 74.4% - of the variation of the increase in sales. The customer's senses account for a significant value - 32.5% - of the variation in the growth in sales and the model explains the changing effects of customer senses on sales growth (sig=0.000<0.05). Customer satisfaction accounts for 3.6% of the variation in sales growth and the model explains the changing effects of customer senses on sales growth (sig=0.000<0.05). Customer loyalty explains 12.2% of the variation in sales growth and the model explains the impact of the customer loyalty on sales growth

(sig=0.000<0.05). In addition, based on all reported statistics, one can state that the hypothesis that customer-memory based marketing significantly affects the growth in sales is rejected.

The subconscious variable of the customer accounts for 13.6% of the variation in the growth in sales and the model explains the effect of customer's subconscious on the growth in sales (sig=0.000<0.05). The customer logical intelligence account for 11.7% of the variation of the growth in sales and the model explains the effects of the customer logical intelligence on sales growth (sig=0.000<0.05).

Path analysis was used to analyze the path and the effect of independent variables on the dependent variable in Amos. In this section, the coefficients of the regression effect and the standard error rate for the research variables are reported. The regression coefficients showed the effect of the independent variable and its role in explaining the dependent variable. If the level of significance is smaller than 0.05 and CR is more than 1.96, the effect is significant. The results of the path analysis model in the Amos and the fitting indices of the model are described in Tables 2 (model fitting indices) and 3. The graphical output of the path analysis was given in Amos software.

Table 2 provides indices for fitting the model. Although the desirability of each of the indices is significant to validate the fitness of a model, only one can give a decisive vote to fit the model, indicating that the values obtained for all indices confirm that the above model has the required fitness. The reported results and comparison of the obtained values for fitting the indices of the model show that the model of the path analysis pattern is largely confirmed and one can verify that the results of this model can be verified. In addition, the results of Table 3 showed the predicted path parameters in both standardized and non-standardized modes with significant paths. Regression path coefficients for all variables except for customer memory have been reported to be significant.

Table 2: Fit indices of path analysis model for the effect of NM aspects on sales growth

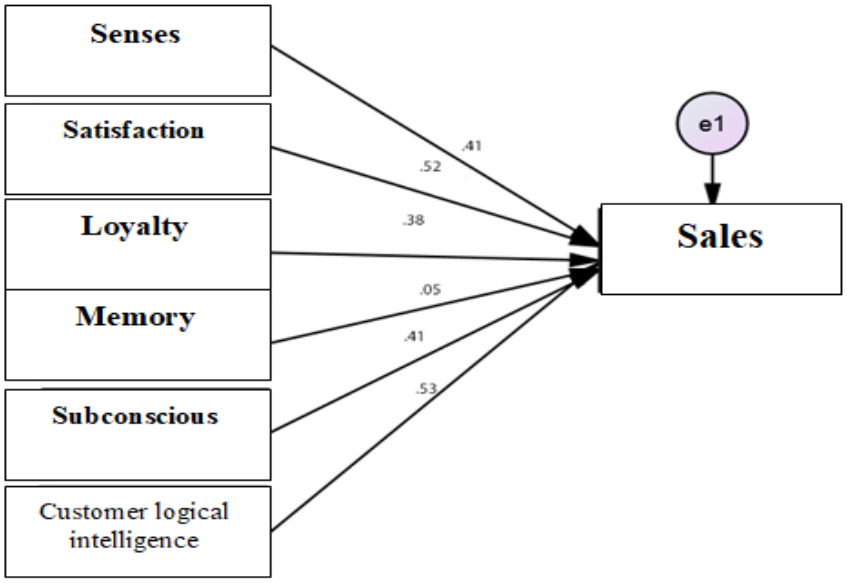
The value obtained	Permitted value	Index
2.011	Less than 3	Chi square to degree of freedom
0.062	Less than 0.08	root mean square error of approximation (RMSEA)
0.906	Higher than 0.9	Tucker Lewis Index (TLI)
0.991	Higher than 0.9	Comparative Fit Index (CFI)
0.946	Higher than 0.9	Relative fit index (RFI)
0.892	Higher than 0.9	Incremental Fitness Index (IFI)
0.801	Higher than 0.9	Normed Fit Index (NFI)
165	Less than the sample analyzed	HOELTER (Critical sample size index)

Table 3: Output of the test of standard and non-standard regression path coefficients

Path			Non-standard parameter	Standard parameter	SD	Critical Ratio (CR)	The significance of the P test
The customer's senses	→	Sales increase	1.003	0.411	0.232	4.080	***
Customer satisfaction	→	Sales increase	1.821	0.520	0.112	3.830	***

Customer Loyalty	→	Sales increase	0.762	0.384	0.201	4.736	***
Customer memory	→	Sales increase	0.064	0.057	0.046	1.406	0.160
The customer's subconscious	→	Sales increase	1.632	0.415	0.218	3.746	***
Customer logical intelligence	→	Sales increase	1.728	0.537	0.110	4.932	***

The following model indicates the t-value coefficients and the obtained parameters of the structural equation model of the research hypothesis. Considering the level of the critical ratio (c.r>1.96) and the significance levels reported for the effect of each independent variables on the dependent variables and the standard values of the coefficients of the reported regression effect, one can state that except for the customer memory, the effect of other variables on sales growth is confirmed.



CONCLUSION

The results supported that NM has a significant effect on sales growth and it can be verified from the statistical test results report. Table 4 presents the summary of the results of statistical tests.

Table 4: Summary of testing the research hypotheses

Row	Hypothesis	The results hypothesis testing
1	NM has a significant effect on the increase in sales of chain stores.	Confirmed
2	The customer's senses have a significant effect on the increase in sales of chain store.	Confirmed

3	Customer satisfaction significantly affects the increase of sales in chain stores.	Confirmed
4	Customer loyalty has a significant effect on the increase in sales of chain stores.	Confirmed
5	Customer memory significantly affects the increase of sales in chain stores.	Rejected
6	The customer's subconscious significantly affects the increase of sales in chain stores.	Confirmed
7	Customer logic intelligence significantly affects increase of sales in chain stores.	Confirmed

Theoretically, one expects that NM and its use in marketing will significantly increase sales, because "The results of studies show that the knowledge of the underlying layers of the mind and the human brain is more important in decision-making process compared to the surface layer information" (Lee et al., 2007). The reported results indicated that the univariate model of the effect of NM on the sales growth was significantly verifiable, and NM has explained a significant portion - 74.9% - of the variation in sales, showing the rest 25.1% of the variation of sales is explained by other factors. This is in line with the results of Gharagozlou (2015), Valipour and Abbaszadeh (2016), Erk et al. (2002), McClure et al. (2004), Perrachione et al. (2008), indicating that the use of NM significantly effects the customer behavior and purchase intention (quoted by Akbari, 2013).

References

Akbari, M. (2013) A Review of Neural Marketing and Its Uses, Quarterly Journal of ShafaKhatam, Volume Two, Number One.

Bagozzi RP, Gopinath M, Nyer PU. The role of emotions in marketing. J Acad Market Sci. 1999; 27 (2): 184-206.

Bayan, L., Alipour, F., Kolivand, P.H., Dasgheib, S.S. (2014) Neural Marketing, Cognitive Approaches to Consumer Behavior, Khatam Healing, Second Volume, No. 4.

Cohen, W. (2015) Marketing Program, Translation by Seyyed Mehdi Jalali, Publishing Sita, Tehran

Gazzaniga MS, Ivry RB, Mangun GR. Cognitive Neuroscience: The Biology of the Mind. 3rd ed. New York: Hardcover.2008; p. 30-45

Georges. M.P., Beyle, A.S., Tutoulou, B.M. (2014) Neural Marketing in Practice (translation by Seyyed Mehdi Jalali Tehran: MehrabanNashr Publishing.

Kenning P, Plassmann H. Neuroeconomics: An overview from an economic perspective. Br Res Bull.2005; 67 (5): 343-54

Kotler, P. & Keller, K. (2007). Marketing Management, 12th ed. New Jersey: Prentice Hall.

Kotler, P., Rackham, N. & Krishnaswamy, S. (2006). Ending the war between sales and marketing. Harvard Business Review, 84 (7/8), 68-78.

Lee, N., Broderick, A. J., & Chamberlain, L. (2007). What is 'neuromarketing'? A discussion and agenda for future research. International Journal of Psychophysiology, 63 (2), 199-204.

Najmi, M., Attarianfar, H., MousaviRazavi, M.M., Jafari, H. (2012) The Role of Interaction of Marketing and Sales Units in the Operational Processes of Value Creation Chain, Journal of Management Science of Iran, no. 25, pp. 74-47.

Tavallayi, R.A., Seyfizadeh, M., Riahi, S. (2015) A Study of Marketing Applications on Consumer Online Shopping Behavior, The First International Conference on Accounting, Business Management and Innovation, Tehran.

Zoravicki, L. (2013) Neural Marketing: Exploration in the Consumer Brain, Translation by KambizHaidarzadeh and Hossein Ali Soltani, Publishing House of Science, Tehran