NEUROMARKETING FEATURES

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Abstract
Article analyze concept neuromarketing, it advantages and disadvantages. The goal of every business is to meet the needs of consumers, so neuromarketing is very important in helping to get to know the consumer better. Neuromarketing does not answer the question of where the buy-in button is and will not replace traditional marketing research, but will add new knowledge[22].

Key words: *neuromarketing, advertising, neuromarketing advantages and disadvantages*

JEL Classification: M31, M37

I. INTRODUCTION

Neuromarketing is the application of neuroscience in marketing. Neuromarketing involves the direct use of brain imaging, scanning, or other technology to measure brain activity to measure a subject's response to specific products, packaging, advertising, or other marketing elements. Neuromarketing research identify specific types of brain activity and how they respond to promotional messages. With this information, companies learn why consumers make the decisions they make and what parts of the brain motivate them. The analysis helps marketers improve their customer knowledge and behavior and improve the marketing results of these companies through this research. This is the application of neuroscience in marketing. Research in this area is based on a variety of experiments with ordinary people, users. The research uses a variety of tools to monitor the volunteers' brains and how they respond to different products, advertisements, their packaging or brands. Although such studies can sometimes mislead their testimony, it is a much more effective method than simple surveys. The goal of each company is to meet the needs of consumers. Therefore, neuromarketing is very important because it helps to know the consumer better. Neuromarketing does not answer the question of where to buy the "button". It will not replace traditional marketing research but will add new knowledge. The more business executives become familiar with neuromarketing tools and apply them to their company, the more attractive the goods or services will be.

II. NEUROMARKETING CONCEPT

Neuromarketing can help marketers better understand consumer behavior to improve their package, pricing, brand positioning, promotion strategies, new product development. Neuromarketing provides valuable insights into consumer behavior, essentially helping marketers with brand building; product design; development of new products; advertising. Lee, N., et al. (2007) defines neuromarketing as "a field of research that uses neuroscientific techniques to analyze and understand market behavior and to stimulate exchange," based on the concept of neuroeconomics. The goal of every business is to meet the needs of consumers, so neuromarketing is very important in helping to get to know the consumer better. Considerations include: measurable emotions, looking for emotions when shopping, mood in mood. The external experience consists of information from the five senses - what we see, hear, taste, touch and smell in the outside world. Accordingly, inner vision acts as a filter for selective perception and involves "pulling" the same five senses out of memory and relating them to attitudes.

According to the Pilelienė (2011) neuromarketing simplest definition – it is neurosciences practices applied in marketing activities. Lee (2007) state, that neuromarketing defined as "areas of research, analysis and for understanding market behavior and promoting exchanges, neuroscience methods are used. According to the authors, the definition has two outcomes: first, neuromarketing raised above neuroview analysis thus emphasizing not only commercial-seeking, but also a scientific discipline nature; secondly, the study area extends from exclusive consumer behavior covering elements to many possible aspects of attention.

Plassmann and other sates that "neurosciences" is too broad to apply to consumer behavior research. According to the authors, "neurosciences" area - of animals (starting and ending snails mammals and primates) nervous system, hence the term is too inclusive to be used in terms of marketing; analyzing consumer behavior Neurosciences field should be used for the terms "cognitive neurosciences" (covering perception, attention, memory, problem solving) and affective neurosciences (covering emotions, feelings and moods). Plassmann (2011) presents the term consumer neuroscience, which proposes to use the analysis of biological perception and affective processes, influencing consumer behavior.

As Gordon has argued, Fibæk (2014) can be regarded as a subdivision of neuroeconomics, since practice stems from research that was initially concerned with significant economic behavior. Neuroeconomics emerged across the boundaries between economics, psychology and neuroscience, and began by exploring a wide range of decision-making theories, in terms of irrationality and emotion, in an attempt to accelerate choice and decision models and simply to better understand people's economic behavior (Rustichini (2009)). Neuromarketing emerged in the early 2000s and quickly gained significant popularity in both academia and business (Fischer et al. (2010)). Despite the emerging nature of neuromarketing, no dedicated scientist can be considered an architect of practice. The first studies using neuroscientific tools to link brain influence and electrical patterns were back in 1979. Morin (2011) state that the application of neuroscience in brand building and consumer psychology can be further traced.

Neuromarketing is the fusion of marketing and neuroscience, and the idea is that neuroscientific techniques can monitor the physical surrogacy of consumers' decision-making process and certain emotional behaviors (Fugate (2007)). It is an attempt to pinpoint how and where our brains respond to marketing and advertising stimuli, and an attempt to evaluate the impact of such stimuli. From a general perspective, basic neurobiology approaches are explored in consumer behavior, decision-making processes, emotions in purchasing, and marketing phenomena (Javor et al. (2013)).

III. NEUROMARKETING ADVANTAGES AND DISADVANTAGES

Neuromarketing is a field of marketing that involves studying the way people react to marketing techniques and adjusting those techniques to maximize sales and inform the public about a specific product, idea, or campaign. Neuromarketing includes the use of biometric sensors, social studies, and subliminal messaging. While neuromarketing is a relatively new technique, it has been widely implemented in recent years and nearly every marketing agency and medium-large company in the world now uses it .Neuromarketers study the brain’s reaction(s) to certain social triggers. These triggers include appearance, smell, descriptive language (as seen in the food industry), a chain of events or story (as seen in presentations), or associating a celebrity with a specific brand (as seen in the sports, perfume, and clothing industries). Neuromarketing itself relies on a neurological process known as “priming.” Priming involves an electrochemical reaction that is set off whenever a topic is first introduced. Priming allows the brain to make an initial connection in order to recall everything that it knows about the specific topic. Once priming is done, new information can be introduced to allow the brain to compare this new information with what it already knows, then make decisive opinions about the topic itself.

Neuromarketing is most often used to market commercial goods and services. It can also be used in psychological and theoretical applications, as it gauges human reactions to specific topics. For example, neuromarketing has recently been used to gauge neurological response to presidential speeches and movie trailers in order to improve how both are presented to the public. Neuromarketing is the application of neuroscience in marketing. Research in this area is based on a variety of experiments with ordinary people, users. The research uses a variety of tools to monitor the volunteers' brains and how they respond to different products, advertisements, their packaging or brands. Neuromarketing adheres to the basic principle of marketing: to try to understand the consumer, why he / she makes such a decision.

Table1. Neuromarketing advantages and disadvantages

Advantages	Disadvantages
Neuromarketing allows human response to be gauged based on neurological, emotional, and physical reactions, the ability to style presentations, speeches, movies, and commercials to match these responses, and the ability to sway the minds of those being presented with information.	The main disadvantage of neuromarketing is that there is a lot of work that goes into it. For example, people must be studied before a technique is established. Once a neuromarketing technique is developed, it must be presented in a manner that sways the audience’s mind without disclosing that they are secretly being controlled with near-subliminal messaging. Likewise, neuromarketing does not always work for everyone.
Neurological research provides marketers with information that is not available through standard marketing techniques (eg facial expressions, eye movements, mouse pointer shifts, etc.). This can provide hidden information about the user experience. More reliable insights with fewer respondents. The application of neurological techniques in marketing may be before the product is released -	Neuromarketing research is significantly more expensive than traditional research methods. Neuromarketing research provides insights into the generalization of the average customer's brain, although brain responses are quite universal, with individual differences. The reactions observed in a laboratory test environment may be slightly different from those observed in a realistic purchasing environment.

when it is just an idea.	Some experts believe that neuromarketing methods are unethical.
• Attempts to predict consumer purchasing trends associated with the relevant communication message. Changing the background alone can direct the user's gaze to the desired position of the advertising element, the text. ". Neuromarketing research methods enable not only laboratory testing but also physical and virtual research. • Neuromarketing employs tools, such as EEG, to measure the user's motivation to take a particular action, such as whether they would like to purchase a product or not, in order to achieve the desired user response and behavior. • Neuromarketing helps organizations determine what stimuli (stimuli) need to be applied to marketing in order to achieve maximum impact. • Can determine how to entice customers to spend more time at the point of sale, buy larger quantities of product and return • So, big companies are making the most of new technologies in an effort to create the right stimulating gimmick to trigger reactions in their minds and encourage them to choose the product they offer. • Allows you to create more attractive goods or services, packaging, communication messages to consumers. • Neuromarketing helps organizations determine what stimuli (stimuli) need to be applied to marketing in order to achieve maximum impact.	Insights that may be interpreted or deployed in an unauthorized context. It can be argued that all advertising is a huge manipulation machine, but the user still has the choice and decision. Neuromarketing should not be used in political campaigns, touching sensitive public issues, trying to influence the voting results of citizens, in propaganda. • Misinformation about consumer behavior can become a tool of manipulation if misused.

IV. NEUROMARKETING IN PRACTICE

The first published study on neuromarketing was done with Coca cola and Pepsi in 2003 by American neuroscientist Read Montague. Two well-known soft drinks, Pepsi and Coca cola, were selected for the study. Researchers have found that while the two products are similar (they have almost the same formulas), they still use one product or another. Researchers then investigated and found that cultural knowledge determines our approach to products that lead to changes in purchasing decisions. One experiment is done with the eyes closed and the other is done knowing what the drink was like and helping researchers monitor their brain activity. When volunteers were unaware of the drink they were taking, fMRI measured activation of the ventromedial frontal cortex, which is considered the reward center when they drink Pepsi. But when volunteers learned what kind of drink they were consuming, the study found that brain activity begins in the hippocampus, midbrain, and dorsolateral frontal cortex (the center of memory and emotion) in favor of Coca Cola, associated with emotional attachment, nostalgia. People like the taste of Pepsi, but they prefer Coca Cola Based on these results, the researchers found that Coca Cola's soft drink is preferred and influenced by brand image rather than taste. Memory and emotions play an important role in maintaining brand loyalty.

Neuromarketing is the latest tool to influence consumer decision. DaimlerChrysler, Ford Motor Co and other manufacturers seek to use medical research to better understand what potential buyers pay maximum attention when choosing a new car. The volunteers scalp electrodes attached (Magnetic Resonance Imagining, MRI) with the help of human brain activity monitored. It is still known only to the initial results of the study, but they are quite interesting. It turned out that sports car image horny men with the same pleasure centers in the brain, like sex, chocolate or cocaine. Although neuromarketing is taking its first steps, but now consumer advocates, with Ralph Nader at the forefront of trying to oppose such research and the utilization of results, arguing that it is a manipulation of the human mind, or even, in a sense, a secret mind reading. Manufacturers expect that researchers them the information will help better understand how the design is more attractive, more acceptable to the consumer, as well as accurately guess what the buyer is stuck in an advertising campaign in the head and forcing him to think about the advertising you've seen the car, as a possible new purchase. DaimlerChrysler's Ulm University staff asked to carry out a study on how customers value the interior of the vehicle. Unfortunately, scientists with the available technologies could not carry out such an investigation,

however, the manufacturer agreed to carry out car outside evaluation study. The present investigation was invited twelve cars interested in men who were shown 66 sports cars, sedans and small cars photos. Subjects the brain activity recorded electrodes attached to the scalp. All the men said that sports cars are more attractive in appearance than the sedan and small cars. However, scientists are interested in answers than men, which is what captured medical equipment. It is that, seeing a sports car, and took the more active parts of the brain that are associated with the provision of pleasures. At the moment, as well as DaimlerChrysler ordered, Ulm University researchers investigating the effects of brain activity makes driving and the use of navigation system at the same time, ie, how the brain works simultaneously carried out two works. The objective of the study is to find out how you can improve the management of the car to make it more convenient and easier for humans to control. In this way, knowing the brain's response, new technologies make it easier to reconcile with human capabilities. Ford Motor Co. expects to help scientists figure out how formed emotional ties existing between the consumer and the brand. Britain has been a study in which volunteers connected to the head electrodes was running Ford and other manufacturers' advertising clips. The electrodes recorded the activity of different brain areas, so the researchers tried to determine which clips were the most emotionally study participants. This kind of activity critics say that MRI scanners, with the primary purpose is to deal with head tumors are not used for the treatment and business purposes.

E. Vaičiukynaitė gives an example of famous chocolate advertising to the German market. 6 different communication messages were created and the sales of chocolate were monitored for individual communication messages in the actual store.[22]

“Prior to in-store testing, all 6 communication messages were evaluated by the laboratory. The results of the survey revealed that the predicted chocolate sales for the respective communication message coincided with the actual chocolate sales in the store. It is important to note that when interviewing the study participants in the laboratory prior to the neuro study, they were asked to identify the communication message they liked best. Most of the experimenters chose the message that generated the least amount of chocolate in the store, ”said a researcher at KTU. [22]

According to the interlocutor, the study of chocolate advertising was the first in the context of neuromarketing research, where the results obtained in the laboratory were used to predict consumer purchasing trends associated with a relevant communication message. The results were accurate, indicating a new breakthrough in neuromarketing, says E. Vaičiukynaitė.[22]

V. CONCLUSIONS

The goal of every business is to meet the needs of consumers, so neuromarketing is very important in helping to get to know the consumer better. Considerations include: measurable emotions, looking for emotions when shopping. With neuromarketing research, organizations can determine how often a promotional message should be repeated on a particular medium in order for an advertising campaign to be effective. Neuromarketing techniques can determine how to entice customers to spend more time at the point of sale, buy larger quantities of product, and return. The growing interest in neuromarketing opens up opportunities for globally operating organizations to take a new look at the market, discover new consumer segments, develop successful product positioning, pricing, communication and distribution strategies by applying human brain principles in product development, pricing, distribution organization and marketing communication activities. Neuromarketing involves the direct use of brain imaging, scanning, or other technology to measure brain activity to measure a subject's response to specific products, packaging, advertising, or other marketing elements.

VI. REFERENCES

1. 1. Ariely, D., and G. Berns. (2010). Neuromarketing: the hope and hype of neuroimaging in Business. Nature Review Science. Http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2875927/
2. 2.Constensen, A., (2011). Neuromarketing. Umsatzsteigerung durch Neurosychologysche Kundenanalyse. Mauritius: Fastbook Publishing.
3. 3. Fischer, C.E., Chin, l. and Klitzman, R., (2010). Defining Neuromarketing: Practices and Professional Challenges. Harvard Review of Psychiatry, vol. 18, no. 4, pp. 230-237.
4. 4. Fugate, D.L., (2007). Neuromarketing: A layman's look at neuroscience and its potential application to marketing practice. Journal of Consumer Marketing, vol. 24, no. 7, pp. 385-394.
5. 5. Georges, P. and Badoc, M., 2010. Le neuromarketingen action. Parler et vedre au cerveau. Paris: EYROLLES – Editions d`Organisation.
6. 6. Gordon, C., Fibæk, M. (2014). Neuromarketing- A Brain New World. Master Thesis Corporate Communication.
7. 7. Javor, A., Koller, M., Lee, N., Chamberlain, L. and Ransmayr, G., (2013). Neuromarketing and consumer neuroscience: contributions to neurology. BMC Neurology, vol. 13, no. 1, pp. 13.
8. 8. Hubert, M. and Kenning, P., 2008. A current overview of consumer neuro-science. Journal of Consum Behaviour, 7, pp. 272-292.
9. 9. Karmarkar, Uma R. (2011). "Note on Neuromarketing". Harvard Business School (9-512-031).
10. 10. Lee, N., Broderick, A. J., Chamberlain, L. (2007). What is ‘neuromarketing’? A discussion and agenda for future research // International Journal of Psychophysiology. Vol. 63.

11. 11. Lewis, D., Brigder, D. (July–August 2005). "Market Researchers make Increasing use of Brain Imaging" (PDF). Advances in Clinical Neuroscience and Rehabilitation .
12. 12. Morin, C., (2011). Neuromarketing: The New Science of Consumer Behavior. Society, vol. 48, no. 2, pp. 131-135.
13. 13. Natasha Singer (3 November 2010). "Making Ads that Whisper to the Brain". The New York Times.
14. 14. Pilelienė, L. (2011). Neuromarketingo principai ir nauda organizacijoms: teorinis aspektas. ISSN 1822-6760. Management theory and studies for rural business and infrastructure development. 2011. Nr. 5 (29). Research papers.
15. 15.Pop, N.A., Dabija, D.CH., Iorga, A.M. (2014). Ethical responsibility of neuromarketing companies in harnessing the market research – a global exploratory approach. Ethical Responsibility of Neuromarketing Companies in Harnessing the Market Research – a Global Exploratory Approach.
16. 16. Plassmann, H., Zoega Ramsoy, T., Milosavljevic, M. (2011). Branding the Brain – A Critical Review. Working paper. – http://www.stanford.edu/~mmilosav/jcp_ok.pdf [2015-06-1
17. Probst, L., Frideres, L., Demetri, D. , Vomhof, B. (2014). Neuro-marketing innovations.
18. 17. Roebuck, K., 2011. Neuromarketing: High-Impact Strategies – What You Need to Know: Definitions, Adoptions, Impact, Benefits, Maturity, Vendors. Emero Pty Ltd.
19. 18. Rustichini, A., (2009). Neuroeconomics: what have we found, and what should we search for. Current Opinion in Neurobiology, vol. 19, no. 6, pp. 672-677.
20. 19. Schull. (2008). Decision and preference in Neuromarketing. Neuroscience and Society. Http://ocw.mit.edu/courses/science-technology-and-society/sts-010-neuroscience-andsociety-spring-2010/assignments/MITSTS_010S10_paper4_js2.pdf.
21. 20. Touhami, Z., L. Benlafkih, M. Jiddane, Y. Cherrah, O. Malki and A. Benomar. (2011). Neuromarketing: Where marketing and neuroscience meet. African Journal of Business Management. Http://www.academicjournals.org/ajbm/PDF/pdf2011/4Mar/Touhami%20et%20al.pdf.
22. 21. Wilson, M., J. Gaines and R. Hill. (2008). Neuromarketing and consumer free will. Journal of consumer affairs. Http://class.classmatandread.net/Physio/neurofreewill.pdf.
23. Book21.
24. http://psichika.eu/blog/kaip-neuromarketingas-padeda-pazinti-vartotoja/