International Academic Institute for Science and Technology

International Academic Journal of Humanities
Vol. 9, No. 1, 2022, pp. 01-11.

ISSN 2454-2245

International Academic Journal of Humanities

www.iaiest.com

Role of Social Responsibility in Company's Neuromarketing: A Case Study in Iraqi General Company for Agricultural Supplies

Sarmad Hamza Jassim [a]

[a] *Department of Business Administration, Faculty of Administration and Economics, Mustansiriyah University, Baghdad, Iraq. E-mail: dr.sarmad08@uomustansiriyah.edu.iq*

Abstract

The research aims to enhance marketing capabilities of companies through their commitment to social responsibility, which will bring company many benefits, most notably application of neuromarketing, social responsibility in its economic, social and environmental dimensions with dependent variable of neuromarketing. A research reached a set of conclusions, the most prominent of which is that customers are involuntarily affected by company's commitment to social responsibility, and therefore a company can use this in application of neuromarketing to ensure increased sales of its product mix and achieve high loyalty to existing customers in the markets.

Keywords: Social Responsibility, Neuromarketing, Economical Dimension, Societal Dimension, Environmental Dimension.

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

Introduction

Company's commitment to social responsibility suggests to customers manifestations of confidence and company's keenness on comfort of society and the safety of its members, the talk about social responsibility on a larger scale started through international companies following the convening of the Earth Summit on the environment in Rio de Janeiro, Brazil in 1992, and it was reaffirmed at the world summit on sustainable development in South Africa in 2002, it is the United Nations initiative to activate social role of companies (Shafieizadeh and Tao, 2020). Social responsibility was issued in a form of an official globally agreed report that included guidelines to support corporate social responsibility and work to achieve international standards of corporate behavior in the field of business and it focuses on business principles, human rights and environmental protection (Ramesh et al, 2019). There is a specification for social responsibility, which is ISO-26000, which was issued and published in 2010 and has been applied in many business companies in various countries of the world with society and the environment surrounding a company (Upadhye et al, 2019). Social responsibility also represents a continuous commitment of business companies to behave ethically and contribute to achieving economic development and work to improve the quality of living conditions for the workforce, their families, the local population and the community, business by behaving ethically and contributing to development and striving to improve the living conditions of workers, local communities and society as a whole (Iglesias et al, 2020).

Neuromarketing appeared in the United States of America at the end of the nineties of the last century after some major institutions studied the secrets of the human brain by means of advanced medical devices such as fMRI devices, displaying some pictures and films in front of a person and at the same time observing him and studying his brain's reactions to those pictures and films and then analyzing the responses Actions and documentation (Iloka and Onyeke, 2020). Neuromarketing is a new branch in the science of marketing that uses mental science methods and methods to analyze and understand human behavior regarding the market (Suomala et al, 2012), as it derives its existence from the fact that human brain consumes approximately (20%) of its energy in conscious activity and the rest percentage, which is approximately (80%), is devoted to the unconscious processing process, which is the space that marketers target because it is the place where consumers develop a certain primary interest and desire to purchase certain products and loyalty to a particular brand (Isa et al, 2019). Traditional marketing research methods depend on surveys of consumers' preferences and study of purchasing patterns in order to know the external influences that govern decisions issued by the consumer's brain, but these methods do not clarify the subconscious impressions that arouse desire for a particular good or service (Singh, 2021). Parts of a brain respond to emotional memory that recalls images and ideas from past advertisements, directing consumer choices toward a specific product or brand (Cotirlea and Dragolea, 2011) therefor, Neuromarketing means the applications of brain science in marketing which includes use of imaging and scanning by modern techniques to measure customer response to specific products, and to establish the type of relationship between the contents of human brains and their actual behavior as a way to help marketers understand customers easily and efficiently (Alsharif et al, 2021).

Theoretical Approach

Social Responsibility

It is commitment of owners of economic activities to contribute with self-motivation to sustainable development by working with components of local community to improve the standard of living of people in a way that serves economy and development together on community and environment, to make its activities in harmony with benefits of society and sustainable development (Ronan and Hong, 2019). Social responsibility is based on ethical behavior and respect for government laws and regulations in daily activities of companies, it has general principles that can be summarized as follows: Principle of environmental protection and restoration: It includes the company's protection and rehabilitation of the environment and the promotion of sustainable development and its incorporation into its daily operations. Principle of accountability and accountability: It means demonstrating the real desire of companies to disclose information and activities towards stakeholders (Randle et al, 2019). Principle of strengthening and enhancing powers: It means working on balancing strategic goals for marketing management among interests of customers, investors, suppliers, affected communities and other stakeholders (Armstrong et al, 2018). Principle of financial performance: working company aims to achieve financial gains for shareholders in capital at a competitive rate of return and maintains property and assets and the sustainability of these returns and that company is keen to prepare policies aimed at promoting growth in the long term (Ji et al, 2020). Principle of work site specifications: that company considers its employees as key partners in its business, which requires respect for their rights and commitment company has fair work, competitive wages and be safe and friendly work environment free from harassment (Tong et al, 2019). Principle of cooperative relations: that company is characterized by fairness and honesty with business

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

partners and works to promote and follow up the social responsibility of these partners (Salazar, 2017). Principle of providing products of appropriate quality: company identifies and responds to needs and rights of customers and stakeholders by providing high quality products. Principle of community interdependence: It means that company is keen to build open relationships with community in which it is located (Singh et al, 2021).

Social responsibility includes many areas of application, most notably respecting laws regulating business sector and all laws in country in which company operates, paying taxes without evasion, managing activities and business according to ethical principles and rules, ensuring financial rights of shareholders, developing and preserving them, and workers' rights as appropriate working conditions, receiving wages and job security (Orazalin and Baydauletov, 2020). it also includes development of society through employment and the company's contribution to solving societal problems, providing financial and technical support to charitable institutions, cooperating with non-governmental organizations, and preserving consumers' rights by providing the finest products of goods and services, providing product security, not using misleading advertisements, and continuous communication with consumers and listening (Abuzayed et al., 2021). In addition to protecting natural environment, reducing environmental pollution, paying attention to ways and means of clean production, and ensuring professional safety in production processes (Waheed et al, 2020). Social responsibility has many practices like preventing bribery, smuggling and administrative and financial corruption, and that the company is keen to deal in ethical ways with indirect partners such as banks, other competing companies, civil society organizations, and dealing with partners who respect ethical rules (Chu and Chen, 2019). Most researchers agree that social responsibility has three dimensions these are (economical, societal and environmental), and the following is a brief explanation of each:

1. Economical Dimension: Includes maintaining rights of shareholders to obtain invested financial returns as well as creating wealth that contributes to achieving economic development, it also refers to commitment to ethical practices within companies, prevention of bribery and corruption, protection of consumer rights and ethical investment (Gilal et al, 2020). company adopts and implements principles of accountability, transparency, ethical behavior, respect for the wishes of stakeholders in company, objectivity of decisions, and commitment to implementing governmental laws and legislation (Jahmane and Gaies, 2020). Company's commitment to requirements of to be economic gives it opportunity to finance applications required of it in a field of social responsibility, reduce complaints' costs and help activates of marketing (Hwang et al, 2020).

2. Societal Dimension: It includes company's contribution to achieving welfare of society in which it operates and improving affairs of its employees and taking care of them, which will reflect positively on increasing their production, developing their technical capabilities, providing occupational and job security and health and community care (Isoraite, 2016). Contemporary companies adopt a policy of equal employment opportunities and own entertainment clubs for families, its employees are administrators and technicians, encourage its employees to complete their higher studies and motivate them to participate in training programs and to organize recreational trips during holidays (Hein and Harris, 2020).

3. Environmental Dimension: Company must take into account environmental aspects when performing its activities, so it works to eliminate toxic emissions and waste to achieve maximum efficiency and available productivity, and reduce practices that may affect future generations' enjoyment of natural resources stored in earth (Bade, 2015). Company must also participate in programs supporting preservation of environment and natural resources, so company's responsibility will be to secure the natural foundations of human life through the company's practice of responsible environmental behaviors that protect society from the dangers of pollution that precede some of the company's business (Ferrell et al, 2019). So it can achieve this endeavor by adopting a responsible environmental policy in addition to its contribution to addressing environmental damage, a company is keen to adopt pattern of green processes in its production and pattern of environmentally friendly products in its marketing (Buertey et al, 2020).

Neuromarketing

It represents latest marketing methods in controlling what buyer thinks and knowing what he intends to do and what he needs, and neuromarketing is defined as shifting focus of customers from virtual to internal stimuli how customers make decisions about a product or a brand (Krajnovic et al, 2012). Neuromarketing focuses on emotional level of brain, which is characterized by speed, spontaneity, and knowledge of human response to products available in the market, it also provides a growing understanding of the way the human brain works in directing the purchasing decision process for goods and services (Massaro, 2020). It requires knowledge of basic forces affecting each stage of purchasing decision and knowledge of mechanism for making it in brain accordingly, neuromarketing is a modern science that addresses the brain through influences in psychology and invests role of emotions in purchasing decision-making process for the consumer (Golnar et al, 2019). It has don through several stages: stage of realizing the need,

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

stage of identifying and evaluating available alternatives, stage of making the purchasing decision, and stage of post-purchase behavior (Kaklauskas et al, 2019). The purchase decision represents the outcome of the interaction of multiple influences, including human influences such as needs, desires, trends and motives, and environmental influences such as family and companions (Fripp, 2020), and there are system of values, social habits, levels of awareness and education that influences control stages of consumer decision-making, and everything that goes on in his mind is a complex process that is linked to the brain and affects it in different ways (Pileliene and Grigaliunaite, 2017). Center of human purchasing decision-making is located in central nervous system in brain, which consists of brain, cerebellum and spinal cord, therefore, nervous purchasing decision goes through four sequential steps (Yadava et al, 2017) starting with first step, which is issuance of several signals from brain regarding specific products that consumer needs, and then second step in which it consists centers of excitement and enthusiasm in brain, which stimulate towards the purchasing decision of these products, then third step, which is to observe circulation of those products, their use and their opinions on them, and finally fourth step, which is final decision after complete conviction of need for these products (Mamun, 2020).

Company seek to know what is going on in mind of customer from purchase decisions in order to create products that fit his requirements when using neuromarketing in several areas (Anuar et al, 2021), most prominent of which are, first: predicting sales of a particular product and knowing most acceptable brand after knowing inclinations and trends of customers when subjecting them to experiment (Vences et al, 2020). Second: determining buying habits and purchasing decision regarding a particular product and knowing reactions of customers about product itself. Third: Identifying products that can be successful in order to enhance their strengths and products that are destined to fail (Constantinescu et al, 2019). Address the weaknesses by preparing equipment to improve these products or re-design them to suit needs of customer, after reaching them by analyzing the customer's brain cells when conducting an experiment on it (Ashe-Edmunds, 2020). Fourth: recognizing importance of advertisements to customer and re-designing advertisements according to what he wants and in harmony with him and according to signals emanating from brain (Ntapiapis and Ozkardesler, 2020). Fifth: achieving differentiation for companies that can adopt such strategies in future, which is evidence of their emphasis on importance of customer and his role in company's survival in a market and an industry in which it operates (Mansor and Isa, 2020). Neuromarketing is subject to certain determinants, most notably methods practiced by marketers, which may place external restrictions on purchasing decision-making and thus constitute a violation of free will of customer (Santini et al, 2020), in addition to determinants of marketing ethics such as infringing the privacy of customer with excessive advertising that is difficult to resist and possibility of deceiving human brain with aim of selling information to companies about customer desires and personal preferences (Nasr, 2014).

Some marketers try a temptation to customers, making them make unhealthy choices to purchase unhealthy products by exploiting the structure of biologically controlled mind and high cost of required technology and determinants of the worms of consumer protection organizations that fight the freedom of advertising companies and fear of consumer exploitation and turning into a victim (Kerin and Hartley, 2020). One true that is a neuromarketing is not a substitute for traditional marketing, but rather an aid to it (Reutov, 2020) despite presence of limitations, it has some advantages, most prominent of which is neuromarketing allows marketers to target customers and clearly define their desires as consumers when developing product and when advertising it to achieve most desire and appeal to customers (Solomon et al, 2018). Neuromarketing provides a clear assessment demand and its details for the success of new products as well as a wide range of activities related to selling and advertising, designing advertising strategies, understanding customer needs and responding to real needs, thus helping to build a sustainable relationship with the customer, as it goes directly to the thinking process in the brain (Sharma and Sinha, 2020). It helps build a better correlation and understanding between supply and demand by investigating inside information, and neuromarketing helps to study internal and psychological factors that influence a person's decisions in real life situations, and it helps companies on how to present advertisements and how they should sell depends on what the customer wants (Pride and Ferrell, 2019). Perhaps most important advantages of neuromarketing lies in fact that its study leads to raising level of efficiency of marketing management which results in an increase in sales of company's products and a better entry into current and potential markets (Palmatier et al, 2020). Neuromarketing is defined as a way to control customer, trying to understand his brain and his way of thinking, to know what he wants to get in order to meet his needs, and then influence his purchasing decisions (Oliveira and Giraldi, 2019). Most researchers agree that neuromarketing has three techniques these are (imaging, packaging and coloring), and the following is a brief explanation of each:

1. Imaging Technique: It means that company focuses in its graphic advertisements and promotional videos on the use of graphic content that mainly focuses on company's product and works to attract customer's attention towards features of product that are supposed to be unique or multiple, as the image raises customer as soon as he looks towards it may generate a desire to buy (Shaari et al, 2019).

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

2. Packaging Technique: It means that company focuses on the process of packing and packaging its products, studies have proven that packing and packaging products generate positive, negative or neutral impressions on customers, so the company must choose the type of packaging and carefully select the texts that are written on it (Zahopoulos, 2020).
3. Coloring Technique: It means that company focuses on using colors that have greatest impact on brain of target segment of customers in implementation of packaging designs and brochures, choosing appropriate color is not limited to color of product only, but also includes choosing appropriate colors for the marketing mix as a whole (Spence, 2019).

Purpose of Study

Diagnosing nature of correlational and influencing relationships between investigated variables provides a guide for marketing management in the company under study in particular and rest of companies in general, which is *main purpose* of study. As for theoretical compilation of most important intellectual premises and scientific implications of social responsibility and neuromarketing, it is *secondary purpose* of study.

Method

Sample and Methodology

Research community is Iraqi General Company for Agricultural Supplies, one of formations of Iraqi Ministry of Agriculture is a self-financed company established in (1976) in accordance with Iraqi Public Companies Registration Law No. (22) for (1977). Company owns several branches inside Iraq aimed at developing agricultural process in Iraq by providing agricultural requirements of machinery and equipment irrigation systems, fertilizers, seeds, pesticides and plastic sheeting, it also aims to introduce modern technologies, promote their use in the agricultural sector, provide reserve storage, as well as support farmers with agricultural requirements, support cultivation and harvest campaigns, and achieve an increase in production and marketing. Accreditation, customs clearance, and receipt of materials in stock, it is distinguished in its import and service commercial activity for agricultural sector, company is interested in providing all agricultural requirements needed by the agricultural sector, both plant and animal, and it is a pioneer in dealing with all regional and international companies. Its website is (www.iraqiscas.com) and the company has two methods of dealing import trade is announcement of tenders and direct sale of goods, company seeks to improve its image through social responsibility applications and conducts marketing research that contributes to increasing its sales and discovering modern marketing methods like neuromarketing.

Research sample was selected using the intentional sampling method, which assumes that the sample has a direct relationship with the variables investigated (social responsibility and neuromarketing), the surveyed sample has (69) individuals all of whom received a questionnaire form that was prepared specifically for this, idea of the research can be clarified in figure (1).

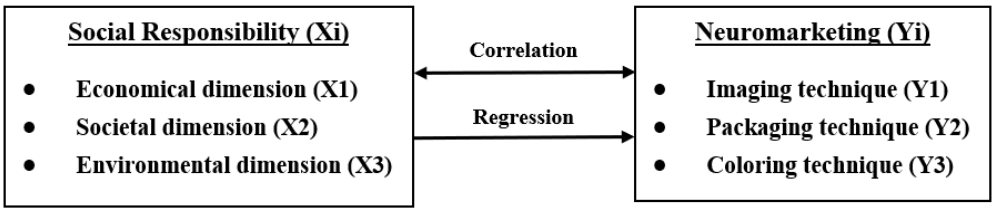


Figure 1: The procedure chart of research

Based on research plan, the following hypotheses were developed:

1. There is a significant correlation between economical dimension (X1) and neuromarketing (Yi).
2. There is a significant correlation between societal dimension (X2) and neuromarketing (Yi).
3. There is a significant correlation between environmental dimension (X3) and neuromarketing (Yi).
4. There is a significant correlation between social responsibility (Xi) and neuromarketing (Yi).
5. There is a significant effect of social responsibility (Xi) in neuromarketing (Yi).

Data Analysis

The research relied on (Likert) five-point scale in answers of sample surveyed amounting to (69) managers on paragraphs of questionnaire form that were prepared specifically for this research. The statistics were relied on (The arithmetic mean, standard deviation and mean relative weight) for studied variables using SPSS V.23 program, as shown in table (1).

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

Table 1: Frequency of Answers for Researched Sample (N=69)

Paragraph content		Totally Agree		Agreed		Neutral		Not Agree		Not Totally Agree		Arithmetic Mean	Standard Deviation
		No.	%	No.	%	No.	%	No.	%	No.	%		
Economical Dimension (X1)	Company is keen to provide accessible and safe services to customers.	31	44.93	29	42.03	9	13.04	0	0.000	0	0.00	4.32	0.696
	Company is committed to observing rights of its employees.	21	30.43	37	53.62	10	14.49	1	1.450	0	0.00	4.13	0.705
	Company strives to improve employee productivity.	20	28.99	39	56.52	10	14.49	0	0.000	0	0.00	4.14	0.648
	Company is committed to ethics of business dealings.	28	40.58	33	47.83	7	10.14	1	1.450	0	0.00	4.28	0.705
	Company fully abides by applicable laws, legislation and government instructions.	18	26.09	26	37.68	11	15.94	14	20.29	0	0.00	3.70	1.075
	Overall Average											4.11	0.766
	Availability of economical dimension in Iraqi General Company for Agricultural Supplies											82%	
Societal Dimension (X2)	Company carries out charitable activities in its work to serve community.	18	26.09	43	62.32	4	5.800	4	5.80	0	0.00	4.09	0.742
	Company achieves satisfaction of all stakeholders at same time.	16	23.19	39	56.52	10	14.49	3	4.35	1	1.45	3.96	0.830
	Company seeks to gain trust of both current and potential customers.	16	23.19	39	56.52	14	20.29	0	0.00	0	0.00	4.03	0.664
	Company maintains privacy of its customers.	13	18.84	38	55.07	13	18.84	5	7.25	0	0.00	3.86	0.809
	Company contributes to strengthening positive cultural fabric of community.	15	21.74	37	53.62	14	20.29	3	4.35	0	0.00	3.93	0.773
	Overall Average											3.97	0.764
	Availability of societal dimension in Iraqi General Company for Agricultural Supplies											79%	
Environmental Dimension (X3)	Company emphasizes application of principle of environmental safety.	21	30.43	31	44.93	15	21.74	2	2.90	0	0.00	4.03	0.804
	Company is keen to be green business.	23	33.33	37	53.62	8	11.59	1	1.45	0	0.00	4.19	0.692
	Company applies requirements of international standard ISO-14000.	18	26.09	37	53.62	10	14.49	4	5.80	0	0.00	4.00	0.804
	Company invests defective products in beneficial areas.	20	28.99	29	42.03	14	20.29	6	8.70	0	0.00	3.91	0.919
	Company consumes minimum amount of natural resources during production processes.	31	44.93	30	43.48	6	8.70	2	2.90	0	0.00	4.30	0.754
	Overall Average											4.09	0.795
	Availability of environmental dimension in Iraqi General Company for Agricultural Supplies											81%	
Imaging Technique (Y1)	Company uses display advertisements for its products.	21	30.43	31	44.93	12	17.39	4	5.80	1	1.45	3.97	0.923
	Company has skilled photographers within its marketing unit cadre.	18	26.09	33	47.83	17	24.64	1	1.45	0	0.00	3.99	0.757

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

	Company resorts to publishing video clips of manufacturing processes of its products.	**13**	**18.84**	**39**	**56.52**	**15**	**21.74**	**2**	**2.90**	**0**	**0.00**	**3.91**	**0.722**
	Company cooperates with cinemas for purpose of displaying its products during films.	**12**	**17.39**	**28**	**40.58**	**26**	**37.68**	**3**	**4.35**	**0**	**0.00**	**3.71**	**0.806**
	Company is keen to portray its products in a way that shows its advantages and hides its flaws.	**18**	**26.09**	**33**	**47.83**	**15**	**21.74**	**3**	**4.35**	**0**	**0.00**	**3.96**	**0.812**
	Overall Average											**3.91**	**0.804**
	Availability of imaging technique in Iraqi General Company for Agricultural Supplies											**78%**	
Packaging Technique (Y2)	**Company is keen on packaging its products in an attractive way for attracting attention of customers.**	**18**	**26.09**	**40**	**57.97**	**7**	**10.14**	**4**	**5.80**	**0**	**0.00**	**4.04**	**0.775**
	Company owns a packaging unit within organizational structure of marketing function.	**13**	**18.84**	**39**	**56.52**	**13**	**18.84**	**2**	**2.90**	**2**	**2.90**	**3.86**	**0.862**
	Company cooperates with famous design agencies in field of product packaging.	**19**	**27.54**	**31**	**44.93**	**13**	**18.84**	**4**	**5.80**	**2**	**2.90**	**3.88**	**0.978**
	Company uses marketing consultants from universities to develop packaging of its products.	**15**	**21.74**	**32**	**46.38**	**16**	**23.19**	**4**	**5.80**	**2**	**2.90**	**3.78**	**0.953**
	Company allocates fixed amounts for packaging from marketing budget.	**14**	**20.29**	**36**	**52.17**	**11**	**15.94**	**4**	**5.80**	**4**	**5.80**	**3.75**	**1.035**
	Overall Average											**3.86**	**0.921**
	Availability of packaging technique in Iraqi General Company for Agricultural Supplies											**77%**	
Coloring Technique (Y3)	**Company adopts a coloring policy for all its products.**	**19**	**27.54**	**30**	**43.48**	**17**	**24.64**	**3**	**4.35**	**0**	**0.00**	**3.94**	**0.838**
	Company allocates a specific color to paint all its buildings.	**10**	**14.49**	**35**	**50.72**	**17**	**24.64**	**6**	**8.70**	**1**	**1.45**	**3.68**	**0.883**
	Company tends to use color green because it is associated with issues of nature.	**6**	**8.70**	**14**	**20.29**	**26**	**37.68**	**18**	**26.09**	**5**	**7.25**	**2.97**	**1.057**
	Company emphasizes that its product mix has a gradual assortment of colors according to importance of product to market.	**17**	**24.64**	**32**	**46.38**	**13**	**18.84**	**6**	**8.70**	**1**	**1.45**	**3.84**	**0.949**
	Company uses colors that attract customers' attention and motivate them to buy.	**21**	**30.43**	**30**	**43.48**	**12**	**17.39**	**5**	**7.25**	**1**	**1.45**	**3.94**	**0.953**
	Overall Average											**3.68**	**0.936**
	Availability of coloring technique in Iraqi General Company for Agricultural Supplies											**74%**	

Results

It is noted from table (1) that social responsibility in its research dimensions (economical, societal and environmental) and neuromarketing have obtained well-weighted averages, which indicates their application and presence in Iraqi General Company for Agricultural Supplies in which a search application was run. Statistical analysis program (SPSS)

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

was used for purpose of extracting *correlation coefficients* between social responsibility and neuromarketing, and results of analysis appeared as in table (2).

Table 2: Results of Correlation Coefficients between Social Responsibility and Neuromarketing

Independent Variables	Economical Dimension	Societal Dimension	Environmental Dimension	Social Responsibility	Indication Level
Dependent variable (Neuromarketing)	**0.559**	**0.697**	**0.649**	**0.738**	**0.000**
Correlation is significant at the 0.01 level (N=69).					

It is clear from table (2) there are correlations between the investigated variables, allowing transition to measure effect relations between those variables by calculating the regression coefficients using statistical analysis program (SPSS), as which is shown in table (3).

Table 3: Results of Regression Coefficients for Social Responsibility on Neuromarketing

Independent variable	Dependent variables	Constant limit value (a)	Value of the marginal slope coefficient (β)	Coefficient of determination (R2)	(F) calculated value	(F) Tabular value	Indication Level	Indication type
Social Responsibility	**Neuromarketing**	**0.950**	**0.908**	**0.484**	**62.741**	**3.984**	**0.000**	**significant**
Regression is significant at the 0.05 level (N=69).								

Discussion

From results in table (2) and table (3) it is possible to reach following:

1) Hypothesis test (*There is a significant correlation between economical dimension and neuromarketing*) The calculated value of correlation coefficient between (economical dimension) and (neuromarketing) reached (0.559), and indicates the existence of a strong direct positive correlation relationship between the two variables at significance level (0.01) and accordingly *the hypothesis is accepted*.
2) Hypothesis test (*There is a significant correlation between societal dimension and neuromarketing*) The calculated value of correlation coefficient between (societal dimension) and (neuromarketing) reached (0.697), and indicates existence of a strong direct positive correlation relationship between two variables at the significance level (0.01) and accordingly *the hypothesis is accepted*.
3) Hypothesis test (*There is a significant correlation between environmental dimension and neuromarketing*) The calculated value of correlation coefficient between (environmental dimension) and (neuromarketing) reached (0.649), and indicates the existence of a strong direct positive correlation relationship between the two variables at the significance level (0.01) and accordingly *the hypothesis is accepted*.
4) Hypothesis test (*There is a significant correlation between social responsibility and neuromarketing*) The calculated value of correlation coefficient between (social responsibility) and (neuromarketing) reached (0.738), and indicates the existence of a strong direct positive correlation relationship between the two variables at the significance level (0.01) and accordingly *the hypothesis is accepted*.
5) Hypothesis testing (*There is a significant effect of social responsibility in neuromarketing*) The calculated (F) value reached (62.741) which is greater than the tabular (F) value of (3.984) at the significance level (0.05) and accordingly *the hypothesis is accepted*. Through value of coefficient of determination (^{2}R) of (0.484), this means that dimensions of the determinants explain (48%) of the changes that occur in neuromarketing, and that (52%) of the effect is due to other factors that are outside scope of this research.

Conclusion

Social responsibility is one of most prominent applications that contemporary business companies seek to adopt because of its clear impact on society's acceptance of its products and in a way that enhances the company's position and gives the character of confidence in its brand. As for neuromarketing, it is a group of modern marketing techniques that help company increase its sales through mental or emotional influence in potential customers, in a way that enhances their awareness of the positive characteristics of the product and implants them in the subconscious side of the mind, thus generating a motive for them to buy. It has only been proven that there are strong relationships of social responsibility in its three dimensions: economic, social and environmental with neuromarketing in its three techniques: imaging, packaging and coloring, and this link is evidence that company's adherence to application of social

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

responsibility will lead to an efficient application of neuromarketing that is related to its products. Economic dimension of social responsibility requires company to be profitable and not losing in order to be able to cover the costs of neuromarketing, especially what is related to imaging technique of product for purpose of displaying images in company's advertising campaigns. Societal dimension of social responsibility requires that company perform charitable work or contribute to it, in order to improve company's image and brand in minds of potential customers, which is main requirement of neuromarketing, in particular packaging technique, as the packaging of products must be done in a safe and satisfactory way for users, in addition to product packaging being attractive and reflecting an interesting image for those who look at it, motivating them to buy. Environmental dimension of social responsibility requires company to preserve natural resources in earth such as air, water and soil, there are many customers who have become aware of importance of natural environment and are looking to buy environmentally friendly products and even promote them, this is among demands of neuromarketing, which emphasizes attracting customer is directed towards company's products through coloring technique and use of green color that is associated with natural environment. Perhaps not only product can be colored in green, but company's building or offices can also be decorated with green in order to influence unconscious perspective of customer's mind and establish a positive idea about company by what drives him towards buying and advertising its products on one hand and increasing company's market share, sales volume and position in industry in which it operates on other hand.

References

Abu Zayyad, H.M., Obeidat, Z.M., Alshurideh, M.T., Abuhashesh, M., Maqableh, M., & Masa'deh, R.E. (2021). Corporate social responsibility and patronage intentions: The mediating effect of brand credibility. *Journal of Marketing Communications*, *27*(5), 510-533.

Alsharif, A.H., Salleh, N.Z.M., Baharun, R., Alsharif, Y.H., & Abuhassna, H. (2021). A Bibliometric Analysis of Neuromarketing: Current Status, Development and Future Directions. *International Journal of Academic Research in Accounting, Finance and Management Business Sciences*, *11*(3), 828-847.

Anuar, N.N.A., Isa, S.M., & Mansor, A.A. (2021). Subconscious response on marketing mix for green and non-green goods: A neuromarketing study. *In Proceeding National & International Conference*, *1*(12), 73-83.

Armstrong, G., Kotler, P., Trifts, V., & Buchwitz, L.A. (2018). Marketing: An Introduction, Ed. 6th, United States of America: Pearson Canada Inc.

Ashe-Edmunds, S. (2020). Good Marketing and Promotion Techniques. *Small Business Review*, 1-8.

Bade, K.S. (2015). The dimensions of marketing mix. *Journal of Management and Organizational Studies*, *2*(1), 72-132.

Buertey, S., Sun, E.J., Lee, J.S., & Hwang, J. (2020). Corporate social responsibility and earnings management: The moderating effect of corporate governance mechanisms. *Corporate Social Responsibility and Environmental Management*, *27*(1), 256-271.

Chu, S.C., & Chen, H.T. (2019). Impact of consumers' corporate social responsibility-related activities in social media on brand attitude, electronic word-of-mouth intention, and purchase intention: A study of Chinese consumer behavior. *Journal of Consumer Behaviour*, *18*(6), 453-462.

Constantinescu, M., Orindaru, A., Pachitanu, A., Rosca, L., Caescu, S.C., & Orzan, M.C. (2019). Attitude evaluation on using the neuromarketing approach in social media: Matching company's purposes and consumer's benefits for sustainable business growth. *Sustainability*, *11*(24), 7094-7115.

Dragolea, L., & Cotirlea, D. (2011). Neuromarketing: between influence and manipulation. *Polish Journal of Management Studies*, *3*, 78-88.

Ferrell, O.C., Harrison, D.E., Ferrell, L., & Hair, J.F. (2019). Business ethics, corporate social responsibility, and brand attitudes: An exploratory study. *Journal of Business Research*, *95*, 491-501.

Fripp, G. (2020). Main Types of Sales Promotions. *Marketing Study Guide Review*, 6-11.

Gilal, F.G., Channa, N.A., Gilal, N.G., Gilal, R.G., Gong, Z., & Zhang, N. (2020). Corporate social responsibility and brand passion among consumers: Theory and evidence. *Corporate Social Responsibility and Environmental Management*, *27*(5), 2275-2285.

Golnar-Nik, P., Farashi, S., & Safari, M.S. (2019). The application of EEG power for the prediction and interpretation of consumer decision-making: A neuromarketing study. *Physiology & behavior*, *207*, 90-98.

He, H., & Harris, L. (2020). The impact of Covid-19 pandemic on corporate social responsibility and marketing philosophy. *Journal of business research*, *116*, 176-182.

Hwang, J., Kim, J.J., & Lee, S. (2020). The importance of philanthropic corporate social responsibility and its impact on attitude and behavioral intentions: The moderating role of the barista disability status. *Sustainability*, *12*(15), 6235.

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

Iglesias, O., Markovic, S., Bagherzadeh, M., & Singh, J.J. (2020). Co-creation: A key link between corporate social responsibility, customer trust, and customer loyalty. *Journal of Business Ethics*, *163*(1), 151-166.

Iloka, B.C., & Onyeke, K.J. (2020). Neuromarketing: a historical review. *Neuroscience Research Notes*, *3*(3), 27-35.

Isa, S.M., Mansor, A.A., & Razali, K. (2019). Ethics in Neuromarketing and its implications on Business to stay vigilant. *KnE Social Sciences*, 687-711.

Išoraitė, M. (2016). Marketing mix theoretical aspects. *International Journal of Research-Granthaalayah*, *4*(6), 25-37.

Jahmane, A., & Gaies, B. (2020). Corporate social responsibility, financial instability and corporate financial performance: Linear, non-linear and spillover effects–The case of the CAC 40 companies. *Finance Research Letters*, *34*.

Ji, Y.G., Tao, W., & Rim, H. (2020). Mapping corporate social responsibility research in communication: A network and bibliometric analysis. *Public Relations Review*, *46*(5).

Kaklauskas, A., Bucinskas, V., Vinogradova, I., Binkyte-Veliene, A., Ubarte, I., Skirmantas, D., & Petric, L. (2019). Invar neuromarketing method and system. *Stud. Inform. Control*, *28*(3), 357-370.

Kerin, R.A., & Hartley, S.W. (2020). *Marketing: the Core, Ed. 8th*. New York: McGraw-Hill Education.

Krajnovic, A., Sikiric, D., & Jasic, D. (2012). *Neuromarketing and Customers*. Management International Conference 13th, Budapest, Hungary.

Mamun, K.A.A. (2020). Technological advancements and opportunities in Neuromarketing: A systematic review. *Journal of Brain Informatics*, *7*(1), 1-19.

Mansor, A.A., & Isa, S.M. (2020). Fundamentals of neuromarketing: What is it all about?. *Neuroscience Research Notes*, *3*(4), 22-28.

Massaro, G. (2020). 21 Ways to Promote Your Sweepstakes and Grow Your Business. *Ecommerce Marketing Magazine*, 3-11.

Nasr, L.B. (2014). Neuroscience techniques and the priming processes significance to neuromarketing advertising. *European Scientific Journal*, *1*, 255-267.

Ntapiapis, N., & Ozkardesler, C. (2020). *Analyzing the Strategic Role of Neuromarketing and Consumer Neuroscience, Ed. 1st*. Uskudar University Publishing, Turkey.

Oliveira, J.H.C.D., & Giraldi, J.D.M.E. (2019). Neuromarketing and its implications for operations management: an experiment with two brands of beer. *Journal of Gest. Prod.*, *26*(3), 1-12.

Orazalin, N., & Baydauletov, M. (2020). Corporate social responsibility strategy and corporate environmental and social performance: The moderating role of board gender diversity. *Corporate Social Responsibility and Environmental Management*, *27*(4), 1664-1676.

Palmatier, R.W., Louis, E.S., Stern, W., & El-Ansary, A.I. (2020). *Marketing Channel Strategy, Ed. 9th*. New York: Taylor and Francis Group.

Pileliene, L., & Grigaliunaite, V. (2017). The effect of female celebrity spokesperson in FMCG advertising: neuromarketing approach. *Journal of consumer marketing*, *34*(3), 202-213.

Pride, W.M., & Ferrell, O.C. (2019). *Foundations of Marketing, Ed. 8th*. Australia: Cengage Learning, Inc.

Ramesh, K., Saha, R., Goswami, S., & Dahiya, R. (2019). Consumer's response to CSR activities: Mediating role of brand image and brand attitude. *Corporate Social Responsibility and Environmental Management*, *26*(2), 377-387.

Randle, M., Kemperman, A., & Dolnicar, S. (2019). Making cause-related corporate social responsibility (CSR) count in holiday accommodation choice. *Tourism Management*, *75*, 66-77.

Reutov, V.E., Mitina, E.A., & Kalkova, N.N. (2020). Formation and Promotion of the Territory Brand of the Neuromarketing Tools. *In International Scientific Conference" Far East Con"(ISCFEC 2020)*, 1375-1383.

Ruonan, Z., & Hong, Y. (2019). Corporate social responsibility disclosure, financing constraints and investment-cash flow sensitivity. *Asian Journal of Business Environment*, *9*(1), 21-28.

Salazar, G.L.L. (2017). The corporate social responsibility and the marketing strategy: influence on the customer's purchase decision. *International Journal of Business and Social Science*, *8*(2), 74-82.

Santini, F.D.O., Ladeira, W.J., Sampaio, C.H., & Boeira, J.P. (2020). The effects of sales promotions on mobile banking a cross-cultural study. *Journal of Promotion Management*, *26*(3), 350-371.

Shaari, N.A.S., Syafiq, M.M.J., Amin, M.K.M., & Mikami, O. (2019). Electroencephalography (EEG) application in neuromarketing-exploring the subconscious mind. *Journal of Advanced Manufacturing Technology (JAMT)*, *13*(2 (2)), 81-92.

Shafieizadeh, K., & Tao, C.W.W. (2020). How does a menu's information about local food affect restaurant selection? The roles of corporate social responsibility, transparency, and trust. *Journal of Hospitality and Tourism Management*, *43*, 232-240.

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022

Sharma, R., & Sinha, A. (2020). Neuromarketing and Understanding Antecedents of Consumer Switching Intensions—A Systematic Review of Literature. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *17*(6), 14660-14675.

Singh, R. (2021). Challenges of Marketing in COVID-19 Scenario: A Neuro-marketing Approach. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(12), 4192-4199.

Singh, S., Khare, A., Pandey, S.K., & Sharma, D.P. (2021). Industry and community peers as drivers of corporate social responsibility in India: The contingent role of institutional investors. *Journal of Cleaner Production*, *295*.

Solomon, M.R., Marshall, G.W., & Stuart, E.W. (2018). *Marketing: Real People Real Choices, Ed. 9th.* United States of America: Pearson Education.

Spence, C. (2019). Neuroscience-inspired design: From academic neuromarketing to commercially relevant research. *Organizational Research Methods*, *22*(1), 275-298.

Suomala, J., Palokanas, N., Leminen, S., Westerlund, N., & Heinonen, J. (2012). *Neuromarketing: Understanding Customers Subconscious Responses to Marketing, 1st Ed*. Urban Publishing: New York, USA.

Wong, A.T.T. (2019). Do corporate social responsibility and safety of food affect reputation? A study of fast-food restaurants industry in Hong Kong. *Journal of Economics, Management and Trade*, *22*(3), 1-18.

Upadhye, B.D., Das, G., & Varshneya, G. (2019). Corporate social responsibility: a boon or bane for innovative firms?. *Journal of Strategic Marketing*, *27*(1), 50-66.

Vences, N., Diaz-Campo, J., & Rosales, D. (2020). Neuromarketing as an Emotional Connection Tool Between Organizations and Audiences in Social Networks. A Theoretical Review. *Frontiers in Psychology*, 11, 1787-1799.

Waheed, A., Zhang, Q., Rashid, Y., & Zaman Khan, S. (2020). The impact of corporate social responsibility on buying tendencies from the perspective of stakeholder theory and practices. *Corporate Social Responsibility and Environmental Management*, *27*(3), 1307-1315.

Yadava, M., Kumar, P., Saini, R., Roy, P.P., & Prosad Dogra, D. (2017). Analysis of EEG signals and its application to neuromarketing. *Multimedia Tools and Applications*, *76*(18), 19087-19111.

Zahopoulos, V. (2020). Understanding Neuromarketing Techniques and Their Use in Localization. In *Digital and Social Media Marketing*, 299-304.

DOI:10.9756/IAJH/V9I1/IAJH0901
Received:02 June 2022/Accepted:20 June 2022/Published:08 July 2022