

# Consumer perception towards durable goods using neuromarketing (eye-tracking) – a study with reference to Jaipur

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## **Abstract:**

*In the modern era, customer retention is one of the visionary tasks for the firm to sustain the customer from the competitors. One of the major issues for the firm is to focus on the existing customer rather than searching for new customers. Hence to overcome these obstacles eye-tracking is a long-lasting technique that will be useful for the marketer to attract customers and retain them for the remote future. It is also cost-effective and the easiest way to admire the customer. Visual attention always creates awareness in the mind of the consumer when they are attracted it will make them for purchasing the product.*

*This paper mainly focuses on using of Eye-tracking technique of neuromarketing to identify the factors influencing the consumer attitude and perception towards durable goods. For this purpose Factor Analysis and Principle Component Analysis is used.*

**Keywords:** *Neuromarketing, Eye-Tracking, durable goods, strategies, Cultural Factors, Technical Factors, Social Factors, Psychological Factors, Economic Factors, Motivational Factors.*

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Date of Submission: 01-07-2024

Date of acceptance: 12-07-2024

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## **I. Introduction:**

### **(A) Neuromarketing: A Quick Overview**

Neuromarketing is a type of marketing that incorporates interdisciplinary fields such as sociology, marketing, psychology, and neurology to better understand consumer behaviour during the buying decision process. The human brain is divided into three sections: the old brain, the middle brain, and the new brain. The human brain is directly affected by neuromarketing. The activation of the brain allows marketers to fill the gap left by traditional tactics by employing various brain imaging techniques. Various neuroimaging techniques such as functional magnetic resonance imaging, electroencephalography, magnetoencephalography, positron emission tomography, transcranial magnetic stimulation, eye tracking, measuring physiological responses, implicit association test, and skin conductance aid in the study of the human brain and the collection of information through the five senses about the consumer needs, desires, and expectations from the marketer to achieve the target in the most difficult of circumstances (V Sebastian, 2014).

Neuromarketing is a cutting-edge field of study that, in contrast to traditional marketing, has been shown to be weak in understanding the consumer mind during the decision-making process. Consumers are typically unable to recollect their sentiments and thoughts emphatically. In the 1990s, Harvard professor Jerry Zaltan saw an opportunity to use cutting-edge technology to read the human brain in marketing and customer behaviour, and he pioneered neuromarketing. It is an approach that incorporates information from a variety of fields, including psychology, sociology, neurology, and marketing. Neuromarketing was founded in 2002 to bridge the gap between consumer behaviour research and neuroscience research. Many advertising companies and marketing professionals use neuromarketing in pre-testing procedures to determine the impact of investments and consumer responses (Sudeep Chatterjee 2015).

Neuromarketing opens the way for businesses and organisations to invest more in production and marketing to better understand their customer's purchase decisions and compete in local, national, and global markets. It is beneficial to both the company and the product by using brain imaging techniques such as functional

magnetic resonance imaging, electroencephalography, magnetoencephalography, positron emission tomography, transcranial magnetic stimulation, eye tracking, measuring physiological responses, implicit association test, and skin conductance (Christophe Morin, 2011). Behind traditional qualitative and quantitative research approaches, neuromarketing has emerged as a noticeable field activity; the focus is on consumer attitudes as the marketing business develops. In the decision-making process, the hidden brain is extremely important. Neuromarketing strategies assist in bridging the gap between traditional methods by offering a comprehensive picture of consumer preferences and choices and overcoming the difficulties that businesses experience in the market. As a result, traditional marketing makes it more difficult to analyse a customer's buying behaviour than neuromarketing. As a result, neuromarketing can help researchers, professionals, marketers, and businesses forecast consumer responses utilising various brain imaging techniques (Silvia Klineckova 2016).

Manufacturers are increasingly turning to neuromarketing to help them launch a new product through advertising. They use brain imaging techniques to assess consumer responses before putting their product on the market. It is essential to examine alterations in the brain imaging techniques aids in the identification of desires wants, and inducements to purchase things. Brands have an important role in the business's success. Colours will entice the consumer to capture in the business amid competitors, and brand plays an important function in creating awareness of the product attributes (K. Vikram, K.V. Ramanathan 2015). Many businesses are focusing on neuromarketing approaches to understand consumer expectations during the buying decision process and develop their businesses using marketing strategies. It is also used as a promotional tactic to run a business more effectively in society to stay in the market for the long term and prevent customers from transferring to competitors. Companies should acquire more information and update their technologies to understand the consumer's expectations and mental outlook in the global market (Cristina Stoicescu, 2015).

According to Dijana Cosic (2016), while neuromarketing cannot precisely read the Consumer's mind, the marketers can raise the awareness about the product by using brain. imaging techniques such as eye-tracking, as well as attractive colours and logos, which will impact the consumer's buying behaviour. In their study of how consumers perceive a/an logotype/emblem in advertising, Yener Giriskan and Diren Bulut (2014) found that placing the emblem or logotype on the left-hand side proves that the consumer's eye moment is usually read the message from left to right, which creates attention, interest, learning, and memory to increase sales by using different colour, shape, and design to attract the consumer.

In research on young people's attitudes about smartphones, Rajesh Bahurupi and Megha Metha (2013) discovered that the majority of respondents prefer to buy Samsung and Nokia phones. Young people who use smartphones anticipate good looks, features, style, and usability, but there are also barriers such as pricing and exploitation that young people face all around the world. According to Christopher Arthman and I-Ping Li (2017), neuromarketing is the art of evaluating the consumer mind, such as feelings, sentiments, and engagement, by visualising the eye moment while watching advertisements, which will influence consumer buying behaviour, brand awareness, and customer loyalty. Vlasceanu Sebastian (2014) examines cognitive and emotional responses using a variety of approaches, instruments, and procedures to determine customer emotions, feelings, and thoughts to make decisions and understand how they react while purchasing a product. According to Arun Kaushal, Ankit Saxena, and Shivam Bhardwaj (2017), neuromarketing approaches were embraced by marketers by studying the mind of the consumer to make decisions in the company to increase sales and compete with competitors for growth and development in the coming years. Manish Madan and Ankita Popli (2016) found that the variable contributes more to independent rather than dependent variables for adopting new technologies to sustain the market for getting effective results by identifying the gap of the consumer to fulfil desires and create demand to boost sales to achieve profit in the company in their study neuromarketing as emerging innovative market research.

## **(B) EYE TRACKING**

Eye-tracking is a marketing tool that allows a marketer to visualise a product to attract the customer's attention and boost their purchasing behaviour. The human eye moves from left to right most of the time. Eye-tracking is also a sign that the human brain is about to make a purchase choice for a company's product. Neuromarketing businesses utilise appealing colours, logos, and messages that are visualised by humans through their eyes to record and influence consumer preferences regarding a product during the buying decision process.

## **(C) FACTORS INFLUENCING CONSUMER ATTITUDE TOWARDS NEUROMARKETING**

Consumer perception is a crucial element for the company to impress the consumer and make awareness about the product. Opinions, emotions, thoughts of the consumer provide an opportunity for the leading business and also play a major loophole to grow and sustain the business for a longer period and protect the consumer from the competitors. Syed Mehdi Ur Rehman, Amir Feroz Shamsi, Syed Saif Ur Rehman, Munira Amir Ali & Mohamed Faraz (2016) in their study stated that qualitative analysis helps to understand the buying behaviour of the consumer using the latest neuromarketing technology to know how far these techniques take the marketer to achieve target audience in purchasing the product. Silviu Gabriel Szentesi (2017) concludes that neuromarketing is useful for both current and future moral consecution arises in companies and can be a pleasant

criterion for the decision maker and the stakeholder. K. Vikram, K. V. Ramanathan (2015) in their study concluded that the investigator uses various factors like features, fashion, colors, style, price, quality to motivate the consumer to purchase smart phones. Brands play an important role in consumer perception of buying decision process for smartphone users. Mohammad Zulfequar Alam, Sherrif A.Elassi (2016) in his study on consumer perception towards E-shopping create a positive impact on consumers in a rapid growth market to satisfy their expectations and increase the buying behavior of the consumer providing vast opportunities in the challenging competitive market. Online marketing paves a path for global firms by providing quality products, fashion and style, attractive colors that will create attention to choose their brands using websites.

Bault and Rusconi (2020) indicate that, in recent years, knowledge on the neurobiology of choice has increased significantly. Research in the field of decision-making has identified important brain mechanisms that construct a representation of an option's subjective value based on previous experience, recovered, and compared with that of other options available to choose from.

Harris et al. (2019) researched the use of consumer neuroscience to improve and determine the effectiveness of ads related to public health and social causes in digital media. This study showed that action/emotion-based marketing communications that ask people to act, share, promise or challenge tend to be more effective than those based on rationality. Also, none of the highest attention peaks were produced when viewing the brand logos. Besides, Hafez (2019) explains that marketing specialists must develop a positive and favorable brand image in the minds of customers through the development of attractive ads with emotional content. Neuromarketing research has empirically evidenced that most purchasing decisions are made emotionally. Therefore, creating initiatives to build an emotional bond is the main task of experts to improve marketing performance.

Neuromarketing has allowed to analyze how the type of medium in which advertising is inserted impacts the emotional reaction of the viewer. Baraybar-Fernández et al. (2017) carried out a research focused on discovering the relationship between the emotions induced in audio-visual advertising messages and their impact on the subject's memory. To achieve this, they carried out an experiment with eight audiovisual advertising messages (six representatives of six basic emotions: joy, surprise, anger, disgust, fear and sadness; and two rational ones). On the one hand, they used neuromarketing techniques such as the cardiac electrical activity (ECG) and the electrical activity of the dermis (AED) of the subjects. On the other, a conventional research technique was also used: a questionnaire applied to the subjects who participated in the research. The results showed that, both for the suggested memory of the message transmitted and for the activity of the advertiser, the announcement with the best results was that of sadness, an announcement that was also considered the most attractive by the subjects under study.

Dos Santos et al. (2019) analyzed how sponsorships functioned in sports posters. The authors' objective was to examine the influence of congruence (perceived and effective) and the level of visual attention toward sponsors on recall as well as purchase intention in sports sponsorship by applying neurophysiological measures. The experiment used eye tracking techniques with 111 men and 129 women ( $n = 24$ ) with 24 sports posters from three different disciplines (sailing, tennis, and F1), with varying consistency, number of sponsors, and position. The results showed that the recall of the brand is influenced by the number of sponsors present on the poster and by the time of fixation. Likewise, it has been shown that the use of sexual claims in advertisements published in print media does not increase brand recall, compared to those that do not use this type of strategy.

With the advent of web 2.0, neuromarketing is providing interesting data to advertisers on the effectiveness of their advertising on social networks. Muñoz-Leiva et al. (2019) carried out research on travel advertising on social networks and showed that it is more effective when inserted in media with little editorial content such as Facebook or specialized blogs. They also showed that the use of celebrities as a claim in these types of ads captures the attention of potential consumers.

Using neuromarketing for social media analysis enables companies to look past big data and go beyond the socially desired responses, as it brings to light real reactions. Therefore, the effort has a great final reward. However, to be sustainable, since this is a joint effort (companies need the help of consumers for data collection), the communication strategy should focus on showing consumers how they are benefited (Constantinescu et al., 2019).

## **II. Research Methodology**

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. It is necessary for the researcher to know not only the research methods/techniques but also the methodology.

This research paper describes the objectives of the study and problem undertaken. Review of the relevant literature is then collected for finding factors influencing variable taken for the study. For data collection quantitative procedure was used to meet the objective. The research instrument for the survey is a well- structured

printed questionnaire. The questionnaire is developed out of an extensive literature review. The questionnaire was circulated among the Consumers of durable goods in Jaipur.

**Research Design**

The research design provides a framework for obtaining and analyzing research data, while the survey focuses on collection of data. The research study initially describes the objectives of the study and problem undertaken. Review of the relevant literature is then collected for finding factors influencing variable taken for the study. For data collection, quantitative procedure was used to meet the objective.

**Sample Design**

Under this empirical research for primary data collection, Convenience sampling method was adopted and the responses from the Consumers of durable goods in Jaipur are considered. To collect empirical data, a survey research design was used, in which questionnaires were personally handed over to the respondents.

**Sample:** The sample for the study is the Consumers of durable goods. Since the perception of these consumers plays vital role in durable goods industry Consumer perception and Eye-tracking technique plays vital role for the marketers to plan their strategies to improve their business in durable goods sector.

**Objectives of the study**

1. To identify the factors influencing the consumer attitude towards durable goods on neuromarketing using eye-tracking strategies.
2. To study the perception of consumer attitude towards durable goods on neuromarketing using eye-tracking strategies.

**Hypotheses of the study**

H<sub>1</sub>: There is no significant relationship between Eye moment that impress consume durable goods and Consumer satisfaction in perceiving durable goods.

H<sub>2</sub>: There is no significant relationship between eye-tracking strategies and Consumer satisfaction in perceiving durable good

**Analysis and Results**

**Demographic profile of the Respondents**

Respondents using Durable goods are selected as respondents in the study. A sample of 378 respondents were selected and their back ground information such as gender, age, marital status, family structure, educational status, occupation level and income level are collected and presented in the Table 1.

<b>Demographic Profile of the Respondents</b>			
<b>Particulars</b>	<b>Classification</b>	<b>Number of Respondents</b>	<b>Percentage</b>
Gender	Male	154	40.7
	Female	224	59.3
Age	Below 30 years	134	35.4
	31-40 Years	60	15.9
	41-50 Years	131	34.7
	51-60 Years	53	14.0
Marital status	Married	256	67.7
	Single	122	32.3
Family Structure	Nuclear Family	190	50.3
	Joint Family	188	49.7
Educational Status	Up to Schooling	76	20.1
	Diploma/Graduation	177	46.8
	Post Graduation & above	125	33.1
Occupational Level	Salaried	155	41.0
	Business	54	14.3
	Professional	55	14.6
	Homemaker	86	22.8

	Others	28	7.4
Income Level	Less than 25000	62	16.4
	25001-50000	88	23.3
	50001-75000	99	26.2
	75001-1000000	74	19.6
	Above 1000000	55	14.6

Source: Primary Data

Table 1 shows that 59.3% of the respondents are female respondents, while 40.7% of them are male respondents. It is observed from the above table1 that, 35.4% of the respondents falls under below 30 years of age group category, 34.7% of them falls under 41 to 50 years age group category, 15.9% of them falls under 31 to 40 years age group category, and 14% of them falls between 51-60 years age group category. It is noted that 67.7% of the respondents are married, while 32.3% of them are staying single. Around 50.3% of the respondents belong to Nuclear family, while 49.7% of them are living in a Joint family. Regarding the Educational status of the respondents, 46.8% of them have completed their Diploma/Graduation, 33.1% of them have completed their Post-graduation and above, and 20.1% of them completed their school education. The majority of the respondents (41%) are Salaried employees, 22.8% of them are Homemaker, 14.6% of them are Professional, 14.3% of them are doing business, and 7.4% of them are working in some other occupations. With respect to the Income of the respondents, 26.2% of them earn between 50001 to 75000, 23.3% of them earn between 25001 to 50000, 19.6% of them earn between 75001 to 100000, 16.5% of them earn less than 25000, and 14.6% of them earn above 100000

**Eye-tracking strategies for perceiving the durable goods**

**1. Exploring the factors of Eye-tracking strategies**

The data reduction process is very important to ascertain a concise research consistently consist of all the characteristic features of variables involved in the study. The data reduction procedure is a resourceful method to correspond to the variable in the form of principal factors with proper statistical support. In social science research the research gap generates many variables to be examined in the research and they materialize in the form of well framed interview schedule. In particular, the perceptual studies rely on the responses given by the respondents in 5-point Likert scaling. The assignment of numerical values in 5- point Likert scales for each variable creates co-variances and the variables in the same domain. These co-variances and co-efficient of correlation are useful statistical parameters to group likely variables to form a new factor. This can be done through Exploratory Factor

**2. Analysis by Principal Component Method.**

It reduces the variables into factors; each factor comprises likely variables with closest co-variance and correlation. This section describes the factors that influence the Eye-tracking strategies for consuming durable goods. Eye-tracking strategies for consuming durable goods are measured by thirty variables. Based on the responses given by the consumers, exploratory factor analysis with principal component method using vari-max rotation was adopted to group the variables in to factors. KMO value (0.837) for this test confirms the sample size is adequate. Bartlett' -square value 372.622 (p=.000) is significant for this analysis. Table 2 explores the Eigen values, percentage of variance and Cumulative percentage of variance.

**Table 2**

Eigen values and variance explored by the factors			
Factors	Eigen Value	Percentage of Variance	Cumulative Percentage
1	9.898	31.986	31.986
2	6.027	12.768	44.754
3	4.326	9.032	53.786
4	3.131	5.948	59.734
5	2.409	4.794	64.528
6	1.352	4.231	68.759

Thirty variables are reduced into six factors through the association between the variables. It is noted that thirty variables under Eye-tracking strategies are reduced in to six factors which explains much of the original data. It is also noted from the cumulative percentage column, six factors explored altogether to 68.759% of the

total variance. Table 3 portrays the factors explored along with their components and their respective factor loadings.

**Table 3**

Factor scores of Eye-tracking strategies		
Factor	Components	Factor Scores
Factor 1: Cultural Factors	Attractive enamel coating colours in durable goods	0.798
	To increase the image among the friends/neighbours and relatives	0.734
	Logos, brand loyalty impress to perceive the durable goods.	0.676
	Different sizes of durable goods give convenience for all types of families.	0.614
	Exchange offers made me purchase new instead of using old goods	0.512
Factor 2: Technical Factors	Technical features of durable goods	0.806
	Innovative advertising for the brand promotion	0.721
	Technical assistance for durable goods after-sales.	0.698
	Technological advancement gives satisfaction in perceiving durable goods.	0.659
	Current saving consumption gives satisfaction to using durable goods.	0.571
Factor 3: Social Factors	I purchase durable goods to mark my status in front of others.	0.821
	I used to collect information from magazines or using the internet about the product and its usage.	0.758
	Visual information is driven by displaying their products, price, delivery, and packaging according to their convenience.	0.648
	Attractive slogans of durable goods create visual attention	0.545
Factor 4: Psychological Factors	Mental Outlook of durable goods	0.819
	I admire purchasing durable goods by seeing emotional Ads	0.805
	I was impressed by the Familiar celebrity using durable goods in media advertisements.	0.771
	I usually perceive the products in a shop along with my family members.	0.745
	I expect a variety of demonstrations from the salesperson.	0.631
	I prefer to perceive durable goods during the festive season.	0.531
Factor 5: Economic Factors	Price outlets displayed in a retail store	0.776
	Interest-free installments in perceiving durable goods	0.743
	Cash back offer for exchanging the durable goods	0.691
	Pay more money for quality products for some brands.	0.613
	I afford to pay more money for some uniqueness.	0.545
Factor 6: Motivational Factors	Demonstration of multiple brands at the same time.	0.813
	Wider choice of colours, shapes, and designs available in durable goods.	0.746
	The positive approach of the salesman creates attention to visit the shop regularly for perceiving the goods	0.723
	Attractive price tags are displayed in front of the product.	0.629
	Good atmosphere like proper lighting and brightening made to purchase goods	0.543

From the Table 3 it is inferred that **factor 1** is a combination of five variables such as, “Attractive enamel coating colours in durable goods”, “To increase the image among the friends/neighbours and relatives,” “Logos, brand loyalty impress to perceive the durable goods”, “Different sizes of durable goods give convenience for all types of families”, “Exchange offers made me purchase new instead of using old goods,” which is named as **Cultural Factors** factor.

**Factor 2** is a combination of five variables: “Technical features of durable goods”, “Innovative advertising for the brand promotion”, “Technical assistance for durable goods after-sales”, “Technological advancement gives satisfaction in perceiving durable goods”, Current saving consumption gives satisfaction to using durable goods”, named as **Technical Factors** factor.

**Factor 3** is a combination of four variables such as: “I purchase durable goods to mark my status in front of others”, “I used to collect information from magazines or using the internet about the product and its usage”,

“Visual information is driven by displaying their products, price, delivery, and packaging according to their convenience”, “Attractive slogans of durable goods create visual attention”, which is named as **Social Factors** factor.

**Factor 4** is a combination of 6 variables such as: “Mental Outlook of durable goods”, “I admire purchasing durable goods by seeing emotional Ads”, “I was impressed by the Familiar celebrity using durable goods in media advertisements”, “I usually perceive the products in a shop along with my family members”, “I expect a variety of demonstrations from the salesperson”, “I prefer to perceive durable goods during the festive season”, which is named as **Psychological Factors** factor.

**Factor 5** is a combination of 5 variables such as: “Price outlets displayed in a retail store”, “Interest-free instalments in perceiving durable goods”, “Cashback offer for exchanging the durable goods”, “Pay more money for quality products for some brands”, “I afford to pay more money for some uniqueness”, which is named as **Economic Factors** factor.

**Factor 6** is a combination of five variables such as: “Demonstration of multiple brands at the same time”, “Wider choice of colours, shapes, and designs available in durable goods”, “The positive approach of the salesman creates attention to visit the shop regularly for perceiving the goods”, “Attractive price tags are displayed in front of the product”, “Good atmosphere like proper lighting and brightening made to purchase goods”, which is named as **Motivational Factors** factor.

Hence Cultural Factors, Technical Factors, Social Factors, Psychological Factors, Economic Factors, Motivational Factors are the factors of Eye-tracking strategies for consuming durable goods. Attractive enamel coating colours, technical features, mark the status in front of others, mental outlook, price outlets displayed in a retail store and demonstration of multiple brands at the same time are the key aspects that contribute to the Eye-tracking strategies for consuming durable goods.

### 3. Perception about Eye-tracking strategies

Eye-tracking strategies for consuming durable goods are factor analysed in the previous section using exploratory factor analysis, they are:

1. Cultural Factors
2. Technical Factors
3. Social Factors
4. Psychological Factors
5. Economic Factors

Perception of the consumers are captured using the descriptive statistics (mean and standard deviation) and are portrayed in the Table 4 to 9

**Cultural Factors** is measured by five variables (i) Attractive enamel coating colours in durable goods, (ii) To increase the image among the friends/neighbours and relatives, (iii) Logos, brand loyalty impress to perceive the durable goods, (iv) Different sizes of durable goods give convenience for all types of families and (v) Exchange offers made me purchase new instead of using old goods. The perceptions of the respondents towards Cultural Factors are captured in the Table 4 through Descriptive measures.

**Table 4**

Perception about Cultural Factors		
Statement	Mean	SD
Attractive enamel coating colours in durable goods	3.98	0.983
To increase the image among the friends/neighbours and relatives	2.72	0.865
Logos, brand loyalty impress to perceive the durable goods.	3.51	1.047
Different sizes of durable goods give convenience for all types of families.	3.78	0.857
Exchange offers made me purchase new instead of using old goods	3.51	1.322

Source: primary data

Table 4 presents the perception of the respondents towards Cultural Factors. The mean responses of the variables are: Attractive enamel coating colours in durable goods is 3.98, To increase the image among the friends/neighbours and relatives is 2.72, Logos, brand loyalty impress to perceive the durable goods is 3.51, Different sizes of durable goods give convenience for all types of families is 3.78 and Exchange offers made me purchase new instead of using old goods is 3.51. Attractive enamel coating colours in durable goods are most important aspect among the respondent’s perception about cultural factors. The respondents agreed that different sizes of durable goods give convenience for all types of families, logos, brand loyalty impress to perceive the

durable goods, and exchange offers made them to purchase new instead of using old goods. However, the respondents stated that they do not want to increase the image among the friends/neighbours and relatives.

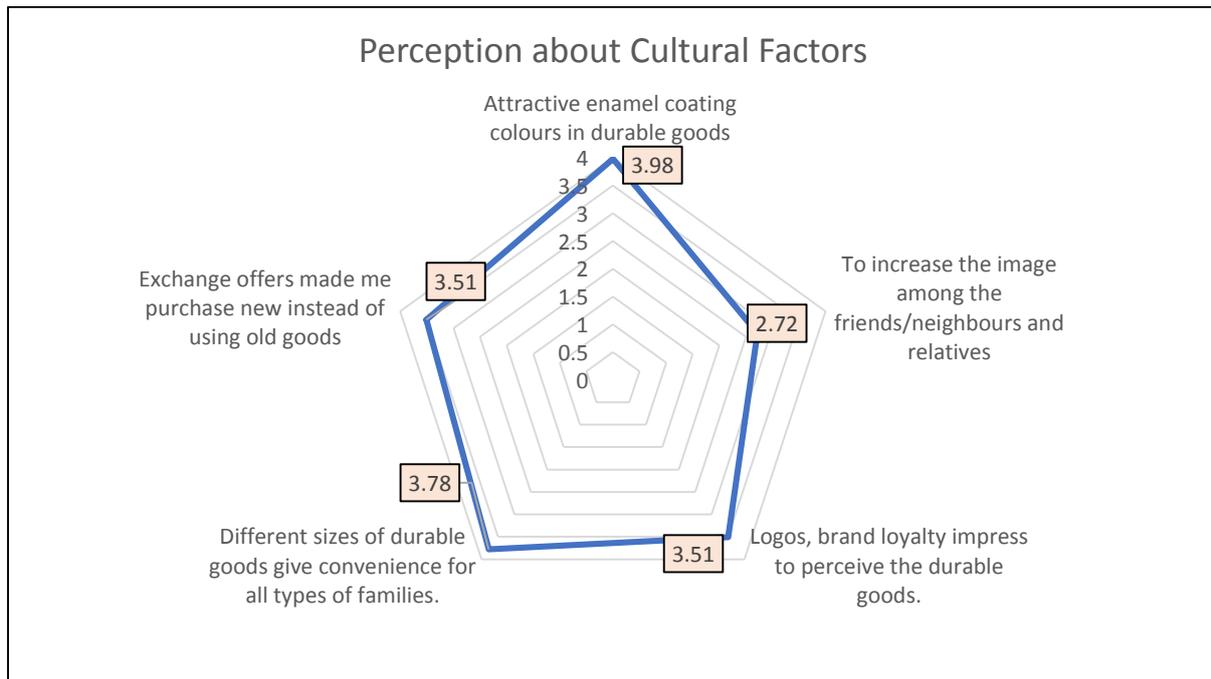


Figure 1: Perception about Cultural Factors

**Technical Factors** is measured by five variables (i) Technical features of durable goods, (ii) Innovative advertising for the brand promotion, (iii) Technical assistance for durable goods after-sales, (iv) Technological advancement gives satisfaction in perceiving durable goods and (v) Current saving consumption gives satisfaction to using durable goods. The perceptions of the respondents towards Technical Factors are captured in the Table 5 through Descriptive measures.

Table 5

Perception about Technical Factors		
Statement	Mean	SD
Technical features of durable goods	4.02	0.792
Innovative advertising for the brand promotion	4.16	0.852
Technical assistance for durable goods after-sales.	2.74	0.964
Technological advancement gives satisfaction in perceiving durable goods.	3.26	1.003
Current saving consumption gives satisfaction to using durable goods.	3.77	1.068

Table 5 presents the perception of the respondents towards Technical Factors. The mean responses of the variables are: Technical features of durable goods is 4.02, Innovative advertising for the brand promotion is 4.16, Technical assistance for durable goods after-sales is 2.74, Technological advancement gives satisfaction in perceiving durable goods is 3.26 and Current saving consumption gives satisfaction to using durable goods is 3.77. Innovative advertising for the brand promotion is the prime aspect of respondent's perception about technical factors. Technical features of durable goods, Current saving consumption gives satisfaction to using durable goods, and Technological advancement gives satisfaction in perceiving durable goods are the other aspects agreed by the respondents about technical factors. However, the respondents felt that technical assistance for durable goods after-sales is not up to their expectations.

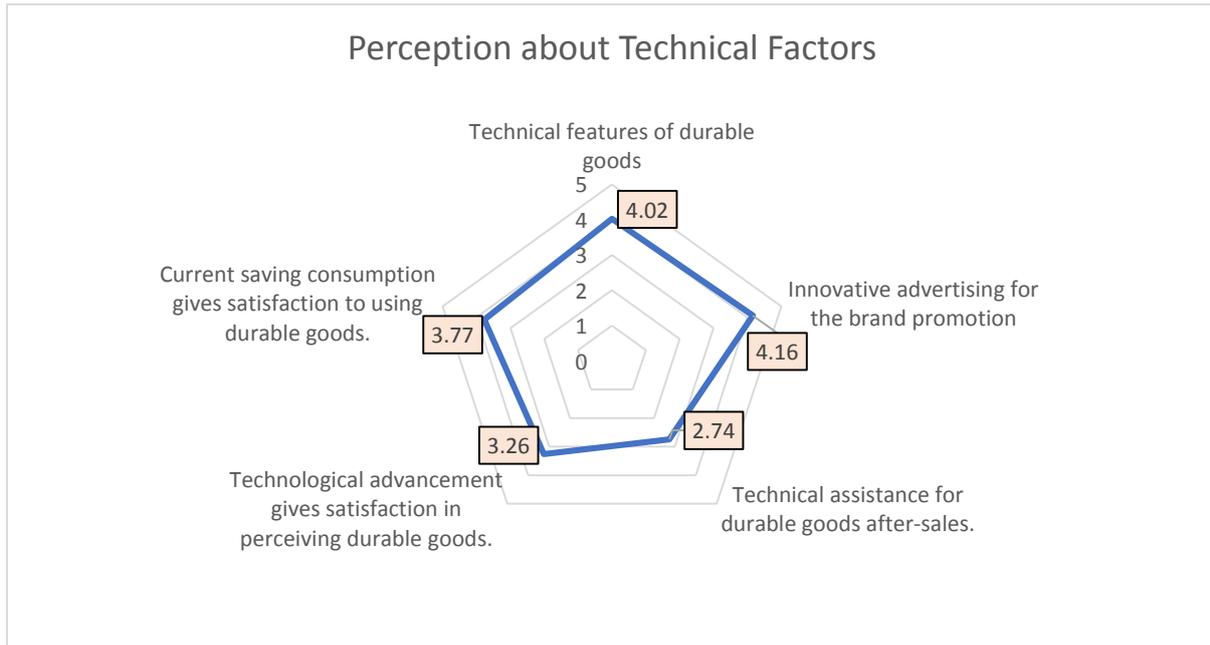


Figure 2: Perception about Technical Factors

**Social Factors** is measured by four variables (i) I purchase durable goods to mark my status in front of others, (ii) I used to collect information from magazines or using the internet about the product and its usage, (iii) Visual information is driven by displaying their products, price, delivery, and packaging according to their convenience and (iv) Attractive slogans of durable goods create visual attention. The perceptions of the respondents towards Social Factors are captured in the Table 6 through Descriptive measures.

Table 6

Perception about Social Factors		
Statement	Mean	SD
I purchase durable goods to mark my status in front of others	3.69	1.426
I used to collect information from magazines or using the internet about the product and its usage.	4.56	0.717
Visual information is driven by displaying their products, price, delivery, and packaging according to their convenience.	3.98	0.985
Attractive slogans of durable goods create visual attention	2.98	1.156

Source: primary data

Table 6 presents the perception of the respondents towards Social Factors. The mean responses of the variables are: I purchase durable goods to mark my status in front of others is 3.69, I used to collect information from magazines or using the internet about the product and its usage is 4.56, Visual information is driven by displaying their products, price, delivery, and packaging according to their convenience is 3.98 and Attractive slogans of durable goods create visual attention is 2.98. The respondents used to collect information from magazines or using the internet about the product and its usage and it is the key aspect among the respondent's perception towards social factors. The respondents felt that visual information is driven by displaying their products, price, delivery, and packaging according to their convenience and they used to purchase durable goods to mark their status in front of others. However, the respondents disagreed that attractive slogans of durable goods create visual attention.

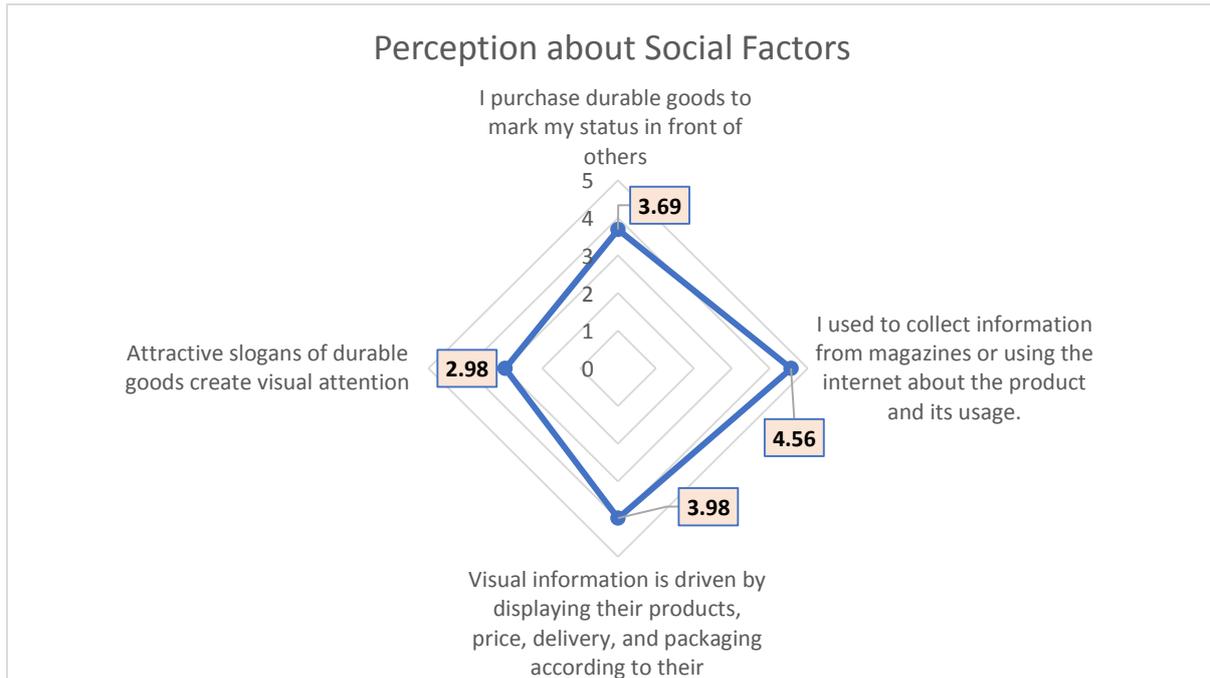


Figure 3: Perception about Social Factors

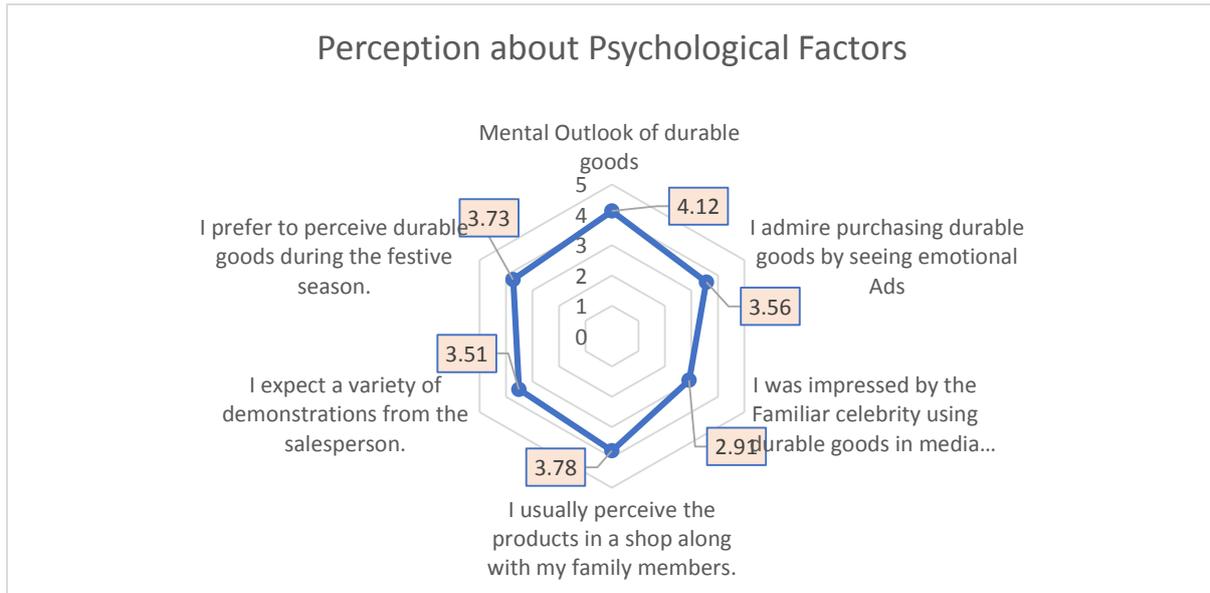
**Psychological Factors** is measured by six variables (i) Mental Outlook of durable goods, (ii) I admire purchasing durable goods by seeing emotional Ads, (iii) I was impressed by the Familiar celebrity using durable goods in media advertisements, (iv) I usually perceive the products in a shop along with my family members, (v) I expect a variety of demonstrations from the salesperson and (vi) I prefer to perceive durable goods during the festive season. The perceptions of the respondents towards Psychological Factors are captured in the Table 7 through Descriptive measures.

Table 7

Statement	Mean	SD
Mental Outlook of durable goods	4.12	0.71
I admire purchasing durable goods by seeing emotional Ads	3.56	1.36
I was impressed by the Familiar celebrity using durable goods in media advertisements.	2.91	0.983
I usually perceive the products in a shop along with my family members.	3.78	0.805
I expect a variety of demonstrations from the salesperson.	3.51	1.254
I prefer to perceive durable goods during the festive season.	3.73	1.304

Source: primary data

Table 7 presents the perception of the respondents towards Psychological Factors. The mean responses of the variables are: Mental Outlook of durable goods is 4.12, I admire purchasing durable goods by seeing emotional Ads is 3.56, I was impressed by the Familiar celebrity using durable goods in media advertisements is 2.91, I usually perceive the products in a shop along with my family members is 3.78, I expect a variety of demonstrations from the salesperson is 3.51 and I prefer to perceive durable goods during the festive season is 3.73. Mental Outlook of durable goods is the key aspect in the perception of the respondents towards psychological factors. The respondents agreed that they prefer to perceive durable goods during the festive season, and usually perceive the products in a shop along with their family members. They also agreed that they expect a variety of demonstrations from the salesperson and admire purchasing durable goods by seeing emotional Ads. However, they were not impressed by the Familiar celebrity using durable goods in media advertisements.



**Figure 4:** Perception about Psychological Factors

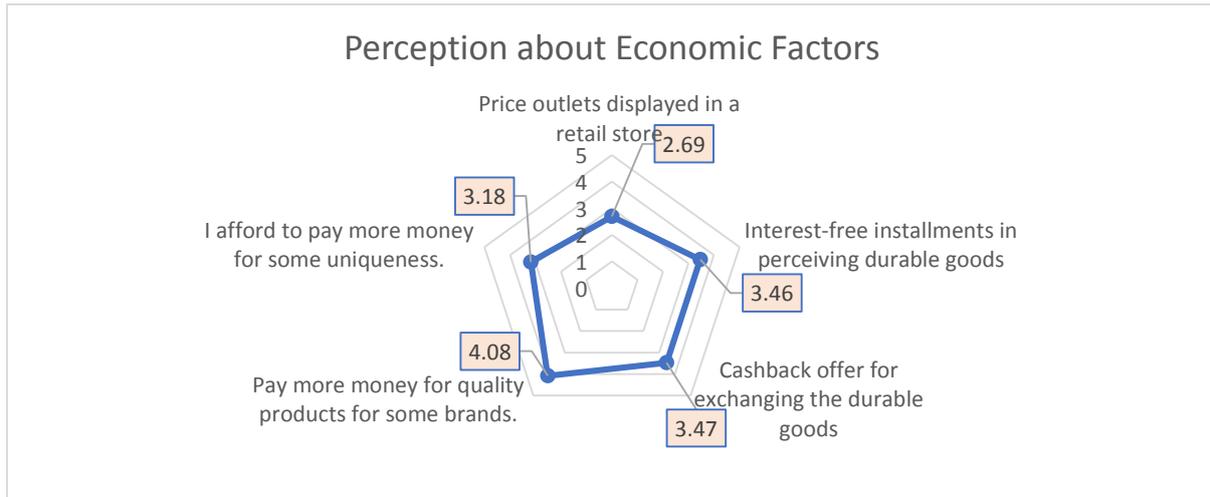
**Economic Factors** is measured by five variables (i) Price outlets displayed in a retail store, (ii) Interest-free instalments in perceiving durable goods, (iii) Cashback offer for exchanging the durable goods, (iv) Pay more money for quality products for some brands and (v) I afford to pay more money for some uniqueness. The perceptions of the respondents towards Economic Factors are captured in the Table 8 through Descriptive measures.

**Table 8**

Perception about Economic Factors		
Statement	Mean	SD
Price outlets displayed in a retail store	2.69	0.925
Interest-free instalments in perceiving durable goods	3.46	1.33
Cashback offer for exchanging the durable goods	3.47	1.355
Pay more money for quality products for some brands.	4.08	0.852
I afford to pay more money for some uniqueness.	3.18	1.477

Source: primary data

Table 8 presents the perception of the respondents towards Economic Factors. The mean responses of the variables are: Price outlets displayed in a retail store is 2.69, Interest-free instalments in perceiving durable goods is 3.46, Cashback offer for exchanging the durable goods is 3.47, Pay more money for quality products for some brands is 4.08 and I afford to pay more money for some uniqueness is 3.18. Pay more money for quality products for some brands is the prime aspect of perception among the respondents towards Economic factors. Cashback offer for exchanging the durable goods, Interest-free instalments in perceiving durable goods are the other aspects of economic factors agreed by them. They agreed that they are affording to pay more money for some uniqueness in the durable goods, if any. But, the respondents are not satisfied with the price outlets displayed in a retail store.



**Figure 5:** Perception about Economic Factors

**Motivational Factors** is measured by five variables (i) Demonstration of multiple brands at the same time, (ii) Wider choice of colours, shapes, and designs available in durable goods, (iii) The positive approach of the salesman creates attention to visit the shop regularly for perceiving the goods, (iv) Attractive price tags are displayed in front of the product and (v) Good atmosphere like proper lighting and brightening made to purchase goods. The perceptions of the respondents towards Motivational Factors are captured in the Table 9 through Descriptive measures.

**Table 9**

Perception about Motivational Factors		
Statement	Mean	SD
Demonstration of multiple brands at the same time.	4.13	0.825
Wider choice of colours, shapes, and designs available in durable goods.	4.38	0.509
The positive approach of the salesman creates attention to visit the shop regularly for perceiving the goods	3.77	0.865
Attractive price tags are displayed in front of the product.	3.81	1.13
Good atmosphere like proper lighting and brightening made to purchase goods	2.81	1.195

Source: primary data

Table 9 presents the perception of the respondents towards Motivational Factors. The mean responses of the variables are: Demonstration of multiple brands at the same time is 4.13, Wider choice of colours, shapes, and designs available in durable goods is 4.38, The positive approach of the salesman creates attention to visit the shop regularly for perceiving the goods is 3.77, Attractive price tags are displayed in front of the product is 3.81 and Good atmosphere like proper lighting and brightening made to purchase goods is 2.81. Wider choice of colours, shapes, and designs available in durable goods is the vital aspect of perception among the respondents towards Motivational factors. Demonstration of multiple brands at the same time, the positive approach of the salesman creates attention to visit the shop regularly for perceiving the goods, attractive price tags are displayed in front of the product are the other aspects of Motivational factors among them. Yet, the respondents stated that good atmosphere like proper lighting and brightening do not influence them to purchase goods.

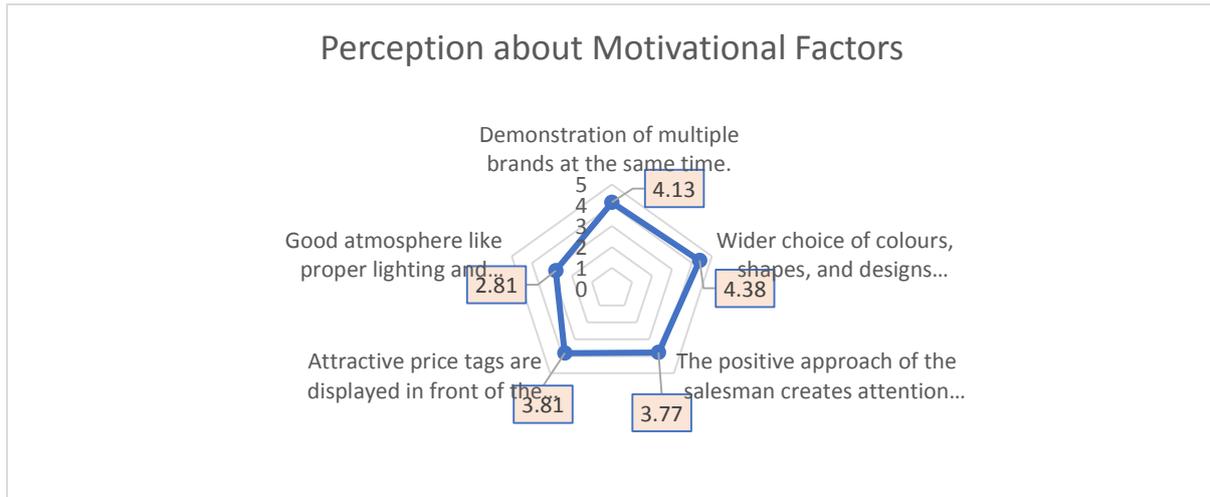


Figure 6: Perception about Motivational Factors

### III. Findings and Conclusion

In the current outline, the eye tracking technique in neuromarketing aid the companies to know the consumer attitude in purchasing the goods. Neuromarketing and consumer attitude is closely related to business growth by knowing the inner thought of the consumer desires about the final decision in purchasing the product. In that neuromarketing technique eye tracking paves spark light for the businessmen in an easiest and cheapest compared to other techniques. Thus, the statistical analysis shows a clear path for the researcher to frame the suggestions from the findings of the study and also to derive a conclusion.

#### (A) Summary of findings

The summary of findings can be subdivided into following ways:

- (i) Demographic profile of the consumers
- (ii) Eye-tracking strategies for perceiving the durable goods
- (iii) Classification of consumers based on the eye tracking strategies

##### (i) Demographic profile of the consumers

59.3% of the respondents are female respondents, while 40.7% of them are male respondents. 35.4% of the respondents falls under below 30 years of age group category, 34.7% of them falls under 41 to 50 years age group category, 15.9% of them falls under 31 to 40 years age group category, and 14% of them falls between 51-60 years age group category. 67.7% of the respondents are married, while 32.3% of them are staying single. Around 50.3% of the respondents belong to Nuclear family, while 49.7% of them are living in a Joint family. 46.8% of them have completed their Diploma/Graduation, 33.1% of them have completed their Post-graduation and above, and 20.1% of them completed their school education. 41% are Salaried employees, 22.8% of them are Homemaker, 14.6% of them are Professional, 14.3% of them are doing business, and 7.4% of them are working in some other occupations. 26.2% of them earn between Rs.50,001 to 75,000, 23.3% of them earn between 25,001 to 50,000, 19.6% of them earn between Rs.75001 to 100000, 16.4% of them earn less than 25,000, and 14.6% of them earn above Rs.1,00,000.

##### (ii) Eye-tracking strategies for perceiving the durable goods

Factors of Eye tracking strategies for consuming durable goods are identified as: Cultural factors, Technical factors, Social factors, Psychological factors, Economic factors, Attractive enamel coating colours in durable goods are most important aspect among the respondents perception about cultural factors. The respondents agreed that different sizes of durable goods give convenience for all types of families, logos, brand loyalty impress to perceive the durable goods, and exchange offers made them to purchase new 136 instead of using old goods. However, the respondents stated that they do not want to increase the image among the friends /neighbours and relatives. Innovative advertising for the brand promotion is the prime aspect of respondent's perception about Technical factors. Technical features of durable goods, Current saving consumption gives satisfaction to using durable goods, and Technological advancement gives satisfaction in perceiving durable goods are the other aspects agreed by the respondents about Technical factors. However, the respondents felt that technical assistance for durable goods after-sales is not up to their expectations. The respondents used to collect information from magazines or using the internet about the product and its usage and it is the key aspect among the respondent's

perception towards social factors. The respondents felt that visual information is driven by displaying their products, price, delivery, and packaging according to their convenience and they used to purchase durable goods to mark their status in front of others. However, the respondents disagreed that attractive slogans of durable goods create visual attention. Mental Outlook of durable goods is the key aspect in the perception of the respondents towards Psychological factors. The respondents agreed that they prefer to perceive durable goods during the festive season, and usually perceive the products in a shop along with their family members. They also agreed that they expect a variety of demonstrations from the salesperson and admire purchasing durable goods by seeing emotional Ads. However, they were not impressed by the Familiar celebrity using durable goods in media advertisements. Pay more money for quality products for some brands is the prime aspect of perception among the respondents towards Economic factors. Cashback offer for exchanging the durable goods, Interest-free instalments in perceiving durable goods are the other aspects of economic factors agreed by them. They agreed that they are affording to pay more money for some uniqueness in the durable goods, if any. But the respondents are not satisfied with the price outlets displayed in a retail store. Wider choices of colours, shapes, and designs available in durable goods is the vital aspect of perception among the respondents towards Motivational factors. Demonstration of multiple brands at the same time, the positive approach of the salesman creates attention to visit the shop regularly for perceiving the goods, attractive price tags are displayed in front of the product are the other aspects of Motivational factors among them. Yet, the respondents stated that good atmosphere like proper lighting and brightening do not influence them to purchase goods.

### **(iii) Classification of consumers based on the eye tracking strategies**

Based on the consumer's responses towards eye-tracking strategies, the consumers are classified in to three types.

1. Emotional Offer Consumers
2. Status Uniqueness Consumers
3. Delightful Consumers

- 28.9% of them are **Emotional offer consumers**. They give moderate level of importance to the Motivational factors, Technical factors and Economical factors. But they are not giving much importance to the Cultural factors, Social factors and Psychological factors.
- 27.8% of them are **Status Uniqueness consumers**, they are giving more importance to the Social factors, giving good importance to Psychological Factors, Cultural Factors, Motivational Factors and moderate importance to Technical factors. But it is noted that these types of consumers are not giving much importance to Economic Factors.
- 43.1% of them are **Delightful consumers**, they give much importance to all the Eye tracking strategies.
- It is observed that 21.9.4% of the female respondents are Emotional Offer Customers.
- It is viewed that 26.2% of the respondents who are between 41 to 50 years of age group category are Status Uniqueness customers.
- It is noted that 28.0% of the married respondents are delightful customers.
- It is viewed that 28.1% of the respondents who lives in a joint family are belong to Delightful customer category.
- It is observed that 26.1% of the respondents who have completed their Diploma/ Graduation are Status Uniqueness customers.
- It is noted that 15.9% of the respondents who are earning between Rs.25,001 to 50,000 are Emotional offer customers.
- It is noted that 15.1% of the respondents who are homemakers are found to be Emotional Offer customers.
- It is viewed that 41.9% of the respondents who have agreed to the preference to purchase durable goods are found to be Delightful customer.
- It is observed that 42.2% of the respondents who are satisfied with perceiving durable goods by using the neuromarketing technique of eye-tracking are found to be Delightful customers.

## **IV. Conclusion**

In the modern competitive world to overcome the obstacles of traditional marketing, neuromarketing by using various tools like fMRI, MRI, facial coding, eye tracking and so on helps to study the inner thought of the consumer. **Eye-tracking is one of the tools used by the firm is cost-effective and the easiest way for the marketer to capture the customer.** The human eye movement usually starts from the left to the right. Visualising the product will create more attention and increase the buying behaviour of the consumer. The researcher analyses that eye tracking is a wonderful tool in research to understand consumer buying decisions. Eye-tracking is also an indicator for the human brain preceding to making a decision for purchasing the product in the firm. The neuromarketing companies use attractive colours, shapes, logos, store image, proper lighting, attractive slogans and messages for the consumer to visualize through eye moment records and alters to look forward the consumer

preferences about the durable products in buying decision process. The company also advertise the product features to the consumer in the bus, train, flying balloons creates positive impact on durable goods. Consumer preferences consist of actions, reactions, and responses in relation to the products brought and services brought. Factors like psychological, social, economic, motivational and technical factors on the one hand and on the other side consumer awareness, brand image, effective campaigns, novelty, price attraction and visual attentions shape the consumer attitude to purchase the goods. Therefore, the neuromarketing techniques helps the businessmen to reveal the inner thoughts of the consumer in perceiving good

## REFERENCES

- [1]. Amir Hasan, Consumer brand preference for consumer durable goods with reference to Lucknow district, International Journal of Economics and Management Sciences, vol 4, Issue 1, 2014.
- [2]. Anwesh Dash, Ratikanta Dash, Biswajita Das, Neuro Marketing – An Expanding Field of Marketing Research, Volume 5, Issue 3, March 2017.
- [3]. Arun Kaushal, Ankit Saxena, Shivam Bhardwaj, Are we buying rationally or impulsively what actually happens in the consumers mind and what does neurotechnology reveal?, Innovation, competitiveness and sustainable development conference, 2017.
- [4]. Ashutaosh Gupta, Richa Shreyam, Ridhigarg, Tabassum Syed, correlation of Neuromarketing to Neurology, Vol 59, Issue, Aug 2017.
- [5]. Baekha M and Gokila K, A Study on consumer awareness, attitude and preference towards herbal cosmetic products with special reference to Coimbatore city, International Journal of Multidisciplinary Studies, Vol 2, Nov 4, 2015.
- [6]. Boldbaatar G, A Neuromarketing Study on Mongolian Consumer's Buying Decision Process, Proceedings of the Mongolian Academy of Sciences, Jan 2018.
- [7]. Christophe Morin, Neuromarketing: The new science of consumer behaviour, symposium: consumer culture in global perspective, Jan 2011.
- [8]. Cristina Stoicescu, Big Data, the perfect instrument to study today's consumer behavior, university of Economics studies, Vol 4, 2015.
- [9]. David Hensel, Ana Iorga, Lisa Wolter, Judith Znanewitz, conducting neuromarketing studies ethically – Practitioner perspectives, cogent psychology, 2017
- [10]. Dhananjay Mandlik & Milind Marathe, NM: Exploring the brain for measuring consumer behaviour, International Journal of management, Vol 6, Issue 3, March (2015)
- [11]. Dijana cosic, NM in market research, Interdisciplinary description of complex systems, Feb 2016.
- [12]. Doris Berger-Grabner, Magdalene Huber, The Effect of Neuromarketing Elements at the POS on the consumer's Decision Making Process In the Retail Sector, 2016.
- [13]. Ewelina Berlinska, Inga Kas Zycka, Neuromarketing Chance or danger for Consumers in Mesu's Students, Joint International Conference (2016)
- [14]. Furkan Sariatli, An introduction to neuromarketing and understanding the consumer brain: They do purchase, but why? An insight for review and implications, International Journal of Management and Applied Science, Volume 3, Issue 10, Oct 2017.
- [15]. Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). London, UK: Sage Publications.
- [16]. Harit Kumar & Priyanka Singh, Neuromarketing: An emerging tool of market research, international journal of engineering and management research, vol 5, Issue 6, December 2015.
- [17]. Harit Kumar, Neha Mathur, Sangeetha Jauhari, Consumer preparation towards NM in India with special reference to Kano Model Int journal of research – Granthaalayah, April 2017, Vol5, Issue4
- [18]. Jason Flores, Arne Baruca, Robert Saldivar, Assessing consumer responses to organizational engagement in political discourse, may 2019.
- [19]. K. Vikram, K.V.Ramanathan A study on perception and preferences towards smartphone users, International Journal of World research Volume1, Dec 2015, issue 14
- [20]. Manish Madan and Ankita Popli, A study on neuromarketing as emerging innovative market research strategy: An interpretive structural model approach, Journal of business and management, 2016.
- [21]. Maurizio Mauri, Luca Petruzzellis, Alberto Pezzi, Marco Chiappa, Andrea Ciceri, Vincenzo Russo, Proceeding of 7th European Business research conference, Dec 2016 sense effects about Wine consumption by means of self reports and NM methods
- [22]. Michael J.R. Butler, Neuromarketing and the perception of knowledge, Journal of MING HSU Neuromarketing inside the mind of the consumer, 2017.
- [23]. Mohammad Zulfeequar Alam and Sherrif A. Elassi, A study on consumer perception towards E-Shopping KSA, International Journal of Business and Management, Volume 11, No 7, 2016.
- [24]. Neha Singh, Simmy Jain, Neuromarketing in Action – Towards a New Model of Persuasion, Journal of Management and Sciences, 2011.
- [25]. Nicolae Al. Pop, Dan-Cristian Dabija Ana Maria Iorga, Ethical responsibility of Neuro marketing companies in harnessing the market research – A global exploratory approach, Vol 16, Issue 35, 2014.
- [26]. Nurcan Yucel, Atilla Yucel, Ali Simi Yilmaz, Fatma Cubuk, Ertugrul Bugra Orhan, Ahmed Ishan Simsek, coffee testing experiment from the neuromarketing perspective, International Academic Conference proceedings, 2015
- [27]. Parveen Kumari, Satinder Kumar, Consumer brand preference towards mobile phone : Effect of Mobile phone attributes on purchase decision, IOSR journal of business and Management, 2016.
- [28]. Rajarajan M, Birundha M, Consumer buying behaviour towards herbal cosmetic products in India, International Journal of World Research, Vol 1, Issue 34, Oct 2016.
- [29]. Rajesh Bahurupi, Megha Mehta, perception of youngsters towards smartphone, Journal of Innovative Research & Technology, Vol 2, Issue 11, Nov 2013.
- [30]. Ramya N, Mohamed Ali SA, Factors Affecting Consumer buying behavior, International Journal of Applied Research, September 2016.
- [31]. Salena Nemorin, Exploring NM and its reliance on remote sensing social and ethical concerns, International Journal of communication, 2017
- [32]. Sammer Simha, Sunil Mishra, Study on consumer perception towards mobile handset, SSRG International Journal of economics and management studies, Volume 3, Issue 2, Feb 2016.
- [33]. Sandor Huszar, Katalin Pap, Revolutionising Market research? A critical view on the promising NM, Economics and Management of Global value chains, 2016.

- [34]. Shanthi R and Desti Kanniah, Consumer perception on online shopping, *Journal of Marketing and Consumer Research*, Vol 13, 2015.
- [35]. Shrinivas, Leena James, A study on understanding the consumer purchase Intention with respect to smartphones among young in Bangalore, *International Journal of business and Management Invention*, Vol 7, Issue 1, Jan 2018.
- [36]. Silviu Gabriel Szentesi, Ethics and NM implications for market research and business practice, *Amfiteatru Economic*, Vol 1, Aug 2017
- [37]. Sonal Thakur, Rajinder Aurora, Consumer perception: A study on E-marketing, *International Journal of Recent Research Aspects*, Vol 2, Issue 2, June 2015.
- [38]. Steffen Schmidt, Philipp, *Mind Mining: Better customer understanding by applying big data analysis to neuromarketing*, 2016.
- [39]. Sudeep Chatterjee, *Neuromarketing – A path breaking approach to understanding consumer behaviour*, 2015
- [40]. Sunita Kumar *Neuromarketing: The New Science of Advertising*, Department of Management Studies, Christ University India, 2015
- [41]. Syed Mehdi Ur Rehman, Amir Feroz Shamsi, Syed Saif Ur Rehman, Munira Amir Ali & Mohamed Faraz, *NM: A Qualitative analysis of a manager's Perception in Pakistan* *EIK Asia pacific journal of marketing and retail management* Vol 7, Issue3, 2016
- [42]. Tatjana Mamula, Barbara Blazanin, *Are we buying rationally or impulsively what actually happens in the consumers mind and what does neurotechnology reveal?*, *Innovation, Competitiveness and sustainable development conference*, 2017
- [43]. Veerakumar k, *consumer behaviour and factors influencing purchase decision of durable goods*, *international Journal of computational Research and development*, volume 2, issue 2, 2017.
- [44]. Viasceanu Sebastian, *NM and evaluation of cognitive and emotional responses of consumers to marketing stimuli*, *social and Behavioral Sciences*, 2014.
- [45]. Vikash, Vinod Kumar, *A study on consumer perception towards online shopping*, *IOSR Journal of*
- [46]. Yener Giriskan and Diren Bulut (2014), *How do consumers perceive a/an logotype/emblem in the advertisements: an eye-tracking study* *International journal on strategic innovative management*, Volume 1, 2014.