



IMPACT OF ARTIFICIAL INTELLIGENCE DRIVEN PROMOTIONS ON CONSUMERS BUYING FROM E-COMMERCE WEBSITES: AN ANALYSIS

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ABSTRACT

Lack of common sense was one of the major limitations of computer devices which has now been eliminated with the introduction of artificial intelligence (AI) technology. With the help of AI, a machine can think and make human-like decisions. In the era of digital transformation, AI technology is slowly making its way into almost every sector where work is done digitally and online retailing is no exception. Artificial Intelligence has reshaped the traditional marketing methods. It offers marketers a personalized way of dealing with each individual customer by assisting in tailoring their advertisements based on an individual's previous shopping behaviour and search history on the internet. It also helps in real time advertising also known as programmatic advertising based on current browsing patterns of a visitor on the e-store. This research is an attempt to study and analyze how artificial intelligence driven marketing practices are affecting consumers in online purchases. The objective of the study is to make an investigation on promotion techniques equipped with AI technology by e-commerce websites. The research is based on the primary data which has been collected through online questionnaires. The study would be helpful for e-retailers in performing cost-benefit analysis of their AI based

marketing methods. It can also prove helpful for advertisers in deciding whether they should adopt AI-powered advertising and promotional activities.

Key words: Programmatic advertisement, artificial intelligence, marketing, consumer behaviour, E-commerce websites, Digital transformation.

Introduction

Undoubtedly the 21st century is the age of digital transformation. Internet has completely changed the concept of market and has revolutionized marketing. As per Statista report, the rate of internet penetration in India was 50% in 2020 rising since 2016 at the combined annual growth rate (CAGR) of 34.4%. Despite pandemic, the year 2020 witnessed highest revenue growth rate in e-commerce (38.5%) which can be mainly attributed to increase in internet penetration. Typically, market was considered as a physical place where buyers and sellers meet and exchange values but now the requirement of a physical place is not indispensable for an exchange to take place. In online business, businesses only need a communication device (preferably one that supports Internet services) for a transaction between buyer and seller. Doing business electronically using internet is often referred as e-commerce. It is a substitute of brick-and-mortar stores. The best part of e-commerce is that the market is not limited to a particular locality or region.

E-commerce: “E-commerce involves buying and selling processes supported by electronic means, primarily the internet. Sellers use e-markets to offer their products and services online. *E-markets* are ‘marketspaces’ rather than physical ‘marketplaces’. Buyers use them to search for information, identify what they want and place orders using credit cards or other means of electronic payment.”¹ Shopping from E-commerce websites is mainly done by Millennials and Generation Z. The Millennials and the Generation Z are comfortable in using new technologies as they are grown up in an internet connected world. (Turban and Gehrke, 2000) Like user interface in ordinary computing, web interface could be a major success factor that determines the user’s willingness to stay on a website, revisit it and buy from it.

Thus, e-commerce is nothing but performing commercial activities i.e., buying and selling goods and services with help of electronic devices. E-commerce may be in the form of any one of the following or a combination of two or more:

- Business-to-business (B2B) Model.
- Business-to-consumer (B2C) Model.
- Consumer-to-consumer (C2C) Model.
- Consumer-to-business (C2B) Model.
- Business-to-Government (B2G) Model.

With a business of USD 50 billion in 2020, India emerged as the eighth largest market for e-commerce. In 2020, India was identified as the third largest online shopping base after China and the US with 14 crore buyers. For 2021, the e-commerce sector has estimated a growth rate of 5 per cent of total sales revenue which would result the Indian e-commerce market to reach around 56.6 billion USD. (*E-Commerce in India: Industry Overview, Market Size & Growth/ IBEF, n.d.-a*) Despite the issues and disruption instigated by Covid-19, a chartbuster performance in festive season with sales of nearby 9.2 billion USD in 2021 has been recorded in the Indian e-commerce industry. In 2020, India was recognized as the third largest online shopping base with 14 crore buyers after China and US. As per reports, in 2021 e-commerce sector has been anticipated to contribute approx. ₹7.29 lakh-crore to GDP and it along with its allied sectors will increase employment opportunities by 28% as compared to last year.

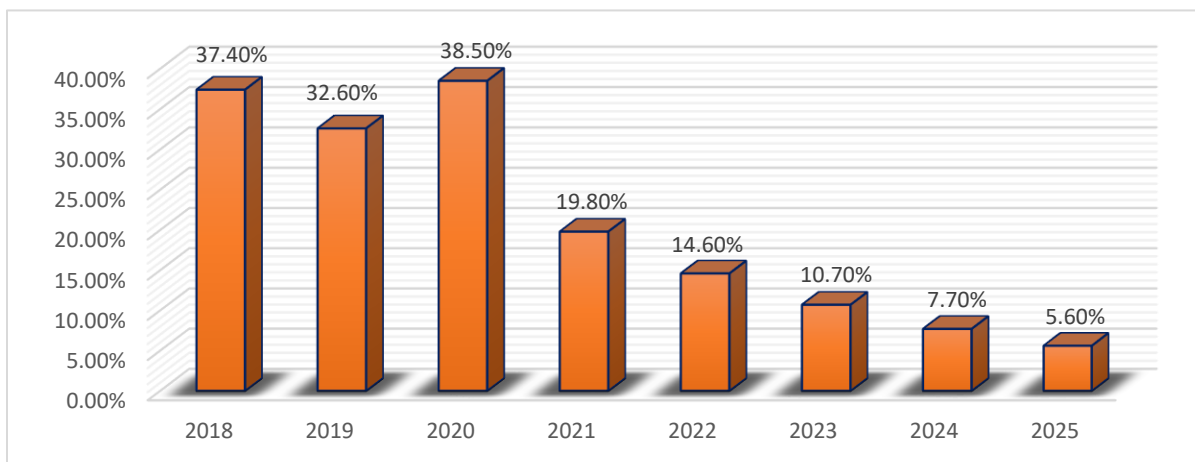


Chart 1: Revenue growth of E-commerce in India: A Statista Report on Past and Future trends

E-commerce websites use various digital tools and techniques to promote and sell their products. But in this age of cut-throat competition only being digital is not enough. Technology is ever evolving and advancing and so the marketers need to be. Technological innovations take place every day and shoppers want to experience them next time they browse an online store. To keep in pace with the market, marketers need to assimilate these innovations in their marketing methodology. AI is one of the top trending technologies which has proved its usefulness in every field where work becomes easy through the use of computers.

ARTIFICIAL INTELLIGENCE

Artificial intelligence is an activity that is devoted to making machines intelligent and intelligence is that quality which enables an entity to function appropriately and with foresight in its environment (Nilsson, n.d.). In general terms, AI refers to the ability of the computer or machine to imitate the capabilities of the human mind, like learning from examples and experience, understanding and responding to what is said, decision making, solving problems and combining these and other capabilities to perform functions a human might perform (Anandvardhan, 2021). As per the data, the current global market size of artificial intelligence (AI) is

58.3 billion USD in 2021 which is expected to grow 309.6 billion USD by 2026 at a CAGR of 39.7%. The pandemic of COVID-19 has stimulated the use and technical expansion of AI.

Role of Artificial Intelligence (AI) in Advertising and Promotion

AI has one of the major usages for mass media and advertising solutions in marketing. AI powered marketing offers real time advertising i.e., programmatic advertisement which works on artificial intelligence technology to make automated conclusions and decisions based on the analysis of data collected from customers and observations of their behaviour, users' browsing patterns and the trends that may influence the marketing efforts. It analyses the data and customer profiles to connect with the customers and offer them personalized services based on their taste and preferences.

Several e-commerce sites and their marketing partners are implementing artificial intelligence technology methods to enhance the experience of their customers. Retailers like Reliance Digital, Shopper's Stop and Aditya Birla Retail have adopted AI-based tools to advance a flawless interface for the customers in India (Indian Retailers Embracing AI, Robotics, Blockchain To Keep Up With The Likes Of Amazon Go, n.d.). For example In the Electronics & Media market Reliance Digital, operated by Reliance Retail Ltd ranked 1 with more than 500 million USD in 2021. (*Reliancedigital.in Revenue / EcommerceDB.Com*, n.d.). These AI embedded platforms enable marketeers to gain a clearer and comprehensive understanding of their target audience. The insights gathered through this process can be used to turn leads into conversions while reducing the workload of marketing teams simultaneously.

Some Popular AI powered promotional tools used by E-commerce companies²

- **Natural language processing (NLP):** NLP is a subfield of AI that enables machines to comprehend human language. Sentiment analysis feature of NLP enables marketers to analyse posts, product reviews and online surveys and classify them as positive, negative or neutral.
- **Speech recognition:** Speech recognition is AI technology that converts spoken words into digital text and also has the ability to recognise the individuals based on their voice commands.
- **Real-time recommendations:** Retail and entertainment websites use neural networks to recommend additional purchases. Importance of real time recommendations is evident from the fact that 75 percent of what consumers watch on Netflix and 35 percent of what they purchase on Amazon is a result of product recommendations based on such algorithms. (*How Retailers Can Keep up with Consumers / McKinsey*, n.d.)
- **Image recognition:** It is the AI technology that enables systems or software to identify people, objects, writing, and even actions within the images. It uses machine vision technologies typically driven by deep neural networks and trained algorithms to recognize images through a camera system.

- **Dynamic Pricing:** AI can be used to set the price of the products dynamically depending on demand, availability, popularity and other factors to maximize both sales and profit.
- **Customer Service Chatbots:** Organizations are using chatbots to deal with frequently asked questions. Chatbots provide 24×7 answers to frequently asked questions and direct the conversation to human agents when the conversation becomes complex.
- **Search Engine optimization:** Integrating AI into search can pick up misspellings, suggest alternatives influenced by users' past browsing or shopping behaviour. Marketers use AI to optimize voice search, improve SEO, and increase website traffic.
- **Pay Per Click advertising optimization:** AI advertising optimisation is used on social networks like Instagram. Algorithm analyses the interest of a consumer on the basis of the social media accounts that a user follows and create tailored advertisements which are most relevant for that particular user.

AI Technology and Consumer Buying Behaviour

Consumer buying behaviour is concerned with the study of final consumers who may be individuals, groups or organizations and the processes they use to select, obtain, consume and dispose of products, services, experiences or ideas in order to satisfy their needs. The consumer buying behaviour studies about a consumer's emotional, mental and behavioural responses. There are numerous factors that influences a consumer's buying behaviour. These factors are classified into four categories: cultural, social, personal and psychological. When a consumer purchases something, he has to go through buying-decision process which is as follows:

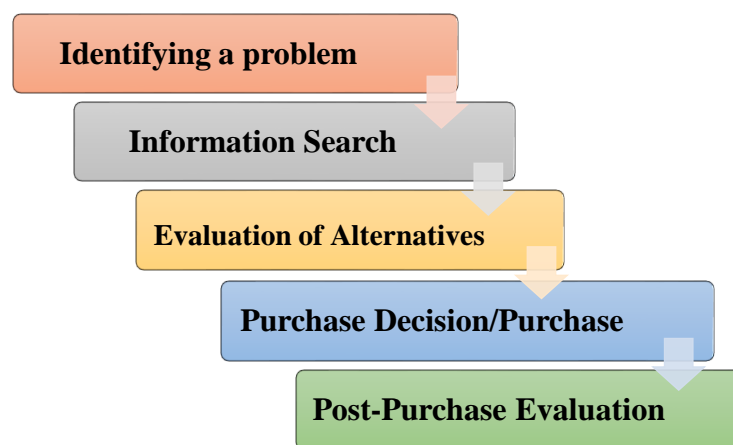


Figure 1: Buying-behaviour Process of a consumer

Understanding the behaviour of a buyer is quite complicated as it depends upon a variety of factors influencing it. It becomes even more complicated when a marketer has to deal with a large number of customers. AI technology assists marketers in understanding the behaviour of the consumers. However, there may also be a negative impact of AI based promotions. This study has tried to explore the influence of such methods of promotion on the consumers in e-commerce industry.

Literature Review

Brill, Munoz and Miller (2019) “In their research paper, they focused on finding the empirical evidence of customer satisfaction with digital assistants (Siri, Alexa, etc.). The authors used PLS-SEM to analyse responses of customers. It was found that the expectations and confirmation of expectations had a positive and significant influence on customer satisfaction with digital assistants. This study confirmed that customer expectations were being met through the digital assistant interaction experience. The integrated digital assistants into operations help customers to define what they expect from the firms. The study also found that the higher level of information privacy concerns would adversely influence the relationship between confirmation of expectations and customer satisfaction.”³

Liang, Lee and Workman (2019). “The authors undertook the research to understand how patrons respond to new technologies, particularly artificial intelligence (AI) in fashion industry. The study was aimed to examine the attitudes of consumers and purchase intentions towards an AI device confined to 10 metropolitan areas in the United States. Applying exploratory and confirmatory factor analysis, the study revealed that perceived usefulness, perceived ease of use and performance risk had a significant influence on the consumers’ attitude towards AI. The positive attitudes of consumers towards the technology had an encouraging influence on the purchase intention.”⁴

Ameen et al. (2020). “In their study, they analysed how the integration of AI in shopping can lead to an improved AI-enabled customer experience. The authors suggested a theoretical model on the trust-commitment theory and service quality model. The research was conducted upon the customers who had used an AI-enabled service offered by a beauty brand using partial least squares-structural equation modelling. The outcome of the study specified the significant role of trust and perceived sacrifice as factors, mediating the effects of perceived convenience, personalisation and AI-enabled service quality. The relationship commitment had a significant impact on AI-enabled customer experience.”⁵

Pillai, Sivathanu and Dwivedi (2020). “This study explored about the predictors of consumers’ intention to purchase at AI-Powered automated retail stores that extended the technology readiness and acceptance model by adding AI context-specific constructs such as perceived enjoyment, customization, perceived usefulness, perceived ease of use and interactivity. Using the PLS-SEM technique, the result of the study disclosed that innovativeness and optimism of consumers positively affect the perceived ease of use and perceived usefulness. However, the insecurity negatively affects the perceived usefulness of AI-powered automated retail stores. Perceived ease of use, perceived usefulness, perceived enjoyment, customization and interactivity were found as significant predictors of shopping intention of the consumers in AI-powered automated retail stores.”⁶

Ullal et al. (2020). “In their paper, the researchers investigated the effect of AI on sales graph in Indian market i.e., comparison of impact on marketing using AI methods and traditional methods (humans) by conducting survey on 4500 customers. The researchers found that the effectiveness of AI is the same when compared to

the experienced salesmen and it is 2.7 times better than the inexperienced salesmen. The sales graph saw a decline of 86.23% when it was revealed to the customers that the interface was done with the machine, not humans. There was substantial reduction in the duration of the call. The paper excavated that Indians do not believe Artificial Intelligence and still prefer human interface as they do not trust machines over human emotions. Despite its superiority over humans in various aspects, the effectiveness of AI was found to be severely lacking.”⁷

Luo et al. (2019). “Through field experiment design the study experimented those customers who received highly structured outbound sales calls from chatbots or human workers. The study unveiled that undisclosed chatbots were as effective as proficient workers and four times more effective than inexperienced workers in stimulating customer purchases. However, the disclosure of chatbot identity before the machine-customer conversation reduced the purchase rates by more than 79.7%. These results were found robust to non-response bias and hang-ups. The chatbot disclosure substantially decreases the call length when customers get information that the conversational partner is not a human. The customers were found to be rude and purchased less as they perceived that the disclosed bot is less knowledgeable and less empathetic.”⁸

Mussa (2020). “This paper was focused on investigating the impact of Artificial Intelligence (AI) on consumer behaviour in the retail sector in Egypt. The study sheds light on machine learning and deep learning and the role of AI in marketing. Using Mann-Whitney U test, Kruskal-Wallis H test (one-way ANOVA by ranks) and structured equation modelling, the results unearthed a significant relationship between Artificial Intelligence and consumer behaviour. The significant differences in customers’ purchase behaviour based on their gender were also found in the study. The researcher recommended the online retailers to employ Artificial Intelligence in the marketing process from need recognition, information search, evaluation, and purchase decision making to post-purchase behaviour to predict the consumers’ purchase behaviour in online platforms.”⁹

Mahmoud, Tehseen and Fuxman (2020). “With this chapter the researchers made an attempt to describe the use of AI in retailing and identify the possible ramifications on the ‘human’ pillars of the retail. They highlighted the AI or machine intelligence which is comprised of three main aspects, i.e., learning, reasoning and self-correction invoking the artificial mind. In retailing, the employment of AI is progressively becoming a major theme of innovation and there is an increase in the use of machine intelligence to efficiently simulate human intelligence for being more competitive through cost cutting and improving customer experiences. But such benefits may be catastrophic in the long run. The authors suggested that the retailers should adhere to norms and values that would commit them to be socially responsible businesses whose investments into AI-powered innovation and implementation are not driven only by their interests but also by others’ good, i.e., customers, employees and society.”¹⁰

Jain and Agrawal (2020). “In this paper, authors revised the concept of using Artificial Intelligence in marketing and provided a comprehensive detail about leveraging AI in marketing and how AI has reshaped

the marketing and the prerequisite of AI in businesses. The authors found that the marketers get information about the customers' perception and their requirements in a short-time frame through AI marketing which assists in boosting the campaign performance and return on investment swiftly. This paper also threw light on the implementation of different AI marketing strategies. The paper was focused on the implications of AI marketing technology throughout the customer life cycle.”¹¹

Huang and Rust (2020). “The authors constructed a strategic framework for marketing planning by incorporating the artificial intelligence (AI) benefits in three-stages that were (i) *Mechanical AI* for automating repetitive marketing functions and activities (ii) *Thinking AI* for processing data to arrive at decisions and (iii) *Feeling AI* for analysing interactions and human emotions. The framework put the ways that AI can be used for marketing research, strategy formation (i.e., segmentation, targeting, and positioning- STP) and actions. The authors found that at the marketing research stage, *mechanical AI* could be used for data collection; *thinking AI* for analysis of market and trends, and *feeling AI* for understanding the customers. At the strategy formation stage, the *mechanical AI* could be used for segmentation, *thinking AI* for targeting and *feeling AI* for positioning. At the marketing action stage, the *mechanical AI* can be used for standardization, *thinking AI* for personalization, and *feeling AI* for relationalization.”¹²

Research gap: After reviewing various research papers and articles, it has been observed that artificial intelligence is one of the leading technologies in computer science as well as in online marketing. However, a very few studies were concentrated on AI powered advertisement and promotion in e-commerce industry. The AI technique is increasingly and significantly affecting our day-to-day life and there is a prominent place of such technology in the e-commerce industry. Hence, we have tried to find out the consequences of AI-powered promotion on consumers who use to shop from e-commerce websites.

RATIONALE OF THE STUDY

One of the key motivating factors to undertake this study is to explore and analyse how artificial intelligence driven promotional techniques are affecting consumers. The AI is ruling the field of digital marketing and almost all the big business houses have more or less started applying this branch of computer science in their promotional activities to target their potential customers. After reviewing sufficient amount of literature related to the topic, it has been identified that not much work has been done in analysing the impact of AI driven tools and techniques of advertising and promotion on consumers. Therefore, this research paper is aimed at making a detailed study of the applications and effects of artificial intelligence powered promotion techniques. The study will be helpful for the marketers in order to do cost-benefit analysis of their AI based advertisements and promotions. It can also prove helpful for advertisers in deciding whether they should adopt AI in their advertising and promotional efforts.

Research Objectives

- To study the influence of Artificial intelligence powered promotion on consumer perception.
- To study the acceptance of personalised advertisements among the consumers.
- To study the factors that influence consumers to react on advertisements.

Research Methodology

The study is based on both primary and secondary data. The secondary data was collected through authentic and reliable sources such as India Brand and Equity Foundation (IBEF), TRAI website, Statista, data published by Internet and Mobile Association of India (IAMAI) etc. The findings of the study are wholly based upon the collected data. Chi-square test method is used for analyzing the data with the use of SPSS software.

Primary Data Collection

The data was solicited through questionnaires sent to people through email and social media platforms. Purposive sampling method was used to reach the respondents. Questionnaires were sent to more than 250 people. Out of which 163 people submitted their completely filled in questionnaires to the researchers. In order to make the study reliable and useful, while selecting the sample, special care was taken to ensure that the participants are genuine online buyers. Questionnaires were circulated among the online shoppers belonging to different social classes, age groups, genders, educational levels etc. in order to make the sample a better representative of the population.

Result and Discussion

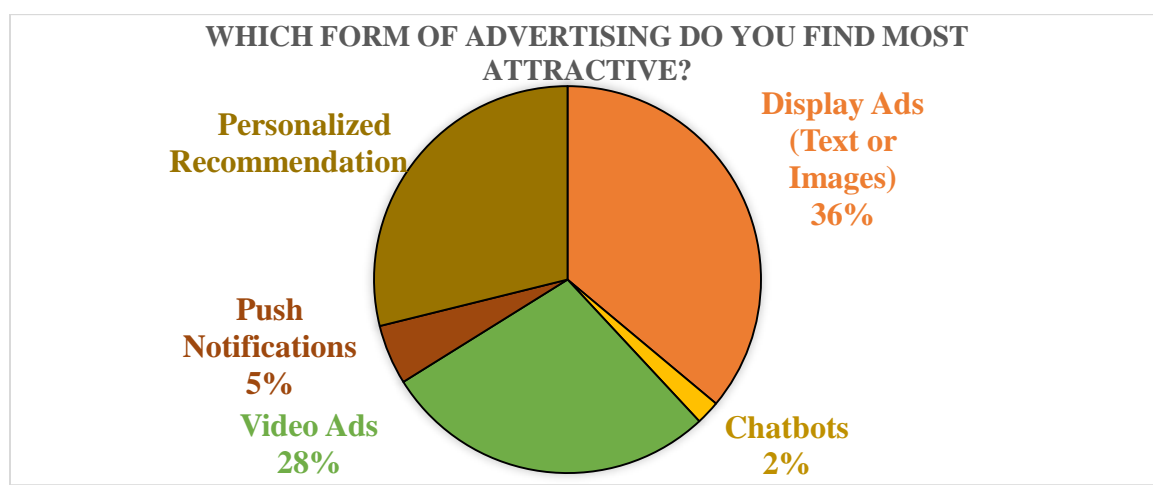


Chart 2

During the survey, consumers were asked to choose the most attractive form of advertising, maximum respondents (36%) selected display advertisements, 29% people selected personalized recommendations of the company, 28% said video advertisements. While push notifications and chatbots were chosen by 5% and 2% of the respondents respectively.

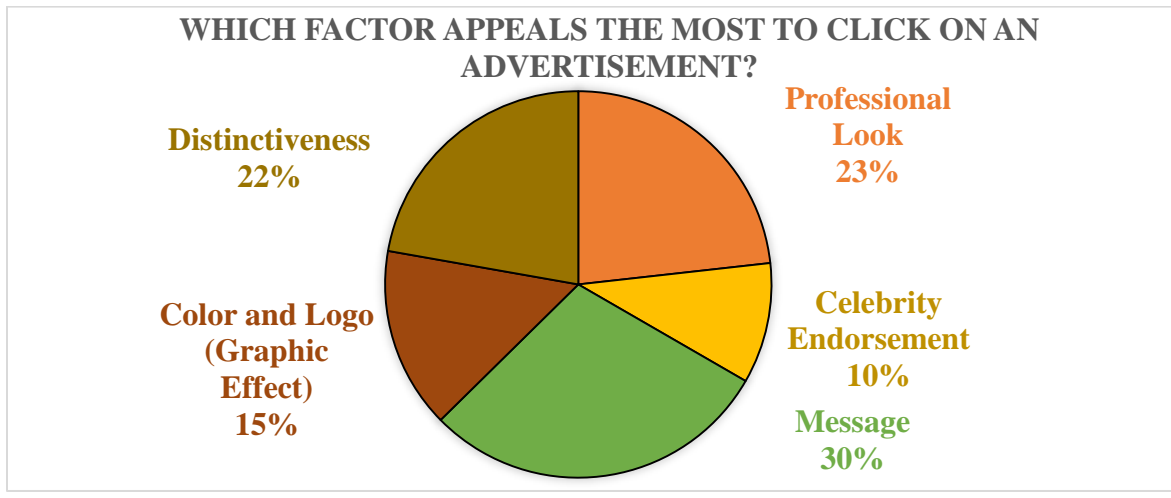


Chart 3

When respondents were asked about the most influencing factor that drives them to click on an ad, most of the respondents (30%) said message of the advertisement is the most important factor, distinctiveness of the advertisement drives 22% respondents to click the advertisement, 23% were fascinated by the professional look of the advertisement., 15% of the respondents were prompted by the color, logo and graphics of the advertisement. However, only 10% respondents were found to be influenced by celebrity endorsement in an online advertisement.

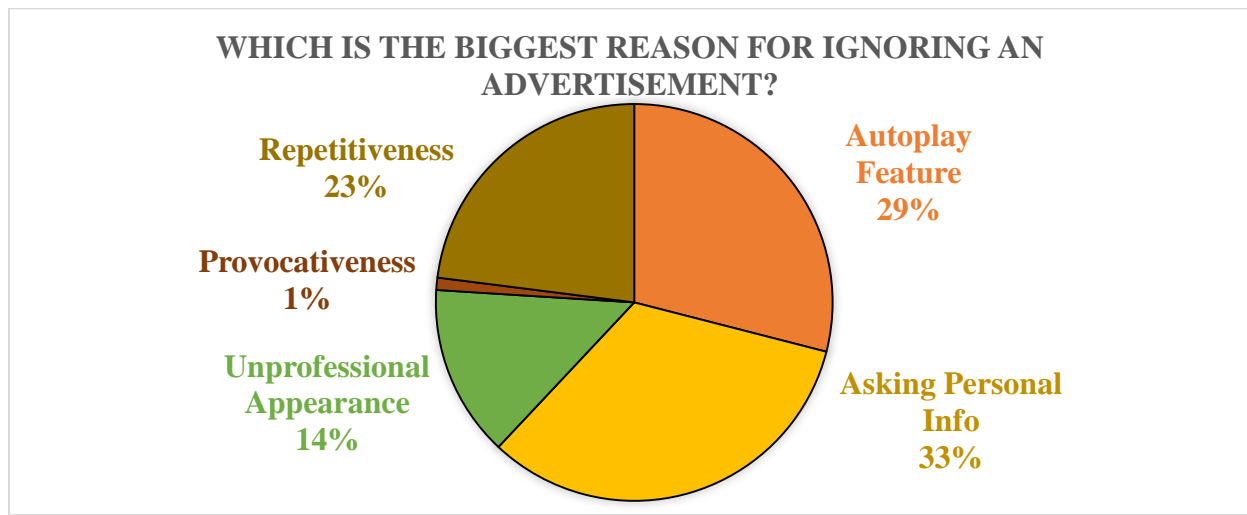


Chart 4

When asked about the most influencing factor which drives them to ignore an advertisement, most of the respondents (33%) accepted that the advertisements asking personal questions drives them to ignore an advertisement. 29% of the total respondents think that the auto-playing feature of an advertisement urges them

to overlook it. 23% respondents feel irritation due to the excessive repetition of the advertisement which drives them to neglect it. 14% people disregard an advertisement due to its unprofessional look while 1% ignore the advertisements due their provocativeness.

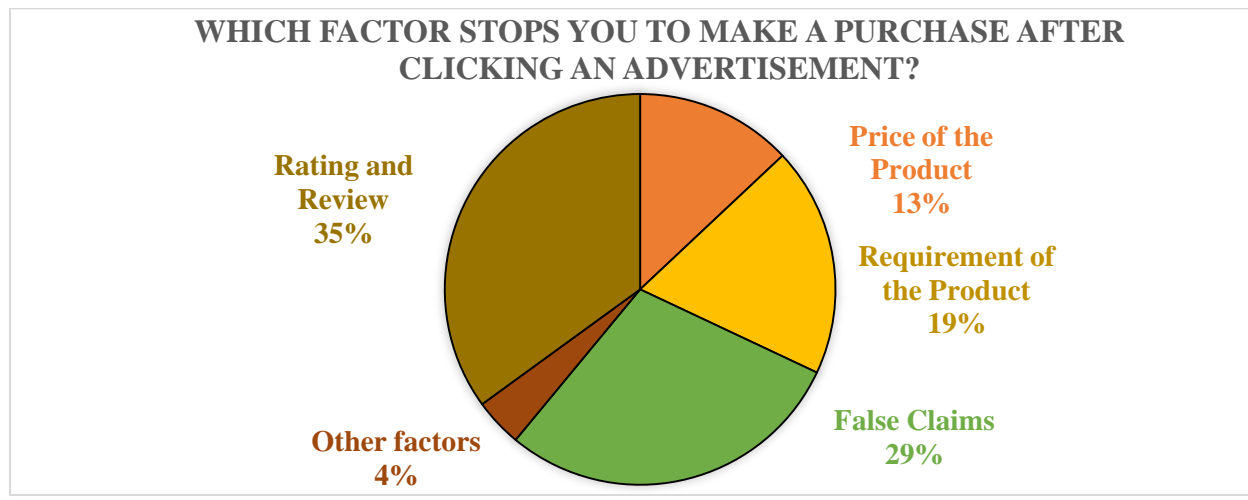


Chart 5

On the question of which factors stops you from making a purchase after clicking an advertisement, majority of the respondents (35%) said ratings and reviews of the product, 29% replied that false claims about the product stops them from making a purchase after clicking an advertisement, 19% respondents said that they later on realize that they really don't need the product and 13% found price as the most demotivating factor that stops them from purchasing a product after clicking an advertisement. However, 4% were affected by other factors which stop them to make purchase after clicking an advertisement.

Relationships between the variables under study

Independent Variables	Dependent Variables	Asymptotic Significant Relationship χ^2 (2-tailed)
Gender	Preferred Website	0.002
Age	Preferred Website	0.018
Age	Awareness about AI	0.000
Age	Clicking on personalized Advertisement	0.011
Occupation	Preferred Website	0.028
Qualification	Preferred Website	0.028
Qualification	Awareness about AI	0.050

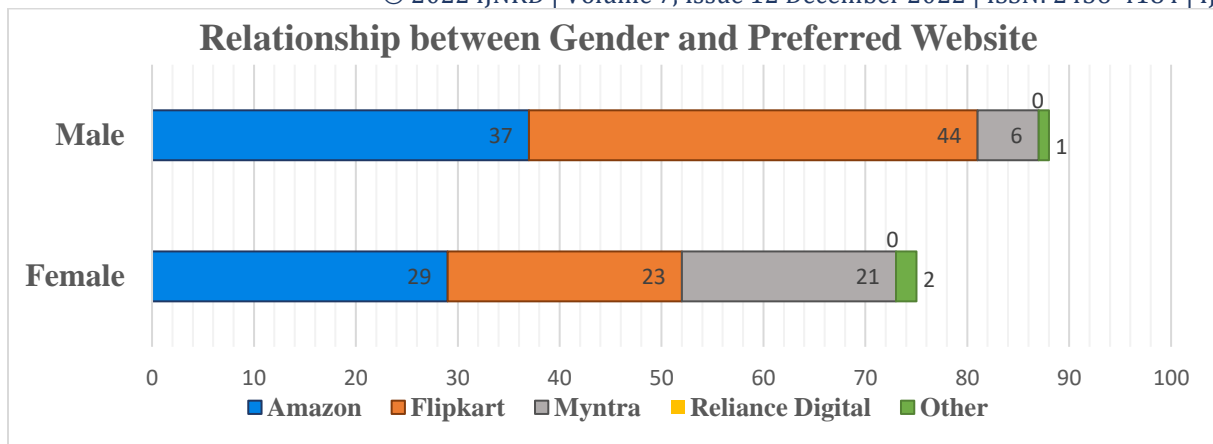


Chart 6

The relationships between variables were measured at 5% level of significance. With P-Value of 0.002, the study shows that there is a significant relationship between gender and the preference of website. Among the total 163 respondents, 46% were females and 54% were males. Among 75 female respondents, 39% prefer Amazon, 31% prefer Flipkart, 28% prefer Myntra, while 3% prefer other websites. Among 88 male respondents, 42% prefer Amazon, 50% prefer Flipkart, 7% prefer Myntra, while 1% prefer other websites. Myntra website is highly preferred by women in comparison to men. However, Flipkart is most followed website by the males. On the other hand, Amazon is most preferred website by the females.

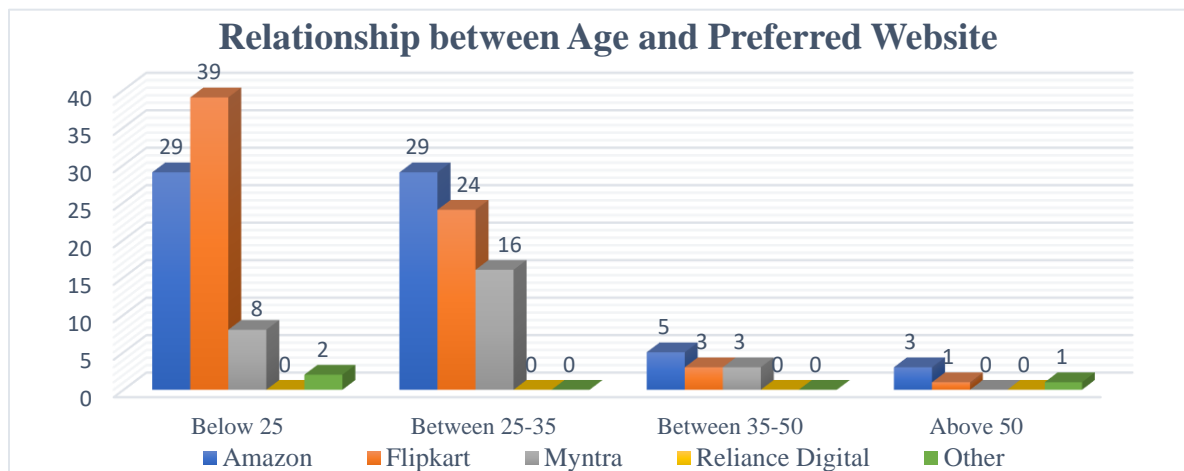


Chart 7

The analysis of data tells that there is a significant relationship between age and the preference of the website for e-purchases. Out of 163 valid responses, 90% of the people were under 35 years of age. Out of 78 respondents in the age group of below 25, 37% prefer Amazon, 50% prefer Flipkart (the most preferred website in this age group), 10% prefer Myntra and only 3% respondents are preferring some other e-commerce website for online shopping. Out of 69 respondents in the age group of 25-35 years, 42% prefer Amazon, 35% prefer Flipkart, 23% prefer Myntra and none other. In the 35-50 (11 respondents) age group, 45% people prefer Amazon, 28% prefer Flipkart and 27% prefer Myntra while in the age group of 'above 50' years, 60% respondents prefer Amazon and 20% prefer Flipkart and rest prefer other websites for shopping. During the

study it was found that no age group prefers Reliance Digital website for online purchasing. Amazon has been found as the most preferred website in the age groups of 'between 25-35', 'between 35-50' and 'above 50'. The study of relationship between age and preference of website at 5% significance level gives P-Value equal to 0.018 which proves that there is a significant relationship between age and preference of e-commerce websites for shopping.

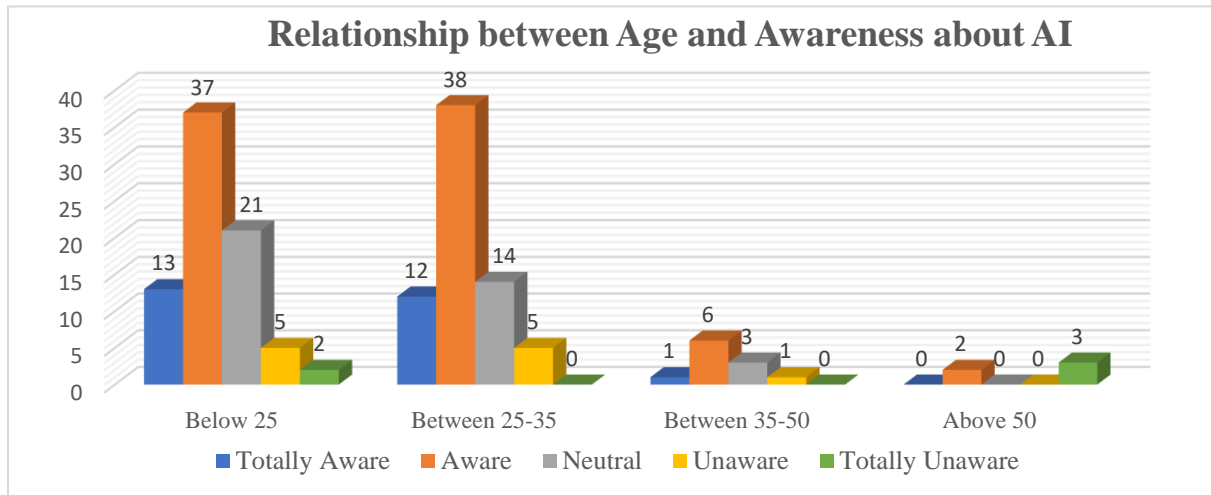


Chart 8

Through the responses, it is observed that among all the age groups 67% people (109 out of 163 respondents) are aware about the concept of AI and only 10% admitted that (16 out of 163 respondents) they are unaware about AI based promotions. 23% (38 out of 163 respondents) are neutral on the awareness about AI. Majority of respondents below the age of 50 (107 out of 158 respondents i.e., approx. 68%) are aware about the concept of AI in marketing. However, almost 60% of people in the age group of above 50 are found unaware about the use of AI in promotion. The analysis also tells that there is a highly significant relationship between age and awareness about AI. χ^2 - test for determining the relationship between age and awareness about AI gave P-Value of 0.000 which means there is sufficient evidence to say that there is very strong relationship between age and awareness about AI.

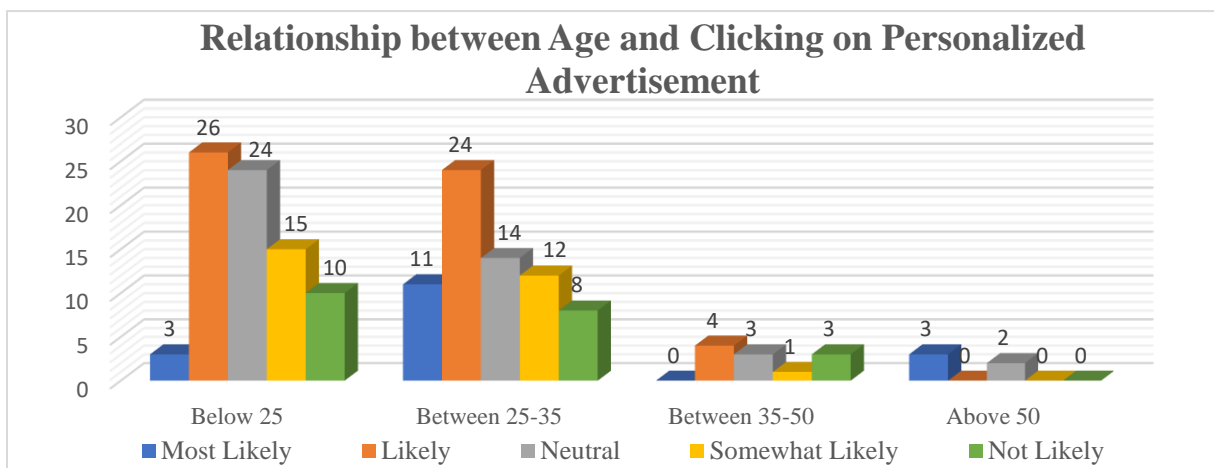


Chart 9

Through the responses, it is seen that among all the age groups majority of individuals (44%, 71 respondents out of 163) like clicking on personalized recommendations. 17% individuals (28 respondents) are very less likely to click on a personalized advertisement and 13% people (21 respondents) are not likely to click on a personalized advertisement. 25% (43 respondents) are seen neutral on clicking a personalized advertisement. In the age group of 'below 25' (78 respondents), it is found that 37% are likely to click on a personalized advertisement out of which 4% are most likely to click an advertisement, 31% people are neutral on clicking an advertisement, 19% are somewhat likely on clicking the advertisement, while 13% are not likely to click on an advertisement. In the age group 'between 25-35' (69 respondents), 51% are likely to click on a personalized advertisement out of which 16% are most likely to click an advertisement, 20% people are neutral on clicking an advertisement, 17% are somewhat likely on clicking the advertisement, while 12% are not likely to click on an advertisement. In the age group of 'between 35-50', 36% are likely to click on a personalized advertisement, 27% people are neutral on clicking an advertisement, 9% are somewhat likely on clicking the advertisement, while 27% are not likely to click on an advertisement. In the age group of 'above 50', 60% are most likely to click on a personalized advertisement and 40% people are neutral on clicking an advertisement. In studying that if there is any relationship between age and clicking a personalized advertisement, P-value obtained is 0.011 which establishes a significant relationship between age and clicking a personalized advertisement.

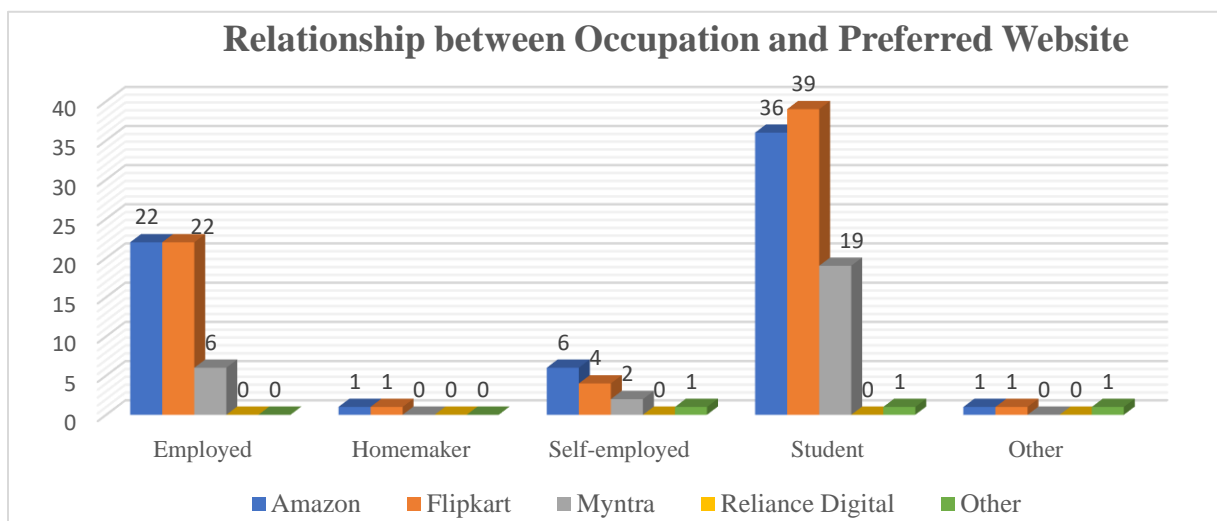


Chart 10

With p-value of 0.028, a significant relation is also confirmed between occupation and preference of website. Out of 50 employed persons, 44% (22 respondents) prefer Amazon, 44% (22 respondents) prefer Flipkart and 12% (6 respondents) follows Myntra whereas out of 95 students approx. 38% (36 respondents) prefer Amazon, approx. 41% (39 respondents) prefer Flipkart and 20% (19 respondents) prefer Myntra over other websites. Among the self-employed people, 46% respondents prefer Amazon, 31% prefer Flipkart, 15% prefer Myntra and rest prefer other websites for purchases. Among the home-makers, both Amazon and Flipkart are preferred by equal number of respondents i.e., 50%. While the other professionals prefer Amazon, Flipkart and other websites for online shopping. It is also discovered that homemakers and other professionals do not follow

Myntra. No one prefers Reliance Digital website for online purchasing among all the professional categories of respondents.

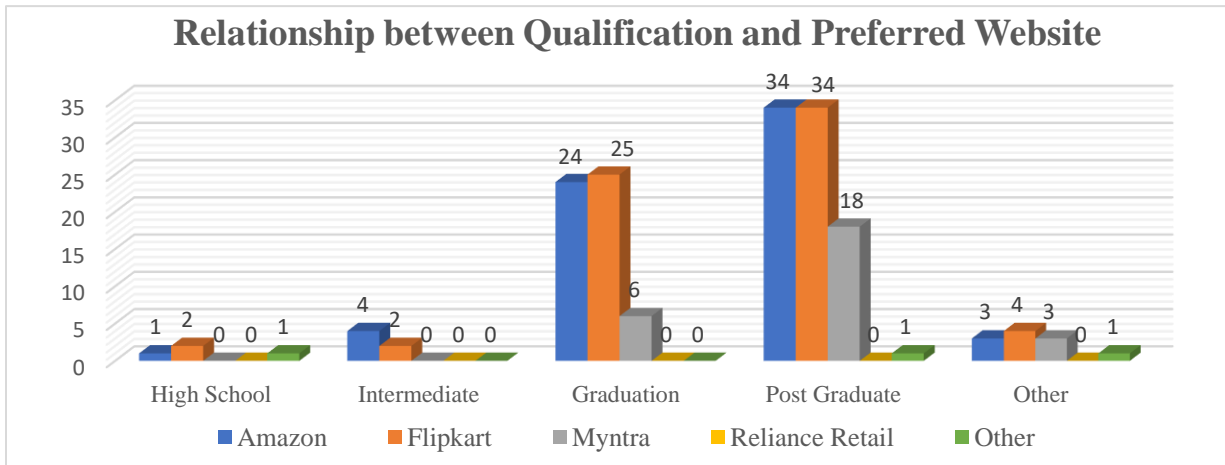


Chart 11

During the analysis of relationship between qualification and preferred website, it is identified that in the category of *high school* qualified respondents 25% prefer Amazon, 50% prefer Flipkart and rest prefer other websites for purchasing goods. In the category of *intermediate* qualified respondents 67% prefer Amazon and 33% prefer Flipkart for buying goods. In the group of *graduate* respondents (55 individuals), 44% prefer Amazon (24 respondents), 45% prefer Flipkart (25 respondents) and 11% prefer Myntra (6 respondents) for procuring things. In the category of *post-graduate* respondents (87 individuals), both Amazon and Flipkart are preferred by 39% people, Myntra is preferred by 21% respondents, whereas 1% use other websites for buying commodities. However, in the category of *other* qualified people, Amazon and Myntra are preferred by 27% respondents each, 36% individuals use Flipkart and rest uses other websites for purchasing of items. Flipkart is found as the most preferred e-commerce website used by approx. 41% respondents (67 individuals) and is equally popular among the people of different educational statuses. In test for relationship between qualification and the choice of website, P-value was 0.028 which indicates that there is a significant relationship between qualification and the preference of the e-commerce website for shopping.

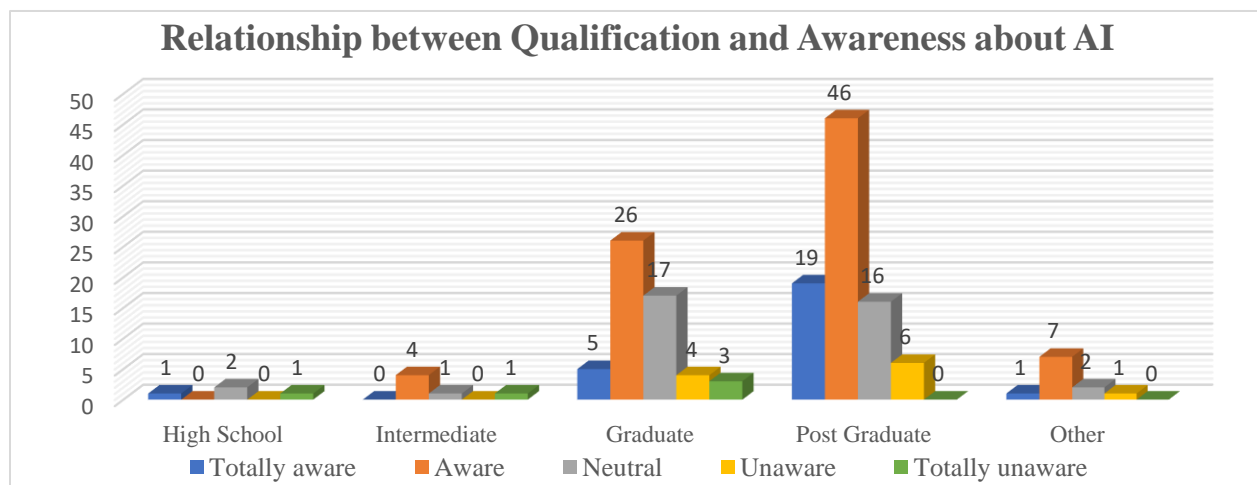


Chart 12

A significant relationship is also determined between qualification and awareness about AI based promotional techniques of the marketers. Among *high school* passed shoppers, 25% are totally aware about the AI powered promotional techniques, 25% are totally unaware about AI powered promotion and rest are neutral in this regard. Of *intermediate* qualified consumers, approx. 67% are aware about the AI backed promotional techniques, approx. 17% are totally unaware about AI powered promotional campaign and the rest 17% are neutral in this respect. Among *graduate* buyers, approx. 69% are aware about the use of AI in promotion of which 11% are totally aware about the concept, 16% of the graduate respondents are unaware about AI powered promotion and rest 38% are neutral in this concern. Among postgraduate customers (87), 75% are aware of AI powered advertising systems, only 7% people are unaware about AI powered promotion and rest 18% are neutral on the question of awareness about AI. In *other* qualified category of shoppers, 63% are aware about the AI promotional technique, whereas 9% are unaware about AI powered promotion and rest 18% are neutral in this matter.

Findings

The analysis of data has revealed that Amazon and Flipkart are equally popular among the consumers. Out of 163 respondents, approx. 41% people selected Flipkart while approx. 40% people selected Amazon as their most preferred e-shopping website. The study also revealed an interesting fact about gender and preference for e-retail websites, 92% (81 out of 88) males prefer either Amazon or Flipkart while only 69% females shop over these websites. Myntra is preferred by only 7% males whereas 28% females revealed that Myntra is their most preferred shopping website. It should be noted that no respondent was likely to prefer the website of Reliance Digital which is one of the popular and diversified retailers in India. It is also detected that approx. 56% people spend less than ₹10000 and approx. 35% people spend up to ₹40000 annually on online shopping. However, there are very few respondents who spend more than ₹40000 annually on e-purchases.

The study also diagnoses that most of the people are getting aware about the AI driven tools and techniques. Display advertisements, personalized recommendations and video advertisements have been found as the most attractive form of advertising by the respondents. Most of the respondents (85.9%) have agreed that AI powered technology captures consumers' attention, while 13.5% are neutral and 14.1% respondent are disagreed to the statement that AI captures consumers attention. A diversified reaction of respondents is seen for clicking a personalized advertisement on e-retail websites, 43.5% people said they were likely to click on a personalized advertisement, 26.4% were neutral, 17.2% said somewhat likely and 12.9% respondents said that they were not likely to click on a personalized advertisement. *Professional look, messages and distinctiveness* have been observed as the highlighted factors which drive respondents to click on the advertisement whereas celebrity endorsement and graphic effects have been considered as effective only by a few respondents. Asking personal questions, auto-play feature and repetitiveness are detected as the major frustrating factors which urge people

to ignore an advertisement while provocativeness has been found as the least irritating factor for ignoring an advertisement. While discovering the factors which stop the purchaser from buying goods after clicking an advertisement, false claims and ratings and reviews have been found as the most influencing factors in this regard. The study has also revealed that only 2% people in the sample prefer websites other than Flipkart, Amazon, Myntra and Reliance Digital for online shopping.

Managerial Implications and Recommendations

Considering the data and outcomes of the study, the promotional tools such as push notifications and chatbots are required to be modified to make them a point of attraction for the customers. Marketers also need to implement and enhance their AI based marketing techniques as these techniques better seize the attention of the customers. The personalized advertising ought to be improved as 50% respondents were either neutral or not interested in it. There is also need to work on graphic effects. The celebrity endorsement should be used judiciously as a smaller number of people are affected by it. The auto-play feature of advertising and asking personal questions are found to be the most annoying factors, which should be properly thought out before use. Marketers need to avoid making false claims in their advertisements as this kind of act discourages the visitor from making purchases from the website. The managers of Reliance Digital should develop a good communication strategy for becoming a popular e-commerce website like Flipkart, Amazon and Myntra and spread awareness about itself to attract consumer attention. Other e-retailers such as Meesho, Shopclues, Snapdeal, Jabong, Paytm Mall etc. need to develop strategies to be preferred by the audience like Amazon, Flipkart and Myntra.

Conclusion and Suggestions

So, it can be concluded that in present times AI based promotional techniques are the most powerful marketing technique to capture the target audience. As consumers' knowledge of AI is increasing, so is the impact of AI on them. Display advertisements, video advertisements and personalized advertisements are eye-catching form of promotional tools. There is still some kind of hesitation among consumers as they do not prefer to shop expensive items online. The most leading retailer in the Indian retail industry, the Reliance Digital is seen as non-preferred e-retail website among the online consumers.

In this paper, the researchers have focused on the AI based promotions and their impact upon the consumers. This study was done to investigate the impression of AI based advertisements upon consumers. The study would provide a base for those upcoming researchers who are interested for doing research in the area of AI driven marketing. In future, the same study could also be done with a bigger sample size. A study on how to enhance the AI powered advertisement can be undertaken to suggest the ways to marketers to improve their

promotional methods. Research on the version of AI driven marketing tools in a particular company may also be a central point for imminent explorations.

Limitations of the Study

Due to lack of time, effort and finance, the study is restricted to limited samples in a particular region. Purposive sampling technique has been used during the data collection. Although extreme care has been taken in the selection of the sample so that it is a good representative of the population, results and conclusions are based solely on data collected from respondents that may be subject to respondents' bias.

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