



IMPACT OF ARTIFICIAL INTELLIGENCE ON CONSUMER BEHAVIOUR: AN EMPIRICAL STUDY IN THE RETAIL SECTOR IN MANGALORE CITY

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ABSTRACT

Artificial intelligence is creating drastic change in business and is emerging as a potential tool to reach customers. This paper makes an attempt to understand the concept of AI and also makes an attempt to identify the role of demographic variables like age, gender, income and educational qualification on consumer behaviour. The study results show that age do not influence consumer behaviour. But other variables like gender, qualification and income influences consumer behaviour.

1. INTRODUCTION

The retail sector has gone through a digital transformation and has become more dynamic. These technologies aid in making their performance better. One such technology is artificial intelligence. Artificial intelligence helps company understand and target the customers in a better way and also helps in customizing the marketing action. Artificial intelligence benefits the customers, company and the marketer in creating, optimizing and distributing the value. Artificial intelligence is gaining importance in the present business world and is efficiently used in many areas. Artificial intelligence has brought drastic change in the way consumers interact with the companies. Understanding the impact of artificial intelligence helps the marketer use this technology. Artificial intelligence in the area of marketing helps in predicting and changing consumer behaviour starting from need recognition to post-purchase behaviour.

Technological disruptions such as artificial intelligence, internet of things, big data analytics have offered digital solutions for attracting and maintaining the customer base (Anshari, Al-munawar, Lim, 2018). These emerging trends and techniques are providing a competitive edge by facilitating the customers' products and services. Artificial intelligence is a widely used emerging technology that helps organizations track real time data to analyze and respond swiftly to customer requirement (Wirth, 2018). Artificial intelligence provides knowledge about consumer behaviour which is needed for attracting new customers and retaining existing customers. Artificial intelligence can help in predicting customers' action. These tools are useful to deduce customer expectation and navigate the future path (Shabbir,2015).

Artificial intelligence has found its path in different context. With the advancement of technology, world has become a web of interconnected networks. Adoption of artificial intelligence in marketing is still in the basic level.

2. REVIEW OF LITERATURE

2.1. Retail Sector

Retail refers to the selling of goods and services directly to the final consumers. Retailing takes place in retail stores or service establishments. It involves the sale of goods from a single point directly to the consumer for his use. It is a transaction of goods between the seller and the end consumer in small quantities to satisfy his needs. It can be in the form of door-to-door sales or electronic channels too. Retail sector includes banking, tourism, insurance, private healthcare, publishers etc.

2.2. Impact of advertisement on retail sector

Promoting a brand is more important than opening a store. Advertisement helps in promoting a brand and creating brand awareness amongst the people. The retailer through various ways of advertising promotes the brand and makes them visit the stores often. Advertisement acts as a catalyst in bringing the customers to the stores. Advertising quickens the turnover and also helps in reducing the risk of dead stock and can proportionately reduce the overhead expenses. Advertising stabilizes the price and thus avoid losses to



the retailers through the price change. Advertising creates awareness and motivates people to buy products which in turn creates demand for the product and thus increases the sales.

2.3. Artificial Intelligence (AI)

AI has entered all fields including those which were exclusively handled by human beings. AI provides the salesperson with accurate predictions and intelligent recommendations through analyzing the past data and priorities that are likely to convert (Avinaash, 2018). AI is related to computers with capabilities that can think and act more efficiently than humans do.

It can recognize image or voice, decision-making and translate language (CXPA, 2018). AI can detect, decide and develop (Sterne, 2017). Detection is the ability of AI to identify the most expected and predominant characteristics in a subject matter. Decision is the ability of AI to decide after evaluating a huge number of characteristics and then determine the most important one. Development refers to the power AI has to program by taking into account new data and the analysis of research along with how it evaluates each factor and then modify its view.

2.4. Impact of AI on Marketing

AI plays a vital role in B2B and B2C marketing. The KRC research report proves that AI is more effective than social media and creates better customer experience. AI plays a significant role in marketing (Jarek and Mazurek, 2019). AI is the technology that will be adopted by marketers because it will affect the face of retailers' marketing strategies and customer behaviour (Davenport *et al.*, 2020).

AI provides the consumer with a new experience, through automatic recommendations and pertinent product suggestions, the customer service personalization and after-sales service. AI improved the relationship between consumer and the brand. AI gives the consumer a chance to test the product virtually. Most of the consumers believe that AI will make their life better by solving complex problems, while others see that AI will take away their jobs (PwC, 2017).

2.5. Impact of AI on Consumer Buying Behaviour

Consumer Buying Behaviour is the process of decision making where customers decide the product or services to purchase, use and dispose off which will satisfy their needs. The analysis of such a process can help in predicting future behaviour (Qazzafi, 2019). Consumer decision making process includes five stages which the consumers pass through before deciding the product. Consumers can skip one or more stages. It depends on their mind (Kotler, *et al.*, 2017).

Understanding consumer buying behaviour is not easy as it involves psychological concept. In the digital era, consumers show their needs, wants and attitudes in different forms like search, comments, blogs, videos and conversations through several channels like web, mobiles or face-to-face (Court, *et al.*, 2009). AI can convert such data into meaningful consumer insight (Kietzmann, 2018). AI depends on such insights to recommend retailers about product displays and cataloging (Avinaash, 2018). AI can help marketers to understand and reach consumers at many stages of the consumer journey (Kietzmann, 2018).

3. OBJECTIVES OF THE STUDY

Based on the literature review and the rapid changes taking place in business the following objectives are framed:

1. To understand the role of artificial intelligence in advertising.
2. To identify the relationship between artificial intelligence and consumer buying behaviour.

4. SCOPE AND LIMITATIONS OF THE STUDY

The study aims at understanding the concept of AI and its role in advertisement. The study makes an attempt to analyze how marketers can use AI in advertising so as to increase the effect of advertisement.

The study is restricted to the retail sector and therefore the findings cannot be generalized. The study is also restricted to Mangalore city.

5. RESEARCH METHODOLOGY

The study uses both primary data and secondary data. Primary data was collected from 385 respondents using a structured questionnaire. Random sampling technique was used to collect the data. The data thus collected was analyzed using SPSS. Correlation



and Regression analysis was used to understand the association between AI and consumer buying behaviour. Secondary data like magazines and journals related to advertisement and AI were used to understand the concept of AI and its applicability in marketing.

6. MEANING OF ARTIFICIAL INTELLIGENCE

In the words of Demis Hassabis, “AI is the science of making machine smart”. AI refers to the ability of a computer or a computer-enabled robotic system to process data and produce results in a manner similar to the thought process of humans in learning, decision making and solving problems”. AI can solve complex issues using logics and reasoning just like a human. AI is something which transfers human intelligence to the machines so that it can handle simple and complicated tasks. AI includes three basic concepts namely machine learning, deep learning and neural learning.

AI is defined by several authors in several ways. But all have highlighted the main feature of non-human intelligence programmed to perform specific job. When AI was introduced, it was considered as a rapidly evolving, reading, speaking, learning and feeling emotions. AI is the theory and development of computer system capable of performing task which generally require human intelligence (Ransbotham, 2017). The main point highlighted is that AI can perform most of the tasks which humans do in the workplace and in the society at large.

6.1. ROLE OF ARTIFICIAL INTELLIGENCE IN ADVERTISING

Impact of AI on advertising is a challenging task. AI in advertising requires consumer insight discovery, ad creation, media planning and ad impact evaluation. This has resulted in introduction of new techniques of advertising based on consumer preferences.

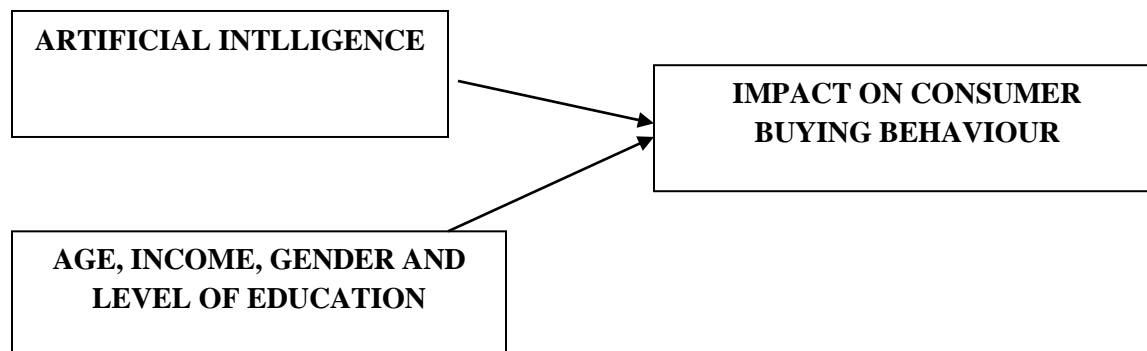
Production of advertisement using AI technology can categorize, combine sources of information, create new ideas and execute intelligent marketing. AI can increase advertising efficiency by grabbing customer attention and also aids in reducing advertising cost. Using AI, marketers can target their advertisements by selecting effective time, place and medium by analyzing the target users. This leads to cost control and improving advertising efficacy.

Brand marketing will become more accurate and effective as AI advances in the advertising business. Advertisement content related to the target audience can be created from various sources using AI and content marketing. AI has significantly improved the customer experience by using human body, intellect, cognition and emotion.

7. CONCEPTUAL MODEL

AI has entered all fields including those which were exclusively handled by human beings. AI provides the salesperson with accurate prediction and intelligent recommendations through analyzing the past data and priorities leads that are likely to convert (Avinaash, 2018).

Figure 1. Conceptual framework showing impact of artificial intelligence on consumer buying behaviour



Source: Developed by the researcher

Figure 1 shows the impact of artificial intelligence on consumer buying behaviour mediated by demographic factors like age, gender, educational level and income.

8. HYPOTHESIS

The following hypothesis is framed for understanding the role of artificial intelligence in influencing consumer buying behaviour.

H₁: There is significant relationship between artificial intelligence and consumer buying behaviour.



H₂: Demographic variables like age, gender, educational level and income influences consumer behaviour.

9. DATA ANALYSIS

ANOVA					
	Sum of squares	DF	Mean square	F	sig
Impact of AI on Consumer Buying Behaviour	2.068	1	2.068	2.308	0.02
Impact of AI on gender	50	48	0.616	3.553	0.058
Impact of income on Consumer Buying Behaviour	50	48	1.982	3.884	0.023

The above table shows that there is significant difference in the mean square. Hypothesis is rejected in the first and last case as the significance value is lesser than 0.05. Alternate hypothesis is accepted which means that AI has an impact on consumer buying behaviour. Income also has an impact on consumer buying behaviour. But in the second case hypothesis is accepted which means that AI does not have any impact on gender.

10. CONCLUSION

AI can influence the business by adopting the updated technologies. AI can influence society, business and people. AI can create a better platform for business. AI is an emerging concept and will further grow in the upcoming days. Therefore, company and people need to prepare themselves and adapt to the changing and innovative business platforms.

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