

# **A Study on the Artificial Intelligence – The Transformative Power in Digital Marketing**

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**Abstract:** *The study investigates on the consumer behaviour towards Artificial Intelligence in digital marketing in Fast Moving Consumer Goods (FMCG). The attitude, beliefs, notions, views that are in the minds of the consumers in using Artificial Intelligence (AI) driven digitalized marketing is collected through a questionnaire, and analyzed with various statistical tests. The statistics taken is a non-probability sampling method of data collection.*

*This AI is a new tool in marketing that is getting popular in all sectors. Now it is used in marketing sector for various purposes attracting customers. The application of it in FMCG has gained significant importance with handling customer service with robots and chatbots. The AI brings a revolutionary marketing with its enhanced experience, improved efficiency, etc. The study reveals the various applications of AI in marketing FMCG products. The study does give a general view of the consumers. The application of AI in marketing is collected through a questionnaire with a quantitative approach.*

*The samples collected from the respondents are 37 and the internal consistency of the data is good and reliable. The study is on the relationship of different variables of AI in Digital Marketing. The study undertaken explores further into the opportunities and challenges posed in implementing the AI driven marketing in a qualitative aspect to reveal the further scope of study of AI and adoption of it in the various aspects of marketing. The study also discuss on the darker side of the AI in regard to factors that standup on challenging the usage of AI by consumers and marketers..*

**Keywords:** Consumer behaviour, AI driven marketing, Opportunity, Challenges

## **I. INTRODUCTION**

For Fast Moving Consumer Goods Industry AI is a crystal ball that helps tackles companies with growing competition. It cuts costs, make customers happy, and develop products that fits customer segment. Spots patterns and changes that occur in consumers' shopping, adapting to the current trends in market and to change in customer needs. AI is changing how Fast Moving Consumer Goods Companies do business. The Artificial Intelligence (AI) streamlines supply chains, predict consumer trends, and personalize marketing strategies making the companies to quickly adapt to market changes. AI is revolutionising by creating new products with help of customer feedback, saves time and money for businessmen. AI is a sustainable form of marketing with helping manufacturers reducing costs, using resources efficiently, environmental conscious packaging, and reduced energy use.

Though Artificial Intelligence is helpful in many ways there are many challenges like technological and social barriers, safeguarding privacy and managing data security, investment and Return On Investment (ROI) considerations.

## **II. LITERATURE REVIEW**

Fazla Rabby, et.al (2021) studied the consumer buying behaviour and AI's influence in digital marketing and how it supports decision making. They said that AI can detect underlying patterns of consumer behaviour based on products purchased and makes better informed product recommendations to consumers for the purchase of the product. AI shapes customers journey by quality assessments and in future it will help build trust and create personalised experiences for consumers.



### Significance of the study

In our Indian economy, the Fast Moving Consumer Goods (FMCG) is the most significant growing sector in respect to its contribution to the GDP of the country. The core products like groceries, home care products (including toiletries, cleaning agents, detergents etc.), drugs for medical use, personal care products, electronic goods, and other consumables. The type of intelligence used in marketing is Predictive AI and Generative AI. The Artificial Intelligence shapes the consumer behaviour in digital marketing. Even though Influencer Marketing is popular, E-WOM (Electronic - Word of Mouth) and traditional method of buying is used. AI acts as an agent and gives a competitive edge over rivals with its services. The AI technology makes supply chain smarter by creating self - adjusting networks that respond to market changes in real - time. It also keeps track of inventory, makes the warehouses more efficient, and helps companies work better with suppliers and distributors. AI is changing the market game with personalised form of marketing. It shows trends and patterns on online behaviour of consumers. It speaks to consumers through marketing campaigns, recommend right products to right people, set better prices, and create experiences that customers may love thus making a consumer to stick to a particular brand. The demand forecasts are turned out to be successful with the use of intelligence. AI helps FMCG companies become more sustainable by helping attaining resource efficiency, reduced energy use, and better meted out customer demands. Besides they are used in content marketing in generating branded blogs and social media posts in few clicks. 24\*7 customer care support services, Search Engine Optimization that are generated by AI, sentiment analysis is also done in social media by these intelligences. So, AI plays a pivotal role in digital marketing and is significant to study on AI and its implementation. It also has a darker side with data privacy issues, data security etc.

### Objectives of the study

- 1) To know the consumer behaviour towards AI – driven marketing in FMCG.
- 2) To study on the applications of the AI in digital marketing of the FMCG products.
- 3) To explore the opportunities and implementation challenges of AI in FMCG marketing.

### III. RESEARCH METHODOLOGY

The research design of the study is on the users of digital marketing and their behaviour towards Artificial Intelligence with a non-randomized selection of respondents. This study is based on quantitative research and defines on the various relationships of marketing of fast moving consumer goods and the behaviour of consumers towards AI.

The following are some of the Research questions that guide the research.

1. What is the Consumer Behaviour towards the AI driven Digital Marketing?
2. What are the Features used in Digital Marketing?
3. What are the Experiences of consumers in AI driven Digital Marketing?

The data collected is of 37 samples and is collected with the help of questionnaire and other instruments used in data collection are websites, journals published, press release, newspapers, magazines and books. The data is analyzed with the help of PSPP software and reliability test is undertaken to test the validity of the data and its internal consistency. To study on the relationship between the variables with correlation and Rank correlation is used here. It is done to know the behaviour and experiences and its relationship with AI in digital marketing and the demographic profile is collected and frequencies are computed. The reasons why respondents purchased online is also discussed in findings along with the implementation challenges and opportunities of AI driven digital marketing.

**Table – 1 Reliability Test**

Experience of AI in Digital Marketing	Mean Scale	Variance Scale	Corrected Total Correlation	Cronbach's Alpha
Chatbots	33.46	37.48	0.52	0.86
Virtual Assistants	33.30	37.50	0.62	0.85
Online Advertisements	33.16	36.20	0.54	0.86



Data privacy and security issue	34.54	33.87	0.51	0.87
Social Media Marketing	33.43	33.25	0.75	0.84
Personalized Marketing	33.24	37.19	0.55	0.86
Personalised Advertisements	33.19	36.49	0.63	0.85
Transparency	33.76	34.41	0.69	0.85
Customer Support	33.84	33.53	0.70	0.84
Dynamic Pricing	34.00	37.17	0.43	0.87

Source: Computed data

#### Reliability Statistics

Cronbach's Alpha	N of Items
0.87	10

Source: Computed data

#### Frequency Tables

Table -2 Demographic Profile

N Cases ( 37=N)	Demographic Profile		
	Description	Frequency	Percentage
Age	18 - 30	6	15.8%
	31 - 40	10	26.3%
	41 - 50	9	23.7%
	Above 50	12	31.6%
Gender	Male	14	37.8%
	Female	23	62.2%
Marital Status	Married	26	70.3%
	Unmarried	11	29.7%
Occupation	Employed	14	37.8%
	Self Employed	9	24.3%
	Professional	6	16.2%
	Others	8	21.6%
Income	Below Rs.1 lakh	3	8.1%
	Rs.1 lakh – Rs.10 lakh	19	51.4%
	Rs.10 lakh – Rs.20 lakh	14	37.8%
	Above Rs.20 lakh	1	2.7%
Avg. Spending on FMCG (p.m.)	Upto Rs.10,000	10	27%
	Rs.10,000 – Rs.20,000	16	43.2%
	Rs.20,000 – Rs.30,000	8	21.1%
	Rs.30,000 – Rs.40,000	3	8.1%
Education	Under Graduate	5	13.5%
	Post Graduate	21	56.8%
	Others	11	29.7%

Source: Primary data

The above 50 age group is the majority in the sample of responses with 31.6% and with 12 as frequency. In respect to gender female is the majority with 62.2% and 23 as frequency. Married respondents are the majority with 26 as frequency and percentage as 70.3%. The employed forms the majority with 37.8% and 14 as frequency. In respect to income Rs1 lakh – Rs.10 lakh is the income of majority of the respondents with 51.4% and 19 as frequency. The



spending average on fast moving consumer goods is Rs.10000 - Rs.20000 as majority with 43.2% and 16 as frequency. In case of education the majority of the respondents fall under the category of Post-Graduation with their percentage as 56.8% and 21 as their frequencies.

#### Correlation Coefficients

**H0**-There is a significant relationship between the features in online purchase and experiences of Artificial Intelligence in Digital Marketing.

**H1** – There is no significant relationship between the features in online purchase and experiences of Artificial Intelligence in Digital Marketing.

#### Relationship between Access of the products and the Use of Chatbots in AI driven digital marketing

**Table – 3 Access of the products and Use of Chatbots**

Access * Chatbots	Value	Asymptotic Error	Std.	Approx. T	Approx. Sig.
Ordinal Spearman Correlation	0.15	0.16		0.89	0.379
Interval Pearson's R	0.17	0.15		1.04	0.304
N of Valid Cases	37				

Source: Computed data

#### Inference

The above table shows that there is a relationship that is of medium correlation between the access of the products and the experience with use of chatbots with a significant value of 0.379 and 0.304 accepting null hypothesis.

#### Relationship between Fashion products availability and AI – driven personalised marketing

**Table – 4 Availability of Fashionable products and AI - driven personalised marketing**

Fashion * Marketing	Value	Asymptotic Error	Std.	Approx. T	Approx. Sig.
Ordinal Spearman Correlation	0.24	0.16		1.46	0.152
Interval Pearson's R	0.27	0.17		1.66	0.106
N of Valid Cases	37				

#### Inference

The above table shows that the two variables are positively correlated with significance level of 0.152 and 0.106 and is within the range of correlation at the significance level of 0.05. The null hypothesis is accepted and alternative hypothesis is rejected.

#### Relationship between availability of discounts and the dynamic pricing of products

**Table – 5 Availability of discounts and the dynamic pricing of products**

Discounts * Dynamic pricing	Value	Asymptotic Std. Error	Approx. T	Approx. Sig.
Ordinal Spearman Correlation	-0.09	0.15	-0.55	0.585
Interval Pearson's R	-0.03	0.12	-0.17	0.867
N of Valid Cases	37			

Source: Computed data

#### Inference

The above table shows that the relationship between discounts offered and dynamic pricing system has a high correlation in Spearman's and very high correlation in Pearson's with a significance level of 0.585 and 0.867 at the 0.05 significance level.



**Relationship between proper grievance system and the transparency in AI – driven digital marketing**

**Table – 6 Grievance system and Transparency**

Grievance * Transparency System	Value	Asymptotic Std. Error	Approx. T	Approx. Sig.
Ordinal Spearman Correlation	0.05	0.19	0.29	0.776
Interval Pearson's R	0.05	0.19	0.30	0.767
N of Valid Cases	37			

**Source:** Computed data

**Inference**

The table above shows that there is a very strong correlation between the proper grievance system and the transparency experiences in digital marketing with the significance value of 0.776 and 0.767 at significance level of 0.05.

**IV. FINDINGS**

1. There is a positive relationship the access to the products that are sold in digital marketing and the experience of chatbots used for marketing products online.
2. There is a positive correlation between fashionable products that are available in online and the AI driven personalised marketing.
3. There is a strong relationship between the discounts offered by online sellers and the dynamic pricing followed by online sellers.
4. There is a very strong relationship between proper grievance system online and transparencies that are experienced by the consumers of fast moving consumer goods industry.
5. The average spending of money on fast moving consumer goods per month as per research among the 37 respondents is Rs.10, 000 – Rs.20, 000.
6. The awareness levels are low among masses with regard to AI applications and this study contains samples of the AI familiar respondents.

**Further Scope of Study**

The study undertaken is of Consumers point of view but the researchers can go for an in-depth study on the Sellers point of usage of AI and in the usage of AI in manufacturing sector of various other goods. The researchers can also study in various other industries of marketing.

**V. CONCLUSION OF THE STUDY**

The data collected is within a limited period of time and with the length of time results may change and this is a non - randomized sampling method used as all are not aware of Artificial intelligence and its use in digital marketing, supply chain, applications in business. The study is still in exploratory stage and there are many challenges and impediments in the path of AI in marketing. There are mainly the privacy and security issues and the need for familiarity in how it can be used for their ease by the customer with the knowledge of threats that may arise.

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