Influence of Artificial Intelligence and Social Media on Online Purchase of Fashion Products Among Z Generation People

Mr. Sreejith P[1], Dr. P. Kannan[2]
[1]*PhD Research scholar in Commerce, Dr. NGP Arts and science college, Coimbatore*
[2]*Associate Professor of Commerce, Dr. NGP Arts and science college, Coimbatore*

***Abstract*—The rapid advancement of digital technologies has significantly transformed consumer behavior, particularly among Generation Z, a cohort defined by its digital nativity. Use of AI and its allied tools for making purchase decisions are very common in these days, it provide very accurate result for the better purchase. Most of the studies are carried out for analyzing the general awareness and usage of AI in individual purchase. The main objective of this research was to analyse the impact of AI and social media influence on individual online purchase. Data were collected through a structured questionnaire and analyzed with the help of some statistical tools such as Anova, T test, etc. The findings of this research reveal that AI tools are greatly influence the individual purchase decision. Secondly, Social media are having prominent role for shaping the individual purchase. Instagram is the major social media individuals are using. AI-driven tools such as personalized recommendations, virtual try-ons, and chatbots have become integral in shaping their purchase decisions. Simultaneously, social media platforms like Instagram, TikTok, and Pinterest play a pivotal role in trend dissemination, peer influence, and brand engagement. AI enhances user experience by providing tailored shopping journeys, while social media serves as a powerful tool for product discovery and validation through influencers, user-generated content, and targeted advertising. The study concludes that fashion retailers and brands must strategically integrate AI capabilities with social media marketing to effectively engage and convert Gen Z consumers. This paper contributes to the understanding of evolving digital consumer behavior and offers practical insights for fashion marketers aiming to leverage technology for improved customer engagement and sales conversion.**

Keywords: **Artificial intelligence, Z generations, Social media, perception, online purchase**

I. INTRODUCTION

The growth of ecommerce was driven by rapid technology adoption led by the increasing use of devices such as smart phones increasing, and access to the internet through broadband, 3G, 4G etc. increased online consumer base. Furthermore, favored demographics and a growing internet user base helped to aid this growth. In terms of highlights, the growth shown by home- grown players such as Flipkart and Snapdeal and the huge investor interest around these companies displayed the immense potential of the market. With the entry of ecommerce behemoths such as Amazon and Alibaba, the competition is expected to further intensify. Both these international players come with deep pockets and the patience to drive the Indian e-commerce market.

The impact of social media on online purchase of fashion product is very high. One industry which is considered to be perfectly suited and naturally fit for social media is fashion. When we talk about social media for the fashion industry it refers to the social networking websites and other online platforms that enable the fashion industry to connect with their customers using the latest social networking technology. The fashion Industry is using social media to study trends and anticipate fashion behaviors of customers. It is embracing social media which has enabled it to emerge in the forefront as a phenomenon. The main impact of social media marketing on online purchase of fashion products Opinions of the customers: The see now, buy now" direct-to-consumer model evolved on the internet. Consumers are smarter than ever because of the variety of products to choose from, the constant evolution of technology and the all-access mindset of social media. As they say, knowledge is power. Today's landscape of fashion is changing dramatically, and the average consumer is becoming more and more empowered. The present study seeks to understand the influence of various AI tools and social media usage for making their purchase of various fashion products.

II. STATEMENT OF PROBLEM

This study aims to investigate the influence of Artificial intelligence and social media on online purchase fashion products among the Z generation people. It will measure the behavioural adaptations and changes in user's attitude towards the usage of AI tools and social media for making the online purchase. There is a rise in advertisement of online social networks and perception of users regarding targeted messages on popular network like Facebook is not known to greater extent. Market should be enabled to reach users with relevant advertisements and personalized messages. Such targeting will increase the value of advertising for both advertisers and social network users. Majority of the Z generation people are using various AI tools and actively using different social medias in their daily life for various purposes. There is a lack of understanding among the people regarding the usage and effectiveness of various AI tools and social media's influence on purchase of fashion products. The study is also enquiring, how beneficial is social media creating purchasing behaviour among costumers and the effects of social media on the fashion products.

III. OBJECTIVES OF THE STUDY

1. The study the impact of social media marketing on the online purchase of fashion product.
2. To analyse the perception of consumers towards the usage of AI tools.
3. To determine the role of AI and social media on the purchase decision of the consumers.

IV. RESEARCH METHODOLOGY

Research methodology of the study provides a frame work or an outline of how the research study carried out. It provides the study procedure in a simple and systematic way. Descriptive research is used for this study. Descriptive research is defined as a research that described the characteristics of the population or phenomenon that is being studied. 100 Samples are selected for the study from Malappuram District of Kerala. This study covers only among Z generation people. Under this study people having an age category of 15-28 are only considered. Simple random sampling method is used for selecting this sample from the population. All the necessary data's are collected from both primary and secondary sources. A structured questionnaire was used for collecting the primary Data. Some statistical tools such as Descriptive statistics, one way Anova, correlation analysis are done by using Jamovi 2.6.26 software.

V. RESULTS AND FINDINGS

Gender	No. of Respondents	Percent
Male	42	42.00%
Female	58	58.00%
Total	100	100.00%
Age	No. of Respondents	Percent
15-19	35	35.00%
20-24	42	42.00%
25-28	23	23.00%
Total	100	100.00%
Education	No. of Respondents	Percent
SSLC	3	3.00%
Plus two	23	23.00%
Diploma	11	11.00%
Degree	41	41.00%
Post Graduate	22	22.00%
Total	100	100.00%
Occupation	No. of Respondents	Percent
Student	42	42.00%

Govt Employee	5	5.00%
Private Employee	33	33.00%
Homemaker	14	14.00%
Business	6	6.00%
Total	100	100.00%
Marital status	No. of Respondents	Percent
Unmarried	56	56.00%
married	44	44.00%
Total	100	100.00%
Area of Residence	No. of Respondents	Percent
Rural	34	34.30%
Semi Urban	60	60.60%
Urban	5	5.10%
Total	100	100.00%
Annual Income	No. of Respondents	Percent
Below 100000	61	61.00%
100001-200000	22	22.00%
200001-300000	11	11.00%
Above 300001	6	6.00%
Total	100	100.00%

(Source: Primary Data)

Interpretation

The above table shows the Demographic profile of the respondents, it include the gender, age, education qualification, occupation, marital status, area of residence and annual income. On the basis of gender, 58% are female, which means female are more engaged in purchasing of fashion products in online. Mostly 20-24 age category people are engaged in online purchase (42%), it means younger generation people are more interested in online purchase. 41% of the respondents are degree holders. Both students and employed persons are doing online purchase. 61% of the respondents are having below 100000 incomes.

H0: There is no significant relation between level of education and awareness level

One-Way ANOVA (Fisher's)				
	F	df1	df2	p
AW1	0.586	4	95	0.673
AW2	1.395	4	95	0.242
AW3	1.912	4	95	0.115

To analyse the statistical significance between education level with overall awareness level, it is found that None of the ANOVA results show significant differences between groups for AW1, AW2, or AW3. The lowest p-value (AW3 = 0.115) is still not below the conventional threshold of 0.05. All the p value of the awareness level is above the basic limit, it means level of education is not significantly influence the awareness level of the respondents. We accept the null hypothesis.

H0: There is no difference in overall perception of AI tool usage between genders.

Group Descriptives						
	Group	N	Mean	Median	SD	SE

Group Descriptives						
	Group	N	Mean	Median	SD	SE
Overall perception of AI Tool usage	Male	42	4.09	4.00	0.655	0.101
	Female	58	3.62	4.00	0.931	0.122

Independent Samples T-Test						
		Statistic	df	p	Mean difference	SE difference
K	Student's t	2.79[a]	98.0	0.006	0.467	0.168
Note. H_a $\mu_{Male} \neq \mu_{Female}$						
[a] Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances						

To test the people overall perception of AI tools usage with their gender, it found that p-value = 0.006, which is less than 0.05 (commonly used significance level). There is a statistically significant difference in the overall perception of AI tool usage between genders. The mean difference of 0.467 indicates the average perception score differs by that amount between genders. Reject the null hypothesis. The t-test shows a statistically significant association between gender and perception of AI tool usage (t = 2.79, p = 0.006). This means gender does appear to influence perception, with a mean difference of 0.467 points between groups.

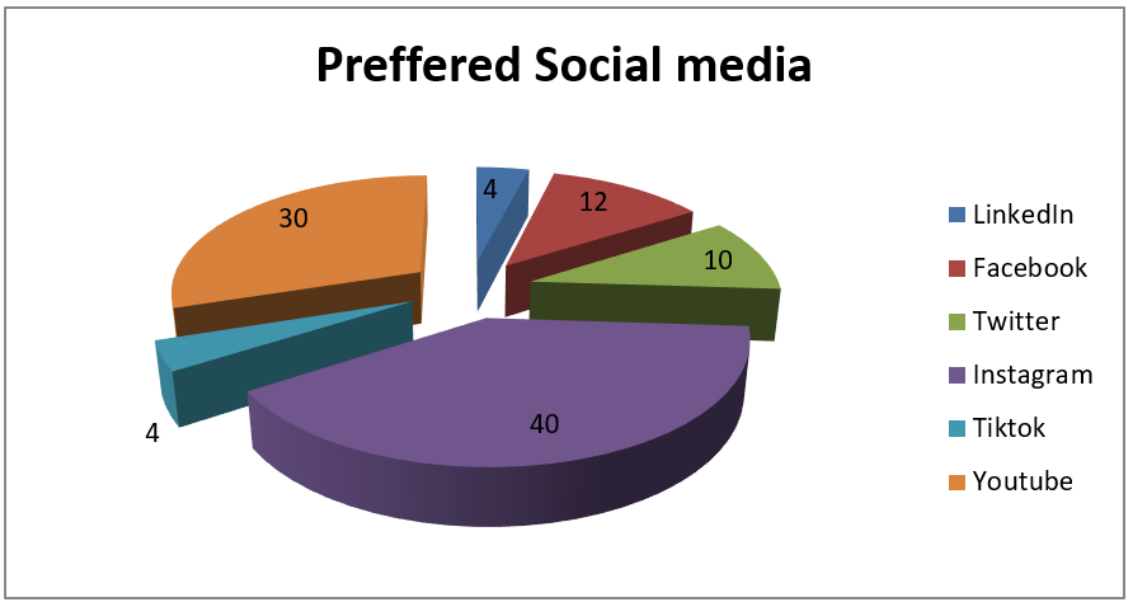


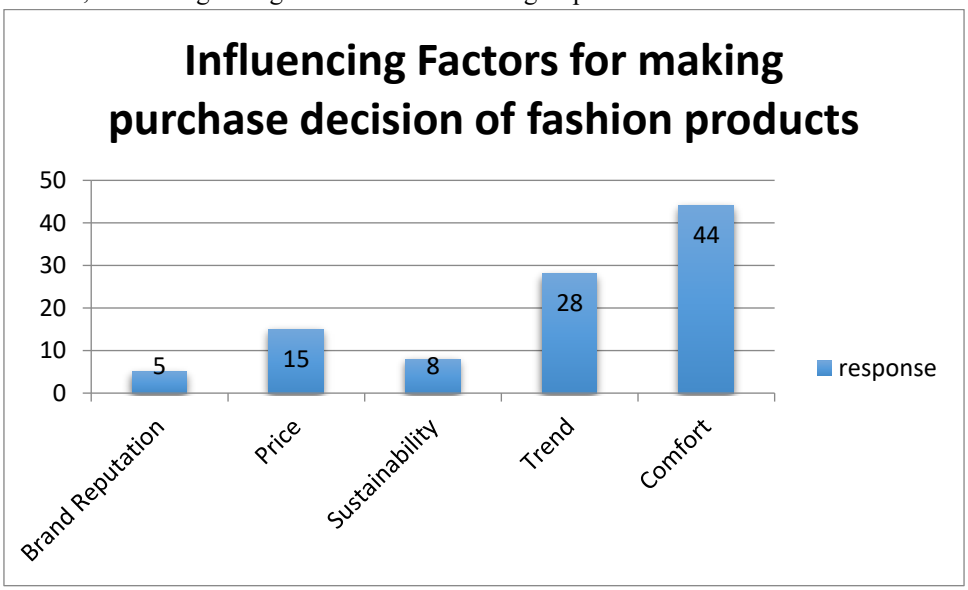
Figure 1 Preference of Social Media

The above figure shows that consumers preference towards social media. 40% of the consumers are actively influencing Instagram for purchasing fashion products in online. 30% are influenced by youtube followed by 12% are influenced by facebook. Only 4% are using tiktok and linkdine social media.

Descriptives Statistics						
Descriptives	Gender	Education	Occupation	Age	Marital status	Area of Residence
Mean	1.58	3.67	2.37	1.69	1.55	1.71

Descriptives Statistics						
Descriptives	Gender	Education	Occupation	Age	Marital status	Area of Residence
Median	2.00	4.00	3.00	1.00	2.00	2
Standard deviation	0.496	1.24	1.32	0.895	0.626	0.558
Skewness	-0.329	-0.481	0.316	1.00	1.70	0.0177
Std. error skewness	0.241	0.241	0.241	0.241	0.241	0.243
Kurtosis	-1.93	-1.11	-1.16	-0.141	7.60	-0.529
Std. error kurtosis	0.478	0.478	0.478	0.478	0.478	0.481

The descriptive statistics provide insights into the distribution of six categorical variables coded numerically. The mean values indicate that most respondents are female (Gender mean = 1.58, with 1 likely representing male and 2 female), have a high level of education (Education mean = 3.67), and are primarily in mid-range occupations (Occupation mean = 2.37). The Age mean of 1.69 suggests a concentration in younger age categories. Skewness values reveal that Age and Marital Status are positively skewed, indicating a higher number of younger and unmarried individuals. In contrast, Gender and Education are negatively skewed, implying more females and higher education levels. High kurtosis in Marital Status (7.60) suggests a peaked distribution, indicating most respondents fall into one marital status category. Other variables show relatively flat distributions (negative kurtosis). Overall, the data shows moderate variability (standard deviations range from 0.496 to 1.32) and meaningful demographic concentration in specific groups.



The above figure shows that major influencing Z generation people for making purchase of fashion products. It reveals that 44% of the respondents are preferring comfort for purchasing items. 28% of them are preferring trend. 15% are considering price.

VI. CONCLUSION

The buying behavior of Generation Z (born roughly between 1997 and 2012) is greatly influenced by artificial intelligence (AI) and social media. AI algorithms on platforms like Amazon, Netflix, and fashion retail sites track Gen Z's browsing and purchase history to offer highly tailored product suggestions. Google assistants and siri is guiding purchase decision. Gen Z consumers use visual search (e.g., Google Lens or Pinterest Lens) to identify products they see in real life or online. Social media influencers play a critical role in shaping Gen Z's tastes and preferences. Reviews,

unboxing videos, and customer posts on platforms like Instagram, and YouTube are more influential than traditional advertising. AI and social media collectively shape the buying habits of Gen Z by making the shopping journey personalized, interactive, and community-driven. Comfort is the prime factor for influencing consumers. Z generation people are greatly using AI tools. Instagram and youtube are the most important and influencing social media among Z generation people.

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