

Consumer Perception Towards the usage of Artificial Intelligence in Online Shopping

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Abstract

Products with artificial intelligence (AI) functions perform thinking, decision-making, and social tasks, similar to human assistants. Consumers generally have different preferences and perceptions when buying electronic gadgets online versus offline. The objectives are to identify the socio-economic condition of the consumer, to identify which factors determining the perception towards the usage of artificial intelligence in online shopping preference, to test the hypothesis for perception towards the usage of artificial intelligence in online shopping preference

The Madurai city is purposively selected for the present study since it is the predominating trade centre for Tamil Nadu. About 120 respondents were selected by adopting simple random techniques. The data accumulated through the online mode. An online survey in Google Forms was conducted to collect data from customers by using well-structured interview schedule and the information collected pertains to the year 2024-25. Percentage analysis, mean ranking, ANOVA were carried out to draw meaningful interpretations. The study identifies the transformative role of AI in shaping the purchase intention and consumer preference in the Indian online shopping preference, addressing gaps in existing literature by focusing on India's unique socio-economic context. The online shopping preference was analyzed by computing the mean score and the results are it is apparent that home delivery was the major preference followed by Convenience, Detailed Product Information, Price Comparison, Wide Selection were the online shopping preference by the consumers for their purchasing behavior.

Keywords: Artificial intelligence, Online Shopping, Consumer, Perception, Retail

Introduction

Products with artificial intelligence (AI) functions perform thinking, decision-making, and social tasks, similar to human assistants. With this similarity to match well-known models of technology acceptance, research hypotheses develops about consumers' preferences to buy or

avoid AI products and the variation of these favourites across consumers and AI product types, which is particularly novel in the literature. Consumers generally have different preferences and perceptions when buying electronic gadgets online versus offline. Online shopping is often favoured for its convenience, wider selection, and potentially lower prices, while offline stores are preferred for the ability to physically inspect products, receive immediate possession, and potentially benefit from personalized customer service. There is limited research linking consumer perception of AI with purchase intention, satisfaction, and loyalty in online shopping. With this background the present study was attempted to identify the socio-economic condition of the consumer and which factors to determine the perception towards the usage of artificial intelligence in online shopping preference.

Objectives

1. To identify the socio- economic condition of the consumer.
2. To identify which factors determining the perception towards the usage of artificial intelligence in online shopping preference.
3. To test the hypothesis for perception towards the usage of artificial intelligence in online shopping preference

Review of Literature

Sivathanu et al. (2023) provide the influencers of customers' online purchasing intent subsequent to viewing deep fake videos generated by artificial intelligence. In addition, the manipulation strategies employed by the managers to create AI-based deep false videos are clarified.

Ersoy, A. B. (2022) provides recommendations for the most effective Artificial Intelligence tools for retail and corporate decision-makers. Utilization of AI tools in India's online retail sector is the focus of this study.

Nagy, S., & Hajdú, N. (2021) The researchers noted that Trust emerged as a significant determinant in shaping consumer perspectives regarding artificial intelligence. As the second most influential factor in attitudes and behavioral intention, perceived utility was deemed more crucial than perceived ease of use.

Suresh, A., & Rani, N. J. (2020) established a significant relationship was observed between the technique's factors, but none was found between the usage factors. Voice-activated search, virtual personal assistants, and real-time product targeting are the most influential aspects of AI in e-commerce.

Giri et al. (2019) stated that Utilizing Artificial Intelligence generates variables that have a direct influence on the formulation of marketing strategies. Consequently, it is evident that Artificial Intelligence is an instrument that, with prudent implementation, has the potential to facilitate an extensive array of operations for the organization.

Methods

Research Design

The descriptive research design used for this study since describing the characteristics of the consumer.

Area of the study

The Madurai city is selected for this research study in Tamilnadu

Data Collection

By adopting simple random technique for collecting the data and 120 respondents were selected for this study. An online survey in Google Forms was conducted to collect data from customers those who are purchasing electronic gadgets and the information collected pertains to the year 2024-25. For drawing the explanation the Percentage analysis, mean ranking, ANOVA were used in this study.

Results and Discussion

The general and socio-economic characteristics of consumers of online shopping were analyzed and the results are presented in Table-1. The results indicated that the majority of the consumers (64.16 per cent) were the age group of 21-30 years followed by less than 20 years and 31-40 Years. About 45.80 per cent of were married while 79 per cent were males. The majority of consumers (49.17 per cent) were postgraduates and about 30 per cent of consumers were under-graduates. The monthly income of consumers was ranging from Rs. 0-5000(85 per cent) followed by Rs.5000- 10000(8.34 per cent). About 70.83 per cent of the consumers have a family size of 4-6 members followed by less than 3 members (25.00 per cent).

Table 1: Socio-Economic Characteristics of Consumers of Online Shopping

Variables with Category	Respondents(N=120)		Variables with Category	Respondents(N=120)	
	Number	Per Cent		Number	Per Cent
Age			Monthly Income(Rs)		
< 20 Years	16	13.33	0-5000	102	85.00
21-30 Years	77	64.16	5001-10000	10	8.34
31-40 Years	14	11.67	10001-15000	4	3.33
41-50 Years	8	6.67	> 15000	4	3.33
> 51 Years	5	4.17			
Gender			Marital Status		
Male	79	65.80	Married	55	45.80
Female	41	34.20	Unmarried	65	54.20
Educational Qualifications			Family Size		
Secondary	8	6.66	< 3	30	25.00
Higher Secondary	12	10.00	4-6	85	70.83
UG	36	30.00	>6	5	4.17
PG	59	49.17			
Others	5	4.17			

Perception towards the usage of artificial intelligence in online shopping preference -Analysis of Variance

The perception towards the usage of AI in online shopping preference were analysed by calculating ANOVA then the results are obtainable in Table 2. The results presented that the F-value was 0.0012 representative the significance at five per cent level. Hence, it was inferred that there was a significant difference between the online shopping preference.

Table 2. Perception towards the usage of AI in Online Shopping Preference – ANOVA

Source	Sum of Squares	d.f	Mean Square	F	Sig.
Between People	680.584	119	5.719		

Within People	Between Items	3716.1878	18	206.454	0.0012	.000
	Residual	1652.5378	1796	.920		
	Total	5368.7256	1814	2.983		
Total		6049.3096	1933	3.184		

Source: Computed Data

Perception Towards the Usage of AI in Online Shopping

The perception towards the usage of AI in online shopping preference was analysed by calculating the mean score and the results are presented in Table 3. From the results, it is apparent that home delivery was the major preference followed by Convenience, Detailed Product Information, Price Comparison, Wide Selection were the online shopping preference by the consumers for their purchasing behavior.

Table 3. Perception towards the usage of AI in Online Shopping Preference

Attributes	Mean Score	Rank
Convenience	5.12	2
Price Comparison	4.92	4
Wide Selection	4.90	5
Detailed Product Information	4.95	3
Home Delivery	5.29	1

Findings

The results indicated that the majority of the consumers (64.16 per cent) were the age group of 21-30 years followed by less than 20 years and 31-40 Years. About 45.80 per cent of were married while 79 per cent were males. The majority of consumers (49.17 per cent) were postgraduates and about 30 per cent of consumers were under-graduates. The monthly income of consumers were ranging from Rs. 0-5000(85 per cent) followed by Rs.5000- 10000(8.34 per cent). About 70.83 per cent of the consumers have a family size of 4-6 members followed by less than 3 members (25.00 per cent). The perception towards the usage of AI in online shopping preference online shopping preference were analyzed by computing ANOVA and the results showed that the F-value was 0.0012 indicating the significance at five per cent level. Hence, it was inferred that there was a significant difference between the perception towards the usage of AI in online shopping preference online shopping preference. The online shopping preference was analyzed by computing the mean score and the results are it is apparent that home delivery was the major preference followed by Convenience, Detailed Product Information, Price Comparison, Wide Selection were the online shopping preference by the consumers for their purchasing behaviour.

Suggestion

Consumers have been seen to reveal different buying behaviours when shopping online than, when they are shopping in a physical retail stores. This makes it very important that retailers have to study the consumer behaviour and make changes in order to remain profitable and flourishing. The overall results prove that the respondents have perceived online shopping in a positive manner. This clearly justifies the project growth of online shopping. The results can also be used by various organizations to identify their target customer segments. India has a great future in online shopping.

Conclusion

Online shopping has gained immense popularity over the past decade, particularly among the “Net Generation.” Its convenience and accessibility have made it a preferred choice for many consumers. While online shopping offers numerous advantages, it also presents potential challenges. This study examines the transformative role of Artificial Intelligence (AI) in shaping purchase intentions and consumer preferences in India’s online shopping landscape. It addresses gaps in existing literature by focusing on the country’s unique socio-economic context, offering insights into how AI-driven technologies influence buying behavior in the Indian market.

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