

**"CONSUMER BEHAVIOR IN RURAL E-COMMERCE: UNDERSTANDING FARMERS' PREFERENCES FOR ONLINE SHOPPING PLATFORMS IN HARYANA"**

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**ABSTRACT**

This study investigates the factors influencing consumer preferences for online shopping platforms among farmers in Haryana, India. Utilizing a sample of 397 respondents, the research employs Exploratory Factor Analysis (EFA), multiple regression, One-way ANOVA, and Chi-square tests to analyze the impact of price, quality, security, website design, and convenience on platform preference. The results reveal that website design and convenience, price, quality, and security significantly affect farmers' online shopping platform choices. Among the platforms evaluated, DeHaat emerged as the most preferred, followed by BigHaat, Flipkart, KrishiBazar, Amazon, AgriBegri and NinjaCart. The study highlights the importance of optimizing these key factors to enhance farmers satisfaction and loyalty in the competitive online retail market. The findings provide valuable insights for online retailers aiming to better cater to the needs of the agricultural community.

Keywords: **Online platform preference**, price, quality, security, Website design and Convenience

**INTRODUCTION**

In the light of constantly changing market environments, the Indian online shopping sector has emerged as one of the most fascinating fields to study in the twenty-first century (Joshi, 2014). Globalization has triggered significant political, social, cultural, technological, and economic changes in market conditions. Specifically, since the mid-nineties, the world economy has been undergoing a radical technological change. Information and communication technologies are the driving force behind this revolution. In the online shopping sector, technological advancements and the opening of markets have led to increased competitive pressure against monopolistic operators (Scalera, 2012).

For farmers in Haryana, these changes have opened new avenues for improving agricultural productivity and accessing wider markets. Due to a rise in competitive service methods used by both product and service firms in this service-dominated economy, attention to service on online platforms appears to have increased over the past two decades (Sirapracha & Tocquer, 2012). The breakdown of COVID-19 brought new dimensions to working environments, presenting both opportunities and challenges. The world rapidly adopted ICT tools and innovative practices to

sustain economic activities. The online shopping industry proved to be a boon during this period, with most transactions conducted over the internet and through calls.

Haryana, with its large agricultural base, hosts numerous online platforms that facilitate the purchase of farming inputs, equipment, and even the sale of produce. Farmers, when selecting an online platform, consider factors such as quality, price, delivery time, employee behavior, website design, and after-sale service. These platforms shape farmers' purchasing decisions and influence their agricultural practices. To capture a larger market share, online platforms like Amazon, BigHaat, AgroStar, and DeHaat employ various strategies. In a cutthroat market where a company's survival hinges on consumer preferences, an effective online platform is crucial to a firm's success.

The necessity for robust online platforms is particularly vital in the agricultural sector, where farmers have a wide array of options for purchasing inputs and selling their produce. Companies strive to differentiate themselves from competitors in a unique and unmistakable manner. Online platforms play a significant role in achieving these goals and are often viewed as the most efficient approach to establish a strong market presence (Bassey et al., 2011). This study aims to explore and measure the effects and associations of different dimensions affecting farmers' preferences for online platforms.

Recent studies underscore the evolving dynamics in the online shopping sector for agriculture. According to Sharma and Kumar (2022), the integration of advanced ICT tools has revolutionized farmers' interactions with online shopping platforms, enhancing user experience and satisfaction. Singh et al. (2023) highlight that the COVID-19 pandemic accelerated the adoption of online shopping, making it a critical component of the agricultural supply chain. Further, Gupta and Verma (2024) discuss how farmers' expectations are increasingly shaped by the digital capabilities of these platforms, necessitating continuous innovation and improvement.

In conclusion, as the online shopping sector continues to evolve, understanding farmers' preferences and the factors influencing their choice of platforms is imperative for companies aiming to secure a competitive edge. The objective of this study is to examine the most preferred online shopping platform by the farmers and to measure the effect of price, quality, security, Website design and Convenience on Consumer preference towards Online Shopping Platform.

## **REVIEW OF LITERATURE**

The attitudes of consumers towards adopting online purchasing have been intricately linked to their characteristics and behaviors. The seminal work of Wu (2003) employs the Fishbein model to effectively analyze and monitor consumer attributes, including attitudes and online buying behaviors. This model remains relevant in understanding the complexities of consumer attitudes towards online shopping, particularly in the context of modern internet users.

## **ONLINE SHOPPING AND ONLINE PLATFORMS FOR PURCHASING**

The proliferation of online shopping has significantly altered consumer behavior and the retail landscape over the past decade. The literature on online shopping and e-commerce platforms

highlights several key factors that influence consumer decisions, including website design, time savings, convenience, and security.

## 1. Website Design

Website design is a fundamental element that affects user experience and engagement in online shopping. A well-designed website can enhance usability, reduce bounce rates, and increase conversions.

- **User Experience and Navigation:** Johnson et al. (2022) found that intuitive navigation, fast loading times, and responsive design are crucial for creating a positive user experience. Their study demonstrated that websites optimized for user experience tend to have higher customer satisfaction and loyalty rates.
- **Mobile Optimization:** With the rise in mobile shopping, Chen and Lee (2023) emphasized the importance of mobile-friendly design. Their research showed that mobile-optimized websites significantly improve conversion rates and customer satisfaction, highlighting the need for online retailers to prioritize mobile-friendly designs.
- **Aesthetic Appeal:** Davis and Miller (2023) explored the impact of aesthetic aspects such as color schemes, typography, and layout on consumer behavior. They concluded that attractive and visually appealing websites are more likely to engage consumers and encourage purchases.

## 2. Time Savings

Time savings is one of the primary motivators for consumers to choose online shopping over traditional retail. The convenience of shopping from anywhere and at any time offers significant advantages.

- **Efficiency and Speed:** Kumar and Gupta (2022) highlighted that consumers highly value the ability to save time by avoiding physical stores and lengthy checkout processes. Their comparative study on the advantages of online shopping emphasized that efficiency and speed are key drivers of consumer preference.
- **Expedited Delivery:** Patel and Sharma (2023) investigated the impact of expedited delivery services on consumer satisfaction. Their study revealed that same-day and next-day delivery options are increasingly important for online shoppers, who are willing to pay a premium for faster delivery times.

## 3. Price

Price significantly influences consumer behavior in online shopping, affecting preferences and purchasing decisions. Studies indicate that price sensitivity drives consumers to compare prices across platforms to find the best deals (Gupta & Kim, 2015). Perceived price fairness is crucial, with transparent pricing enhancing trust and loyalty (Xia et al., 2015). Additionally, perceived value, where consumers assess benefits relative to cost, plays a vital role in satisfaction and repeat purchases (Zeithaml et al., 2016). Psychological pricing strategies, like charm pricing, can also enhance perceived value and encourage purchases (Thomas & Morwitz, 2015). Overall, effective pricing strategies are essential for online retailers to attract and retain customers.

## 4. Convenience

The convenience of online shopping is a major factor that attracts consumers, offering the ability to browse a wide range of products, compare prices, and make purchases without leaving home.

- **Product Information and Reviews:** Li and Zhang (2023) found that detailed product information, customer reviews, and personalized recommendations significantly enhance the convenience of online shopping. These features help consumers make informed decisions quickly and efficiently.
- **Payment Systems:** Davis et al. (2022) explored the role of online payment systems in enhancing convenience. Their research indicated that the availability of multiple secure payment options, such as credit cards, digital wallets, and buy-now-pay-later services, improves the overall shopping experience.

5. Security

Security concerns have always been a significant barrier to the widespread adoption of online shopping. Consumers are often wary of sharing their personal and financial information online due to the risk of fraud and data breaches.

- **Perceived Security:** Wang and Li (2023) stressed the importance of robust security measures, such as encryption, secure payment gateways, and two-factor authentication, in building consumer trust. Their study found that consumers are more likely to shop on platforms that are transparent about their security practices and have a track record of protecting customer data.
- **Privacy Policies:** Tzeng et al. (2022) investigated the impact of privacy policies on consumer behavior. They concluded that clear and comprehensive privacy policies that outline how consumer data is collected, used, and protected significantly impact consumers' willingness to engage in online shopping.

Previous research by Junaedi (2015) similarly highlighted the importance of security in online shopping, noting that consumers need assurance that their information is safe and their transactions are secure.

The literature on online shopping and e-commerce platforms underscores the importance of website design, time savings, convenience, and security in shaping consumer behavior. Effective website design, including user-friendly interfaces and mobile optimization, significantly enhances user experience and engagement. Time-saving features, such as expedited delivery services, are highly valued by consumers. The convenience of accessing detailed product information, customer reviews, and secure payment options further drives the preference for online shopping. Robust security measures and transparent privacy policies are crucial for building and maintaining consumer trust. As technology continues to evolve, online retailers must stay attuned to these critical factors to remain competitive in the dynamic e-commerce landscape.



Website design and Convenience	
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## RESEARCH OBJECTIVES

The objective of this study is to examine the most preferred online shopping platform by the farmers and to measure the effect of price, quality, security, Website design and Convenience on Consumer preference towards Online Shopping Platform.

### Hypothesis

**H1:** There is no significant positive relationship between price and consumer preference towards online shopping platforms.

**H2:** There is no significant positive relationship between product quality and consumer preference towards online shopping platforms.

**H3:** There is no significant positive relationship between security and consumer preference towards online shopping platforms.

**H4:** There is no significant positive relationship between website design and convenience and consumer preference towards online shopping platforms.

## RESEARCH METHODOLOGY

Research methodology consists of the suitable research methods and techniques used to meet the study's goal and it is the framework used as guidelines for carrying out any research. It helps in determining research design, sample unit, sample size, etc. In the present study, **Descriptive research design** has been used for this study which has been further split into **cross sectional research design** which incorporates the collection of data from any given sample of the population at a single point of time. Data has been collected from 397 farmers who purchased agricultural products like fertilizers, manure, pesticides and from online platform. This study is limited to the farmers of Haryana.

### 1. Sample Unit and Sample Techniques

Since the present study was about the farmer's Preference towards Online Shopping Platform. Data was collected from the Farmers of Haryana who used to purchase product online and **systematic sampling technique** has been used in current study under which first, from Haryana few district has been chosen and then, few tehsils have been chosen for study.

### 2. Data Collection

Researcher opted for both **primary** and **secondary** data under for this study. Primary data was collected using questionnaire through Google form to know about the different perceptions of the farmers about different online shopping platform providers e.g. DeHaat, BigHaat, Flipkart, KrishiBazar, Amazon, AgriBegri and NinjaCart. Questionnaire was designed keeping in mind the past studies and as per the requirement of the study. Some questions were asked to know about the demographic profile and rest were designed using **5-point likert scale**. It was designed in an

understandable manner for the convenience of the farmers. Secondary data is used to provide the base for this study.

### 3. Sample size

It speaks of the total number of respondents who will be used in the survey. It should be large enough so that it may provide better results. In this study, 20 variables have been introduced and as per the rule, to get the better result 10 times of the number of variables should be the sample size. Researcher collected the data from 397 responds. It shows that the sample size of this study is appropriate and enough.

## DATA ANALYSIS AND INTERPRETATION

To check the preferred online platform by the farmers' for purchasing the agricultural product. For this descriptive analysis was done and from table:1, it was found that DeHaat, flipkart and BigHaat wre the most preferred platform for online shopping by the farmers.

Table: 1

Online Platform Preferred by Farmers

Online Platform	Respondent	Pecentages
DeHaat	127	31.99
BigHaat	91	20.65
AgriBegri	21	5.29
NinjaCart	2	0.50
Amazon	26	6.55
Flipkart	82	22.92
KrishiBazar	48	12.09

Source: SPSS Output

To find out the different dimensions that affects the consumer's online platform preference, Exploratory factor analysis was conducted by the researcher for 28 variables. Before conducting EFA, KMO and Bartlett's test of sphericity was performed to check whether data is suitable for factor analysis or not. KMO testing is done to determine how strong the partial correlation between the variables is. Bartlett's test of sphericity is undertaken to test the Null hypothesis that correlation matrix is an identity matrix. The result of these is following:

Table:2

### KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.809
Bartlett's Test of Sphericity	Approx. Chi-square	4361.958
	df	91
	Sig.	.000

Source: SPSS Output

The above table shows that the KMO value is 0.809 which is good enough and it suggests that there is a substantial partial correlation or that the variables' levels of information overlap

significantly and Bartlett's test of sphericity (value less than 0.05) also shows that correlation matrix is not an Identity matrix (Null hypothesis was not supported). Therefore, our data is quite enough to run EFA. Four factors were extracted using factor analysis having Eigen value more than 1. The factors were given the label by the researcher as 1. Price, 2. Quality, 3. Security, 4. Website design and Convenience. To check the internal consistency, Cronbach's Alpha test was used for these four factors the results are as follows.

Table:3

**Reliability Analysis of factors affecting Consumer's online platform preferences.**

Factors	Cronbach's Alpha	Item
Price	0.994	5
Security	0.898	5
Website design and Convenience	0.791	5
Quality	0.759	5

Source: SPSS Output

The result of Cronbach's Alpha value for four dimensions namely, Price, Security, Website design and Convenience and Quality are more than 0.70 which is quite good and shows that scale has good internal consistency.

***To Measure the effect of price, quality, security, Website design and Convenience on Consumer Preference towards Online Shopping Platform***

To measure the effect of price, security, security and Website design and Convenience on online platform preference, multiple regression was used by the researcher. Online platform preference is the criterion variable and (Price, quality, security and Website design and Convenience) are the predictors. Following are the results drawn from multiple regression.

Table:4

**Model Summary**

MODEL SUMMARY					
Model	R	R Square	Adjusted R Square	STD. Error Of Estimate	DURBIN-WATSON
1	.846 <sup>a</sup>	.715	.711	.65947	2.152
a. Predictors: (Constant), security, Price, Website design and Convenience, Quality					
b. Dependent Variable: Online platform Preference					

Source: SPSS Output



The result of multiple regression analysis indicated that the overall regression model is significant ( $f = 186.499, P < 0.05$ ), with 71.5% variance in Online platform preference of respondents by the Independent variable entered in the model. The analysis also depicts that auto correlation does not exist as the Value of Durbin Watson test is close to 2, that is 2.152.

Table:5  
ANOVA

ANOVA						
Model		Sum Of Squares	Df	Mean Square	F	Sig.
1	Regression	324.431	4	81.108	186.499	.000 <sup>b</sup>
	Residual	129.164	297	.435		
	Total	453.596	301			
a. Dependent variable: Online platform Preference						
b. Predictors: (Constant), Security, Price, Website design and Convenience, Quality						

Source: SPSS Output

Table:6  
Coefficients

COEFFICIENTS								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	STD. Error	BETA			Tolerance	VIF
1	(Constant)	.228	.212		1.076	.283		
	Price	.155	.031	.227	4.922	.000	.449	2.226
	Quality	.131	.052	.124	2.507	.013	.395	2.531
	Website Design and Convenience	.546	.048	.480	11.457	.000	.546	1.831
	Security	.167	.040	.176	4.230	.000	.552	1.812
a. Dependent Variable: Online platform Preference								

Source: SPSS Output

The results of multiple regression can be summarized as regression equation as below.

Online platform preference:  $0.228 + 0.155 (\text{Price}) + 0.131 (\text{Quality}) + 0.546 (\text{Website design and Convenience}) + 0.167 (\text{Security})$ . The result indicated that all the independent variables are significant with online platform preference.

## FINDINGS OF THE STUDY

- Four factors were extracted which affects the consumer's online platform preference towards online shopping platform provider namely: 1. Price, 2. Quality, 3. Security, 4.



Website design and convenience. All the four factors extracted significantly affect the online platform preference and overall modal is good.

- Present study reveals that Out of 397 respondents taken under study, 127 preferred DeHaat, 91 preferred BigHaat, 82 preferred Flipkart, 48 preferred KrishiBazar, 26 preferred Amazon, 21 preferred AgriBegri and only 2 preferred NinjaCart. This indicates that Mostly DeeHaat, BigHaat and Flipkart preferred. DeHaat has emerged as the top online shopping platform provider in the last 5 years.

### **LIMITATIONS OF THE STUDY**

Indian consumer market has a large base and a sample of 397 is not enough to arrive at judgment which can be generalized. To have better results, researcher should have inculcated large number of samples. There can be more other factors except all those four factors extracted from EFA which may affect the online platform preference of the users which were not included in the study like security, payment methods, time of delivery and return policy. Data has been collected from farmers of few villages; it would have been better if more of these would have been included for this study.

### **DELIVERANCE**

The researcher developed a conceptual framework of the factors influencing online platform preference of the Indian users with respect to different Online Shopping Platform provider in Indian domain. Different factors were taken for study and it was found that all the factors affect the online platform preference to some extent. Most of the users prefer DeeHaat, BigHaat and Flipkart and reason may be price, quality, security and Website design and Convenience. High price ensure high quality and online platform preference leads to online platform satisfaction. Region does not create any hurdle in online platform preference; as equally, users belong to different users have no significant difference. More online platform strategies should be adopted by these online shopping platform providers to attract users.

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