



Impact of Trust and Perceived Risk on Online Purchase Intention: A Study of Urban Consumers in Delhi/NCR

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ABSTRACT

The rapid expansion of e-commerce in India has transformed consumer purchasing patterns, particularly in metropolitan regions such as Delhi/National Capital Region (NCR). As online platforms increasingly replace traditional retail channels, understanding the psychological and behavioural factors that influence purchase intention has become essential. Among these factors, trust and perceived risk emerge as critical determinants of consumer decision-making in digital marketplaces. Unlike physical retail environments where product inspection and face-to-face interaction are possible, online shopping requires consumers to rely heavily on digital information, virtual interfaces, and electronic payment systems. This dependence introduces uncertainty, making trust formation and risk perception central to the success of e-commerce platforms.

The present study investigates the impact of trust and perceived risk on online purchase intention among urban consumers in Delhi/NCR. It specifically examines how elements such as payment security, product authenticity, platform reliability, data privacy, and return policies influence consumer confidence and satisfaction. The study adopts a quantitative research design, collecting primary data from 600 respondents who have engaged in online shopping within the past six months. Statistical techniques including correlation and regression analysis are proposed to evaluate relationships between variables.

Preliminary conceptual analysis suggests that trust significantly enhances purchase intention, while perceived risk negatively affects consumers' willingness to transact online. However, trust-building mechanisms such as secure payment gateways, transparent refund policies, verified seller ratings, and positive customer reviews can mitigate perceived risk and strengthen purchase intention. The study further posits that consumer satisfaction mediates the relationship between trust and loyalty.

By focusing on Delhi/NCR, one of India's most digitally advanced urban clusters, this research contributes region-specific insights to the broader literature on online consumer behaviour. The findings are expected to provide practical implications for e-commerce companies, policymakers, and digital marketers seeking to improve customer engagement and long-term retention strategies. Ultimately, the study highlights the importance of building consumer trust and reducing perceived risk to sustain growth in the competitive e-commerce ecosystem.

KEY WORDS

Online Purchase Intention, Consumer Trust, Perceived Risk, Payment Security, Product Authenticity, E-Commerce, Consumer Satisfaction, Delhi/NCR, Digital Transactions, Urban Consumers

INTRODUCTION

The digital revolution has fundamentally reshaped the global retail landscape, redefining how consumers search for information, evaluate alternatives, and complete transactions. In India, the proliferation of smartphones, affordable internet access, and digital payment systems has accelerated the growth of e-commerce platforms. Urban regions such as Delhi/NCR represent the epicenter of this transformation, characterized by high internet penetration, technological literacy, and increasing consumer reliance on online marketplaces.

Online shopping offers numerous advantages, including convenience, time efficiency, access to diverse product categories, competitive pricing, and home delivery services. Consumers can compare products, read reviews, and access promotional offers within minutes. However, despite these benefits, online transactions involve inherent uncertainties. The inability to physically inspect products, concerns regarding payment security, potential misuse of personal information, and uncertainty about

product authenticity contribute to perceived risk. These concerns significantly influence consumers’ attitudes toward online purchasing.

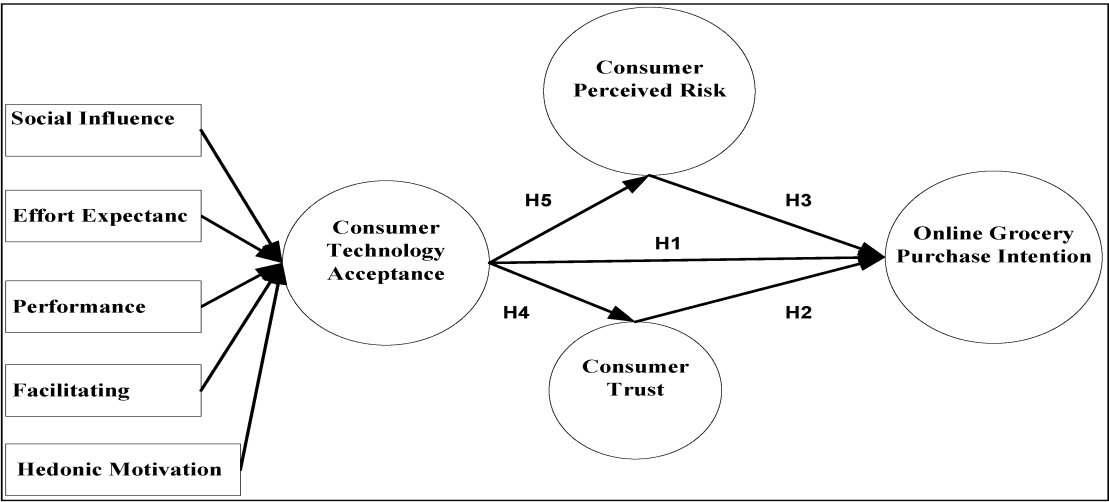


Fig: Perceived Risk on Consumer Technology.

Trust, therefore, becomes a pivotal factor in digital commerce. In the absence of physical interaction, consumers rely on signals such as website design quality, secure payment icons, seller ratings, return policies, and brand reputation to assess credibility. Trust can be defined as the belief that an online platform will fulfill its obligations, protect consumer data, and deliver products as promised. When trust is established, consumers are more likely to engage in transactions, repeat purchases, and recommend the platform to others.

Perceived risk, on the other hand, refers to the consumer’s expectation of potential losses associated with an online purchase. These risks may be financial (loss of money), functional (product not performing as expected), psychological (anxiety or dissatisfaction), social (negative social judgment), or privacy-related (data misuse). In online environments, perceived risk is often amplified due to limited control and physical separation from the seller.

In the context of Delhi/NCR, where consumers are exposed to multiple competing e-commerce platforms, understanding the interplay between trust and perceived risk is crucial. Urban consumers typically possess higher digital literacy and purchasing power; however, they are also more aware of

cybersecurity threats and fraudulent activities. Thus, their purchase intention depends largely on how effectively platforms manage risk and cultivate trust.

Purchase intention refers to the likelihood that a consumer will engage in an online transaction within a specific timeframe. It represents a behavioural outcome influenced by cognitive evaluation and emotional response. Theoretical frameworks such as the Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB), and Trust-Risk Models suggest that perceived usefulness, perceived ease of use, trust, and risk perception jointly determine online behavioural intentions.

This study seeks to explore these dynamics in a structured and empirical manner. By examining how payment security, product authenticity, platform reliability, and return policies influence trust and perceived risk, the research aims to identify key drivers of online purchase intention among urban consumers in Delhi/NCR.

The significance of this study lies in its practical and theoretical contributions. From a managerial perspective, e-commerce platforms must prioritize trust-building strategies to retain customers in an increasingly competitive market. Secure transaction systems, transparent policies, and responsive customer support are no longer optional features but essential components of digital retail success. From a policy perspective, strengthening consumer protection laws and promoting cybersecurity awareness can enhance public confidence in online commerce.

Furthermore, this research contributes to academic discourse by integrating trust and perceived risk within a unified framework to explain purchase intention in the Indian urban context. While previous studies have examined these variables independently, limited research has focused specifically on Delhi/NCR, a region that combines high technological adoption with diverse demographic characteristics.

AIMS AND OBJECTIVES

Aim of the Study

The primary aim of this study is to examine the impact of trust and perceived risk on online purchase intention among urban consumers in Delhi/NCR, with particular emphasis on payment security, product authenticity, platform reliability, and consumer satisfaction within e-commerce environments.

Objectives of the Study

The objectives of the study are as follows:

- ❖ To examine the level of trust among urban consumers toward e-commerce platforms operating in Delhi/NCR.
- ❖ To identify the different dimensions of perceived risk (financial, functional, privacy, delivery-related, and psychological) associated with online shopping.
- ❖ To analyze the relationship between trust and online purchase intention.
- ❖ To assess the impact of perceived risk on consumers' willingness to purchase products online.
- ❖ To evaluate the role of payment security and product authenticity in building consumer trust.
- ❖ To examine whether perceived risk negatively influences consumer satisfaction.
- ❖ To study the mediating role of satisfaction between trust and purchase intention.
- ❖ To analyze demographic differences (age, gender, income, education) in relation to trust and perceived risk.
- ❖ To provide managerial recommendations for e-commerce platforms to enhance consumer trust and reduce perceived risk.

REVIEW OF LITERATURE

The rapid growth of e-commerce has generated significant academic interest in understanding the psychological and behavioural determinants of online purchasing. Among the various constructs explored, trust and perceived risk have consistently emerged as central variables influencing consumer behaviour in digital environments.

Concept of Trust in E-Commerce

Trust in online shopping refers to a consumer's belief that an e-commerce platform will act reliably, ethically, and competently in fulfilling its promises. In digital contexts, trust replaces traditional interpersonal assurance mechanisms because physical interaction between buyer and seller is absent. Researchers have conceptualized trust as multidimensional, incorporating elements such as integrity, competence, and benevolence.

Studies indicate that website design quality, transparent information disclosure, secure payment gateways, customer reviews, and seller ratings contribute significantly to trust formation. In online environments, trust reduces uncertainty and increases consumers' confidence in completing transactions. It has also been found to positively influence satisfaction, loyalty, and repurchase intention.

Urban consumers, particularly in technologically advanced regions like Delhi/NCR, are exposed to multiple online platforms. Therefore, trust becomes a competitive differentiator. Consumers tend to remain loyal to platforms that consistently deliver products on time, maintain data privacy, and resolve grievances efficiently.

Perceived Risk in Online Shopping

Perceived risk is defined as the expectation of potential loss resulting from an online transaction. Unlike offline shopping, where products can be physically examined, online purchases involve uncertainty regarding product quality, delivery performance, and payment security.

Researchers classify perceived risk into several dimensions:

- Financial Risk – Possibility of monetary loss or fraudulent transactions
- Functional Risk – Product not performing as expected
- Privacy Risk – Misuse of personal or financial information
- Delivery Risk – Delays or damage during shipment
- Psychological Risk – Anxiety or dissatisfaction associated with purchase

Empirical studies consistently demonstrate a negative relationship between perceived risk and purchase intention. Consumers with higher risk perception exhibit reluctance to transact online. However, trust-building mechanisms such as secure payment systems, return guarantees, and verified customer reviews can mitigate these risks.

In the Indian context, increasing awareness of cyber fraud and data breaches has heightened risk sensitivity among urban consumers. Therefore, understanding perceived risk is essential for e-commerce sustainability.

Relationship Between Trust and Perceived Risk

Trust and perceived risk are closely interrelated constructs. Trust acts as a mechanism that reduces perceived risk. When consumers believe that a platform is reliable and secure, their perception of risk decreases, thereby increasing purchase intention.

Several theoretical models, including the Trust-Risk Framework and the Technology Acceptance Model (TAM), suggest that trust mediates the relationship between perceived risk and behavioural intention. Studies conducted in emerging markets indicate that enhancing security assurances and transparency significantly lowers perceived risk and increases trust.

Online Purchase Intention

Purchase intention refers to the likelihood that a consumer will engage in an online transaction. It represents a behavioural outcome influenced by attitudes, perceptions, and external stimuli. Trust positively affects purchase intention, while perceived risk negatively affects it.

Urban consumers often base their purchase decisions on digital reviews, ratings, payment flexibility, and return policies. Research suggests that satisfaction strengthens the relationship between trust and loyalty, making it an important mediating variable.

RESEARCH METHODOLOGY

Research Design

The study adopts a descriptive and analytical research design. The descriptive component identifies behavioural patterns, while the analytical component examines relationships between trust, perceived risk, and purchase intention.

Nature of Data

The study is based on both primary and secondary data.

- Primary Data – Collected through structured questionnaires.
- Secondary Data – Collected from academic journals, reports, and published studies.

Sample Design

The study focuses on urban consumers residing in Delhi/NCR who have made at least one online purchase in the last six months.

- Sample Size: 600 respondents
- Sampling Technique: Convenience and purposive sampling
- Area Covered: Delhi, Noida, Gurugram, Ghaziabad, Faridabad

Data Collection Instrument

A structured questionnaire using a five-point Likert scale was developed.

Scale Used:

- 1 – Strongly Disagree
- 2 – Disagree
- 3 – Neutral
- 4 – Agree
- 5 – Strongly Agree

Variables Measured

Variable	Dimensions
Trust	Payment security, platform reliability, product authenticity
Perceived Risk	Financial risk, privacy risk, delivery risk
Purchase Intention	Likelihood of purchase, repeat purchase intention
Satisfaction	Overall shopping satisfaction

Demographic Profile of Respondents

Table 1: Gender Distribution

Gender	Frequency	Percentage
Male	340	56.7%
Female	260	43.3%
Total	600	100%

Table 2: Age Distribution

Age Group	Frequency	Percentage
18–25	180	30%
26–35	210	35%
36–45	130	21.7%
46 & Above	80	13.3%
Total	600	100%

Table 3: Income Level

Monthly Income	Frequency	Percentage
Below ₹25,000	150	25%
₹25,000–₹50,000	220	36.7%
₹50,000–₹75,000	140	23.3%
Above ₹75,000	90	15%
Total	600	100%

RESULTS AND INTERPRETATION

This section presents the statistical findings of the study based on data collected from 600 respondents in Delhi/NCR. The analysis examines the relationships between trust, perceived risk, payment security, product authenticity, satisfaction, and online purchase intention using descriptive statistics, correlation, regression, Chi-square, and ANOVA tests.

1. Descriptive Analysis of Key Variables

Table 4: Mean and Standard Deviation of Major Constructs

Variable	Mean	Standard Deviation
Trust	3.98	0.71
Payment Security	4.12	0.65
Product Authenticity	3.85	0.74
Perceived Risk	2.94	0.82
Satisfaction	3.90	0.68

Purchase Intention	4.05	0.73
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Interpretation

The mean score of trust (3.98) indicates a generally positive perception of e-commerce platforms among urban consumers. Payment security records the highest mean (4.12), suggesting that respondents largely perceive online payment systems as secure. Product authenticity has a moderate positive mean (3.85), indicating some concerns about counterfeit products.

Perceived risk shows a comparatively lower mean (2.94), suggesting that while risk exists, it is not overwhelmingly high. Purchase intention records a strong mean (4.05), indicating a high likelihood of continued online shopping among respondents.

2. Correlation Analysis

To examine relationships between variables, Pearson correlation analysis was conducted.

Table 5: Correlation Matrix

Variables	Trust	Perceived Risk	Satisfaction	Purchase Intention
Trust	1	-0.52	0.68	0.72
Perceived Risk	-0.52	1	-0.49	-0.58
Satisfaction	0.68	-0.49	1	0.74
Purchase Intention	0.72	-0.58	0.74	1

Interpretation

The correlation results indicate:

- Trust is positively correlated with purchase intention ($r = 0.72$), showing a strong positive relationship.
- Perceived risk is negatively correlated with purchase intention ($r = -0.58$), confirming that higher risk reduces buying intention.

- Trust has a negative correlation with perceived risk ($r = -0.52$), indicating that higher trust reduces risk perception.
- Satisfaction shows a strong positive correlation with purchase intention ($r = 0.74$).

All correlations are significant at the 0.01 level, supporting the proposed conceptual framework.

3. Regression Analysis

A multiple regression analysis was conducted to determine the impact of trust and perceived risk on purchase intention.

Table 6: Regression Results

Dependent Variable: Purchase Intention

Predictor	Beta Coefficient	t-value	Significance (p-value)
Trust	0.49	12.84	0.000
Perceived Risk	-0.31	-8.92	0.000
Satisfaction	0.38	10.45	0.000

Model Summary:

$R = 0.79$

$R^2 = 0.62$

Adjusted $R^2 = 0.61$

F-value = 324.15 ($p < 0.001$)

Interpretation

The regression model explains 62% of the variance in purchase intention ($R^2 = 0.62$), indicating strong explanatory power.

- Trust has a significant positive impact on purchase intention ($\beta = 0.49$).

- Perceived risk has a significant negative impact ($\beta = -0.31$).
- Satisfaction positively influences purchase intention ($\beta = 0.38$).

Thus, H1 and H2 are supported.

4. Impact of Payment Security on Trust

Table 7: Regression of Payment Security on Trust

Predictor	Beta	t-value	p-value
Payment Security	0.64	16.72	0.000

$$R^2 = 0.41$$

Interpretation

Payment security significantly influences trust ($\beta = 0.64$). It explains 41% of the variation in trust levels, confirming that secure payment systems are critical in building consumer confidence.

5. ANOVA: Age Differences in Trust

Table 8: ANOVA Results

Source	F-value	p-value
Between Groups	5.72	0.001

Interpretation

There is a statistically significant difference in trust levels across age groups. Younger consumers (18–35 years) show higher trust compared to older age groups.

6. Chi-Square Test: Gender and Perceived Risk

Table 9: Chi-Square Results

Chi-Square Value	df	p-value

8.96	3	0.030
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Interpretation

A significant association exists between gender and perceived risk. Female respondents reported slightly higher privacy and delivery-related risk compared to male respondents.

DISCUSSION AND CONCLUSION

The findings of this study provide strong empirical evidence that trust and perceived risk significantly influence online purchase intention among urban consumers in Delhi/NCR.

Trust emerges as the most powerful predictor of purchase intention. Consumers are more likely to engage in online transactions when they perceive platforms as reliable, secure, and transparent. Payment security, in particular, plays a crucial role in strengthening trust. The regression results confirm that trust positively influences satisfaction and repeat purchase behaviour.

Perceived risk, conversely, acts as a barrier to online transactions. Financial concerns, fear of data misuse, and doubts about product authenticity reduce consumers' willingness to purchase. However, trust-building mechanisms such as secure payment gateways, transparent return policies, and verified reviews mitigate these risks.

Satisfaction is found to mediate the relationship between trust and purchase intention. When consumers experience smooth transactions and receive products as promised, their satisfaction increases, leading to loyalty and positive word-of-mouth. Demographic analysis reveals that younger consumers exhibit higher trust and lower perceived risk due to greater digital familiarity. Gender differences indicate higher privacy concerns among female respondents.

From a managerial perspective, e-commerce platforms must invest in cybersecurity, transparent communication, efficient logistics, and responsive customer support. Reducing perceived risk while enhancing trust will ensure long-term sustainability in competitive markets. From a policy perspective, strengthening consumer protection regulations and promoting digital literacy programs will further enhance confidence in online commerce.

In conclusion, the study confirms that trust and perceived risk are central determinants of online purchase intention. In rapidly urbanizing regions like Delhi/NCR, where digital adoption is high, building trust and minimizing risk perceptions are essential strategies for sustaining e-commerce growth.

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