Gender Perspectives Towards Trust and Security Concern in Online Shopping

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Abstract: Consumers trust plays a vital role in determining the success of online shopping platforms. This study finds out the trust and security concerns among consumers, who involves in online shopping. The purpose of this study is to understand the consumers trust towards the online shipping and to know how security concern like privacy, payment safety and website reliability affects the buying behavior. This research will be conducted by preparing structured primary questionnaire and circulating among respondents residing in Chennai. The findings will show the security concerns, trust and purchase decision among the online shoppers. Moreover, this study will highlight the need for E - commerce platforms to improve security concerns to build consumer confidence. A structured questionnaire was sent to 151 respondents who were active in online shopping. This research was done by using statistical tools like frequency analysis, one-sample t-test and ANOVA to evaluate trust levels and gender-based differences. The research reveals that both genders have a moderate level of trust in online shopping platforms, particularly in payment safety, data privacy and fraudulent risk in popular e-commerce platforms such as Amazon, Flipkart and Myntra. Female shows higher concern regarding payment safety and misuse of personal information. This research concludes that online shoppers demonstrate growing confidence in digital platforms, but security concerns remain significant determinants of purchase intention. By enhancing transparent policies, secure payment gateways and data protection mechanisms the consumer trust will increases. This research provides valuable insights for e-commerce companies, marketers and policymakers to develop trust in urban digital markets.

KEY WORDS: Online Shopping - Consumer Trust - Security Concerns - Gender Differences, Payment Safety.

1. INTRODUCTION:

1.1 Digital Transformation of Retail: The rapid growth in the technology and internet has transformed the buying behaviour of the consumers. Online shopping becomes a part of consumers lifestyle particularly in Chennai. E-Commerce has reshaped by providing convenience, competitive pricing, wide product range and door step delivery. Despite of rapid change in online shopping, trust and security concerns were remain as an important challenge. As the consumer cannot physically touch the product or directly interact with the producers there will some risk related to the product's quality, payment safety, data privacy and fraudulent activities might be arises. Therefore, customers trust can be plays a major role in influencing the purchase decision and long-term customer retention.

1.2 Objectives of the Study

- To understand the customer trust in online shopping platforms.
- To examine security concerns like payment safety, data privacy and fraudulent risk in online shopping.
- To identify the customer awareness and security measures adopted by e-commerce platforms.

1.3 Scope of the Study

- This research analyses the variation in trust and security concern based on demographic factors of online shopping.
- This research examines the security concerns like payment safety, data privacy and online fraud which influence online purchasing behaviour.
- The study assesses customer awareness and perception of security measures implemented in online shopping systems.

1.4 Need for the Study

- The research helps businesses to strengthen the security systems and develop effective trust building strategies.
- To necessitate evaluation of consumer security concerns in growing incidents of data breaches, payment fraud and misuse of personal information.
- Understanding consumer perceptions of trust and security which will assist organizations to improve customer experience and ensures customer retention for longer period.

1.5 Hypothesis of this study:

The following hypothesis were formulated based on the responses collected from the respondents:

- **Objective 1:** H_0 = There is no significant difference between the sample mean and the neutral value ($\mu = 3$). (Customers have neutral trust toward online shopping platforms.)
- **Objective 2:** H_0 = There is no significant difference in security concerns among different gender groups.
- **Objective 3:** There is no significant difference in awareness and perception of security measures among different gender groups.

1. REVIEW OF LITERATURE

Ghadeer Neama, Rana Alaskar, Mohammad Alkandari (2016): "Privacy, Security, Risk and Trust concerns in E – Commerce": This research talks about the revolution in information technology and electronic commerce has been increased rapidly. It investigates the relationship between privacy, security concerns and risks. Understanding these concepts are even crucial. However, it would relate to customer's trust. The goal of this model is to explore and provide clear understanding about certain website. This research result in a positive way that exist between perceived risk and privacy attributes like confidentiality and integrity. Moreover, integrity is used to guarantee data accuracy, completeness and concerned about handling, transferring and sorting data for those who needs it. The security privacy perceived risk theoretical model result in a proper validation, it will lead to better understanding of the importance that the security, privacy, perceived risk and trust in adopting e-commerce.

Sakinah Salehudin, Maizatul Saadiah Mohamad, Harniyati Hussain, Roszi Naszariah Nasni Naseri (2025): "The factor of Trust, privacy and convenience Risk on consumer online shopping behavior"**:** This study provides us a clear picture of how trust and security concerns shape the online shopping behavior, especially in a growing digital market. This paper highlights the trust, as a major driving factor where consumer feels confident enough to engage in online buying. Moreover, when consumer believe that online platforms are reliable and transparent, they are more willing to complete their online shopping. Many consumers were stressed out how their personal information are collected, stored and possibly misused, which directly reduces the interest in online shopping. Additionally, convenience risk such as delayed delivery or confusing return policies can frustrate customers and affects their satisfaction levels. This study strongly addresses the risk which significantly improve customer experience and loyalty. At last, this review shows how important the trust is and ensures there is a strong security measures to influence online shopping positively.

Anil Gurung, M.K. Raja (2016): **"**Online privacy and security concerns of consumers**"**: Privacy and security concerns are one of the primary hindrances for the growth of e-commerce. In return these concerns will increase the risk perception of consumers. By understanding these concerns and their relationship with risk provides us an effective solution. This study investigates the privacy and risk perception by using Theory of planned behavior, which helps to examine the relationship of trust, privacy risk and security concerns and adaptation to e-commerce. In most of the cases security has been a part of privacy concern. These privacy concerns loaded onto 3 factors of control, awareness of privacy practices and collection. Moreover, this study result that trust had the largest effect followed by privacy and security concerns. In

addition to risk perception, trust beliefs play a vital role in shaping the attitude of customers. The limitation of this study is limited to only with the students and not with general publics. The major contribution in this study is developing and validating an integrative framework of e-commerce. Furthermore, adding other technical features like recommendation agents and personalization schemes can help to create a favorable attitude in consumer towards the websites.

3. RESEARCH METHODOLOGY:

This research undergoes in descriptive research design to know the level of customer trust and security concerns in online shopping. The research has a quantitative approach to measure consumer trust, payment safety, data privacy and online fraudulent risk. Both primary and secondary data were used for this research. Primary data were collected by a structured questionnaire, while secondary data were gathered from journals and articles to support the framework. The questionnaire consisted of close-ended questions covering demographic details, customer trust, security concerns and awareness of security measures. Responses were measured using a Likert scale to evaluate the findings among respondents. A convenience sampling method was adopted to select the respondents. The totally 151 sample size was collected for the research. The samples were analyzed using statistical tools such as Frequency table, One-Sample t-test to examine customer trust levels, and ANOVA to identify differences in trust and security concerns among different genders. These analytical tools helped in achieving the research objectives and draws a meaningful conclusion regarding consumer trust and security concern in online shopping.

2.   DATA ANALYSIS AND FINDINGS:

Meaning of Frequency analysis:

Frequency analysis means it is descriptive statistical procedure used to summarize the distribution of variable by counting each value or category occurs. It helps the researchers to summarize demographic details like gender, education level, and occupation ect. By using this frequency analysis, we can able to create charts for the data or histograms for continuous numeric data.

4.1 Frequency Analysis:

Table 4.1.1: Age of respondents

Age	Frequency	Percent	Valid Percent	Cumulative Percent
Below 20 yrs	11	**7.3**	7.3	7.3
21-30 yrs	105	**69.5**	69.5	76.8
31-40 yrs	13	**8.6**	8.6	85.4
40-50 yrs	11	**7.3**	7.3	92.7
Above 50 yrs	11	**7.3**	7.3	100.0
Total	151	100.0	100.0	

Inference:

- It is inferred that the age below 20 years the percentage is **7.3**%
- It is inferred that the age from 21-30 years the percentage is **69.5**%
- It is inferred that the age from 31 – 40 years the percentage is **8.6**%
- It is inferred that the age from 40 – 50 years the percentage is **7.3**%
- It is inferred that the age above 50 years the percentage is **7.3**%

Table 4.1.2: Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	42	**27.8**	27.8	27.8
Female	107	**70.9**	70.9	98.7
Prefer not to say	2	**1.3**	1.3	100.0
Total	151	100.0	100.0	

Inference:

- It is inferred that the male respondents are 42 with having a percentage of **27.8**%
- It is inferred that the female respondents are 107 with having a percentage of **70.9**%
- It is inferred that prefer not to say are 2 with having a percentage of **1.3**%

Table 4.1.3: Occupation of respondents

Occupation	Frequency	Percent	Valid Percent	Cumulative Percent
Student	63	**41.7**	41.7	41.7
Employed	71	**47.0**	47.0	88.7
Home maker	12	**7.9**	7.9	96.7
Self Employed	5	**3.3**	3.3	100.0
Total	151	100.0	100.0	

Inference:

- From the above table, it is inferred that the student having the frequency of 63 with percentage of **41.7%**
- From the above table, it is inferred that the employed people have the highest frequency of 71 with percentage of **47.0%**
- From the above table, it is inferred that the home maker having the frequency of 12 with percentage of **7.9%**
- From the above table, it is inferred that the self -employed having the frequency of 5 with percentage of **3.3%**

Table 4.1.4: Income Level of respondents

Income level	Frequency	Percent	Valid Percent	Cumulative Percent
Below 10,000	19	**12.6**	12.6	12.6
10,001 - 20,000	23	**15.2**	15.2	27.8
20,001 - 30,000	23	**15.2**	15.2	43.0
Above 40,000	28	**18.5**	18.5	61.6

Not applicable	58	**38.4**	38.4	100.0
Total	151	100.0	100.0	

Inference:

- From the above table, it is inferred that the income below Rs. 10,000 have the percentage of **12.6%**
- From the above table, it is inferred that the income Rs. 10,001 – 20,000 have the percentage of **15.2%**
- From the above table, it is inferred that the income Rs. 20,001 - 30,000 have the percentage of **15.2%**
- From the above table, it is inferred that the income Above 40,000 have the percentage of **18.5%**
- From the above table, it is inferred that the income Not applicable have the percentage of **38.4%**

Table 4.1.5: Frequency of online shopping

Frequency of Online shopping	Frequency	Percent	Valid Percent	Cumulative Percent
Daily	2	**1.3**	1.3	1.3
Weekly	20	**13.2**	13.2	14.6
Monthly	67	**44.4**	44.4	58.9
Rarely	59	**39.1**	39.1	98.0
Never	3	**2.0**	2.0	100.0
Total	151	100.0	100.0	

Inference:

- From the above table, it is inferred that the Monthly frequency of online shopping has the highest frequency of 67 with the percentage of **44.4%**
- From the above table, it is inferred that the Rarely frequency of online shopping has the frequency of 59 with the percentage of **39.1%**
- From the above table, it is inferred that the weekly frequency of online shopping has the frequency of 20 with the percentage of **13.3%**
- From the above table, it is inferred that the never has the frequency of 3 with the percentage of **2.0%**
- From the above table, it is inferred that the Daily frequency of online shopping has the least frequency of 2 with the percentage is **1.3%**

Table 4.1.6: Residing area of Respondents

Residing area	Frequency	Percent	Valid Percent	Cumulative Percent
North Chennai	33	**21.9**	21.9	21.9
South Chenai	15	**9.9**	9.9	31.8
Central Chennai	22	**14.6**	14.6	46.4

East Chennai	7	**4.6**	4.6	51.0
West Chennai	74	**49.0**	49.0	100.0
Total	151	100.0	100.0	

Inference:

- From the above table, it is inferred that North Chennai has the percentage of **21.9%**
- From the above table, it is inferred that South Chennai has the percentage of **9.9%**
- From the above table, it is inferred that Central Chennai has the percentage of **14.6%**
- From the above table, it is inferred that East Chennai has the percentage of **4.6%**
- From the above table, it is inferred that West Chennai has the percentage of **49.0%**

4.2 Inferential Analysis:

Meaning of One sample T-test:

It is a statistical hypothesis test used to determine the mean value of single sample group which is significantly differs from a known or hypothesized population mean. It is used when the population standard deviation is unknown and has small sample size. It helps to compare sample mean with predetermined mean. Here the null hypothesis can be as follows "The sample mean is equal to the population mean" and alternate hypothesis can be "The sample mean is different from the population mean".

Meaning of Anova:

ANOVA (Analysis of variance) is a technique used when multiple sample cases are involved. This statistical parametric technique used to compare the means of three or more groups to determine whether there is any significant difference among two samples. It helps the researchers to understand whether observed differences are due to the treatment effects or simply due to random variation. Hypothesis can be framed as the group means are equal to one another for null hypothesis and for alternate hypothesis the group means are not equal to one another.

OBJECTIVE 1: To understand the customer trust in online shopping platforms.

H_0 = There is no significant difference between the sample mean and the neutral value ($\mu = 3$).
(Customers have neutral trust toward online shopping platforms.)

H_1 = There is a significant difference between the sample mean and the neutral value ($\mu \neq 3$).
(Customers significantly trust online shopping platforms.)

Table 4.2.1: One Sample T-Test

Customer Trust in Online Shopping Platforms	Mean	Std. Deviation	Std. Error Mean	T -value	P-value
I trust online shopping platforms delivered products as they shown in images	**3.26**	**0.779**	0.063	4.076	**0.000****
Online shopping websites are generally trustworthy for buying products.	**3.33**	**0.746**	0.061	5.455	**0.000****
I feel confident when I order products from popular e-commerce platforms	**3.58**	**0.828**	0.067	8.654	**0.000****

Does online sellers provide accurate and truthful information about the product.	3.15	0.831	0.068	2.253	0.026*

Inference:

- All p-values are less than 0.05, so we reject the null hypothesis for all statements.
- This indicates that customer trust in online shopping platforms is significantly higher than neutral level (3).
- The highest trust level is seen in confidence in popular e-commerce platforms (Mean = 3.58).
- The lowest trust perception is regarding accuracy and truthful product information (Mean = 3.15), though it is still statistically significant.

OBJECTIVE 2: To examine security concerns like payment safety, data privacy and fraudulent risk in online shopping.

H_0 = There is **no significant difference** in security concerns among different gender groups.

H_1 = There is a **significant difference** in security concerns among different gender groups.

Table – 4.2.2 ONE-WAY ANOVA

Security Concerns in Online Shopping		N	Mean	Std. Deviation	Std. Error	F- value	P-Value
Does online sellers provide accurate and truthful information about the product.	Male	42	**3.17**	**1.034**	.160	0.404	**0.961**
	Female	107	3.15	.750	.072		
	Prefer not to say	2	3.00	.000	.000		
	Total	151	3.15	.831	.068		
I am concerned about the safety of online payment methods	Male	42	3.40	1.083	.167	1.554	**0.215**
	Female	107	3.68	.853	.082		
	Prefer not to say	2	**4.00**	**0.000**	.000		
	Total	151	3.61	.924	.075		
I am worried about misusing of my personal and financial information	Male	42	3.24	1.100	.170	1.236	**0.294**
	Female	107	**3.41**	**0.931**	.090		
	Prefer not to say	2	2.50	.707	.500		
	Total	151	3.35	.981	.080		
Does fear of online fraud make you hesitate to shop online?	Male	42	3.07	1.156	.178	0.820	**0.443**
	Female	107	3.32	1.069	.103		
	Prefer not to say	2	**3.50**	**0.707**	.500		
	Total	151	3.25	1.091	.089		

Inference:

- From the statement of "Does online sellers provide accurate and truthful information about the product", we inferred that the mean value is **13.7** with standard deviation of **1.034**, and with P-Value of **0.961** which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

- From the statement of "I am concerned about the safety of online payment methods", we inferred that the mean value is **4.00** with standard deviation of **0.000**, and with P-Value of **0.215** which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

- From the statement of "I am worried about misusing of my personal and financial information", we inferred that the mean value is **3.41** with standard deviation of **0.931**, and with P-Value of **0.294**, which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

- From the statement "Does fear of online fraud make you hesitate to shop online?" we inferred that the mean value is **3.50** with standard deviation of **0.707**, and with P-Value of **0.443** which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

- The study concludes that **security concerns in online shopping are similar across genders**, indicating that safety, privacy, and fraud-related worries are universal issues. Strengthening security infrastructure and improving transparency can enhance customer confidence and reduce hesitation in online shopping.

OBJECTIVE 3: To identify the customer awareness and security measures adopted by e-commerce platforms.

H_0 = There is **no significant difference** in awareness and perception of security measures among different gender groups.

H_1 = There is a **significant difference** in awareness and perception of security measures among different gender groups.

Table – 4.2.3 ONE WAY - ANOVA

Awareness and Perception of Security Measures		N	Mean	Std. Deviation	Std. Error	F Value	p Value
I am concerned about the safety of online payment methods	Male	42	3.40	1.083	0.167	1.554	**0.215**
	Female	107	3.68	0.853	0.082		
	Prefer not to say	2	**4.00**	**0.000**	0.000		
	Total	151	3.61	0.924	0.075		
I am worried about misusing of my personal and financial information	Male	42	3.24	1.100	0.170	1.236	**0.294**
	Female	107	**3.41**	**0.931**	0.090		
	Prefer not to say	2	2.50	0.707	0.500		
	Total	151	3.35	.981	0.080		
Does fear of online fraud make you hesitate to shop online?	Male	42	3.07	1.156	0.178	0.820	**0.443**
	Female	107	3.32	1.069	0.103		
	Prefer not to say	2	**3.50**	**0.707**	0.500		
	Total	151	3.25	1.091	0.089		

Do you think online shopping is riskier than offline shopping?	Male	42	3.40	1.127	0.174	0.290	**0.749**
	Female	107	**3.48**	**0.935**	0.090		
	Prefer not to say	2	3.00	.000	0.000		
	Total	151	3.45	.984	0.080		

Inference:

• From the statement of "I am concerned about the safety of online payment methods", we inferred that the highest mean value is **4.00** with standard deviation of **0.000**, and with P-Value of **0.215** which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

• From the statement of "I am worried about misusing of my personal and financial information", we inferred that the highest mean value is **3.41** with standard deviation of **0.931**, and with P-Value of **0.294** which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

• From the statement "Does fear of online fraud make you hesitate to shop online?", we inferred that the highest mean value is **3.50** with standard deviation of **0.707**, and with P-Value of **0.443** which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

• From the statement "Does fear of online fraud make you hesitate to shop online?", we inferred that the highest mean value is **3.48** with standard deviation of **0.935**, and with P-Value of **0.749** which is not significant @ 5% level. Hence the null hypothesis is accepted. Therefore, the group means are equal to one another.

• The analysis shows that awareness and perception of online shopping security measures do not significantly differ by gender. However, moderate levels of concern highlight the need for improved security systems and stronger communication strategies to enhance consumer confidence in online shopping platforms.

5. RECOMMENDATION AND CONCLUSION:

5.1 Recommendation:

• **Addressing Gender specific Concerns**: Here female responses are substantially greater regarding the payment safety and data privacy. The communication tactics has to be established to reassure and generate confidence among such client categories.

• **Increasing Awareness of Security Measures:** Platforms should actively educate customers about the security features offered, such as secure payment gateways, protection policies and fraud detection systems**.**

• **Improving Data Privacy Protection:** Clear and correct privacy policies have to be maintained and ensure customers personal and financial information should not be misused

• **Improve Product Accuracy Representation:** Since the lowest mean relates to product information accuracy (3.15), platforms should: Provide verified product descriptions, include real customer photos and enforce strict seller guidelines.

• **Enhance Transparency:** Clear return policies, Display verified seller badges, and show authentic customer reviews.

• **Strengthen Brand Trust:** Popular platforms already enjoy higher confidence. They should: Maintain consistent delivery quality and Offer buyer protection programs.

• **Monitor Seller Performance:** Regular audits and penalties for misleading information can further improve trust.

• **Online shopping platforms should:**

Strengthen Payment Security

- Use secure payment gateways (SSL encryption).
- Provide two-factor authentication (OTP verification).
- Offer trusted payment options (UPI, secured cards, digital wallets).

Improve Data Privacy Measures

- Clearly display privacy policies.
- Ensure strict data protection standards.

- Avoid sharing customer data with third parties without consent.

Increase Fraud Awareness

- Educate customers about phishing and fake websites.
- Send regular alerts about fraud prevention.
- Provide easy complaint and refund systems.

Seller Verification

- Implement verified seller badges.
- Remove sellers with repeated complaints.
- Encourage genuine customer reviews.

- Although gender differences are not significant in the study, moderate concern levels suggest the need for stronger security awareness and confidence-building measures.

Enhance Payment Security Visibility

-Promote secure payment gateways.

-Display security certifications and encryption badges clearly.

Strengthen Data Protection Communication

- Clearly explain privacy policies in simple language.
- Inform customers how their data is protected.

Customer Education Programs

- Conduct awareness campaigns about safe online shopping practices.
- Provide fraud prevention tips through emails and app notifications.

Improve Transparency

- Provide real-time order tracking.

-Offer easy refund and grievance redressal systems.

5.2 Conclusion:

This research shows how trust plays a major role in shaping consumers buying behaviour in online. The findings indicates that respondents have a moderate level of trust in online platforms, especially in payment and data privacy and security. However, these security concerns influence purchase decisions. There is a statistically significant positive trust among customers toward online shopping platforms. Customers generally: Trust product delivery accuracy, believe websites are trustworthy, feel confident using popular platforms, and Perceive sellers as reasonably truthful. Moreover, female respondents expressed comparatively higher concern about payment security and data privacy.

This research will also highlight the importance of digital security and transparent policies. additionally, it also emphasizes that awareness of security measures and financial and personal information is been protected their will increases the consumer confidence and they are more willing to complete online transactions. Overall, while online shopping continues to grow, by building stronger a trust through improved security pattern will satisfy the customers in long term.

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