



Original Article

Factors Shaping Consumer Confidence in E-Commerce: An In-Depth Analysis of Online Shopping Habits

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Abstract

The nature of consumers is the primary focus of this paper as it reviews different aspects that affect the confidence of online consumers. Thus, it is essential to determine constituents of consumer trust since it is a key to enhance user experience and subsequently, build long-term development of e-commerce industry as digital environment develops rapidly. This is achieved with the help of an analysis that uses both quantitative and qualitative methods to study important features such as website security, usability, and design, customer service quality, product genuineness, and the effect of online reviews. Both self-completed questionnaires and face to face interviews are grouped here. The findings also reveal that while now novel components such as customized connoisseurship and perceptions due to social media, remain significant to consumer assurance, other factors as enduring as safe payment platforms and authentic delivery remain critical. The study also reinforces the significance of building trust relating to mobile-friendly platforms and the AI-online suggestions. Thus, the variables discussed provide relevant data to e-commerce companies that aspire to build and maintain customer trust throughout a very competitive online environment. The discovery serves to provide impetus for what can only be described as the omnibus approach of balancing the technological with the psychological of the consumer while developing a credible and engaging virtual retail environment.

Keywords: e-commerce, consumer, confidence, online shopping,

Introduction

The buying and selling of products and services over computer networks is known as electronic commerce or e-commerce. An increasing number of tangible and intangible products and services can be purchased or sold online by consumers and firms. Some companies use e-commerce to increase the reach of their other distribution channels, or they sell only online. E-commerce is booming and can be a lucrative endeavour in any case. To determine whether e-commerce is the right choice for you, let's examine its specifics. With the advent of e-commerce, formerly marginalized companies, including mom-and-pop shops, have been able to expand their customer bases via more efficient and cost-effective distribution methods, ultimately reaching a wider audience. While some companies exist only in cyberspace, others maintain a physical and digital footprint. You can now purchase everything from action figures and toothpaste to clothes and coffee makers without ever leaving your house thanks to the addition of an online shop by many major stores, one of which is Target (TGT). Individual sellers are increasingly using their own personal websites to conduct e-commerce transactions at the other end of the spectrum. Additionally, online marketplaces such as eBay and Etsy function as venues for a large number of buyers and sellers to interact and conduct business.

E-commerce website

An online store where clients can look through products, make purchases, and find information is known as an e-commerce website. It helps the buyer and seller complete their transaction. The product shelves, sales personnel, and cash register of a physical store can all be virtually replicated with a digital storefront. Product categories, product listings, and user reviews are possible extras for an online store.

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E-Commerce Business: A company that makes money by selling goods or services online or by utilizing the internet to find leads for sales is known as an e-commerce business. An online store may offer merchandise, software, housewares, clothing, or web design services, for instance. An e-commerce business may be run from a single website or from a combination of sites like Facebook and email.

Online-Shopping

Customers leveraging on a web browser or mobile application can buy products or services directly from sellers in online shopping, which is a form of electronic commerce. A customer can go to a shopping search engine and type what they are looking for in a particular store, or the customer can go to retailer's webpage to search for a product of interest. The shopping search engine reveals the price and where to get the same product from different online shops. Consumers can shop with different platforms and devices including PCs, laptops, tablets, and even mobile phones as from the year 2020. This is commonly referred to as business to consumer - B2C online shopping, and is similar to a real-life analogy of a purchase of products or services from a normal retail store or mall. Business to business also referred to as B2B online shopping is the process of developing an online store to enable firms to buy from other firms. A standard design of an online store enables the consumer to browse through the company's portfolio in products and services, check photos or images of the goods and information about features, specifications and prices of products. Stores can be closed at certain times of the day or night and therefore online shopping sites are always available.

Factors that can shape consumer confidence in e-commerce include

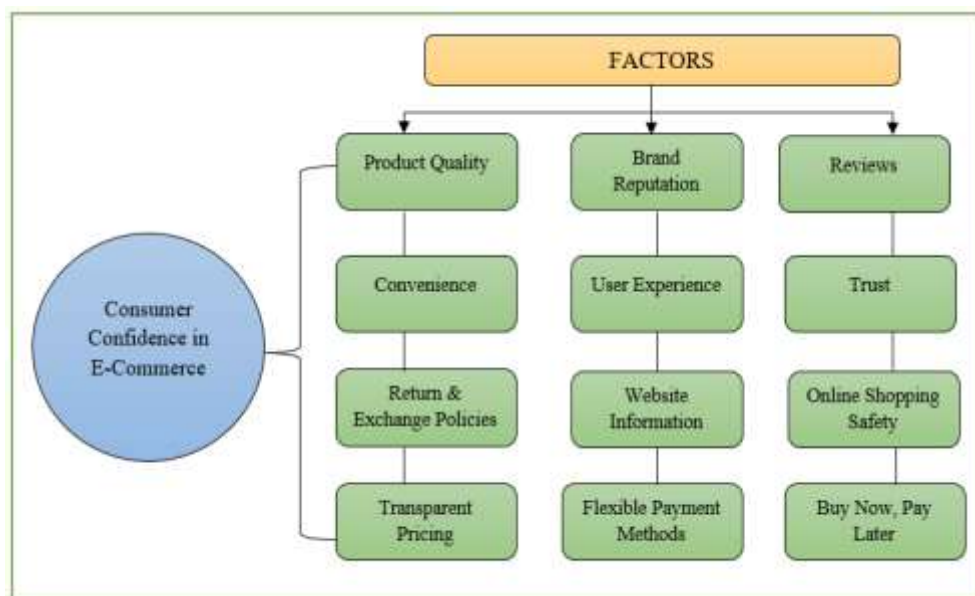


Figure 1: Factors Shape Consumer Confidence in E-Commerce

- **Product quality:** This may make consumers wary of receiving substandard, or even entirely counterfeit products.
- **Product quality:** This may make consumers wary of receiving substandard, or even entirely counterfeit products.
- **Reviews:** Most people always trust what other people have to say about a particular product or a brand because of word-of-mouth.
- **Convenience:** Consumers may prefer those retailers who deliver goods quickly, have flexible return policy and accept their mode of payment.
- **User experience:** The customer can be easily persuaded to buy if the website or application is beautiful and he can easily find what they are looking for and recommendations made may catch their eyes.
- **Trust:** If customers are in any way unsure of the legitimacy of an online store then they might think twice before buying.
- **Return and exchange policies:** Lack of clarity on the part of the consumer regarding the means of obtaining refunds and making exchanges will dampen the online purchases.
- **Website information:** Consumers may also avoid buying products online if the website contains wrong or missing information.
- **Online shopping safety:** Consumers can also be worried about the safety aspect of the shopping online and threats that particular platform holds.
- **Transparent Pricing:** Free-rating strategies that involve hidden charges, uncertain pricing model and unclarity of the return policies are unreliable to customers. Simplicity and transparency of the prices strengthen its credibility.
- **Flexible Payment Methods:** Providing several secure payment methods (credit/debit cards, PayPal, cryptocurrencies) allows customers make payments which they find most convenient and trustworthy.

- **Buy Now, Pay Later (BNPL):** The availability of BNPL options is effective in certain segments such as young people to meet their needs flexibly and gain confidence in the purchase.
- **Delivery timings of the products.**

Literature Review

Yang et al. (2023) having done research as to which factors enhance online shopping behaviour they used a number of analytical techniques. The research also examines important variables including perceived user-friendliness, consumer confidence and perceived pleasure as key determiners of participation in e-commerce. Also, the research applies environmental concerns into the model of consumer behavior. In their study examining e-commerce and consumer behavior, Pahnla and Warsta (2010) distinguished habits and perceived value in behavior. They also establish that the perceptions of cost/benefit, particularly where measures such time taken to shop influence how a consumer is willing to shop online. Consumer relativity of buying on the internet was investigated by Liao and Cheung in a survey conducted among consumers. They state their work relates to variables like website quality, perceived risk, and ease as catering for positive attitude and thus encouraging participation in electronic commerce. Baubonienė and Gulevičiūtė (2015) explore the factors that have greater influence over the consumers' choice to select online shopping such as usability, safety, and the websites' effectiveness. They raise awareness in respect of how such factors as trust and ease of use determine consumer behavior in virtual markets. In their study, Nasution et al. (2019) examine the drivers that influence the consumers' buying intentions on online purchases. Their research highlights various useful factors that affect buying behaviour including confidence in the identity of the platform, ease of operation, perceived level of risk, and quality of customer support. Liao & Cheung (2002) provide a look at the consumer behavior of Internet Banking Services. Their findings suggest that perceived safety, convenience and trust are indeed fundamental factors as regards the preparedness of consumers to accept online banking channels. Similarly, Kumar (2020) analyses how social media platforms, potential security threats and the status of the online retailer differential consumer purchasing intentions by the trust perspective. This research adopts structural equation modelling to show that, in fact, trust mediates between the identified factors and consumers' willingness to part with their money. Banay et al. (2021) – This study looks at the major factors affecting the consumer interaction with online buying in the new normal brought by the COVID-19. Based on the research done, this paper concludes that factors that influence the adoption of e-commerce include ease of use, health protection and proficiency with digital technology. Lee & Turban, (2001) This article proposes a trust model for internet based consumer purchase and highlight how credibility, data protection and confidentiality can help to increase consumer trust for online retail. Kim 2020 – The following study focuses on purchase intent on online platforms and how consumers' fear of buying over e-commerce such as privacy concerns and product authenticity affect them. Ramesh (2022) – Here, this research presents a comprehensive analysis of consumer behaviour in web-based buying and factors like usability, assortment of products and finally, confidence that shapes consumers in the e-tail environment.

Objectives

1. To Identify key factors influencing consumer Confidence in online shopping platforms
2. To Examine how brand reputation affects consumer trust in e-commerce.
3. To Explore the effect of personalized recommendations on consumer trust and purchases.

Data & Methodology

This investigation used random sampling as the sampling technique. There were 38 consumers in the sample. After being prepared, the structured questionnaire was given to the respondents. Following data collection, the data was Statically analysed and the output were shown in the results and discussion.

Hypothesis of the Study

The research hypothesis for the present study includes both a null hypothesis and an alternate hypothesis.

H₀: There is no significant impact of factors Shaping Consumer Confidence in E-Commerce

H₁: There is significant impact of factors Shaping Consumer Confidence in E-Commerce

Results & Discussion:

T-Test

Table.1 One-Sample Data Analysis

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
AllFactors	38	1.8860	0.33525	0.05439

Source: Primary Data

Table.1 represents the summary statistics for a one-sample test on a variable labelled "AllFactors".

1. **N (Sample Size):**The sample size, denoted by **N = 38**, means there are 38 observations in this dataset for the variable "AllFactors."
2. **Mean (Average):**The mean of the dataset is **1.8860**, which indicates the average value of the "AllFactors" variable for the 38 samples.
3. **Standard Deviation (Std. Deviation):**The dispersion or variability of the "AllFactors" values from the mean is shown by the standard deviation, which is **0.33525**. The closer the data points are to the mean, the smaller the standard deviation, and the further apart the points are from the mean, the larger the standard deviation.

4. **Standard Error of the Mean (Std. Error Mean):** The standard error is **0.05439**, representing the standard deviation of the sample mean distribution. It indicates the precision of the sample mean estimate; the smaller the standard error, the more precise the estimate of the mean.

The data shows that the average value for "AllFactors" is close to 1.886 with relatively low variability (as indicated by the standard deviation), and the standard error suggests a reasonable level of confidence in the estimate of the mean for the population based on this sample of 38.

Table.2 One Sample Test

One-Sample Test							
	Test Value = 0						
	t	df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p		Lower	Upper
AllFactors	34.678	37	<.001	<.001	1.88596	1.7758	1.9962

Source: Primary Data

According to Table.2, the one-sample statistics you supplied are the outcomes of a one-sample t-test, which compares the sample mean against a test value of 0.

Key Variables:

1. **Test Value = 0:** The null hypothesis (H_0) suggests that the population mean is 0.
2. **t = 34.678:** This is the t-statistic, which indicates how many standard deviations the sample mean is from the hypothesized population mean (0 in this case).
3. **df = 37:** Degrees of freedom (df), which is calculated as the sample size minus 1 ($n-1$).
4. **Significance (One-Sided p < .001, Two-Sided p < .001):** The null hypothesis is tested using the p-value. A <.001 value suggests that there is an extremely little chance of seeing such a severe test statistic under the null hypothesis, suggesting that the outcome is very statistically significant.
 - a. **One-sided p-value** tests if the sample mean is significantly greater than 0.
 - b. **Two-sided p-value** tests if the sample mean is significantly different from 0 (either greater or less).
5. **Mean Difference = 1.88596:** The difference between the sample means and the test value (0). This means the sample mean is 1.886 units higher than the hypothesized population mean.
6. **95% Confidence Interval (CI): [1.7758, 1.9962]:** With this range, we can say with 95% certainty that the actual population mean is somewhere around the middle. Since the interval does not include 0, these further supports rejecting the null hypothesis.

Interpretation:

1. **Statistical Significance:** Both the one-sided and two-sided p-values are less than .001, meaning the sample mean is significantly different from 0. This is a strong indication that the factors being measured are not equal to zero and have a meaningful effect.
2. **Positive Mean Difference:** The mean difference of 1.88596 suggests that the factors analysed the study have a positive effect compared to the test value of 0.
3. **Confidence Interval:** The CI suggests that the true mean lies between 1.7758 and 1.9962, reinforcing that the effect is statistically significant and positive.

In summary, the data shows a highly significant positive effect of the factors being analysed compared to the null value of 0.

Table.3 Sizes of One-Sample Effects

One-Sample Effect Sizes					
		Standardizer ^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
AllFactors	Cohen's d	0.33525	5.625	4.307	6.937
	Hedges' correction	0.34225	5.511	4.219	6.795

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation.

Hedges' correction uses the sample standard deviation, plus a correction factor.

Source: Primary Data

Table.3 data provided presents effect size statistics, specifically Cohen's d and Hedges' g (corrected effect size), for a one-sample test.

1. Cohen's d

- **Point Estimate:** 5.625

- This indicates a large effect size, as a Cohen's d above 0.8 is generally considered large, and the estimate (5.625) is substantially higher. The discrepancy between the sample mean and the predicted population mean seems to be big and statistically significant.

- **95% Confidence Interval:** [4.307, 6.937]

- This shows that you can be 95% confident the true effect size lies between 4.307 and 6.937. Both the lower and upper bounds are still large effect sizes, reinforcing the strength of the difference.

2. Hedges' Correction

- **Point Estimate:** 5.511

- Hedges' g is a slightly corrected version of Cohen's d, accounting for sample size bias. The corrected estimate (5.511) is very similar to Cohen's d (5.625), indicating that the sample size is likely large enough that the bias is minimal.

- **95% Confidence Interval:** [4.219, 6.795]

- The interval here is slightly narrower, ranging from 4.219 to 6.795, but it still represents a large effect size.

Interpretation Summary:

- Both Cohen's d and Hedges' g show very large effect sizes (above 5), which indicates that the observed effect in data (across "AllFactors") is substantial. The confidence intervals reinforce that this is not due to random variation, and the true effect size is likely to be similarly large.

This suggests that "AllFactors" being analyzed have a very strong impact or difference from the hypothesized population mean in sample.

One Sample Proportions Tests

Table.4 Tests of One-Sample Proportions

One-Sample Proportions Tests									
Test Type		Observed			Observed - Test Value ^a	Asymptotic Standard Error	Z	Significance	
		Successes	Trials	Proportion				One-Sided p	Two-Sided p
AllFactors = 2.67	Mid-p Adjusted Binomial	1	38	0.026	-0.474	0.026		<.001	<.001
	Score	1	38	0.026	-0.474	0.026	-5.840	<.001	<.001

a. Test Value = .5

Source: Primary Data

Table.4 tests compare the observed proportion (0.026) to a hypothesized **test value** of **0.5** (50%).

Key Elements:

1. Test Types:

- **Mid-p Adjusted Binomial:** A variation of the binomial test, adjusted for smaller sample sizes.
- **Score:** This is a Z-test for proportions, used to compare the observed proportion to the hypothesized value (0.5 in this case).

2. Observed Proportion:

- **Successes:** There was 1 success.
- **Trials:** There were 38 trials.
- **Proportion:** The proportion of successes observed is $1/38 = 0.026381 = 0.026$ (or 2.6%).

3. Observed - Test Value:

- The discrepancy between the test value (0.5) and the observed percentage (0.026) is shown in this column. The difference is $0.026 - 0.5 = -0.474$. $0.026 - 0.5 = -0.474$, indicating the observed proportion is much smaller than the hypothesized proportion.

4. Asymptotic Standard Error:

- The standard error is 0.026 for both tests, reflecting the variability in the sample proportion.

5. Z-Value:

- In the **Score** test, the Z-value is **-5.840**, which indicates how many standard deviations the observed proportion is from the hypothesized test value of 0.5. A negative Z-value means the observed proportion is lower than the hypothesized value.

6. Significance (p-values):

- Both tests return extremely small **p-values** (**< 0.001**), for both the **one-sided** and **two-sided** tests.
 - **One-Sided p** tests whether the observed proportion is less than 0.5.
 - **Two-Sided p** tests whether the observed proportion is different (either greater or less) than 0.5.

Interpretation:

- The observed proportion of **0.026 (2.6%)** is significantly different from the hypothesized proportion of **0.5 (50%)**.

- The **p-values** < **0.001** for both tests indicate strong evidence against the null hypothesis that the proportion is 0.5.
 - The **Z-score** of **-5.840** and the significant p-values confirm that the observed success rate is **much lower** than 50%, with a high degree of statistical certainty.
- This suggests that in this sample, the true proportion of successes is likely far below the hypothesized 50% mark.

Conclusions:

Assuming this position, this study has looked into primary causal factors of consumer confidence in e-commerce to provide a comprehensive analysis of how numerous antecedent factors such as perceptions on product quality, brand image, cardinality of user reviews, facility, trust and security risks influence e-shopping behaviors amongst consumers. The results we have obtained allow us to conclude that transparent and easily understandable prices, great return policies, secure payment options, as well as reliable delivery services are essential for building trust, which is still a critical factor for customization in the context of e-commerce. Besides, the increased employment of the flexible payment options, particularly the BNPL services, has emerged as a critical factor in enhancing consumer confidence as it attracts customers on matters to do with ease and flexibility regarding their payments.

Concerns about security, especially in relation to user's personal information, remain valid barriers to trust; there is an important need for enhanced security measures and information sharing from the e-Commerce platforms. Due to the fact that consumers often turn to word of mouth and famous brands while making their choices of what to purchase, brand image and word of mouth also affect consumer confidence. In this regard, those companies that are willing to invest on the creation of a reliable, well-established presence on the web in addition to a clean, user-friendly shopping environment are more likely to retain and build upon their base of customers.

Consequently, in general, it is suggested that companies provide the pivotal factors discovered in this study a high level of strategic importance to continue the building of customer trust as e-commerce evolves. Politicians cannot be ignored in development of e-commerce environment as they are supposed to guarantee that laws that regulate data protection, online security as well as consumer protection are clear and enforceable. The above problems can be solved, and thus e-commerce platforms can continue expanding, and customers can experience a safer and more satisfying shopping process.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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