



## EXAMINING THE RELATIONSHIP BETWEEN SERVICE QUALITY, CUSTOMER EXPECTATIONS, AND ONLINE PURCHASES ACROSS A RANGE OF PRODUCTS

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### Abstract

This study aims to investigate customer satisfaction with online shopping, considering factors such as value, product quality, and overall shopping convenience. Online shopping is recognized for providing competitive pricing, high-quality products, and a seamless shopping experience. The success of any e-commerce company in India is contingent upon its widespread popularity. In the contemporary business landscape, online shopping has become a significant phenomenon, offering a competitive advantage to firms. The evolution of online shopping has created opportunities for gaining a competitive edge. Over the years, online shopping has gained popularity, primarily due to its convenience for individuals who prefer shopping from the comfort of their homes or workplaces. The Internet has become an integral part of economic activities, and individuals increasingly express interest in online shopping.

**Keywords:** Online Shopping, Service Quality, Internet Use, Customer Satisfaction

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## Introduction

In the contemporary business landscape, ensuring customer satisfaction and devising strategies for long-term consumer contentment are paramount. Identifying the drivers of customer satisfaction has become an urgent focus for managers, representing a key area of research in marketing literature.

The advent of online shopping stands out as a significant development, enabling consumers to make purchases conveniently from their homes. This eliminates the need to navigate multiple stores, contend with enthusiastic sales personnel, or endure long queues at the cashier's desk. The proliferation of online businesses has prompted a re-evaluation of strategies aimed at enhancing the customer experience. An essential factor influencing the potency of online purchasing is the expenditure, the frequency of online transactions over time, the diversity of online stores patronized by consumers, and the anticipated inclination toward future online shopping. The extent of time spent by online buyers connected to the internet during specific periods is termed the intensity of internet use.

## Literature Survey

According to Emel Kursunluoglu Yarimoglu (2017), she looked into how segment features affected the quality of e-services and found a motivator in exclusive online shopping clubs. How socio economic factors differ in service quality and are taken into consideration as an incentive in private internet shopping clubs was the research question, Coefficients of the constant variance term the ARCH and GARCH parameters are positive and statistically significant at the 1/level. This is given the result of the GARCH model. The time-varying volatility includes a constant(0.722164) plus its past(0.623) and a component that depends on past errors (0.136).

The result reveals that COVID-19 spice export performance also indicates the persistence of the volatility spices export represented is larger. It denoted that the effect of today's export prices remains in the forecast of variance for many periods in the future. Calculating the volatility of spices export price during the post-COVID-19

period by (GARCH) behavior in a mobile commerce environment.

Jun Liu et al., (2020) discovered evidence that reveals the beneficial outcomes of enthusiastic venting inspiration and philanthropy inspiration on posting negative client online surveys by recognizing a few characteristics of the customers who posted negatively on the internet surveys in the Chinese food and refreshment industry.

According to Katherine E.Harris et al.,(2017),the disconnected medium appears to have a mediated effect on expected help is appointment recovery via a flaw in the air plane information. In bank information, on/disconnected medium has a significant impact on fault, and fault has a significant impact on projected aid disappointment recovery.

## Research Methodology

### Statement of the Problems

Internet-based commerce has altered the way business is conducted in India. There are numerous portals and internet sites dedicated to online shopping around the world. Retail, in particular, is the fastest-growing business among young people in India. Customers' biggest concerns, however, are regarding product quality and safety, as they cannot touch or feel the product.

This study illustrates how customers are satisfied with their purchasing and what motivates them to buy more and more online.

Therefore, the purpose of this study is to determine the gap between customer perception and expectation.

### Objective of the study

- To determine how satisfied customers are with their online shopping experience.
- To examine the features that customers anticipate when shopping online.
- To recognize the challenging aspects of online shopping.
- To evaluate the degree of customer satisfaction with the chosen online products.

## Variables Identified

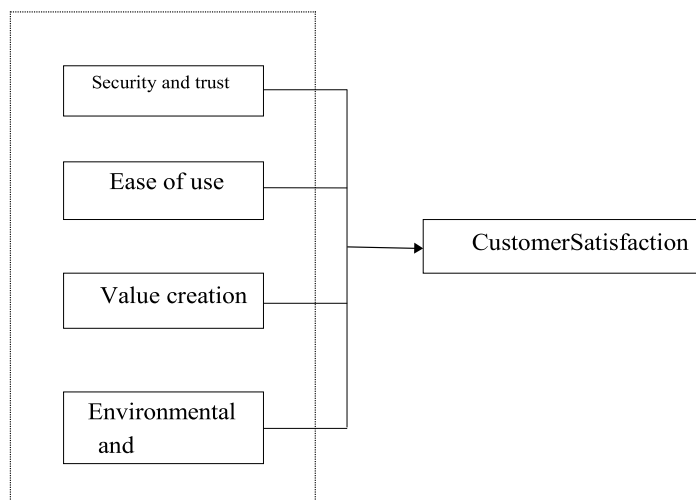


Figure 3 Conceptual Framework Research Hypothesis

Based on the preceding literature review on customer satisfaction, the following hypotheses were framed:

- Ho=Age group from 18-30 are using a high percentage of online shopping and are satisfied with online service
- Ha=Other than age (18-30) using a low percentage of online shopping and satisfied with online service

## Research Gap

Many countries in world are interested in doing research regarding online business because of the rapid increase in that field. But the major problem is whether all the customers are satisfied with the products. People are ordering their product only with the help of rating and visual images and videos. This study is mainly for to get the proper information about the customer and their expectation.

- Ho=Students are more satisfied the online services.
- Ha= Employees, Businesses were less satisfied the online services.
- Ho=The salary group from 0-1lakh have high percentage of satisfaction on online shopping.
- Ha=The salary group from 1-2lakh have high percentage of satisfaction on online shopping.

## Research Methodology

To determine and describe customer expectations, influencing factors, etc., a descriptive research design was used. Consumers who shop online are given a structured questionnaire to complete in order to gather the primary data. The respondents responded to the questionnaire, which was distributed electronically.

## Research Design

A research design is the setting up of parameters for data collection and analysis in a way that seeks to add relevance to the research goal. In actuality, the conceptual framework within which the research is conducted is the research design. This study's research design is a descriptive study in which the hypothesis is tested. The study seeks to discover the characteristics of employees as well as their perspectives on management techniques. The questionnaire is being offered to young people via Instagram and Whatsapp. As a result, it falls within survey research methodology.

## Sampling Design

For the study, the researcher used a multi stage sampling technique. Multi stage sampling is a technique in which the sample size is decreased at each stage by conducting the sampling in stages. Data is gathered during the first stage from arbitrary Instagram users. During the second stage, data from corporate employees were collected using stratified random sampling. Using the stratified sampling technique, the population is divided into smaller groups based on traits or attributes. The sample size is 150 people. The questionnaire was distributed to a random sample of persons who all purchase online.

## Data Design

One of the key tasks in the research methodology is data collection. Two categories of data exist.

- Raw data
- Additional data.

By using structured questionnaires and conducting the survey, raw data has been gathered. Additional information is gathered from websites, numerous

periodicals, journals, and other relevant library books. The primary data are the main foundation of this study. With the aid of a questionnaire, the raw data is gathered.

**Statistical Tools**

The SPSS software is used to analyze the data. The statistical tools to be used for testing the hypothesis are

- Percentage Analysis

- Factor Analysis
- One way ANOVA

**Analysis and Interpretation Percentage Analysis**

This percentage study is used to evaluate which factors influence a customer’s decision to acquire goods or services in online shopping based on gender.

**Cross Tabulation**

Cross-tabulation of Gender and regular purchasing through online

**Table 4 Percentage analysis for regularly purchasing through online**

Count					
		Are you regularly Purchasing through online?			Total
		Maybe	No	Yes	
Gender	Male	23	3	68	94
	Female	80	41	82	203
Total		103	44	150	297

According to the data in the table above, around 68 males and 82 females typically make online purchases. The remaining respondents may or may not make regular internet purchases.

**Tabulation of Gender and Where Did They Know about Online Purchasing**

**Table 5 Percentage Analysis for Information about Online Purchasing**

Count							
Where did you know about online purchasing?							
		Friends/relatives	Internet	Self	Social networksites	Television	Total
Gender	Male	3	39	12	29	11	94
	Female	38	61	45	59	0	203
Total		41	100	57	88	11	297

From the above table, majority 61 females are getting information about online purchasing from the Internet and 39 males from the internet.

**Cross Tabulation of Gender and Mode of Payment they Prefer**

**Table 9 Percentage Analysis for Mode of Payment**

Count								
		Which mode of payment will you use to settle the payment for online purchasing?					Total	
		On delivery of cash	Bankcard	Debit card	InternetBanking	UPI		
Gender	Male	11	22	28	9	24	94	
	Female	104	9	36	34	20	203	
Total		115	31	64	43	44	297	

Mostly 104 females are interested in the COD method of payment while 28 males are interested in debit card payment method.

**Cross tabulation of Gender and Compared to Traditional Shopping [Time Consumption]**  
**Table10 Percentage Analysis for Online and Traditional Shopping**

count							
	Compared to traditional shopping, why do you prefer online shopping? Time consumption						Total
		1	2	3	4	5	
Gender	Male	35	22	26	11	0	94
	Female	47	82	46	23	5	203
Total		82	104	72	34	5	297

The main advantage of online purchasing is time consumption in that most of 82 females give second position of preference based on that and 35 males give first preference for hat.

**Cross tabulation of Gender and Compared to traditional shopping [Independent]**  
**Table11 Percentage Analysis for online and traditional way of shopping**

Count							
	Compared to traditional shopping, why do you prefer online shopping?[Independent]						Total
		01	02	3	04	05	
Gender	Male	14	38	42	0	0	94
	Female	37	91	38	24	13	203
Total		51	129	80	24	13	297

Online purchasing is an independent one, in that 91 females are giving 2 place for that and male thinks that it is 3rd position in their life.

**Cross tabulation of Gender and Compared to traditional shopping [Money saving] Count**  
**Table12 Percentage Analysis for online and traditional way of shopping**

Count							
	Compared to traditional shopping, why do you prefer online shopping?[Moneysaving]						Total
		1	2	3	4	5	
Gender	Male	15	36	37	6	0	94
	Female	35	92	58	13	5	203
Total		50	128	95	19	5	297

From the above table, the highest of 92 females are thinking that online purchasing is the money-saving one but only 15 males are thinking like that.

**Cross Tabulation of Gender and Compared to traditional shopping [Comparisons]**  
**Table13 Percentage Analysis for Online and Traditional Way of Shopping**

Count							
	Compared to traditional shopping, why do you prefer online shopping?[Comparisons]						Total
		1	2	3	4	5	
Gender	Male	24	24	40	6	0	94
	Female	30	109	44	15	5	203
Total		54	133	84	21	5	297

Everyone will compare the products and what they purchase, in that mostly female (109) are highly comparing when compared to males (24).

**Cross Tabulation of Gender and Compared to Traditional Shopping[Online Tracking]**  
**Table14PercentageAnalysisforonlineand tradition always of shopping**

Count							
		Compared to traditional shopping, why do you prefer online shopping?[Comparisons]					Total
		1	2	3	4	5	
Gender	Male	24	24	40	6	0	94
	Female	30	109	44	15	5	203
Total		54	133	84	21	5	297

Most of the 77 females are thinking that online purchasing is better when compared to traditional purchasing while only 14 males think that online purchasing is not that good when compared to traditional purchasing.

**Cross-tabulation of Gender and Product Delivery Time in the Chosen Portal**  
**Table15 Percentage Analysis for delivery of the product**

Count							
		Compared to traditional shopping, why do you prefer online shopping?[Online tracking]					Total
		1	2	3	4	5	
Gender	Male	14	37	31	12	0	94
	Female	54	77	46	17	9	203
Total		68	114	77	29	9	297

Around 163 female and 62 males were satisfied that their selected portal delivering the product in 10 days.

**Cross Tabulation of Gender and Security Level of Credit Card**  
**Table16 Percentage Analysis for Credit card usage**

count							
		level of opinion on the security aspects relating to various modes of payment in online purchases.[Credit card]					Total
		High Security	Low security	Moderate	Very High Security	Very Lows ecurity	
Gender	Male	32	10	26	26	0	94
	Female	76	9	87	25	6	203
Total		108	19	113	51	6	297

Mostly everyone prefers credit card is highly secured that means, 76 female and 32 male feels that credit card is highly secured.

**Cross tabulation of Gender and Security Level of Debit Card**  
**Table17Percentage Analysis for Debit Card Usage**

Count							
		State your level of opinion on the security aspects relating to various modes of payment in online purchase.[Debit card]					Total
		High security	Low security	Moderate	Very high security	Very low security	
Gender	Male	48	9	32	5	0	94
	Female	104	16	46	31	6	203
Total		152	25	78	36	6	297

When compared to credit cards debit cards is highly preferred in the count of 104 females and 48 males. No one feels that a debit card is not secure.

**Cross Tabulation of Gender and Security Level of Net Banking**  
**Table18 Percentage Analysis for Net Banking**

Count							
		State your level of opinion on the security aspects relating to Various modes of payment in online purchases.[Net banking]					Total
		High security	Low security	Moderate	Very high security	Very low security	
Gender	Male	51	0	40	3	0	94
	Female	97	15	64	21	6	203
Total		148	15	104	24	6	297

Net banking is not preferable by youngsters but only 51 male only highly interested in net banking and 97 female are highly interested in net banking.

**Cross tabulation of Gender and security level of UPI.**  
**Table19 Percentage Analysis for UPI usage**

Count							
		State your level of opinion on the security aspects relating to various modes of payment in online purchase.[UPI]					Total
		High security	Low security	Moderate	Very high security	Very low security	
Gender	Male	52	17	19	6	0	94
	Female	94	26	45	35	3	203
Total		146	43	64	41	3	297

UPI is one of the best option for payment, 52 male and 94 female are feels that UPI is the best one among other payment methods.

**Cross tabulation of Gender and Security Level of Cash on Delivery**  
**Table20 Percentage Analysis for COD usage**

110 Female and Feels that COD is the Best One for Payment while 44 Male Feels that COD is the Best among Other Payment Methods

Count							
		State your level of opinion on the security aspects relating to various modes of payment in online purchase.[Cash on Delivery]					Total
		High security	Moderate	Very high security	Very low security		
Gender	Male	29	11	44	10	94	
	Female	67	26	110	0	203	
Total		96	37	154	10	297	

**Cross Tabulation of Gender\*Decision Making Factors**  
**Table21 Percentage Analysis for Gender**

		01	02	03	04	05	
Gender	Male	17	27	24	20	6	94
	Female	51	85	40	27	0	203
Total		68	112	64	47	6	297

The factors that make customers to take the decision to purchase goods or service in online shopping are:

1. Reputation of the company
2. Guarantees and warranties
3. Safety and security of the information
4. Description of goods
5. Product & Prices comparison
6. Customer care
7. Cancellation of order

8. Free replacement
9. No extra cost
10. Refunds
11. Customer's ratings/ review

From the percentage analysis, the total respondents were 297 in that 203 were female and 94 were male. So, from the overall analysis female were more interested and satisfied in online shopping e-services.

### ANOVA Analysis for Age

On the basis of the preceding literature review on customer satisfaction, the following hypotheses were framed:

- Ho=Age group from 18-30 are using high percentage of the online shopping and are satisfied with online service.

- Ha=Other than age(18-30)using low percentage of the online shopping and satisfied with online service

The certain age, salary, occupation is compared with the satisfaction level like Reliability, Responsive, Assurance and Tangibles.

**Table 22 ANOVA Analysis for Respondents' ages**

ANOVA						
		Total Squares	Degree of freedom	Mean Square	F	Significance value
Reliability	Among Groups	.396	3	.132	1.441	.231
	In Groups	26.823	293	.092		
	Total	27.219	296			
Responsive	Among Groups	.396	3	.132	1.441	.231
	In Groups	26.823	293	.092		
	Total	27.250	296			
Assurance	Among Groups	.192	3	.064	.893	.445
	In Groups	20.947	293	.071		
	Total	21.140	296			
Tangibles	Among Groups	1.123	3	.374	1.571	.196
	In Groups	69.790	293	.238		
	Total	70.910	296			

The null hypothesis is accepted because each value from the overall significant level is greater than the significant value of 0.05, indicating that the age group from 18 to 30 was extremely interested in and satisfied with online shopping.

### ANOVA Analysis for Occupation

- Ho=Students are more satisfied the online services
- Ha=Employee, Business were less satisfied the online services

**Table 23 ANOVA analysis for respondents' occupations**

ANOVA						
		Total Squares	Degree of freedom	Mean Square	F	Sig.
Reliability	Among Groups	.602	4	.151	1.660	.162
	In Groups	26.620	293	.092		
	Total	27.220	294			
Responsive	Among Groups	.610	4	.150	1.651	.162
	In Groups	26.620	294	.091		
	Total	27.230	298			
Assurance	Between Groups	.450	4	.111	1.570	.182
	In Groups	20.696	294	.071		
	Total	21.140	298			
Tangibles	Between Groups	3.395	4	.848	1.719	.146
	In Groups	144.110	294	.494		
	Total	147.510	298			

• The null hypothesis is accepted because each value from the overall significant level is greater than the significant value of 0.05, indicating that the students were extremely interested in and satisfied with their online shopping experience.

- People who interested in online shopping in the category based on salary, they depend on the reliability, responsive, assurance and tangibles

they got from their online website and their e-services.

### ANOVA ANALYSIS FOR SALARY

- Ho=The salary group from 0-1lakh have high percentage of satisfaction on online shopping.
- Ha=The salary group from 1-2lakh have high percentage of satisfaction on online shopping



**Table24 Anova Analysis of Respondents' Salaries**

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Reliability	Among Groups	.999	3	.333	.448	.719
	In Groups	219.920	296	.744		
	Total	219.920	299			
Responsive	Among Groups	4.106	3	1.370	1.977	.118
	In Groups	204.820	296	.692		
	Total	208.920	299			
Assurance	Among Groups	4.946	3	1.649	2.420	.066
	In Groups	199.610	296	.681		
	Total	205.554	299			
Tangibles	Among Groups	2.958	3	.985	1.055	.368
	In Groups	274.518	296	.934		
	Total	278.480	299			

The null hypothesis is accepted because each value from the overall significant level is greater than the significant value of 0.05, indicating that the salary group from 0 to 1 lakh was extremely interested and satisfied with online shopping.

People who are interested in online shopping in the category based on salary, they depend on the reliability, responsive, assurance and tangibles they got from their online website and their e-services.

**Factor Analysis**

Here there are list of difficulties that respondents experience during online shopping. In these the factor analysis is applied to factorize the components for easy identification of factors. The factors are listed below:

1. I believe the websites' stated privacy policies
2. It replaces the conventional method of shopping
3. It provides a wider range of products
4. The best place to purchase difficult-to-find

items is online.

5. Shopping online is practical.
  6. Even when buying small items, I find myself comparing prices.
  7. Simple to compare features and prices when searching for products
  8. The ordering process on the internet is simple to use and understand.
  9. I believe that credit card and other online payment methods are secure. I am willing to give my personal information when shopping on the internet
  10. I find interest sales promotion appealing.
  11. Find online shopping to be a fun way to shop.
  12. I shop online to save time.
  13. I enjoy using my free time to preview products
  14. I frequently view online advertisements for deals and discounts
  15. Offers higher-quality goods
  16. I receive better services from online retailers.
- Interest sales promotion is attractive to me.

**Table25 KMO Table of FactorAnalysis**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.834
Bartlett's Test of Sphericity	Approx. Chi-Square	503.643
	df	66
	Significance value	.000

**Table26 Components from Factor Analysis**

Factors	Compound			
	1	2	3	4
Offers wider product selections	.782			
Online stores offer me better services	.744			.471
Provides better quality products	.721			
The online ordering process is simple to use and comprehend.	.564		.502	
I find interest sales promotion appealing.	.530	.493		
I use the internet to shop to save time.		.870		

I find online shopping to be a lot of fun.		.753		.321
Shopping online is practical.		.708	.423	
I enjoy using my free time to preview products.	.377	.590	.319	
Simple to compare features and prices when searching for products			.863	
The best place to buy difficult-to-find items is online.		.304	.722	
I believe the websites' stated privacy policies	.485		.540	.377
Even for small purchases, I find myself comparing prices.	.464	.501	.502	
I frequently view online advertisements for deals and discounts.		.410		.756
When I shop online, I'm willing to divulge my personal information.				.749
I am confident in the security of online payment systems like credit cards.			.428	.652
It serves as an alternative to traditional shopping methods.	.487		.319	.505
Extraction Method: Analysis by Principal Components.				
Rotation Method: Varimax with Kaiser Normalization. A				
a. Rotation converged in 9 iterations.				

From the above factor analysis, the four components are formed according to their factors. The components are listed below:

- Component1: Positive reputation for online shopping.
- Component2: Customers feel convenient in the online shopping.
- Component3: Perceptions of customers toward online e-services.
- Component 4: Customers trust the online portal by giving their personal details.

**Conclusion**

This study helps to understand that customer satisfactions are one of the essential things for the organization because it will increase the positive reputation about the organization in the market and also for more functional benefits. The organization is also promoting their products with the help of various. As per the analysis, Online shopping will benefit businesses by increasing their business opportunities and by enabling higher levels of customer satisfaction within the business environment.

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