

From Physical to Digital Consumerism: Pandemic-Driven Digital Transformation in Consumer Shopping Behaviour

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ABSTRACT:

The COVID-19 pandemic brought a significant change in consumer shopping behaviour by accelerating the adoption of online shopping and digital payment methods. This study examines the impact of the COVID-19 pandemic on consumer shopping behaviour and the transition from physical to online shopping among consumers in Kannur district, Kerala. It specifically analyses changes in consumers' shopping habits before and after the pandemic, focusing on online shopping frequency, online spending, digital payment usage, customer satisfaction, and the problems encountered while shopping online. The study adopts an empirical, descriptive, and quantitative research design based on primary data collected from 75 respondents using a structured questionnaire through convenience sampling. The data were analysed using percentage analysis, weighted mean score and ranking, the Chi-square test, the paired (dependent) sample t-test, and the Wilcoxon signed-rank test.

The findings indicate that consumers became more aware of online shopping and increasingly preferred online platforms after the pandemic. There was a significant increase in online shopping frequency, online spending, and the use of digital payment methods. The results further reveal that convenience, safety, product availability, and ease of digital payments were the major factors driving the adoption of online shopping. Consumers also reported a high level of satisfaction with online shopping, particularly with respect to product availability, delivery services, and payment convenience. Overall, the study concludes that the COVID-19 pandemic has accelerated the shift from physical shopping to digital consumerism, making online shopping an integral part of post-pandemic consumer behaviour.

Keywords: Digital Consumerism, Digital Transformation, COVID-19 Pandemic, Online Shopping Behaviour, Buying Behaviour, Consumer Behaviour

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Introduction

Consumer shopping behaviour has changed significantly because of the COVID-19 pandemic. During the pandemic, people increasingly depended on online shopping due to lockdowns, movement restrictions, and health concerns. As a result, online shopping, digital payments, and home delivery services became more popular. Even after the pandemic, many consumers continue to shop online because it is convenient, saves time, and offers a wide variety of products. At the same time, physical stores remain important for products that customers prefer to see or try before purchasing. This study examines how consumer shopping behaviour changed before and after the COVID-19 pandemic. It focuses on changes in online shopping frequency, spending patterns, customer satisfaction, and the challenges faced while shopping online. The findings show that consumers have become more comfortable with online shopping and digital payments, while also adopting a combination of online and offline shopping. The study provides useful insights for retailers, e-commerce companies, and policymakers to improve customer satisfaction and develop better shopping experiences in the future.

Review of Literature

Gu et al. (2021) found that the COVID-19 pandemic significantly increased online shopping across different countries. Consumers preferred online shopping because it was safer, more convenient, and offered easy access to products. The study also reported increased use of digital payment methods.

Pantano et al. (2021) explained that COVID-19 accelerated the growth of e-commerce and changed consumer buying behaviour. Many consumers continued shopping online even after lockdowns because of convenience and flexibility.

Rohit Kumar and Mishra (2021) reported that the COVID-19 pandemic increased the demand for online shopping in India. Consumers preferred online platforms because of movement restrictions, product availability, and convenience.

Shamim et al. (2021) observed that health and safety concerns during the pandemic strongly

influenced shopping behaviour. Consumers adopted safer shopping practices and increasingly preferred online purchasing.

Patil et al. (2022) found that lockdowns changed consumers' purchasing behaviour in India. Consumers reduced visits to physical stores and relied more on online shopping for essential products. Perceived risk and trust influenced their shopping decisions.

Statement of the Problem

The COVID-19 pandemic changed the way consumers shop by increasing the use of online shopping and digital payment methods. Even after the pandemic, many people continue to prefer online shopping because it is convenient, offers a wide variety of products, and saves time. However, online shopping also creates challenges such as delivery delays, product unavailability, return and refund issues, and online security concerns. Therefore, it is necessary to understand how the COVID-19 pandemic has influenced their shopping behaviour and whether these changes have continued in the post-pandemic period. This study aims to examine these changes among consumers in Kannur district.

Objectives of the Study

To examine the changes in consumers' shopping behaviour before and after the COVID-19 pandemic.

To identify the factors influencing the shift from physical shopping to online shopping.

To assess consumers' satisfaction with various aspects of online shopping services.

To identify the major problems faced by consumers while shopping online.

Hypotheses

H₀1: There is no significant difference in online shopping behaviour before and after COVID-19.

H₀2: There is no significant difference in the online purchase of selected product categories before and after the COVID-19 pandemic.

H₀₃: There is no significant association between problems faced in online shopping and overall customer satisfaction.

Significance of the Study

This study is important because it helps in understanding how the COVID-19 pandemic changed consumers' shopping behaviour and increased the use of online shopping. It explains the changes in shopping habits, online spending, customer satisfaction, and the problems faced by consumers while shopping online. The findings will help retailers and e-commerce companies improve their products, delivery services, digital payment systems, and customer support. The study will also help policymakers promote safe and secure online shopping and support the growth of digital commerce. In addition, it will serve as a useful reference for researchers and students interested in consumer behaviour, e-commerce, and digital marketing, while contributing to a better understanding of post-pandemic consumer behaviour.

Research Methodology

The present study adopts an empirical, descriptive, and quantitative research design to examine the impact of the COVID-19 pandemic on consumer shopping behaviour and the transition from physical shopping to digital consumerism. The study is based on primary data collected from 75 consumers residing in Kannur district, Kerala, who have experience with both physical and online shopping after the COVID-19 pandemic. A convenience sampling technique was used to select the respondents, and data were collected through a structured questionnaire. The collected data were analyzed using statistical tools such as percentage analysis, weighted mean score and ranking, the Chi-square test, the paired (dependent) sample t-test, the Wilcoxon signed-rank test.

Analysis and Discussion

The data collected from 75 respondents who use online shopping services in Kannur District were analysed

Table 1: Profile of Respondents

Profile Variables	Category	Number	Percentage
Age	Below 25	42	56.00
	25-35	14	18.67
	36-45	12	16.00
	46-55	6	8.00
	Above 55	1	1.33
Gender	Male	30	40.00
	Female	45	60.00
Education	SSLC	8	10.67
	Pre-Degree/Higher Secondary	20	26.67
	Graduation	24	32.00
	Post Graduation	12	16.00
	Others (Diploma/Others)	11	14.67

Occupation	Public Sector	7	9.33
	Business	19	25.33
	Private Sector	24	32.00
	Profession	10	13.00
	Students/Others	15	20.00
Monthly income	Less than ₹20,000	28	37.33
	₹20,000–₹40,000	21	28.00
	₹40,001–₹60,000	15	20.00
	Above ₹60,000	11	14.67
Area of residence	Rural	29	38.67
	Urban	46	61.33
	Total	75	100.00

The table 1 shows that 42 respondents (56.00%) were below 25 years of age, followed by 14 (18.67%) in the 25-35 years age group, 12 (16.00%) in the 36-45 years age group, 6 (8.00%) in the 46-55 years age group, and 1 (1.33%) above 55 years.

Among the 75 respondents, 45 (60.00%) were female and 30 (40.00%) were male.

Regarding education, 24 respondents (32.00%) were graduates, followed by 20 (26.67%) with Higher Secondary / Pre-Degree, 12 (16.00%) postgraduates, 11 (14.67%) with diploma or other qualifications, and 8 (10.67%) with SSLC.

In terms of occupation, 24 respondents (32.00%) worked in the private sector, 19 (25.33%) were engaged in business, 15 (20.00%) were students/others, 10 (13.33%) were professionals, and 7 (9.33%) worked in the public sector.

Regarding monthly income, 28 respondents (37.33%) earned less than ₹20,000, 21 (28.00%) earned ₹20,000–₹40,000, 15 (20.00%) earned ₹40,001–₹60,000, and 11 (14.67%) earned above ₹60,000.

With respect to area of residence, 46 respondents (61.33%) were from urban areas, while 29 (38.67%) were from rural areas.

Table 2: Awareness of Online Shopping Apps

Apps	Before COVID-19 Number	Before COVID-19 Percentage	After COVID-19 Number	After COVID-19 Percentage	Increase in Percentage
Amazon	42	56.00	75	100.00	+33
Flipkart	31	41.33	75	100.00	+44
Snapdeal	13	17.33	68	90.67	+55

Meesho	17	22.67	62	82.67	+45
Myntra	9	12.00	54	72.00	+45
Ajio	1	1.33	37	49.33	+36
Nykaa	0	0.00	26	34.67	+26
Swiggy	31	41.33	72	96.00	+41
Zomato	11	14.67	61	81.33	+50
Bigbasket	1	1.33	19	25.33	+18

Note: Multiple responses were allowed

Before the pandemic, Amazon was the most recognized platform, with 42 respondents (56.00%) aware of it, followed by Flipkart and Swiggy, each known by 31 respondents (41.33%). Awareness of Meesho (17 respondents; 22.67%), Snapdeal (13 respondents; 17.33%), Zomato (11 respondents; 14.67%), and Myntra (9 respondents; 12.00%) was comparatively low, while Ajio and BigBasket were known by only 1 respondent (1.33%) each, and Nykaa was not known by any respondent. After the pandemic, awareness

increased considerably, with Amazon and Flipkart becoming familiar to all 75 respondents (100.00%), followed by Swiggy (72 respondents; 96.00%), Snapdeal (68 respondents; 90.67%), Meesho (62 respondents; 82.67%), Zomato (61 respondents; 81.33%), Myntra (54 respondents; 72.00%), Ajio (37 respondents; 49.33%), Nykaa (26 respondents; 34.67%), and BigBasket (19 respondents; 25.33%). The highest increase in awareness was recorded for Snapdeal (+55 respondents), followed by Zomato (+50), Meesho and Myntra (+45 each), Flipkart (+44), Swiggy (+41), Ajio (+36), Amazon (+33), Nykaa (+26), and BigBasket (+18).

Table 3: Source of Awareness about Online Shopping Apps

Source	Number	Percentage
Friends and relatives	18	24.00
Advertisement	24	32.00
Social media (Facebook, Whatsapp, Instagram, You tube etc.)	15	20.00
Influencers and bloggers	5	6.67
Online review	4	5.33
E-Commerce websites	7	9.33
E-mail and SMS promotional messages	2	2.67
Total	75	100.00

Advertisements were the major source of awareness about online shopping, reported by 24 respondents (32.00%). This was followed by

friends and relatives with 18 respondents (24.00%) and social media with 15 respondents (20.00%). E-commerce websites were the source of awareness

for 7 respondents (9.33%), while 5 respondents (6.67%) learned through influencers and bloggers. Online reviews influenced 4 respondents (5.33%),

and e-mail and SMS promotional messages were reported by 2 respondents (2.67%).

Table 4: Online Shopping Apps Usage

Apps	Before COVID-19 Number	Before COVID-19 Percentage	After COVID-19 Number	After COVID-19 Percentage	Increase in Number
Amazon	18	24.00	75	100.00	+57
Flipkart	15	20.00	75	100.00	+60
Snapdeal	8	10.67	61	81.33	+53
Meesho	5	6.67	18	24.00	+13
Myntra	4	5.33	49	65.33	+45
Ajio	0	0.00	32	42.67	+32
Nykaa	0	0.00	19	25.33	+19
Swiggy	10	13.33	62	82.67	+52
Zomato	7	9.33	53	70.67	+46
BigBasket	0	0.00	11	14.67	+11

Before COVID-19, Amazon was used by 18 respondents (24.00%), which increased to 75 respondents (100.00%) after the pandemic, showing an increase of 57 respondents. Similarly, Flipkart usage increased from 15 respondents (20.00%) to 75 respondents (100.00%), recording the highest increase of 60 respondents. The usage of Snapdeal increased from 8 respondents (10.67%) before the pandemic to 61 respondents (81.33%) after the pandemic, with an increase of 53 respondents. Swiggy also showed a significant rise from 10 respondents (13.33%) to 62 respondents (82.67%), an increase of 52 respondents. Likewise, Zomato usage increased

from 7 respondents (9.33%) to 53 respondents (70.67%), showing an increase of 46 respondents.

The use of Myntra increased from 4 respondents (5.33%) before COVID-19 to 49 respondents (65.33%) after COVID-19, with an increase of 45 respondents. Ajio, which had no users before the pandemic, was used by 32 respondents (42.67%) after the pandemic. Similarly, Nykaa increased from 0.00% before COVID-19 to 19 respondents (25.33%) after the pandemic. Meesho usage increased from 5 respondents (6.67%) to 18 respondents (24.00%), while BigBasket increased from no users before the pandemic to 11 respondents (14.67%) after the pandemic.

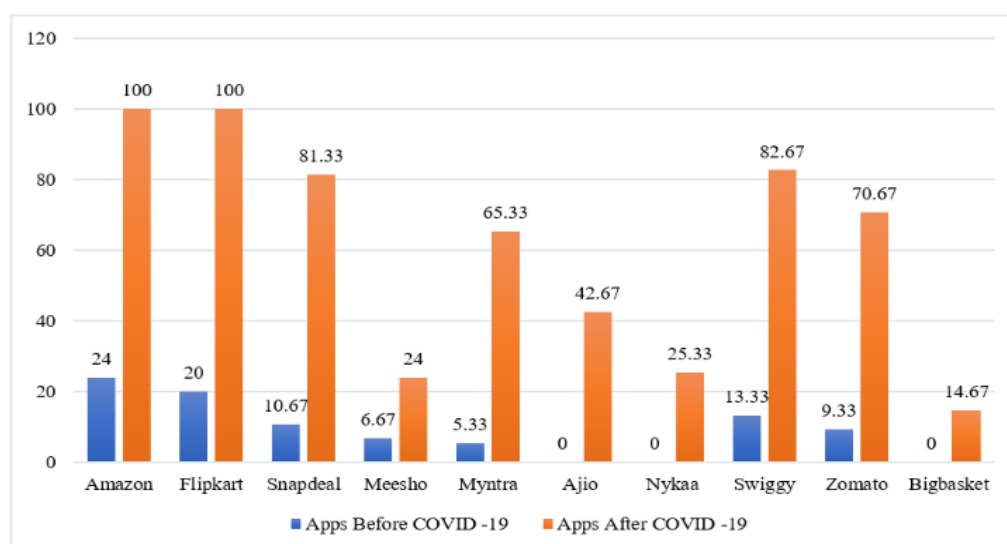


Figure 1: Online Shopping Apps Usage Before And After COVID-19

Table 5: Reason for Choosing Online Shopping

Reasons	Highest Priority	High Priority	Moderate Priority	Low Priority	Lowest Priority	Weighted Score	Weighted Average	Rank
Convenience	24	27	18	5	1	293	3.91	1
Time saving	20	25	19	8	3	276	3.68	4
Low price	16	24	22	9	4	264	3.52	5
Variety of products	21	24	19	8	3	277	3.69	3
Home delivery	28	22	15	6	4	289	3.85	2

Among the reasons for choosing online shopping, convenience ranked first with the highest weighted average score of 3.91, followed by home delivery

with 3.85. Variety of products (3.69), time saving (3.68), and low price (3.52) secured the third, fourth, and fifth ranks respectively.

Table 6: Change in Behaviour of Online Shopping Before and After COVID-19

Online shopping behaviour	Before COVID -19 High	Before COVID -19 Medium	Before COVID -19 Low	Before COVID-19 Weighted Average	After COVID -19 High	After COVID -19 Medium	After COVID -19 Low	After COVID-19 Weighted Average	Increase in Weighted Average

Awareness of online shopping	16	35	23	1.91	45	27	2	2.58	+0.67
Frequency of online shopping	12	29	33	1.72	30	40	4	2.35	+0.63
Visiting physical store	28	26	10	2.38	19	40	15	2.05	-0.33
Average monthly online spending	9	24	41	1.57	24	42	8	2.22	+0.65

Before the pandemic, the weighted average for awareness of online shopping was 1.91, which increased to 2.58 after the pandemic, indicating that consumers became more knowledgeable and familiar with online shopping platforms and digital purchasing methods. Similarly, the weighted average for the frequency of online shopping increased from 1.72 before COVID-19 to 2.35 after COVID-19, suggesting that respondents purchased products online more frequently following the pandemic. In contrast, the weighted average for visiting physical stores declined from 2.38 before the pandemic to 2.05 after the

pandemic, indicating a reduction in in-store shopping as consumers increasingly preferred online purchasing. Furthermore, the weighted average for average monthly online spending increased from 1.57 before COVID-19 to 2.22 after COVID-19, demonstrating that respondents not only shopped online more frequently but also spent more on online purchases. Overall, these findings indicate that the COVID-19 pandemic accelerated the adoption of online shopping, leading to higher awareness, greater shopping frequency, increased online expenditure, and reduced dependence on physical retail stores.

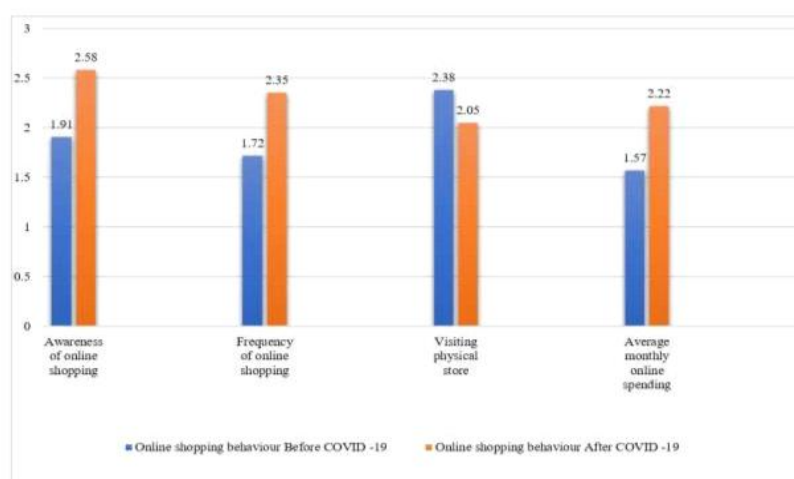


Figure 2: Change in Behaviour of Online Shopping Before and After COVID-19

Table 7: Change in Online Shopping Behaviour Before and After COVID-19 (Wilcoxon Signed-Rank Test)

Online shopping behaviour	W	p-value	Decision	Direction of Change
Awareness of online shopping	30.0	< 0.001	Significant	Increased (Weighted mean: 2.20 → 2.43)
Frequency of online shopping	52.0	< 0.001	Significant	Increased (Weighted mean: 2.20 → 2.50)
Visiting physical stores	291.5	0.008	Significant decrease	Decreased (Weighted mean: 2.37 → 2.03)
Average monthly online spending	42.0	< 0.001	Significant	Increased (Weighted mean: 2.40 → 2.47)

The Wilcoxon Signed-Rank Test results show a statistically significant difference in all four aspects of online shopping behaviour ($p < 0.05$). Awareness of online shopping ($W = 30.0$, $p < 0.001$), frequency of online shopping ($W = 52.0$, $p < 0.001$), and average monthly online spending ($W = 42.0$, $p < 0.001$) increased significantly after the pandemic. In contrast, visits to physical stores decreased significantly ($W = 291.5$, $p = 0.008$). These findings indicate that the COVID-19

pandemic brought a significant change in consumer shopping behaviour, with respondents becoming more aware of online shopping, shopping online more frequently, spending more through online platforms, and visiting physical stores less often. Thus, the null hypothesis - 'There is no significant difference in online shopping behaviour before and after COVID-19 pandemic' is rejected.

Table 8: Product Purchased Online Before and After COVID-19

Product Category	Before COVID-19 Number	Before COVID-19 Percentage	After COVID-19 Number	After COVID-19 Percentage	Rate of Changes
Clothes	59	78.7	68	90.7	15.3%
Electronics	24	32.0	35	46.7	45.8%
Grocery and medicines	7	9.3	20	26.7	185.7%
Home appliances	14	18.7	26	34.7	85.7%
Beauty and personal care	22	29.3	46	61.3	109.1%

Toys/Baby products	6	8.0	17	22.7	183.3%
Books/Stationery	30	40.0	44	58.7	46.7%

Clothes remained the most purchased category, increasing from 59 (78.7%) to 68 (90.7%), with a 15.3% increase. Electronics increased by 45.8%, while home appliances increased by 85.7%. Beauty and personal care purchases rose by 109.1%. The highest increases were seen in Grocery and medicines (185.7%) and Toys/Baby products (183.3%). Books/Stationery also increased by 46.7%. Overall, the results show that respondents

purchased more products online after COVID-19, especially essential and personal care items.

Difference in the Online Purchase of Selected Product Categories

H₀₂: There is no significant difference in the online purchase of selected product categories before and after the COVID-19 pandemic.

Table 9: Difference in the Online Purchase of Selected Product Categories (Paired-Sample t-test)

Product Category	t-value	p-value	Decision
Clothes	2.838	< 0.05	Significant increase
Electronics	2.620	< 0.05	Significant increase
Grocery & medicines	3.155	< 0.05	Significant increase
Home appliances	2.838	< 0.05	Significant increase
Beauty & personal care products	5.289	< 0.001	Significant increase
Toys/Baby products	2.986	< 0.05	Significant increase
Books/Stationery	1.720	0.090	Not significant

The paired-sample t-test indicates that the purchase of clothes, electronics, grocery & medicines, home appliances, beauty & personal care products, and toys/baby products increased significantly after COVID-19 ($p < 0.05$). The

largest increase was observed for beauty & personal care products ($t = 5.289$, $p < 0.001$). However, books/stationery did not show a statistically significant change ($t = 1.720$, $p = 0.090$).

Table 10: Mode of Payment Used for Online Shopping Before and After the COVID-19 Pandemic

Mode of Payment	Before COVID-19 Number	Before COVID-19 Percentage	After COVID-19 Number	After COVID-19 Percentage	Rate of Changes
Cash on delivery	60	80.00	26	34.67	-56.7%
UPI	8	10.67	48	64.00	498.1%

Debit/Credit cards	7	9.33	0	0.00	-100%
Net banking	0	0.00	1	1.33	XX

The use of Cash on delivery decreased from 60 respondents before COVID-19 to 26 respondents after COVID-19, showing a 56.7% decrease. In contrast, UPI usage increased from 8 respondents to 48 respondents, recording a 498.1% increase, which indicates a strong preference for digital payments. The use of Debit/Credit cards fell from 7 respondents to none, resulting in a 100%

decrease. Net banking increased slightly from 0 to 1 respondent after COVID-19, but the percentage rate of change cannot be calculated because there were no users before the pandemic. Overall, the findings show that respondents shifted from cash-based payments to digital payment methods, especially UPI, after COVID-19.

Table 11: Level of satisfaction

Factors	HS	S	N	D	HD	WS	WA
Availability of products	1	0	10	41	23	310	4.13
Variety of brands and products	0	1	9	35	30	319	4.25
Ease of using shopping apps/websites	0	1	18	30	26	306	4.08
Delivery speed	0	3	17	39	16	293	3.91
Accuracy of delivered products	1	2	15	42	15	293	3.91
Delivery time	2	3	17	36	17	288	3.84
Packaging quality	0	0	17	38	20	303	4.04
Convenience of online payments	0	2	16	34	23	303	4.04
Safety and security of payments	1	3	17	31	23	297	3.96
Return and refund process	0	10	14	36	15	281	3.75
Discounts and offers	1	4	15	33	22	296	3.95
Quality of products	0	3	21	35	16	289	3.85
Customer service support	0	4	24	32	15	283	3.77
HS = Highly Satisfied, S = Satisfied, N = Neutral, DS = Dissatisfied, HDS = Highly Dissatisfied, WS = Weighted Score, WA = Weighted Average							

Among all the factors, variety of brands and products received the highest weighted mean of 4.25, indicating that respondents were highly satisfied with the range of products and brands available on online shopping platforms. Availability of products recorded the second-highest weighted mean of 4.13, followed by ease of using shopping apps/websites with 4.08, suggesting that respondents found online shopping platforms convenient and user-friendly. Packaging quality and convenience of online payments each obtained a weighted mean of 4.04,

while overall online shopping experience recorded 4.01, indicating a high level of satisfaction with these aspects. Safety and security of payments (3.96), discounts and offers (3.95), delivery speed (3.91), and accuracy of delivered products (3.91) also reflected satisfactory opinions among the respondents. Comparatively lower weighted mean values were observed for quality of products (3.85), delivery time (3.84), customer service support (3.77), and return and refund process (3.75).

Table 12: Problems Faced in Online Shopping

Problems	Number	Percentage
Delivery delays	50	66.7
Non availability of products	33	44.0
Price rise/unexpected charge	23	30.7
Payment issue	18	24
Return/refund difficulties	17	22.7
Cyber risk/online fraud	10	13.3

The findings show that delivery delays were the most common problem faced by online shoppers, reported by 50 respondents (66.7%). This was followed by non-availability of products, experienced by 33 respondents (44.0%). Price rise or unexpected charges were reported by 23 respondents (30.7%), while payment issues and return/refund difficulties were faced by 18 respondents (24.0%) and 17 respondents (22.7%), respectively. Cyber risk or online fraud was the

least reported problem, experienced by 10 respondents (13.3%).

Association Between Problems Faced in Online Shopping and Overall Customer Satisfaction

H₀₃: There is no significant association between problems faced in online shopping and overall customer satisfaction.

Table 13: Association between Problems Faced and Overall Customer Satisfaction (Chi-square test)

Problems Faced	Chi-Square (χ^2)	p-value	Decision
Delivery delays	3.083	0.544	Not Significant
Non-availability of products	2.025	0.731	Not Significant
Price rise/Unexpected charges	4.149	0.386	Not Significant
Payment issues	4.835	0.305	Not Significant

Return/Refund difficulties	2.513	0.642	Not Significant
Cyber risk/Online fraud	5.909	0.206	Not Significant

Delivery delays ($\chi^2 = 2.949$, $p = 0.566$), non-availability of products ($\chi^2 = 2.195$, $p = 0.700$), price rise or unexpected charges ($\chi^2 = 0.000$, $p = 1.000$), payment issues ($\chi^2 = 0.000$, $p = 1.000$), return/refund difficulties ($\chi^2 = 0.000$, $p = 1.000$), and cyber risk or online fraud ($\chi^2 = 5.736$, $p = 0.220$) were all found to have no significant relationship with respondents' overall satisfaction. Therefore, the null hypothesis was accepted, indicating that the problems faced during online shopping had no significant association with the overall satisfaction of the respondents.

Major Findings

➤ The majority of the respondents (56.00%) were below 25 years of age, indicating that young consumers were the main users of online shopping.

➤ Female respondents (60.00%) were higher than male respondents (40.00%).

➤ Most respondents were graduates (32.00%), showing that online shopping was more common among well-educated consumers.

➤ Private sector employees (32.00%) formed the largest occupational group, followed by business people (25.33%).

➤ Most respondents (37.33%) had a monthly income below ₹20,000.

➤ A majority of the respondents (61.33%) were from urban areas.

➤ Awareness of all online shopping platforms increased considerably after the COVID19 pandemic. Amazon and Flipkart achieved 100% awareness after the pandemic.

➤ Snapdeal showed the highest increase in awareness, followed by Zomato, Meesho, Myntra, Flipkart, and Swiggy.

➤ Advertisements were the main source of awareness about online shopping, reported by 24

respondents (32.00%), followed by friends and relatives (24.00%) and social media (20.00%).

➤ Convenience (Weighted Mean = 3.91) was the most important reason for choosing online shopping, followed by home delivery (3.85).

➤ The use of online shopping applications increased significantly after the COVID-19 pandemic. Amazon usage increased from 18 respondents (24.00%) to 75 respondents (100.00%), while Flipkart increased from 15 respondents (20.00%) to 75 respondents (100.00%).

➤ Among the online shopping applications, Flipkart recorded the highest increase in usage (60 respondents), followed by Amazon (57 respondents), Snapdeal (53 respondents), Swiggy (52 respondents), Zomato (46 respondents), and Myntra (45 respondents).

➤ Ajo, Nykaa, Meesho, and BigBasket also gained users after the pandemic, indicating a wider adoption of different online shopping platforms among consumers.

➤ Awareness of online shopping increased, with the weighted mean rising from 1.91 before COVID-19 to 2.58 after COVID-19.

➤ The frequency of online shopping increased from a weighted mean of 1.72 before the pandemic to 2.35 after the pandemic.

➤ Visits to physical stores declined, with the weighted mean decreasing from 2.38 before COVID-19 to 2.05 after COVID-19.

➤ Average monthly online spending increased from a weighted mean of 1.57 before the pandemic to 2.22 after the pandemic.

➤ The paired-sample t-test showed a significant increase in the online purchase of clothes, electronics, grocery and medicines, home appliances, beauty and personal care products, and

toys/baby products after COVID-19. However, there was no significant change in the purchase of books and stationery.

➤ The use of Cash on Delivery declined after COVID-19, whereas UPI became the most preferred mode of payment, indicating a shift towards digital payments.

➤ Respondents expressed a high level of satisfaction with online shopping, with an overall weighted mean of 3.96.

➤ Variety of brands and products (Weighted Mean = 4.25), availability of products (4.13), and ease of using shopping apps/websites (4.08) were the highest-rated satisfaction factors.

➤ Return and refund process (3.75) and customer service support (3.77) received comparatively lower satisfaction scores, indicating the need for improvement.

➤ Delivery delays (66.70%) were the most common problem faced by online shoppers, followed by non-availability of products (44.00%) and price rise or unexpected charges (30.70%).

➤ Payment issues (24.00%), return/refund difficulties (22.70%), and cyber risk or online fraud (13.30%) were reported by a smaller proportion of respondents.

➤ The Wilcoxon Signed-Rank Test revealed a significant difference in online shopping behaviour before and after the COVID-19 pandemic, indicating increased awareness, shopping frequency, and online spending, along with reduced visits to physical stores.

➤ The Chi-square test showed no significant association between the problems faced during online shopping and the overall satisfaction of

respondents. Therefore, the problems experienced did not significantly affect customer satisfaction.

Suggestions

E-commerce companies should improve delivery services to reduce delivery delays.

Online shopping platforms should make the return and refund process faster and easier.

Retailers should offer more product varieties and maintain good product quality to improve customer satisfaction.

Online shopping companies should continue providing attractive discounts and special offers to encourage customers.

The government and financial institutions should promote digital payment awareness and strengthen online security to ensure safe transactions.

Conclusion

The study concludes that the COVID-19 pandemic significantly changed consumers' online shopping behaviour in Kannur district. After the pandemic, consumers became more aware of online shopping platforms, shopped online more frequently, spent more through online channels, and increasingly used digital payment methods, especially UPI. Respondents were generally satisfied with online shopping, particularly with the variety of products, product availability, and ease of using shopping apps. Although delivery delays, non-availability of products, and return and refund issues were the major problems faced by consumers, these did not significantly affect their overall satisfaction. Overall, the study shows that online shopping has become an important part of consumers' daily lives, highlighting the need for e-commerce companies to improve delivery services, customer support, and return policies to provide a better shopping experience.

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