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Article

Transformation in Digital Payment Practices Following the COVID-19 Pandemic

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Abstract: This study, titled "Transformation in Digital Payment Practices Following the COVID-19 Pandemic", focuses on how people's use of digital payment methods changed before and after the COVID-19 pandemic. The study was conducted among 60 consumers in Kannur District using a questionnaire. The collected data were analysed using percentage analysis, weighted mean, ranking, and t-test. The study found that digital payment usage increased greatly after COVID-19. Before the pandemic, only 26.67% of respondents used digital payments, but after the pandemic, all respondents started using digital payment methods. The main reasons for using digital payments were ease of use, time saving, and cashless transactions. Mobile wallets and mobile banking were the most preferred payment methods. Respondents were highly satisfied with digital payment services, especially regarding ease of use (WA = 4.40). However, problems like network issues, fraud, and security concerns still affect users.
Keywords: Digital Payments, Online payment, COVID-19 Pandemic, Cashless Transactions, Consumer Behaviour.

1. INTRODUCTION

Digital payment has become an important part of everyday life. Earlier, most people preferred to use cash for shopping, paying bills, and other daily transactions. Today, people can easily make payments using UPI, debit cards, mobile banking, digital wallets, internet banking, credit cards, and QR codes. The increasing use of smartphones, affordable internet services, and government initiatives such as Digital India, BHIM, and Jan Dhan Yojana have encouraged people to adopt digital payment methods. These payment systems are fast, convenient, and available at any time.

The COVID-19 pandemic brought a major change in the way people made payments. During the lockdown, people avoided cash transactions and preferred contactless payment methods to reduce physical contact. As a result, the use of digital payment systems increased significantly. Even after the pandemic, many people continued using digital payments because they found them convenient, time-saving, and secure. This study, "Transformation in Digital Payment Practices Following the COVID-19 Pandemic", examines the changes in the use of digital payment methods before and after the COVID-19 pandemic in Kannur District. It also investigates the factors influencing the adoption of digital payment methods, the problems faced by consumers, and the changes in their payment behaviour. The findings of the study will help banks, financial institutions, and business organizations better understand consumer preferences and enhance the quality and accessibility of digital payment services.

1.1 Problem Statement

Although digital payment options such as UPI, mobile banking, internet banking, and digital wallets were available before the COVID-19 pandemic, many consumers continued to rely on cash. The pandemic changed this pattern by encouraging people to use contactless payment methods for safety and convenience. As a result, the use of digital payments increased rapidly. However, it is still important to understand whether this change in payment behaviour has continued after the pandemic or was only a temporary response to the health crisis. Consumers also face challenges such as internet connectivity issues, cybersecurity concerns, transaction failures, and lack of digital awareness. In Kannur District, there has been a noticeable increase in digital payment usage, but only a few studies have compared consumer behaviour before and after the COVID-19 pandemic. Therefore, this study attempts to compare the use of digital payment methods before and after the pandemic, identify the factors influencing their adoption, and examine the problems faced by consumers while using digital payment systems.

1.2 Significance of the Study

This study is useful as it provides a comprehensive understanding of the transformation in digital payment practices before and after the COVID-19 pandemic among consumers in Kannur District. It identifies the factors influencing the adoption and usage of digital payment methods, examines changes in consumer payment behaviour, and highlights the major challenges faced by users. The findings will help banks, merchants, financial institutions, fintech companies, and policymakers better understand consumer preferences and develop strategies to improve the efficiency, security, accessibility, and reliability of digital payment services.

Objectives of the Study

1. To examine the changes in digital payment usage before and after the COVID-19 pandemic.
2. To identify the main factors encouraging consumers to use digital payment methods.
3. To analyse the difficulties experienced by consumers while using digital payment services.
4. To suggest ways for improving digital payment adoption and usage.

Hypothesis

$H_0 1$: There is no significant difference in the usage of digital payment methods before and after the COVID-19 pandemic in Kannur District.

Review of Literature

Singh and Rana (2017) examined the factors influencing the adoption of digital payment systems in India. The study found that convenience, ease of use, perceived usefulness, and security encouraged consumers to use digital payment methods. However, concerns about cyber fraud and limited digital awareness discouraged some people from adopting digital payments.

Sivathanu (2019) studied the adoption of digital payment systems in India during the demonetization period. The findings showed that perceived usefulness, trust, ease of use, security, government support, and social influence positively influenced digital payment adoption. The study emphasized the importance of improving digital infrastructure and consumer awareness.

Shree, Pratap, Saroy, and Dhal (2021) conducted a survey-based study on consumers' experiences with digital payment systems in India. The study revealed that convenience, speed, security, and reliability increased consumer satisfaction. It also highlighted that stronger digital infrastructure and consumer trust are important for the continued growth of digital payments.

Jena (2022) examined retailers' intention to continue using mobile payment platforms after the COVID-19 pandemic. The study found that perceived usefulness, trust, ease of use, and customer satisfaction significantly influenced the continued use of mobile payment systems.

George and Sunny (2022) investigated consumers' continued use of mobile wallets during the COVID-19 pandemic. The study reported that trust, perceived usefulness, satisfaction, and habit positively influenced users' intention to continue using mobile wallets. It also stressed the importance of improving security and user experience.

Gupta, Kiran, and Sharma (2022) studied the role of digital payment methods in promoting online shopping using the modified UTAUT2 model. The findings showed that convenience, trust, security, ease of use, and performance expectancy significantly influenced consumers' intention to use digital payment methods. The study concluded that secure and user-friendly payment platforms encourage online shopping and improve customer satisfaction.

Research Methodology

The present study, "Transformation in Digital Payment Practices Following the COVID-19 Pandemic", is a descriptive and analytical based on the survey method. Primary data were collected from 60 consumers in Kannur District using a structured questionnaire, and the respondents were selected through the convenience sampling method. The collected data were analysed using percentage analysis, weighted mean, ranking and dependent sample t-test.

Table 1 : Demographic Profile

Profile Variables	Category	Number	Percentage
Age	Below 20 years	10	16.67
	20–30 years	32	53.33
	30–40 years	8	13.33
	40–50 years	8	13.33
	Above 50 years	2	3.33
Gender	Male	28	46.67
	Female	32	53.33
Education	SSLC	1	1.67
	Pre-Degree/Higher Secondary	16	26.67
	Graduation	20	33.33
	Post Graduation	7	11.67
	Professional Degree	13	21.67
	Others (Diploma/Others)	3	5.00
Occupation	Public Sector	2	3.33
	Business	5	8.33
	Private Sector	12	20.00
	Profession	3	5.00
	Students/Others	28	46.67
Monthly income	Less than ₹20,000	27	45.00
	₹20,000–₹40,000	15	25.00
	₹40,001–₹60,000	4	6.67
	Above ₹60,000	14	23.33
Area of residence	Rural	24	40.00
	Urban	36	60.00
	Total	**60**	**100.00**

Majority of the respondents belonged to the 20-30 years age group (53.33%), followed by below 20 years (16.67%). Respondents aged 30-40 years and 40-50 years each accounted for 13.33%, while only 3.33% were above 50 years.

Female respondents (53.33%) slightly outnumbered male respondents (46.67%).

Most respondents were graduates (33.33%), followed by pre-degree/higher secondary (26.67%), professional degree holders (21.67%), postgraduates (11.67%), others (5.00%), and SSLC holders (1.67%).

With respect to occupation, students and others (46.67%) formed the largest group, followed by private sector employees (20.00%), business people (8.33%), professionals (5.00%), and public sector employees (3.33%).

Nearly half of the respondents earned less than ₹20,000 (45.00%), followed by those earning ₹20,000-₹40,000 (25.00%), above ₹60,000 (23.33%), and ₹40,001-₹60,000 (6.67%).

The majority of the respondents belonged to urban areas (60.00%), while 40.00% were from rural areas.

Table 2 : Duration of Using Digital Payment Methods

Duration	Number	Percentage
Less than 3 years	2	3.33
3-5	24	40.00
5-7 years	18	30.00
7-9 years	12	20.00
More than 9 years	4	6.67
Total	**60**	**100**

Most of the respondents (40.00%) had been using digital payment methods for 3-5 years. About 30.00% had 5-7 years of experience, while 20.00% had been using digital payments for 7-9 years. Only 6.67% had more than 9 years of experience, and 3.33% had started using digital payments within the last 3 years.

Table 3 : Sources of Awareness about Digital Payment Systems

Sources	Number	Percentage
Friends and Relatives	22	36.67
Social Media	15	25.00
Banks and Other Financial Institutions	11	18.33
App Promoters	4	6.67
Others	8	13.33
Total	**60**	**100.00**

Friends and relatives (36.67%) were the main source of awareness about digital payment methods. Social media (25.00%) was the second most important source, followed by banks and other financial institutions (18.33%). Other sources (13.33%) also contributed to creating awareness, while app promoters (6.67%) accounted for the smallest share.

Table 4 : Usage of Digital Payment Methods Before and After Covid-19

Usage	Before covid-19		After covid-19	
	Number	**Percentage**	**Number**	**Percentage**

Daily	2	3.33	22	36.67
Weekly	3	5.00	17	28.33
Monthly	4	6.67	10	16.67
Rarely	4	6.67	5	8.33
Occasionally	3	5.00	6	10.00
Not Using Digital Payments	44	73.33	0	0.00
Total	**60**	**100.00**	**60**	**100.00**

Before the COVID-19 pandemic, 73.33% of the respondents were not using digital payment methods. Among the users, 6.67% used digital payments monthly and rarely, 5.00% used them weekly, and 3.33% used them daily. After the pandemic, all respondents started using digital payment methods, with 36.67% using them daily and 28.33% using them weekly.

Table 5 : Digital Payment Usage Before and After COVID-19 (Paired Sample t-Test)

Variable	**Mean**	**SD**	**Mean Difference**	***t*- value**	***df***	***p*-value**
Usage Before COVID-19	0.63	1.35	-3.48	-16.98	59	.000
Usage After COVID-19	4.12	1.22				

The mean usage score increased from 0.63 (SD = 1.35) before COVID-19 to 4.12 (SD = 1.22) after COVID-19. The difference is statistically significant, $t(59) = -16.98$, $p < 0.05$, indicating a substantial increase in digital payment usage following the COVID-19 pandemic. Therefore, the null hypothesis is rejected, suggesting that the COVID-19 pandemic significantly influenced the frequency of digital payment usage.

Table 6: Reasons for Using Digital Payment

Reasons	**Number**	**Percentage**
Easy to use	46	76.67
Time saving	41	68.33
Secure transaction	32	53.33
Low transaction	18	30.00
Cashless transaction	36	60.00
Reward	22	36.67
Reduced risk	27	45.00

Note: Multiple responses were allowed

The table 6 shows that easy to use (76.67%) was the most important reason for using digital payment methods, followed by time saving (68.33%) and cashless transactions (60.00%). More than half of the respondents also considered secure transactions (53.33%) as an important reason. Reduced risk of carrying cash (45.00%), rewards or cashback (36.67%), and low transaction cost (30.00%) were also identified as factors encouraging the use of digital payment methods.

Table 7 : Digital Payment Methods Used

Methods	**Before Covid-19**	**Before Covid-19**	**After Covid-19**	**After Covid-19**
	Number	**Percentage**	**Number**	**Percentage**
Mobile wallets (G-pay, Paytm, phone pay)	7	11.67	30	50.00
Credit card/Debit Cards	3	5.00	10	16.67
Net banking	2	3.33	5	8.33
Mobile Banking	4	6.67	15	25.00
Not using	44	100	0	0
Total	60	100	60	100

Before the COVID-19 pandemic, only 16 respondents (26.67%) used digital payment methods, while the remaining 44 respondents (73.33%) did not use them. Among the users, mobile wallets (11.67%) were the most preferred payment method, followed by mobile banking (6.67%), credit/debit cards (5.00%), and net banking (3.33%). After the COVID-19 pandemic, all 60 respondents (100.00%) started using digital payment methods. Among them, mobile wallets (50.00%) became the most popular payment method, followed by mobile banking (25.00%), credit/debit cards (16.67%), and net banking (8.33%).

Figure 1 : Digital Payment Methods Used

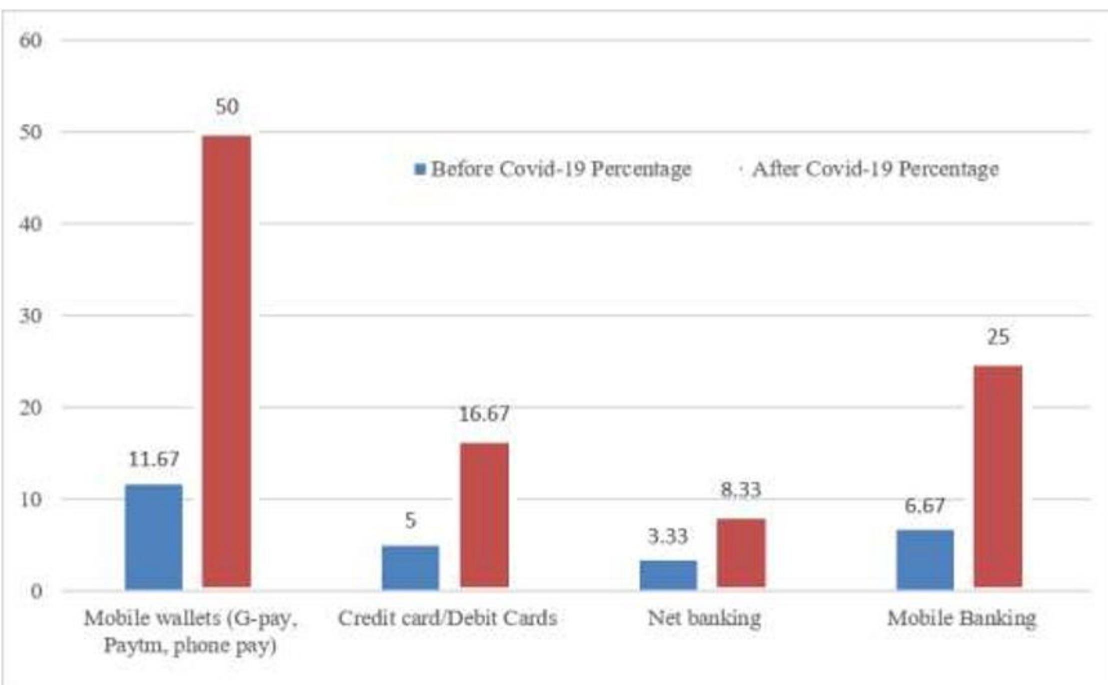

Table 8 : Purpose of Using Digital Payment Methods

Purpose	Before covid-19	Before covid-19	After covid-19	After covid-19
	Number	Percentage	Number	Percentage
Bill/Utility payment	5	8.33	34	56.67
Online shopping	7	11.67	42	70.00
Money transfer	3	5.00	48	80.00
Mobile recharge	5	8.33	36	60.00
Paying fees/ taxes, etc.	1	1.67	25	41.67
Others	2	3.33	12	20.00

Note: Multiple responses were allowed.

Before the COVID-19 pandemic, only a small number of respondents (16) used digital payments for different purposes. Online shopping (11.67%) was the most common purpose, followed by bill or utility payments (8.33%) and mobile recharge (8.33%). After the pandemic, the use of digital payments increased considerably for all purposes. Money transfer (80.00%) became the most common use, followed by online shopping (70.00%), mobile recharge (60.00%), and bill or utility payments (56.67%). Many respondents also used digital payments for paying fees and taxes (41.67%).

Table 9 : Features Needed in an Online Payment Platform

Features	Number	Percentage
Ease to use	48	80.00
Clear instructions	19	31.67
Fast transaction processing	38	63.33
Low transaction cost	20	33.33
Reward points	16	26.67
Cash back	29	48.33
Real time transaction updates	24	40.00

Note: Multiple responses were allowed

Ease of use (80.00%) was the most preferred feature of digital payment methods among the respondents. This was followed by fast transaction processing (63.33%) and cashback offers (48.33%). Around 40.00% of the respondents preferred real-time transaction updates, while low transaction cost (33.33%) and clear instructions (31.67%) were also considered important. Reward points (26.67%) were the least preferred feature.

Table 10 : Level of Satisfaction (5 Points Scale)

Features	HS	S	N	D	HD	WS	WA
Ease of use	27	30	0	3	0	264	4.40
Security	6	42	0	12	0	234	3.90
Transaction cost	3	40	8	7	2	215	3.58
Trustworthiness	7	38	7	5	3	221	3.68
Responsiveness	3	54	3	0	0	240	4.00
Overall experience	5	54	0	1	0	243	4.05

HS = Highly Satisfied, S = Satisfied, N = Neutral, DS = Dissatisfied, HDS = Highly Dissatisfied, WS = Weighted Score, WA = Weighted Average

Ease of use received the highest satisfaction level (WA = 4.40), indicating that respondents find digital payment platforms simple and convenient to use. Overall experience (WA = 4.05) and responsiveness (WA = 4.00) were also highly rated. Security (WA = 3.90), trustworthiness (WA = 3.68), and transaction cost (WA = 3.58) received satisfactory ratings. Overall, respondents showed a favourable level of satisfaction with digital payment services

Figure 2 : Level of Satisfaction

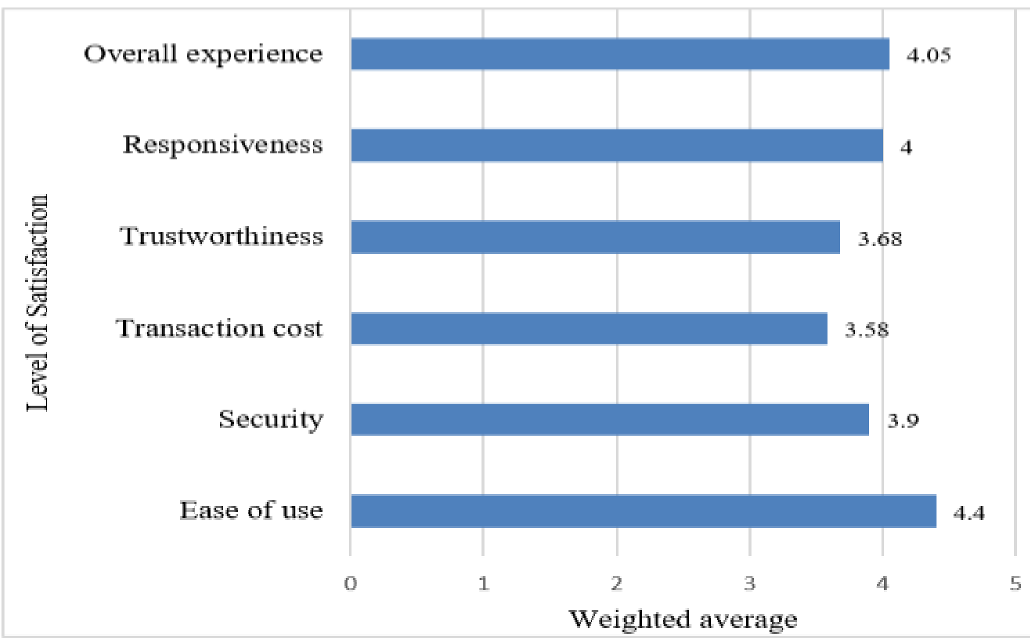

Table 11 : Difficulties Encountered While Using Digital Payments

Problems	Number	Percentage	Rank
Network issue	46	76.67	1
Fraudulent Practices	24	40.00	2
Security Issue	14	23.33	3

Less customer support	10	16.67	4
Low responsiveness	4	6.67	5

Note: Multiple responses were allowed

Network issues were the most common problem reported by respondents (76.67%), ranking first. Fraudulent practices (40.00%) ranked second, followed by security issues (23.33%), less customer support (16.67%), and low responsiveness (6.67%).

Findings

Majority of the respondents belonged to the 20–30 years age group (53.33%), and female respondents (53.33%) slightly outnumbered male respondents (46.67%).

Most respondents were graduates (33.33%), and nearly half of them had a monthly income of less than ₹20,000 (45.00%).

A majority of respondents had been using digital payment methods for 3–5 years (40.00%), indicating increased adoption over time.

Friends and relatives (36.67%) were the major source of awareness about digital payment methods, followed by social media (25.00%) and banks/financial institutions (18.33%).

Before COVID-19, digital payment usage was limited, with only 26.67% of respondents using digital payment methods. After COVID-19, usage increased significantly, with 100% adoption among respondents. The mean usage score increased from 0.63 before COVID-19 to 4.12 after COVID-19, showing a statistically significant rise in digital payment usage.

The major reasons for using digital payments were ease of use (76.67%), time-saving (68.33%), and cashless transactions (60.00%).

Before COVID-19, mobile wallets (11.67%) were the most preferred digital payment method, while after COVID-19, mobile wallets remained the leading choice (50.00%), followed by mobile banking (25.00%).

After COVID-19, digital payments were mainly used for money transfers (80.00%), online shopping (70.00%), mobile recharge (60.00%), and bill payments (56.67%).

Ease of use (80.00%) was the most preferred feature of digital payment methods, followed by fast transaction processing (63.33%) and cashback offers (48.33%).

The satisfaction analysis revealed that ease of use received the highest satisfaction level (WA = 4.40), followed by overall experience (WA = 4.05) and responsiveness (WA = 4.00). Overall, respondents showed a favourable level of satisfaction with digital payment services.

Network issues (76.67%) were the major problem faced by respondents, followed by fraudulent practices (40.00%) and security issues (23.33%).

Suggestions

Digital payment providers should improve network connectivity to reduce transaction failures.

Digital literacy and awareness programmes should be conducted to promote safe and effective use of digital payments.

Platforms should improve customer support services for faster resolution of payment issues.

Attractive cashback offers and rewards should be provided to encourage regular usage.

Digital payment services should reduce transaction costs and ensure transparency in charges.

2. CONCLUSION

The study concludes that COVID-19 significantly accelerated the adoption of digital payment systems in Kannur District, transforming consumer payment behaviour from cash-based transactions to digital modes such as UPI, mobile banking, digital wallets, and QR code payments. Respondents showed a positive attitude towards digital payments due to their ease of use, convenience, time-saving nature, and cashless features. Mobile wallets and mobile banking were among the most preferred methods. However, issues such as network problems, security concerns, transaction failures, and limited awareness continue to affect user experience.

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