# A Study on Consumer Perception of Digital Payment Methods in times of Covid Pandemic

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**Abstract**

The digitalization drive in payment methods since demonetization has made remarkable progress even in times of Covid pandemic. The present study analysed primary data collected from 107 respondents from Ernakulam district of Kerala to study the consumer perception of digital payment methods on the basis of demographic characteristics such as gender, age, education, profession, and employment. Correlation and ANOVA were used to analyse the data and found that there was no significant variance in consumer perception of digital payment methods even in times of Covid pandemic based on the key demographic characteristics.

**Keywords**

Digital Payment Methods, Consumer Perception, Digital Wallets

## INTRODUCTION

India is a thriving market for mobile phones. Though the Indian smartphone market registered a modest 4 percent decline during Covid Pandemic, it crossed 100 million units by the second half of 2020 for the first time. (*India Smartphone Market Share: By Quarter - Counterpoint Research*, n.d.) A concomitant growth in Internet usage was vividly visible in the Indian economy. By 2020 India had nearly 700 million Internet users and it is predicted to be around 975 million by 2025. ( *Total Internet Users in India | Statista*, n.d.)The exponential growth of the smartphone market and Internet usage in India paved the way for a digital revolution in payment modes. In the hindsight, it can be argued that the demonetization drive on 8th November 2016 was the major catalyst in digitalizing India. The digital Wallet companies made the best use of opportunities presented to them and India witnessed a dramatic growth in digital payments.

The digitalization drive in the Indian economy caused a tremendous leap in cashless transactions. With the onset of Covid Pandemic and subsequent lockdown, online shopping was resorted by a massive population further boosting online payments. The lockdown commenced on 25$^{th}$ March 2020, which was of the largest magnitude in the world and it

extended till 3rd May 2020 restricting economic transactions of 1.3 billion people. A survey conducted in April 2020 among nearly 9000 respondents revealed that over 33 percent of respondents increased their digital payments during this period and 9 percent made exclusively online payments. ( *India - COVID-19 Impact on Digital Payment Apps 2020 | Statista*, n.d.)

The present study intends to look at the consumer perception of digital payment methods in times of Covid Pandemic on the basis of their demographic characteristics like gender, age, education, profession, and income.

**The Digital Payment Methods in India**

The digital India programme with its objective of transforming India into a digitally empowered society and knowledge economy led to the emergence and growth of various modes of Digital Payments like banking cards, Unstructured Supplementary Service Data (USSD), Aadhaar Enabled Payment System (AEPS), Unified Payment Interface (UPI), Mobile Wallets, Banks Prepaid Cards, Point of Sale, Internet Banking, Mobile Banking, and Micro ATMs.(*Cashless India*, n.d.)

a) Banking Cards: Banking cards include debit, credit, cash, travel, and various other types, which offer customers more security, convenience, and control than any other payment method. These wide varieties of cards like RuPay, Visa, and Master Cards offer enormous flexibility in digital payment modes. With the added security of PIN and OTP, these cards provide customers the ease of transaction. In India, around 750 banks provide services related to banking cards.

b) USSD: The innovative *99# works on Unstructured Supplementary Service Data Channel. This service can be availed by even basic feature mobile phones without Internet thus enabling the inclusion of underbanked society in the mainstream banking services. Customers can dial *99# on their mobile phones and transact through an interactive menu displayed on the mobile screen. USSD provides services like interbank account-to-account fund transfer, balance enquiry, mini statement beside a host of other services. Presently USSD services are provided by 51 leading banks and all GSM service providers and can be accessed in 12 different languages.

c) AEPS: It is a bank-led model, which allows online interoperable financial transactions at PoS and Micro ATMs using Aadhaar authentication. AEPS offers services like balance enquiry, cash withdrawal, cash deposits, Aadhaar to Aadhaar fund transfer, and payment transactions.

d) UPI: It is a single platform that merges various banking facilities, seamless fund routing, and merchant payments under one umbrella. It also facilitates Peer-to-Peer fund

transfers. It is required that the mobile phone number is linked with the bank account. Each bank provides its own UPI app for various mobile platforms like android, IOS, and Windows. This facility can be availed only with a smartphone having Internet access. The fund transfer limit is set to be one lakh rupees per transaction.

e) Mobile Wallets: Mobile phone acts as a wallet and provides an easier way to carry cash in digital format. A customer's bank account is required to be linked with the digital wallets to load money in them. Mobile wallets allow a customer to make payments with a mobile phone, tablet, or smartwatch. Paytm, Mobikwik, Airtel Money, Jio Money, etc. are some examples of Mobile wallets.

f) Point of Sale: PoS is the time and place where the customer executes the payment for goods and services. A handheld device with a card and/ or biometric reader is used for PoS transactions.

g) Internet Banking or Online Banking: It is an electronic payment system provided through a financial institution's website that enables its customers to undertake a myriad of financial transactions. Internet banking provides different services like National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS), Electronic Clearing System (ECS), and Immediate Payment Service (IMPS).

h) Mobile Banking: It is a service provided by banks to its customers to avail various banking services remotely using a mobile device like mobile phones or tablets. The banks provide various customized mobile applications for this purpose.

i) Micro ATMs: It is a device used by a million Business Correspondents to deliver basic banking services. These are a mini version of ATMs. This machine contains a card swipe facility or fingerprint scanner. These machines are carried by bank representatives and used at remote locations. Bank representatives have the responsibility for collecting and disbursing the cash through micro ATM transactions. (*Cashless India*, n.d.)

## REVIEW OF LITERATURE

Singh, S., & Rana R made a study on the consumer perception of digital payment modes and found that consumer perception of digital payment has a significant and positive impact on the adoption of digital payment. The study made use of ANOVA and frequency analysis and concluded that there is no significant variance in consumer perception based on demographic factors such as gender, age, profession, and annual income of the respondents (*Study of Consumer Perception of Digital Payment Mode | Open Access Journals*, n.d.).N Singh, S Srivastava, and N Sinha conducted a study on consumer preference and satisfaction of M-wallets among North Indian consumers and study showed a strong correlation between consumers' perception, preferences, and satisfaction. (Singh et al., 2017). M Sudhir and P Narayanamma in their study found that the majority of the respondents agreed with the

benefits of mobile wallet/digital payment in the purchase of products, improving the quality of the decision, helpful in buying products as compared to traditional methods. (Sudhir et al., 2018)

R Goel, S Sahai, and et al. made a study on consumer perception on digital transactions and found that there was an increase in the use of digital payment transactions due to improved technological infrastructure and favourable policy changes. (Goel et al., 2019). Akhila Pai conducted a study on consumer perception towards digital wallets and concluded that though digital payment modes were on the rise, people still had fear of making online payments due to lack of awareness and security issues. (Pai, 2018). D, Chawla, and H, Joshi through their study found that perceived ease of use (PEOU), perceived usefulness (PU), trust, security, facilitating conditions, and lifestyle compatibility had a significant impact on the consumer attitude and intention to use mobile wallets. (Chawla & Joshi, 2019)

K, Kamatchi Eswaran in his study concluded that digital transfers using apps have brought behavioural change and helped in the adoption of digital payment. This facilitated ease of transfer of money in rural areas, which was not touched earlier by the digital payment method. (Kamatchi Eswaran, 2019). R Saxena and S Chaudhary in their study concluded that security, necessity, time, the satisfaction of the services used are the factors that influence the consumers towards M-wallets as the respondents also feel that they save time and have made life easier. (Saxena & Chaudhary, 2019). M Somasundaram in his study concluded that the digital payment system should be strengthened to improve the safety and security of financial transactions of consumers and it must be simplified and make user-friendly. (Dr.M. Somasundaram, 2020). M Abraham in his study remarked that Internet connectivity issues and payment restrictions for huge amounts are the common problems faced in digital payments. (Abraham, 2020)

## OBJECTIVES AND HYPOTHESIS

The objective of the study was to find the consumer perception of digital payment methods in times of Covid Pandemic and to analyse the impact of demographic characteristics like gender, age, education, profession, and income on these perceptions. The following hypotheses were formulated bearing in mind these objectives.

$H_{01}$: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of gender.

$H_{02}$: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of age.

$H_{03}$: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of education.

$H_{04}$: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of profession.

$H_{05}$: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of monthly income.

## RESEARCH METHODOLOGY

The present study is based on primary data collected from107 respondents belonging to the different parts of Ernakulam district of Kerala. A well-structured questionnaire was constructed and data was collected via Google forms. The research and statistical tools used in the study are Correlation and Analysis of Variance (ANOVA). Microsoft Excel was used in the study to conduct statistical tests and hypothesis testing.

## RESULTS AND DISCUSSION

This section is classified into three segments.

1) Demographic Profile of the respondents
2) Correlation between different variables understudy
3) Analysis of variance to test the hypotheses.

### 1) Demographic Profile of the respondents

The demographic profile of the respondents in table 1 reveals that the gender share of the respondents are almost equal but predominantly belonging to the age group of 20- 30 (66 %) with degree education (63.6%) and most of the respondents are students (75%) with less than Rs.20000/- monthly income (85%). These factors are likely to influence the study results and conclusions.

Table 1: Demographic profile of the respondents.

| Variable | Characteristics | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 54 | 50.5 |

| | | | |
|---|---|---|---|
| | Female | 53 | 49.5 |
| Age Group | Below 20 | 28 | 26.17 |
| | 20-30 | 71 | 66.36 |
| | 30-40 | 1 | 0.93 |
| | 40-50 | 3 | 2.80 |
| | 50-60 | 4 | 3.74 |
| Education | SSLC | 19 | 17.76 |
| | Plus Two | 5 | 4.67 |
| | Degree | 68 | 63.55 |
| | PG | 4 | 3.74 |
| | Technical | 5 | 4.67 |
| | Professional | 6 | 5.61 |
| Profession | Student | 80 | 74.77 |
| | Daily Wages | 3 | 2.80 |
| | Private Job | 22 | 20.56 |
| | Govt Job | 2 | 1.87 |
| Monthly Income | Below 20000/- | 91 | 85.05 |
| | Between 20000/- and 50000/- | 8 | 7.48 |
| | Between 50000/- and 75000/- | 3 | 2.80 |
| | Above 75000/- | 5 | 4.67 |

**2) Correlation**

Correlation analysis of the different variables under study, as shown in Table 2 reveals that digital payment is positively related to age, education, profession, and monthly income. Profession and Monthly income have a relatively higher correlation with digital payment than other variables like age and education.

Table 2: Correlation of different variables under study.

| | *Age* | *Education* | *Profession* | *Monthly Income* | *Digital Payment* |
|---|---|---|---|---|---|
| Age | 1 | | | | |
| Education | -0.2060002 | 1 | | | |
| Profession | 0.54048784 | 0.01267422 | 1 | | |
| Monthly Income | 0.03077569 | 0.18932232 | -0.078015234 | 1 | |

| | | | | | |
|---|---|---|---|---|---|
| *Digital Payment* | 0.04539498 | 0.09879576 | 0.013159777 | 0.149756953 | 1 |

**3) Analysis of Variance and Hypothesis Testing**

Analysis of Variance (ANOVA) is carried out to test the various hypotheses formulated in the study. The first hypothesis was concerning digital payment methods and gender.

Null Hypothesis: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of gender.

Alternative Hypothesis: There is a significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of gender.

Table 3: Computation of ANOVA on the basis of gender

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
| Between Groups | 0.07644154 | 1 | 0.07644154 | 0.62604444 | 0.43059364 | 3.93155641 |
| Within Groups | 12.8207547 | 105 | 0.12210243 | | | |
| | | | | | | |
| Total | 12.8971963 | 106 | | | | |

Table 3 reveals that F value is very much less than the critical value of F and the P-value is very well above 0.05. Thus we fail to reject the null hypothesis and conclude that there is no significant difference between male and female on the perception of digital payment methods in times of Covid pandemic.

The Second hypothesis was concerning digital payment methods and Age.

Null Hypothesis: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of age.

Alternative Hypothesis: There is a significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of age.

Table 4: Computation of ANOVA on the basis of age

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
| Between Groups | 0.67067 | 4 | 0.167668 | 1.39877 | 0.239737 | 2.4608 |
| Within Groups | 12.22653 | 102 | 0.119868 | | | |
| | | | | | | |
| Total | 12.8972 | 106 | | | | |

Table 4 reveals that F value is rather less than the critical value of F and the P-value is very well above 0.05. Thus we fail to reject the null hypothesis and conclude that there is no significant difference between different age groups on the perception of digital payment methods in times of Covid pandemic.

The third hypothesis was concerning digital payment methods and education.

Null Hypothesis: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of education.

Alternative Hypothesis: There is a significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of education.

Table 5: Computation of ANOVA on the basis of education.

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
| Between Groups | 1.05988976 | 5 | 0.21197795 | 1.808669325 | 0.11781983 | 2.304396417 |
| Within Groups | 11.8373065 | 101 | 0.11720105 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Total | 12.8971963 | 106 | | | | |

Table 5 reveals that F value is rather less than the critical value of F and the P-value is very well above 0.05. Thus we fail to reject the null hypothesis and conclude that there is no significant difference between different age groups on the perception of digital payment methods in times of Covid pandemic.

The fourth hypothesis was concerning digital payment methods and profession.

Null Hypothesis: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of profession.

Alternative Hypothesis: There is a significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of profession.

Table 6: Computation of ANOVA on the basis of profession.

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
| Between Groups | 0.37901444 | 3 | 0.12633815 | 1.039514317 | 0.37839285 | 2.69284113 |
| Within Groups | 12.518181 8 | 103 | 0.12153575 | | | |
| | | | | | | |
| Total | 12.897196 3 | 106 | | | | |

Table 6 reveals that F value is rather less than the critical value of F and the P-value is very well above 0.05. Thus we fail to reject the null hypothesis and conclude that there is no significant difference between different groups of the profession on the perception of digital payment methods in times of Covid pandemic.

The fifth hypothesis was concerning digital payment methods and monthly income.

Null Hypothesis: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of monthly income.

Alternative Hypothesis: There is no significant difference in the perception of respondents towards digital payment methods in times of Covid Pandemic on the basis of monthly income.

Table 7: Computation of ANOVA on the basis of monthly income.

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
| Between Groups | 0.369723734 | 3 | 0.123241 | 1.013281 | 0.39004 | 2.692841 |
| Within Groups | 12.52747253 | 103 | 0.121626 | | | |
| | | | | | | |
| Total | 12.89719626 | 106 | | | | |

Table 7 reveals that F value is rather less than the critical value of F and the P-value is very well above 0.05. Thus we fail to reject the null hypothesis and conclude that there is no significant difference between different groups of monthly income on the perception of digital payment methods in times of Covid pandemic.

**CONCLUSION**

The present study was an attempt to analyse the consumer perception of digital payment methods in times of the Covid pandemic. The study based on the sample data concludes that irrespective of various demographic factors such as gender, age, education, profession, and monthly income, people tend to use digital payment methods in times of Covid pandemic. The demographic profile of the respondents showed that 66% of the respondents belong to the age category of 20-30, 75% of the respondents are

students and 85% of the respondents belong to a monthly income category of below Rs.20000/- These factors have not inserted any dampening effect on the use of digital payment methods in times of Covid pandemic. The high digital literacy prevailing in Kerala with deep mobile penetration and easy accessibility of the Internet has indeed played a significant role in the digital revolution of payment methods even in times of Covid pandemic.

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