

# DIGITAL PAYMENT IN RURAL GUJARAT- AN EMPIRICAL EVIDENCE FOR ATMANIRBHAR BHARAT

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## ABSTRACT

Digital payment is payment without physical exchange of money. Such transactions are done through digital mode in Digital Financial Services industry. Different researchers have studied Various digital payment methods in developed nations but there is a strong research gap for such studies in developing country like India. Research objective for the study is to measure User opinion towards Digital Payment in Rural Gujarat. Study is based on primary research. Data analysis is done using SPSS 26.0. Study provides strong value addition to researchers, academia, industry and society as a whole.

**Keywords:** Digital Payment, User Opinion, Rural Gujarat, Digital Financial Services

## 1. INTRODUCTION

Digital payments have spread and changed user behaviour as a result of app-based transfers. In remote places that were previously unaffected by digital payment methods, it is now easier to transfer money as a result. Numerous factors are promoting the development of digital payments and the transition away from an economy reliant on cash to one with less cash. The rising popularity of mobile internet access, one-touch payments, the expansion of the financial technology sector, and government programmes like tax rebates and incentive schemes are just a few examples of these enablers. Together, these elements are fostering an unfavourable environment for digital payments. In order to enable cashless transactions, the Indian government launched a number of digital payment options as part of its effort to make India a "Digital India": There are different methods such as: a) Banking Cards –Credit/Debit cards fall into the category of "bank cards" and offer customers security, convenience and flexibility. Ensure transaction security with secure PINs and OTPs. Online payments are facilitated through the Aadhaar Enabled Payment System (AEPS), which makes use of the banking system. Since the Aadhaar card is used to verify transactions, it must be connected to the customer's account. Micro ATMs and biometrics are additional requirements for this process. B) Unified Payment Interface (UPI) –Create a mobile application that combines a large number of bank accounts. This payment mechanism requires a smartphone with internet access and his PIN for mobile phones. C) Mobile Wallets – By connecting your mobile device's debit/credit information to your mobile wallet application, you can easily carry cash with your digital wallet. Paytm, Airtel Money, SBI Buddy, etc. are well-known digital wallets. D) Internet Banking – It makes it possible for users to conduct financial transactions online. Different techniques are employed, such as National Electronic Fund Transfer (NEFT). E) Banks using Mobile – It allows clients to remotely perform various financial operations using their smartphones and tablets. Each bank offers a unique mobile banking app. Bank correspondents utilise these tiny ATMs to offer essential banking services to clients who are located distant from their branches. Rural people now have a platform to easily access micro banking services and benefit from financial inclusion (Kotecha P.S., 2018).

## 2. LITERATURE REVIEW

After China, India has the second-largest smartphone market worldwide. The use of digital wallets and other services with significant support from Internet service providers like Reliance Jio has increased. Internet access and mobile connectivity are crucial for online payments. More than half of India's 692 million active internet users come from rural areas, according to the "Internet in India" report, which was based on an ICUBE 2021 survey. The report forecasts that India's internet users will reach 900 million by 2025, saying that "although most of the growth will continue to be driven by India's rural areas (351 million users), India's urban areas appear stagnant (341 million users). (Source: Internet in India 2021, IAMAI- KANTAR). Governments have expanded efforts to boost internet usage, while financial service organisations and other businesses have made significant efforts to increase online payments. Rural India is seeing a significant increase in penetration as well.

### *2.1 Ease of use (Convenience in usage)*

Thanks to online banking services and other mobile applications, users now have greater ease while conducting their transactions anywhere and at any time as a result of the expansion of the internet (Varma, A. J., 2021). People find mobile applications and online banking services handy as a result of technological advancement and internet connectivity. By enabling them to make purchases anywhere, at any time, it has increased consumer convenience (Andrew Stephen, 2015). As information and communication technology develops and Internet deployment prices fall, the convenience and ease of use of digital payments will increase their acceptability. (Reiss, D. G., 2018).

### *2.2 Perceived security (Secured transactions)*

The digitalization process can be accelerated by developing better systems, increasing security, and obtaining collaboration from all parties (Shallu et al (2019). Teoh et al. (2013) found that security and trust had a negative association (Teoh et al, 2013). Also, Akhila Pai wrote about these issues (Akhila Pai, 2018). Although debit and credit cards are frequently used for cashless transactions, J. SobanaShanthiniDr. J. Immanuel Nallathmbi (2018) discovered that security was the biggest obstacle to acceptance.

### *2.3 Perceived Benefits*

Digital/cashless transaction adoption brings benefits all on its own. Customers that use digital payments can track and manage their transactions, track cash back incentives and rewards, make payments directly from their bank accounts, receive payments remotely, and save money and time. A business owner experiences the same advantages (Kulkarni, S., 2021). Mobile wallets helped the growth of cashless electronic payments. In order for clients to profit from simple and quick transactions, the author looked into the compatibility of the mobile wallets (Venkatesh, V., 2012).

### *2.4 Reliability*

Digital transactions have also been found to benefit from attributes such as trust, security, and how well technology helps users (Abdullah, 2020). In contrast to the negative association between risk and reliability, benefits and reliability (or perceived trust) were found to be positively correlated in another study. Customers' intentions to adopt digital payments were influenced by this trust (Park et al., 2018). Although plastic money is widely utilised because of its reliability, it was discovered that the primary barriers to using it are convenience and safety (Prasanth et al., 2019).

### *2.5 User Opinion*

When consumers assess a system in terms of how it will affect their payments, expectations are often formed with regard to how valuable they perceive it to be (Brown, S. A., 2012). The user's opinion toward and inclination to utilise mobile payment solutions will improve due to perceived usefulness. The Technology Acceptance Model (TAM) outlines the extent to which a user believes that utilising a certain technology will improve its efficiency and performance. This is known as user opinion. (Sahi et al., 2021). User opinion can be influenced by factors like customer desire in using electronic payment systems, security concerns, and trust in these systems (Wibowo et al., 2018).

### **2.6 Need for Study and Research Gap**

This study aims to find out how rural consumers feel about adopting digital payments. Much research has been

done on how consumers feel about using credit cards for purchases, but very little about how consumers feel about other payment methods and digital payments. Also, there are few studies that focus on rural populations. Here, Research Objective is to study user opinion towards Digital Payment in Rural Gujarat.

## 2.7 Scope of the Study

The research is limited to Gujarat's rural areas. It includes samples above the age of 18 who are the users of digital payment. For the study, age, gender, annual family income, marital status, number of residents in the home, and other factors based on the literature research were taken into consideration.

## 3. METHODOLOGY

Research Objective for current study is to measure user opinion towards digital payment in rural Gujarat. This study's target population consists of the digital payment users residing in rural areas of Gujarat state. Among descriptive research designs, a single cross-sectional study design was chosen. The questionnaire survey was administered. Respondents' informed consent was obtained prior to data collection. Snowball sampling was used in this research. Non comparative scaling technique is used in this study. Response time was around 7 minutes to fill up the questionnaire. Pilot testing was done over 51 respondents to validate the questionnaire. Data obtained from pilot survey were reliable as the Cronbach alpha value was 0.936. Pilot survey data was not utilized for the final survey. A number of other books, journals, websites and research articles were utilized for secondary data collection. The rural population of Gujarat's top 10 rural areas were the primary source of statistics who utilize digital payment modes, with help of the structured questionnaire. The rural areas include these districts, Dholka, Sanand, Daskroi, Dabhoi, Mahuva, Kamrej, Palsana, Jetpur, Gondal and Paddhari. Statements of questionnaires were extracted through literature review. Here researcher has utilized Likert scale for strongly agree to disagree options. The sample size for this research survey is 392 respondents. For analysis purpose SPSS, which is considered among the most powerful statistical analysis tools, was used in the research project.

## 4. DATA SPECIFICATION

### 4.1 Reliability Analysis

| Variable No. | Variable                  | Cronbach Alpha | Number of items |
|--------------|---------------------------|----------------|-----------------|
| 1            | <i>Ease of use</i>        | .912           | 4               |
| 2            | <i>Perceived security</i> | .892           | 3               |
| 3            | <i>Perceived Benefits</i> | .916           | 4               |
| 4            | <i>Reliability</i>        | .901           | 4               |
| 5            | <i>User Opinion</i>       | .921           | 5               |

Acceptable values of Cronbach's alpha have to be greater than 0.70 (Nunnally J, Bernstein L., 1994). Here all the values are above 0.7 so, data is reliable for further studies.

### 4.2 Demographic Analysis

| Factors              | Particulars        | Frequency | Percent | Cumulative Percent |
|----------------------|--------------------|-----------|---------|--------------------|
| Gender               | Male               | 261       | 66.6    | 66.6               |
|                      | Female             | 131       | 33.4    | 100.0              |
|                      | Total              | 392       | 100.0   |                    |
| Age                  | 18-28              | 138       | 35.2    | 35.2               |
|                      | 29-38              | 173       | 44.1    | 79.3               |
|                      | 39-48              | 57        | 14.5    | 93.9               |
|                      | 49-58              | 24        | 6.1     | 100.0              |
|                      | Total              | 392       | 100.0   |                    |
| Marital Status       | Married            | 279       | 71.2    | 71.2               |
|                      | Unmarried          | 113       | 28.8    | 100.0              |
|                      | Total              | 392       | 100.0   |                    |
| Annual Family Income | Less than 2,00,000 | 30        | 7.7     | 7.7                |
|                      | 2,00,001-4,00,000  | 167       | 30.6    | 38.3               |

|                          |                                  |     |       |       |       |
|--------------------------|----------------------------------|-----|-------|-------|-------|
|                          | <b>4,00,001-6,00,000</b>         | 131 |       | 33.4  | 71.7  |
|                          | <b>6,00,001-8,00,000</b>         | 64  |       | 16.3  | 88.0  |
|                          | <b>Above 8,00,000</b>            | 47  |       | 12.0  | 100.0 |
|                          | <b>Total</b>                     | 392 |       | 100.0 |       |
| <b>Education</b>         | <b>SSC</b>                       | 11  |       | 2.81  | 2.81  |
|                          | <b>HSC</b>                       | 79  |       | 20.15 | 22.96 |
|                          | <b>Graduation</b>                | 103 |       | 26.27 | 49.23 |
|                          | <b>Post-Graduation and above</b> | 199 |       | 50.77 | 100.0 |
|                          | <b>Total</b>                     | 392 |       | 100.0 |       |
| <b>Members household</b> | <b>in1-3</b>                     | 146 | 37.2  | 37.2  | 37.2  |
|                          | <b>4-6</b>                       | 188 | 47.95 | 47.95 | 85.15 |
|                          | <b>7-9</b>                       | 17  | 4.3   | 4.3   | 89.45 |
|                          | <b>Above 9</b>                   | 41  | 10.5  | 10.5  | 100.0 |
|                          | <b>Total</b>                     | 392 | 100.0 | 100.0 |       |

### 4.3 Hypothesis Testing

Ho1: There is no significant difference between an age and user opinion.

H11: There is a significant difference between an age and user opinion.

Average score of the user opinion taken as the testing variable and age, was taken as the grouping variable in the one-way ANOVA test.

#### ANOVA

User Opinion

|                | Sum of Squares | Df  | Mean Square | F     | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 20.372         | 3   | 6.791       | 3.823 | .010 |
| Within Groups  | 689.197        | 388 | 1.776       |       |      |
| Total          | 709.569        | 391 |             |       |      |

#### Descriptive

| User opinion | N   | Mean | Std. Deviation |
|--------------|-----|------|----------------|
| 18-28        | 138 | 3.43 | 1.424          |
| 29-38        | 173 | 3.40 | 1.280          |
| 39-48        | 57  | 4.02 | 1.172          |
| 49-58        | 24  | 3.88 | 1.513          |
| Total        | 392 | 3.53 | 1.347          |

**Interpretation:** In this case, the researcher rejects the null hypothesis since the significance value is 0.010, which is less than 0.05, indicating a substantial difference between age and user opinion. The age group 39-48 years has the highest mean score.

Ho<sub>2</sub>: There is no significant difference between education and User opinion.

H1<sub>2</sub>: There is a significant difference between education and User opinion.

Average score of the User opinion taken as the testing variable and education, was taken as the grouping variable

in the one-way ANOVA test.

## ANOVA

User opinion

|                | Sum of Squares | Df  | Mean Square | F    | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .842           | 2   | .421        | .231 | .004 |
| Within Groups  | 708.727        | 389 | 1.822       |      |      |
| Total          | 709.569        | 391 |             |      |      |

## Descriptive

| Education                 | N   | Mean | Std. Deviation |
|---------------------------|-----|------|----------------|
| SSC                       | 11  | 3.55 | 1.422          |
| HSC                       | 79  | 3.73 | 1.284          |
| Graduation                | 103 | 3.98 | 1.171          |
| Post-Graduation and above | 199 | 4.02 | 1.513          |
| Total                     | 392 | 3.68 | 1.372          |

**Interpretation:** Here, Researcher rejects null hypothesis as the Significance value is 0.04 that is less than 0.05 that concludes a significant difference between education and User opinion.

**Ho<sub>3</sub>:** There is no significant difference between Annual Family Income and User Opinion.

**H1<sub>3</sub>:** There is a significant difference between Annual Family Income and User Opinion.

Average score of the User Opinion taken as the testing variable and Annual Family Income, was taken as the grouping variable in the one-way ANOVA test.

## ANOVA

User Opinion

|                | Sum of Squares | df  | Mean Square | F     | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 22.796         | 4   | 5.699       | 3.211 | .013 |
| Within Groups  | 686.773        | 387 | 1.775       |       |      |
| Total          | 709.569        | 391 |             |       |      |

## Descriptive

| User Opinion       | N   | Mean | Std. Deviation |
|--------------------|-----|------|----------------|
| Less than 2,00,000 | 30  | 3.27 | 1.680          |
| 2,00,001-4,00,000  | 120 | 3.47 | 1.216          |
| 4,00,001-6,00,000  | 131 | 3.34 | 1.340          |
| 6,00,001-8,00,000  | 64  | 3.95 | 1.290          |
| Above 8,00,000     | 47  | 3.83 | 1.404          |
| Total              | 392 | 3.53 | 1.347          |

**Interpretation:** Here, Researcher rejects null hypothesis as the Significance value is 0.013 that is less than 0.05 that concludes a significant difference between Annual Family Income and User Opinion. The mean score of 600001-800000 income group is highest.

#### 4.4 Regression Analysis

Researcher has utilised Multiple linear regression for measuring significant impact of the literature derived factors onto the user opinion. Following hypothesis are tested for measuring the same.

H0: There is a significant impact of *Ease of use, Perceived security, Perceived Benefits, Reliability* on *User Opinion*.

H1a: There is a significant impact of *Ease of use* on *User Opinion*

H1b: There is a significant impact of *Perceived security* on *User Opinion*

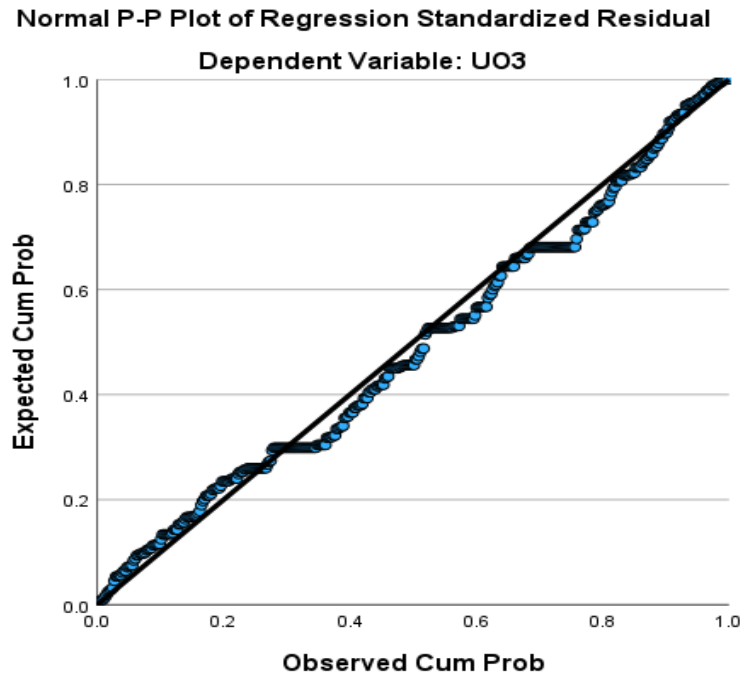
H1c: There is a significant impact of *Perceived Benefits* on *User Opinion*

H1d: There is a significant impact of *Reliability* on *User Opinion*

| Hypothesis     | Regression weight                                  | Beta Coefficient | T     | P value | Hypothesis Supported |
|----------------|--|------------------|-------|---------|----------------------|
| H1a            | <i>Ease of use</i> →<br><i>User Opinion</i>        | .470             | 4.343 | .000    | Yes                  |
| H1b            | <i>Perceived Security</i> →<br><i>User Opinion</i> | .382             | 4.153 | .034    | Yes                  |
| H1c            | <i>Perceived Benefits</i> →<br><i>User Opinion</i> | .394             | 1.714 | .046    | Yes                  |
| H1d            | <i>Reliability</i> →<br><i>User Opinion</i>        | .373             | 1.265 | .000    | Yes                  |
| R <sup>2</sup> | 0.757  |                  |       |         |                      |
| F(4,391)       | 131.920  |                  |       |         |                      |

The dependent variable *User Opinion* was regressed on predicting variables of *Ease of use, Perceived security, Perceived Benefits, Reliability*. The independent variables significantly predict *user opinion*,  $F(4,164) = 131.920$ ,  $p < 0.00$ , which indicates that the four factors under the study have significant impact on *User Opinion*. Impact of *Ease of use* is positive and significant on the *user opinion* towards digital payment with the standardized beta weight of 0.470 and value of significance  $p < 0.00$ , hence H1a is accepted. Impact of *Perceived Security* is positive and significant on the *user opinion* towards digital payment with the standardized beta weight of 0.382 and value of significance  $p = 0.34$ , hence H1b is accepted. Impact of *Perceived Benefits* is positive and significant on the *user opinion* towards digital payment with the standardized beta weight of 0.394 and value of significance  $p = 0.46$ , hence H1c is accepted. Impact of *Reliability* is positive and significant on the *user opinion* towards digital payment with

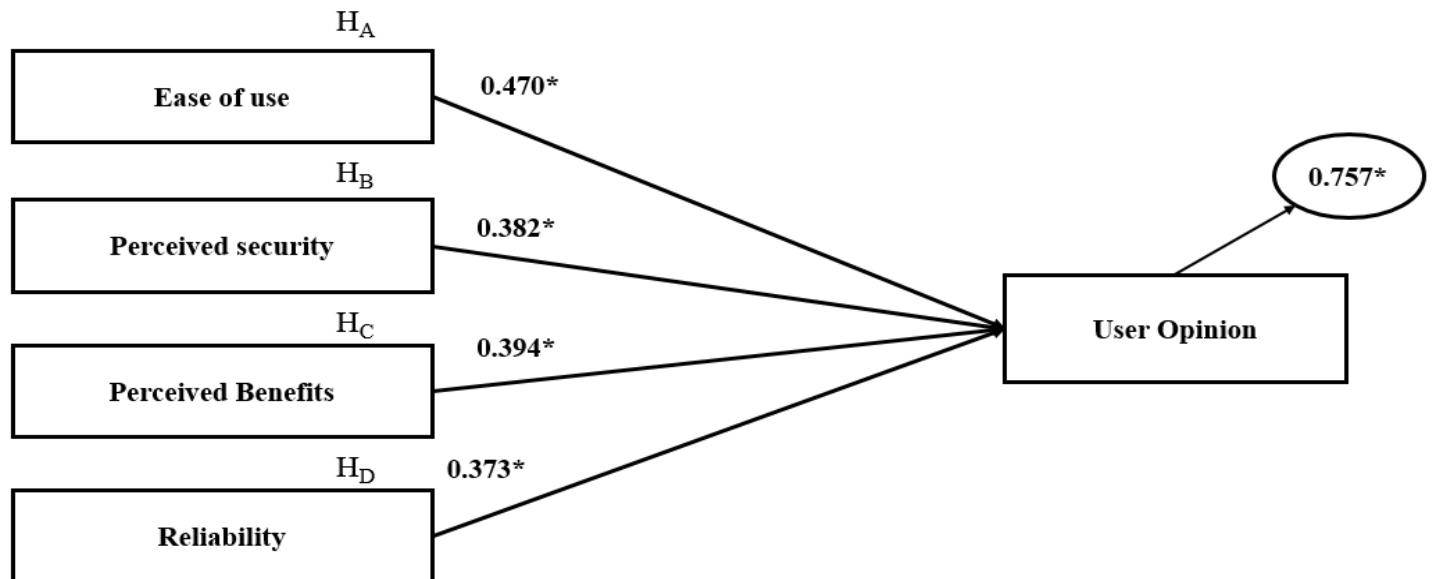
the standardized beta weight of 0.373 and value of significance  $p < 0.00$ , hence H1d is accepted. Moreover, the  $R^2 = 0.757$  depicts that the model explains 75.7% of the variance in *User Opinion*.



Here UO3 is the user opinion factor

The normal probability plot is a graphical approach used to determine whether or not a data set is normally distributed. (Chambers et al., 1983). The data is shown against a theoretical normal distribution, with the points roughly forming a straight line.

#### 4.5 Proposed Research Model Based on Data Analysis



*Figure 1 Proposed Research Model Based on Data Analysis*

Note: \*statistically significant regression weights,  $H_{A-D}$  Hypothesis H1a to H1d

Figure 1 shows that *Ease of use*, *Perceived security*, *Perceived Benefits* and *Reliability* have a significant immediate effect on the *User Opinion*. Moreover, the  $R^2 = 0.757$  depicts that the model explains 75.7% of the variance in *User Opinion*.

## 5. RESULTS AND DISCUSSIONS

### 5.1 Key Findings

1. Cronbach's Alpha can be defined as the reliability measurement tool, for the selected construct, it should be above acceptance standard 0.7. Lowest cronbach's alpha was 0.805 for perceived image construct. It provides the good reliability of all the constructs.
2. There is a significant difference between mean score of Age, Education and Annual Income. The mean score of age group 39-48 years category is highest. As education level increases, mean score for user opinion also increases. From the Annual Family Income perspective, The mean score of 600001-800000 income group is highest.
3. Impact of Ease of use is positive and significant on the user opinion towards digital payment with the standardized beta weight of 0.470 and value of significance  $p < 0.00$ , hence H1a is accepted. Impact of Perceived Security is positive and significant on the user opinion towards digital payment with the standardized beta weight of 0.382 and value of significance  $p = 0.34$ , hence H1b is accepted. Impact of Perceived Benefits is positive and significant on the user opinion towards digital payment with the standardized beta weight of 0.394 and value of significance  $p = 0.46$ , hence H1c is accepted. Impact of Reliability is positive and significant on the user opinion towards digital payment with the standardized beta weight of 0.373 and value of significance  $p < 0.00$ , hence H1d is accepted. Moreover, the  $R^2 = 0.757$  depicts that the model explains 75.7% of the variance in User Opinion.
4. According to the research model, ease of use, perceived security, perceived benefits, and reliability all have a substantial immediate effect on user opinion.

### 5.2 Key Implications

The empirical finding about users' perception has implications for digital payment platform or applications providers, as it concludes what user considers most important for utilizing their platform for digital payment. According to the approach, managers might adopt a market segmentation strategy to encourage consumer technology use in rural areas. Because there is a variation in opinion among users of different ages, education levels, and income levels, the study findings will be valuable to marketers in targeting them strategically. The study contributes to the existing pool of literature and can be helpful to other researchers as well.

## 6. CONCLUSION AND SCOPE FOR FURTHER STUDY

Attributes of digital payment with respect to user opinion are closely examined through this research and it has been found that higher education level leads to more positive perception of users towards digital payment modes. Through literature review concluded that 4 factors will be counted for overall opinion of users towards digital payment. This study is different from the past research in such a way that this study has taken holistic approach in measurement of User opinion towards Digital Payment in Rural Gujarat and it finds the effect of *Ease of use*, *Perceived security*, *Perceived Benefits*, *Reliability* on the *User Opinion*. It was found that *ease of use* contributes the most in rural Gujarat's digital payment *user opinion* for digital payment followed by *perceived benefits*, *security* and *reliability*. The study provides a basic framework for understanding digital payment users' opinion. Further research should expand the geographic area, age group, and sample size, as well as employ probability sampling procedures.

## 7. BIBLIOGRAPHY

- [1] Singh, R., & Malik, G. (2019). Impact of digitalization on Indian rural banking customer: with reference to payment systems. *Emerging Economy Studies*, 5(1), 31-41.
- [2] Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- [3] Ravi, C. S. (2017). Digital payments system and rural India: A review of transaction to cashless economy. *International Journal of Commerce and Management Research*, 3(5), 169-173.
- [4] Venkatesh, K. V., & Nandini, V. V. (2013). Direct metallaser sintering: A digitised metal casting technology. *The Journal of Indian Prosthodontic Society*, 13(4), 389-392.
- [5] Hjelholt, M., & Damsgaard, J. (2012). The genesis and evolution of digital payment platforms.
- [6] Alkhowaiter, W. A. (2020). Digital payment and banking adoption research in Gulf countries: A systematic literature review. *International Journal of Information Management*, 53, 102102



- [7] Al-Smadi, and Mohammad (2012). Factors affecting adoption of electronic banking: An analysis of the perspectives of banks' customers. *International Journal of Business and Social Science*, 3, 294-309.
- [8] Balan, R. K., Ramasubbu, N., Prakobphol, K., Christin, N., & Hong, J. (2009, June). mFerio. the design and evaluation of a peer-to-peer mobile payment system In *Proceedings of the 7th international conference on Mobile systems, applications, and services* (pp. 291-304)
- [9] Bill & Melinda Gates Foundation (2013). Digital Payments Can Benefit the Poor, and Be Good for Business Press releases and statements, [www.gatesfoundation.org/Media\\_Center/Press-Releases/2013/09/Digital-Payments-Can-Benefit-the-Poor](http://www.gatesfoundation.org/Media_Center/Press-Releases/2013/09/Digital-Payments-Can-Benefit-the-Poor).
- [10] Camenisch, J., Maurer, U., & Stadler, M. (1997) Digital payment systems with passive anonymity-revoking trustees. *Journal of Computer Security*, 5(1), -89
- [11] Chen, L. D. & Nath, R. (2008). Determinants of mobile payments: an empirical analysis. *Journal of International Technology and Information Management*. 1700.2
- [12] Deloitte Report (2010) Leading the cashless charge-Evaluation of the digital wallet industry in India
- [13] Dewan, S. G., & Chan, L. D. (2005) Mobile payment option in the US. A cross industry, causal platforms solution. *Journal of Information Privacy and Security*, 7(2), 4-28
- [14] Drogbenaku, RK. Amoako, G. K. Kumi. D. K. & Bens, GA (2022) Digital payments and financial wellbeing of the rural poor: The moderating role of age and gender *Journal of International Consumer Marketing* 34(2), 113-136
- [15] Gupta, K. (2018). Digital transactions rise to 1.11 billion in January, <https://www.livemint.com/Money/xafGXlqfSTjqTdYva5EO/Digital-transactions-rise-to-111-billion-in-January.html>, 16.07.2022
- [16] Islam, M. A. Ahmad, T. S. B., Khan, M. A., & Ali, M. H. (2010), Adoption of M commerce services: The case of Bangladesh. *World Journal of Management*, 2011, 37-54
- [17] Johnson, V. L. Kiser, A., Washington, R., & Torres, R. (2018). Limitations to the rapid adoption of M-payment services. Understanding the impact of privacy risk on MPayment services. *Computers in Human Behavior*, 79, 111-122
- [18] Junadi, and Sfenrianto (2015). A Model of Factors Influencing Consumer's Intention To Use E-payment System in Indonesia. *Procedia Computer Science*. 59, 214-220, doi.org/10.1016/j.procs.2015.07.557.
- [19] Kazan, Erol, and Damsgaard (2014). An Investigation Of Digital Payment Platform Designs A Comparative Study Of Four European Solutions. *Proceedings-22nd European Conference on Information Systems*. Tel Aviv, Israel. Retrieved from
- [20] Luna, I. R. (2017). *Mobile Payments at the Point of Sale: Key Issues, Perspectives and Guidelines for Future User Adoption* (Doctoral dissertation, PhD Thesis. Department of Marketing and Market Research, Universidad de Granada, Spain).
- [21] Merritt, C. (2011). Mobile money transfer services: the next phase in the evolution of person-to-person payments. *Journal of Payments Strategy & Systems*, 5(2), 143-160.
- [22] Padmanabhan, A. (2017). The Right way to nurture India's Digital Economy Available on <http://carnegieindia.org/2017/05/04/right-way-to-nurture-india-s-digital-economy> pub-69863 (Assessed on 15th October, 2022).
- [23] Poustichi, K., Schiessler, M., & Wiedemann, D. G. (2009). Proposing a comprehensive framework for analysis and engineering of mobile payment business models. *Information Systems and E-Business Management*, 7(3), 363-393.
- [24] PWC Report (2017), GNFC, Impact Assessment of Cashless Initiatives. 27. Renny, Guritno, S. and Siringoringo, H. (2013). Perceived Usefulness, Ease of use, and Attitude Towards Online Shopping Usefulness. Towards Online Airlines Ticket Purchase. *Procedia Social and Behavioral Sciences*, 81, 212-216, [www.sciencedirect.com](http://www.sciencedirect.com).
- [25] Sharma, P. (2018). Regulating a Digital Economy: An Indian Perspective, [www.brookings.edu/blog/up-front/2018/04/25/regulating-a-digital-economy-an-indian-perspective](http://www.brookings.edu/blog/up-front/2018/04/25/regulating-a-digital-economy-an-indian-perspective), 18.07.2022
- [26] Siyanbola, and Tunji, T. (2013). The Effect of cashless banking on Nigerian Economy. *Canadian Journal of Accounting and Finance*, 40, 1(2), 9-19.
- [26] Srivastava, S. C., Chandra, S., & Theng. Y. L (2010). Evaluating the role of trust in consumer adoption of mobile payment systems: An empirical analysis. *Communications of the Association for Information Systems*, 27, 561-588,

- [27] Susanto, E., Solikin. 1. & Purnomo, B. S. (2022) A Review of Digital Payment Adoption in Asia Advanced International Journal of Business, Entrepreneurship and SMEs, 411.
- [28] Dewan, S.G., Chen, L.D., 2005. Mobile payment adoption in the USA: a crossindustry, cross-platform solution. *J. Inf. Priv. Sec.* 1 (2), 4–28.
- [29] Luna, I.R., 2017. Mobile Payments at the Point of Sale: Key Issues, Perspectives and Guidelines for Future User Adoption. PhD Thesis. Department of Marketing and Market Research, Universidad de Granada, Spain.
- [30] Liébana-Cabanillas, F., Lara-Rubio, J., 2017. Predictive and explanatory modeling regarding adoption of mobile payment systems. *Technol. Forecast. Soc. Chang.* 120, 32–40.
- [31] Innopay, 2013. Mobile Payments 2013 – Changing Checkout. Retrieved 06 July 2014 from: [http://www.innopay.com/system/files/private/Mobile%20payments%202013\\_Innopay\\_v1.0.pdf](http://www.innopay.com/system/files/private/Mobile%20payments%202013_Innopay_v1.0.pdf)
- [32] Lowry, C., 2016. What's in your mobile wallet? An analysis of trends in mobile payments and regulation. *Federal Commun. Law J.* 68, 353–384.
- [33] Denso Wave, 2000. QR Code. (ISO/IEC18004).
- [34] Cheng, Y.H., Huang, T.Y., 2013. High speed rail passengers' mobile ticketing adoption. *Transp. Res. Part C: Emerg. Technol.* 30, 143–160
- [35] Ghosh, G. (2021). Adoption of digital payment system by consumer: a review of literature. *vol, 9*, 412-418.
- [36] Sahi, A. M., Khalid, H., Abbas, A. F., & Khatib, S. F. (2021). The evolving research of customer adoption of digital payment: Learning from content and statistical analysis of the literature. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(4), 230.
- [37] Internet in India 2021, IAMAI- KANTAR <https://inc42.com/buzz/rural-india-drives-internet-penetration-with-351-mn-users-iamai-report>
- [38] Ranjith, P. V., Kulkarni, S., & Varma, A. J. (2021). A Literature Study Of Consumer Perception Towards Digital Payment Mode In India. *PSYCHOLOGY AND EDUCATION*, 58(1), 3304-3319.
- [39] Andrew Stephen (2015), The Role of Digital and Social Media Marketing in Consumer Behaviour, *Current Opinion in Psychology special issue on Consumer Behaviour*, 1-16
- [40] Reiss, D. G. (2018). Is money going digital? An alternative perspective on the current hype. *Financial Innovation*, 4(1), 1-6.
- [41] Kotecha, P. S. An Empirical Study of Mobile Wallets in India. *Research Guru: Online Journal of Multidisciplinary Subjects*, 11.
- [42] Akhila Pai H. (2018), Study on Consumer Perception Towards Digital Wallets, *IJRAR*, 3, 385-391
- [43] Tripathi, S. (2020). A study on adoption of digital payment through mobile payment application with reference to Gujarat state. *International Journal of Trend in Scientific Research and Development*.
- [44] J. SobanaShanthini&Dr. J. Immanuel Nallathmbi (2018), A study on consumer's perception regarding cashless transaction in Peikulam area, *International Journal of Business and Administration Research Review*, Vol 3, No 21, 101- 108
- [45] Brown, S. A., Venkatesh, V., & Goyal, S. (2012). Expectation confirmation in technology use. *Information Systems Research*, 23(2), 474-487.
- [46] Sahi, A.M., Khalid, H., Abbas, A.F., & Khatib, S.F. (2021). The evolving research of customer adoption of digital payment: Learning from content and statistical analysis of the literature. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(4), 230.
- [47] Fatonah, S., Yulandari, A., & Wibowo, F. W. (2018, December). A review of e-payment system in e-commerce. In *Journal of Physics: Conference Series* (Vol. 1140, No. 1, p. 012033). IOP Publishing.
- [48] Chambers, J.M., Cleveland, W.S., Kleiner, B., Tukey, P.A., 1983. *Graphical Methods for Data Analysis*. PWS Publishers: Duxbury Press, Boston. Cleveland, W.S., 1993. *Visualizing Data*. Hobart Press, N.J.