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# Digital Payment Frauds- An Evaluative Study of Awareness and Digital Literacy

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## Abstract

The present paper attempts to study the concept of digital payment frauds. With the increase in usage of digital payment services, the occurrence of digital payment frauds have also grown up in the economy. The paper further investigates the awareness of customers towards these frauds & role of digital literacy in combating these. Due to plenty of merits, the digital payment services are being widely used now days even by the laymen in both rural & urban areas. The different digital payments modes have contributed in acceptance of digital payment services on large scale. The rise in digitalization has amplified the fraud practices. These consumer frauds have created an environment of insecurity & lack of trust in digital payment mechanism. The customer feels unprotected in digital surroundings due to such frauds. The present paper tried to study the digital payment frauds of various types and awareness level of customers. The importance of digital literacy is further highlighted in the study. Conclusion of the study indicates that precautionary safety measures are a key for minimizing the frauds.

***Keywords:***

Digital Payment frauds,
Digital literacy,
Awareness,
Technology
& Security

## 1. Introduction

With increased digitalization in payment services, recent years have seen amplification in volume as well as value of frauds in digital payment sector. The rise in digital payment frauds has made the virtual environment insecure for the users to some extent. Further the customer losses its confidence in the digital payment mechanism and have negative impact on customer satisfaction. So there arises a need to investigate the awareness level of customers towards these. The digital literacy plays a significant role now days to prevent the spot fraud incidences with digital knowledge and prudent behaviour in digital payment transactions. However efforts are needed from both the customers and the Government in combating and preventing fraud situations. Also the technology is improving many folds to lower the complex fraud situations. Efforts are required on priority to prevent such frauds in future & for promising a secure virtual environment for digital payments.

Review of Literature

Jain Rajni, Gour Bhupesh & Dubey Surendra (2016) examined the Hybrid approach for fraud detection using techniques like Rough Set and Decision Tree for credit card fraud detection mechanism. The tools of study were MATLAB & WEKA. It was concluded that the performance of the proposed study system is better in comparison to existing work and presented the results with the help of graph.

Md Arif Hassan, Zarina Shukar, Mohammad Kamrul Hasan and Ahmed Salih Al- Khaleefa (2020) presented the review of 131 research articles published on electronic payment system between 2010 & 2020 on two groups- e-wallets & online payment system. The studies examined that e-wallets are gaining more attention in electronic payment & the focus on electronic payment system was more on online payment security. The security properties of electronic payments included confidentiality, integrity, non repudiation, authorisation, authentication, availability, robustness & efficiency and supporting transactions.

Prakash Dr B, Murthy G Venu Madhava, Ashok P, Prithvi B. Pavan & Kira S Sai Harsha (2018) explored the performance of Decision tree, Logistic Regression & Support Vector machine on largely imbalanced data sourced from European cardholders containing on 200000 transactions. It was stated that Machine learning technique as a novel one & if this algorithm is applied into bank ATM Card fraud detention system, the probability of fraud transactions can be predicted soon after ATM card transactions.

Shree Sudiksha, Pratap Bhanu, Saroy Rajas, Dhal Sarat (2021) examined the online survey based data set to understand how factors such as perception and trust in digital payments & experience in online frauds affect the payment behaviour of the consumers. The sample size was 640 and tool used was Multi-nominal Regression model. It was found that degree to which past experience with online fraud deters usage of digital payments varies with the purpose of transactions. The key policy recommendation of the study was incorporating feedback & gauging public perception can further catalyse digitalisation.

Suresh G & Raj R Justin (2018) discussed the various techniques for credit card fraud detection including Decision tree, Neutral Network, K-Means Clustering, Hidden Markov Model & Genetic Algorithm. The paper concluded with survey on detecting illegal usage of credit card & the strategies which concerned inside detecting credit card fraud.

Yomas Jerrin & Kiran N Chitra (2018) focused on the evolution of e-payment system. A comparative analysis is also presented. The study provided the landscape of digital e-payment system & its opportunities for future E-commerce system. They also discussed the statistics related to transactions fraud rates with the help of graph & charts.

## 2. Research Method

Research Design and Methodology

The study is descriptive in nature. Primary Data was collected through a structured questionnaire from 40 respondents. Secondary data has been collected from books, Journals, publications, reports and websites.

Objectives of the study

- To study the concept of digital payment frauds
- To examine the awareness level towards digital payment frauds
- To highlight the role of digital literacy

Scope of the study

The study has been conducted in Rajasthan state. There were 40 respondents from Jaipur and Kota. Convenience sampling method was used and data was collected through a structured questionnaire. The questionnaire was pre tested through a pilot study and necessary amendments have been made before issuing it to the respondents.

Limitations of the study

- The study has been restricted to Rajasthan state
- The sample size is small of 40 respondents
- Convenience sampling is used which has its own pros & cons

Data Analysis and Interpretation

Table-1 Demographic profile of respondents

| **Factor** | **Classification** | **Frequency / Percentage** |
|---|---|---|
| Age | 18-30 | 11 (27.5%) |
| | 31-45 | 09 (22.5%) |
| | 46-60 | 12 (30.0%) |
| | 61-65 | 08 (20.0%) |
| | Total | 40 (100.0%) |
| Gender | Male | 21 (52.5%) |
| | Female | 19 (47.5%) |
| | Total | 40 (100.0%) |
| Education | Higher Secondary | 10 (25.0%) |
| | Graduation | 12 (30.0%) |
| | Post Graduation | 11 (27.5%) |
| | Professional | 07 (17.5%) |
| | Total | 40 (100.0%) |
| Occupation | Salaried | 07 (17.5%) |
| | Business | 06 (15.0%) |
| | Self employed | 10 (25.0%) |
| | Retired | 08 (20.0%) |
| | Student | 09 (22.5%) |
| | Total | 40 (100.0%) |

Source- Primary Data

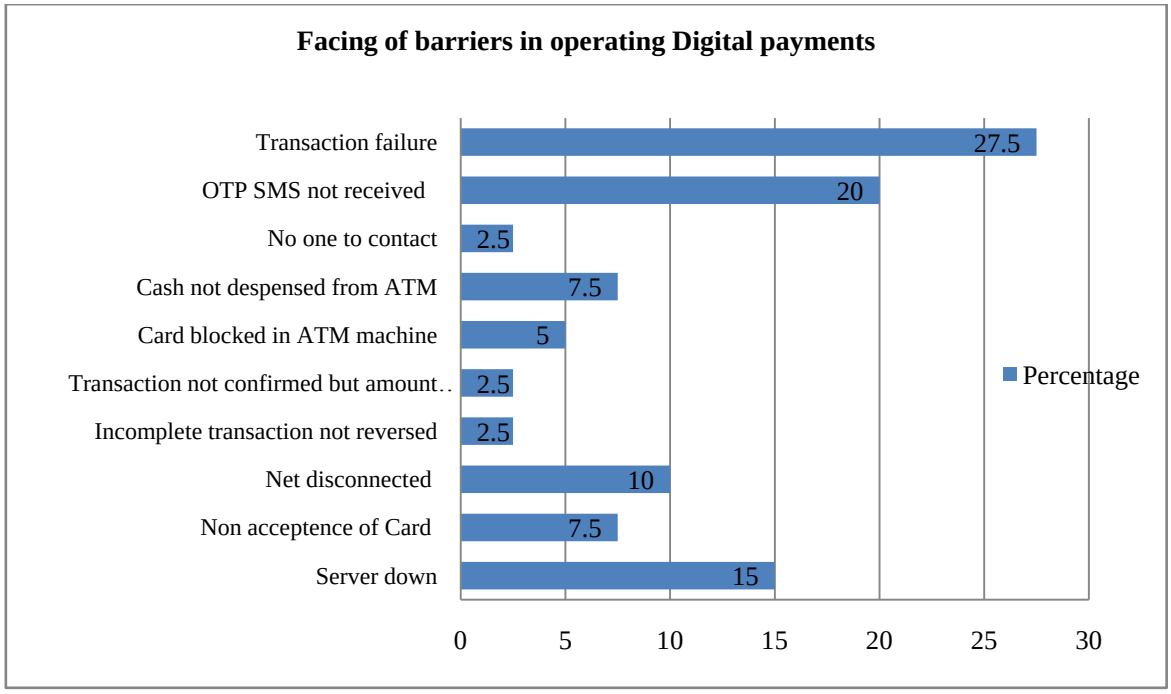
Table-2 Awareness towards Digital Terminology

| **Digital Terminology** | **High** | | **Low** | |
|---|---|---|---|---|
| | **Frequency** | **Percentage** | **Frequency** | **Percentage** |
| Login Id | 32 | (80.0%) | 08 | (20.0%) |
| CVV | 25 | (62.5%) | 15 | (37.5%) |
| OTP | 38 | (95.0%) | 02 | (5.0%) |
| PIN | 39 | (97.5%) | 01 | (2.5%) |
| QR/Bar code | 34 | (85.0%) | 06 | (15.0%) |

Table-3 Facing of barriers in operating Digital payments

| **Types of barriers in operating Digital payments** | **Frequency** | **Percentage** |
|---|---|---|
| Transaction failure | 11 | (27.5%) |
| Server down | 06 | (15.0%) |
| Non acceptance of Card | 03 | (7.5%) |
| Net disconnected | 04 | (10.0%) |
| Incomplete transaction not reversed | 01 | (2.5%) |
| Transaction not confirmed but amount debited | 01 | (2.5%) |
| Card blocked in ATM machine | 02 | (5.0%) |
| Cash not dispensed from ATM | 03 | (7.5%) |
| No one to contact | 01 | (2.5%) |
| OTP SMS not received | 08 | (20.0%) |
| Total | 40 | (100.0%) |

Fig-1



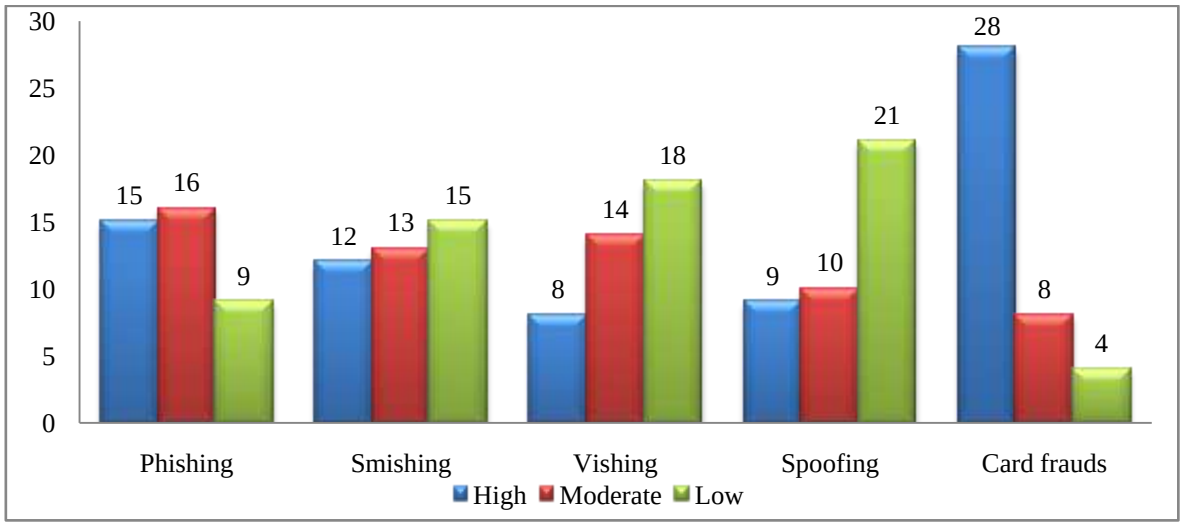

Source- Primary Data

Table-4 Awareness level towards Digital Payment Frauds

| Types of Digital Payment Frauds | High | | Moderate | | Low | |
|---|---|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Phishing | 15 | (37.5%) | 16 | (40.0%) | 09 | (22.5%) |
| Smishing | 12 | (30.0%) | 13 | (32.5%) | 15 | (37.5%) |
| Vishing | 08 | (20.0%) | 14 | (35.0%) | 18 | (45.0%) |
| Spoofing | 09 | (22.5%) | 10 | (25.0%) | 21 | (52.5%) |
| Card frauds | 28 | (70.0%) | 08 | (20.0%) | 04 | (10.0%) |

Source- Primary Data

Fig-2 Awareness level towards Digital Payment Frauds




Source- Primary Data

Table-5 ATM/Debit Card complaints (Year wise break-up)

| Year / Sub-Category | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|
| Non-payment of cash / account debited but cash not dispensed by ATMs | 14,691 | 19,366 | 31,832 |
| (8.98% ) | 9.89% | 10.31% | |
| Debit in account without use of the card or details of card | 2,356 | 4,481 | 15,752 |
| (1.44%) | 2.29% | 5.10% | |
| Use of stolen / cloned cards | 2117 | 4,961 | 7,511 |
| (1.29%) | 2.53% | 2.43% | |
| Account debited more than once for one withdrawal in ATMs or for POS transaction | 965 | 1,288 | 2,687 |
| (0.59% ) | 0.66% | 0.87% | |
| Short payment of cash / less or excess amount of cash dispensed by ATMs | 1,166 | 1,186 | 1,613 |
| (0.71%) | 0.61% | 0.52% | |
| Others | 3,377 | 5,257 | 8,405 |
| (2.06%) | 2.68% | 2.72% | |
| Sub-total | 24,672 | 36,539 | 67,800 |
| (15.08%) | 18.65% | 21.97% | |
| Total complaints received | **1,63,590** | **1,95,901** | **3,08,630** |

Source- BOS, Reserve Bank of India
Figures in % indicate percentage to total number of complaints of respective year

The table is showing the total complaints received in last three years and break up of these on grounds relating to digital transactions (Mobile / Electronic banking, ATM / Debit Cards and Credit Cards). The number of complaints is rising and this is a concern area for the Banking Ombudsman, Reserve Bank of India.

Role of digital literacy

In this technology driven world, the key requirement is digital literacy for efficiently managing the digital payment transactions and moving towards less cash economy. Digital knowledge and awareness enables the users to deal prudently with financial matters in the economy. For inclusive digital inclusion of all sections of society it is needed to have high digital awareness regarding operating of digital transactions and for combating the digital payment frauds in rural as well as urban areas. The knowledge towards digital terminology, digital operating process and security features enables a secured platform for digital payments. There is increased concern of security and privacy nowadays due to happening of fraudulent activities on large scale. These include phishing, vishing, smishing, spoofing and card & identity related frauds which have made the digital environment insecure for both the users and the government. The customers feel dissatisfied and losses trust in the digital payment mechanism. Hence the security feature is of utmost importance. To sum up, digital literacy plays a major role in digital & financial inclusion.

**3. Results and Analysis**

Major Findings of the study

Table-1 (a): The age group (46-60 years) constitutes the maximum 30% of the respondents.
Table-1 (b): In gender classification the males constitutes the maximum 52.5%.
Table-1 (c): In the study, maximum 30% coverage is of respondents who possess graduation educational qualification.
Table-1 (d): As per occupation status, maximum 25% coverage is of respondents who are self employed.
Table-2: In the study, as per awareness level towards digital terminology, maximum 97.5% respondents have high awareness towards PIN and 37.5% have least awareness regarding CVV, as per data.
Table-3: Amongst the population, maximum 27.5% respondents faced the challenge of Transaction failure in operating Digital payments.

Table-4: Amongst the population, maximum 70.0% respondents have high awareness towards card frauds, maximum 40.0% respondents have moderate awareness towards Phishing fraud and 52.5% respondents have least awareness towards spoofing fraud.
Table-5: The table showed total complaints received in last three years under Banking Ombudsman scheme and the breakup of these digital transactions is presented.

**4. Conclusion**

In the nutshell, it can be stated that digital payment mechanism has witnessed a sharp rise in last few years. And with this increase, the digital payment frauds have also grown at comparatively larger scale. Thus for combating these frauds in digital environment, the need of digital literacy and awareness has increased very much. With prudent digital knowledge the consumers can prevent the fraudulent activities in this virtual environment. However the security features are to be taken care of in dealing digital payments.

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