7 Digital Payment Security and Consumer Confidence: Evidence from Women Users in Haryana

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Abstract

Digital payments have grown rapidly in India over the last decade. Platforms like UPI, PhonePe, and Google Pay have made financial transactions faster and easier for millions of people. However, not everyone has been equally able to benefit from this shift. Women, particularly those living in semi-urban and rural areas of states like Haryana, continue to face serious difficulties in using digital payment systems with confidence. A large part of this problem comes down to security — or, more precisely, how safe women feel when using these platforms. When a person does not feel that her money and personal information are protected, she is unlikely to use digital payments regularly or at all. This paper explores the connection between digital payment security and consumer confidence among women in Haryana. It draws on existing research from India and other developing countries to understand what shapes women's trust in these platforms, what makes them hesitant, and what can be done to improve their participation. The paper finds that security perception is closely linked to consumer confidence, but it is also shaped by social factors, digital literacy, personal experience with fraud, and the quality of complaint resolution. It concludes with suggestions for how policymakers, banks, and digital payment companies can make these systems safer and more trustworthy for women across Haryana.

Keywords: Digital Payment, Consumer Confidence, Fraud, Digital Literacy, Financial Transactions.

Introduction

India has seen a major shift in how people pay for things. Since the government launched the Unified Payments Interface (UPI) in 2016, digital transactions have become a part of daily life for a large part of the population. By 2024, UPI was processing more than 14 billion transactions every month (NPCI, 2024). This growth has been supported by the Digital India programme, the Pradhan

Mantri Jan Dhan Yojana scheme, and the availability of cheap mobile data across the country. Together, these changes have opened up formal financial systems to people who had never previously used them.

Despite this progress, the benefits of digital payments have not reached everyone equally. Women — especially those in states like Haryana — continue to use digital payment platforms far less than men and often with much greater caution. The World Bank's Global Findex Report (2021) showed that women in South Asia are significantly less likely than men to actively use digital financial services, even when they have bank accounts. In Haryana, this problem is shaped by a mix of social, economic, and educational factors that make digital payments feel unsafe or inaccessible for many women.

Security is at the heart of this problem. For digital payments to work, a person has to trust that her money will not disappear, that her information will not be stolen, and that if something goes wrong, she will be able to get it fixed. This kind of trust does not come automatically, especially for people who are new to technology or who have heard stories of others being cheated. Research shows that women in India are more likely than men to stop using digital platforms after a single bad experience, and they are less likely to return even after the problem is resolved (Malhotra and Sharma, 2020).

Haryana is a useful state to study because it contains both highly developed urban areas — like Gurugram, which is one of India's biggest technology and finance hubs — and more traditional rural districts like Hisar, Mewat, and Rohtak, where women's access to personal phones and bank accounts is still limited. This contrast makes it possible to see how the same digital payment systems can mean very different things to different women depending on where they live and what resources they have access to.

This paper aims to examine the relationship between digital payment security and consumer confidence among women in Haryana by reviewing and synthesising existing research. The paper does not present new survey data. Instead, it brings together evidence from published studies to build a clear picture of where the problems lie and what needs to change.

Objectives

- To understand how women in Haryana perceive the security of digital payment platforms and how this shapes their confidence in using these platforms.
- To identify the key factors — social, economic, institutional, and experiential — that influence women's trust in digital payments.
- To examine the barriers that prevent women in semi-urban and rural Haryana from using digital payments confidently.

- To draw conclusions from existing research and suggest practical steps for improving digital payment security and consumer confidence among women in Haryana.

Literature Review

- **Digital Payments and the Role of Trust**

Research across different countries has consistently shown that trust is one of the most important factors in whether someone uses a digital payment platform. If a person believes the platform is safe, she will use it. If she does not, she will avoid it or use it only in a limited way. Pavlou (2003) explained that trust in digital transactions comes from two things: the belief that legal and technical systems will protect the user, and the feeling that the transaction environment is familiar and predictable. Both of these are essential, and both are often weak when it comes to women who are new to digital finance in India.

The Technology Acceptance Model, developed by Davis (1989), is one of the most widely used frameworks for understanding why people adopt new technologies. It says that people are more likely to use a technology if they find it useful and easy to use. Later researchers added that security and privacy concerns also play a major role, particularly in financial technology (Gefen, Karahanna and Straub, 2003). Venkatesh, Morris and Davis (2003) extended this further by pointing out that social influence — what friends, family, and colleagues think and do — also matters a great deal. This is especially true for women in traditional societies where financial decisions are often made collectively rather than individually.

Rathore, Singh and Jain (2021) studied first-time UPI users in rural Rajasthan and found that fear of fraud was the single biggest reason people did not use digital payments, even more important than ease of use. Their respondents said they were afraid of losing money through a technical error or a scam. This fear was particularly strong among women and older users. The researchers concluded that platforms and regulators need to do more than just make digital payments easy to use — they need to actively address security fears and communicate clearly about what protections are in place.

- **Women and Digital Financial Inclusion**

The gender gap in digital financial participation is a well-documented problem in India and across developing countries. The World Bank (2021) found that women in South Asia are 12 percentage points less likely than men to use digital financial services actively. Demirguc-Kunt et al. (2018) noted that while the Jan Dhan Yojana scheme increased account ownership among women significantly, many of these accounts remained dormant — used only to receive government transfers, not for regular transactions. Having an account is not the same as having the confidence to use it.

A major structural barrier is access to personal mobile devices. GSMA (2023) reported that India has one of the largest mobile internet gender gaps in the world, with women about 40 percent less likely than men to use mobile internet. Many women in rural Haryana share a phone with a husband or male relative, which means they cannot use digital payment apps independently. Barboni et al. (2018) documented this pattern among women entrepreneurs in Bihar and Uttar Pradesh, finding that shared phone access made it almost impossible for women to develop their own familiarity with digital financial tools.

Bansal, Mathur and Negi (2023) studied women in Self Help Groups (SHGs) in Himachal Pradesh and found that those who had received peer-based digital literacy training were far more likely to use digital payments regularly and confidently compared to those who had not. Importantly, they found that the social element of the learning — the fact that it happened with trusted peers rather than in a formal bank setting — was a key reason for its effectiveness. Women said they felt safer asking questions and making mistakes when learning with people they already knew.

Chopra and Agarwal (2021) found that women in semi-urban India often described their feelings about digital payments in emotional terms — words like fear, nervousness, confusion, and uncertainty came up frequently in their interviews. These researchers argued that emotional security — the feeling of being supported and not judged — is as important as technical security when it comes to building confidence in digital payments.

- **Fraud Fear and Its Effects on Consumer Behaviour**

Fear of fraud is one of the most consistent findings in research on women's digital payment behaviour in India. Arora and Kaur (2021) studied women UPI users in Delhi and found that more than 60 percent reported regular anxiety about fraud, even though most had never personally experienced it. The researchers found that this fear was largely driven by stories of fraud shared through WhatsApp and other personal networks. A single fraud incident in a social circle could make many women reduce or stop their digital payment activity, even if they themselves were not affected.

This pattern of fear spreading through social networks is significant because it means that the actual rate of fraud incidents matters less than how those incidents are perceived and communicated within communities. Mishra and Bisht (2013) called the way users respond to this fear a 'risk compensation strategy' — instead of stopping digital payments altogether, many women reduce the size of their transactions, limit their usage to familiar platforms or vendors, or avoid certain features like QR code payments that they do not fully understand. While this strategy allows some continued use, it limits the benefits women can get from digital finance.

Malhotra and Sharma (2020) compared how men and women responded to negative digital payment experiences in Uttar Pradesh. They found that women were significantly more likely to stop using a platform after a single bad experience and much less likely to return to it even after the issue was resolved. This finding points to something important: building consumer confidence among women is not just about preventing bad experiences — it is also about how well the system responds when things go wrong.

- **Grievance Resolution and Institutional Trust**

Across the literature on digital financial inclusion in India, the quality of grievance resolution consistently emerges as a major factor in shaping long-term consumer confidence. When users know that a problem can be resolved quickly and fairly, they feel more secure using digital platforms. When they believe that a complaint will go unanswered or be too difficult to file, they start to see digital payments as risky in a fundamental way that goes beyond the individual transaction.

Kumar and Raheja (2022) studied digital payment dispute experiences in Haryana and Punjab and found that most respondents who had raised a complaint were unhappy with how it was handled. The main problems were: difficulty understanding what steps to follow, long waiting times, being sent back and forth between the bank and the digital platform without a clear answer, and not being told what was happening with their complaint. Women with lower levels of formal education were more likely to give up on the process before it was resolved.

Flavian and Guinaliu (2006) argued that the belief that complaints will be handled seriously is one of the strongest predictors of consumer loyalty in digital financial services. Their findings have been applied in the Indian mobile banking context by Mishra and Bisht (2013), who found that first-time users in semi-urban areas were more worried about having no recourse if something went wrong than about the transaction failing in the first place. This suggests that improving grievance resolution may do as much for consumer confidence as improving the security of the platforms themselves.

The Reserve Bank of India's own data supports this concern. The RBI's Annual Report on Digital Payment Ombudsman Complaints (2024) showed that complaints related to digital payment fraud and failures have been growing by over 70 percent each year for the past three years, with resolution rates around 60 percent. This means a significant number of complaints — many likely from vulnerable or low-literacy users — are simply not being resolved.

- **The Haryana Context**

Studies focused specifically on women's digital payment behaviour in Haryana are still limited, but what exists consistently highlights the state's significant internal variation. The National Family Health Survey-5 (2021) showed that female literacy in Haryana ranges from above 80 percent in urban Gurugram to below 65 percent in some rural districts. This difference in literacy levels directly affects how comfortable women are with digital interfaces, most of which require at least basic reading ability in Hindi or English.

Pawar and Yadav (2022) conducted a study in Mewat, one of Haryana's most economically disadvantaged districts, and found that women's participation in digital payment systems was below 10 percent. The main reasons were that most women did not have their own phones, did not have independently operated bank accounts, and had never received any explanation of how digital payments worked in a language or format they could understand. In this context, security concerns were almost secondary — the basic conditions for digital payment access simply did not exist.

Kapoor (2023), by contrast, studied working women in Gurugram and found that they used digital payments regularly and felt generally confident about their safety. However, even in this more educated and financially independent group, concerns about data privacy and the difficulty of resolving disputes were common. This suggests that security concerns do not disappear as income and education increase — they shift from basic fraud fears to more complex concerns about data use and institutional accountability.

Kumar and Raheja (2022) found that women in Rohtak and Karnal — Haryana's mid-tier districts — tended to occupy a middle ground: they had some exposure to digital payments through SHG accounts or government transfers, but their usage was cautious and infrequent. The quality of their early digital payment experiences was found to be especially important — women who had smooth first experiences were more likely to continue using digital payments, while those whose early experiences involved errors or confusion often stopped using them entirely.

Key Security Concerns That Affect Consumer Confidence Among Women in Haryana

Drawing from the literature reviewed above, it is possible to identify the specific security concerns that most directly affect consumer confidence among women in Haryana. These are discussed below.

- Fear of Fraud and Phishing: Women across income and education levels in Haryana express concern about being cheated through digital transactions. This concern is particularly strong in semi-urban and rural districts, where awareness of OTP safety, QR code risks, and phishing tactics is limited. As documented by Arora and Kaur (2021), even women who have never experienced fraud directly report high levels of anxiety because of stories they have heard from others.

- Unfamiliar Interfaces and Unclear Language: Most digital payment platforms in India are designed primarily in English, with Hindi as a secondary option. For women in districts like Mewat or Hisar who have limited formal education, navigating these interfaces can be confusing and stressful. As Kaur and Singh (2022) found, this interface unfamiliarity creates ongoing low-level anxiety that persists even after several successful transactions.
- Lack of Personal Device Ownership: Women who share a phone with a male family member cannot develop familiarity or confidence with digital payment platforms on their own terms. As documented by GSMA (2023) and Barboni et al. (2018), this structural barrier is one of the most fundamental challenges to women's digital financial inclusion and cannot be solved through financial literacy campaigns alone.
- Poor Complaint Resolution Experience: When something goes wrong with a digital payment and the complaint process is slow, unclear, or inaccessible, women's confidence drops sharply and often permanently. Kumar and Raheja (2022) found this to be a major problem in Haryana specifically, with women reporting that they gave up on complaints and simply absorbed losses rather than navigate what seemed like an impossibly complicated process.
- Dependence on Male Family Members: Many women in Haryana, particularly in rural and semi-urban areas, do not manage their own digital transactions. Their husbands, brothers, or sons handle digital payments on their behalf. While this can feel like a practical arrangement, it means women never develop the direct experience needed to build genuine confidence.

Factors That Help Build Digital Payment Confidence Among Women

The research also identifies several factors that have a positive effect on women's confidence in digital payments. Understanding these helps identify where interventions are most likely to be effective.

- Peer-Based Learning: Bansal et al. (2023) found that women who learned about digital payments from peers in SHGs or neighbourhood groups were more confident and more active users than those who received formal training from banks. Learning in a familiar, low-pressure environment where asking questions is easy makes a significant difference, especially for women who feel shy or intimidated in formal institutional settings.
- Positive Early Experiences: Kumar and Raheja (2022) found that the quality of a woman's first few digital payment experiences was strongly linked to her long-term confidence. Women who had smooth, successful early transactions were much more likely to continue and expand their usage. This

points to the importance of designing first-time user experiences carefully — ensuring that they are guided, simple, and error-free wherever possible.

- Social Network Support: Women who belong to communities where digital payments are commonly discussed and where people share tips, warnings, and help feel significantly more supported and confident. Arora and Kaur (2021) found that WhatsApp groups and community networks play an important role in spreading both awareness and caution — when well-informed members actively share accurate information, these networks can be a powerful confidence-building tool.
- Access to Personal Devices and Independent Accounts: Women who own their own smartphones and have their own bank accounts are significantly more confident with digital payments than those who depend on shared devices and accounts. Policy interventions that support women's personal device ownership and independent account usage are therefore an important part of building digital payment confidence.
- Clear and Accessible Grievance Channels: When women know that a problem can be fixed and understand how to go about reporting it, they feel more confident taking the small risks involved in digital transactions. Mishra and Bisht (2013) found that simple, accessible complaint channels are as important as security features themselves in shaping user confidence.

Findings and Conclusions

This paper has reviewed existing research on digital payment security and consumer confidence among women in Haryana. The evidence points to several clear findings.

First, security perception is the most important single factor shaping women's confidence in digital payments. Women who feel their money and personal information are safe are much more likely to use digital platforms actively and regularly. Women who do not feel this way either avoid digital payments or use them only in limited, cautious ways that prevent them from fully benefiting from the technology.

Second, security perception is shaped not just by the technical features of a platform but by a woman's broader social and institutional environment. How she learned to use digital payments, who she can ask for help, how the platforms respond when things go wrong, and what the people around her think and do — all of these things influence how secure she feels. This means that improving digital payment confidence among women in Haryana requires more than just improving platform security. It requires investing in social infrastructure, accessible complaint channels, and community-based learning.

Third, Haryana's internal variation is significant. The barriers faced by women in Gurugram are different from those faced by women in Mewat or Hisar. A single state-level policy is unlikely to work well for all of them. District-level approaches that account for local differences in literacy, phone access, community networks, and banking infrastructure are more likely to be effective.

Fourth, the current quality of grievance resolution in India's digital payment ecosystem is not adequate for the needs of low-literacy and low-experience users. When complaints go unresolved, confidence falls permanently and is very hard to rebuild. Improving complaint processes — making them simpler, faster, and accessible in local languages — is one of the most important steps that can be taken to build lasting consumer confidence among women.

Suggestions

- Digital payment platforms should develop simple, vernacular-language interfaces for Hindi and Haryanvi speakers, with clear plain-language explanations of what each step means, when to share information, and when not to. Fraud warnings should be specific and easy to understand rather than full of technical language.
- Banks, fintech companies, and government programmes should invest in peer-based digital literacy training through SHGs, mahila mandals, and neighbourhood women's groups. These community networks are more trusted and more effective than formal institutional training for building confidence among women who are new to digital finance.
- Grievance redressal processes should be redesigned to be accessible to low-literacy users. This means providing voice-based complaint options in local languages, setting mandatory resolution timelines, and sending plain-language updates to users throughout the complaint process.
- Policies supporting women's financial inclusion should focus on creating conditions for genuine digital autonomy — personal smartphone ownership, independent bank accounts, and individual digital literacy — rather than treating a male family member's digital access as equivalent to the woman's own inclusion.
- Policymakers in Haryana should design district-specific digital payment inclusion strategies that account for the very different conditions in urban districts like Gurugram and rural districts like Mewat or Hisar, rather than applying a single state-level approach to all contexts.

Conclusion

Digital payments have the potential to significantly improve the financial independence and everyday convenience of women across Haryana and India as a whole. But for this potential to be realised, the platforms, the institutions behind them, and the policies that govern them need to take women's specific security concerns and confidence barriers seriously. The research reviewed in this paper makes clear that this is not simply a matter of improving technology. It is a matter of building trust — through better education, more accessible complaint systems, stronger community support networks, and genuine attention to the social contexts in which women engage with digital finance. Addressing these issues is not only the right thing to do for women in Haryana — it is also essential for India's broader goal of building an inclusive digital economy.

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