

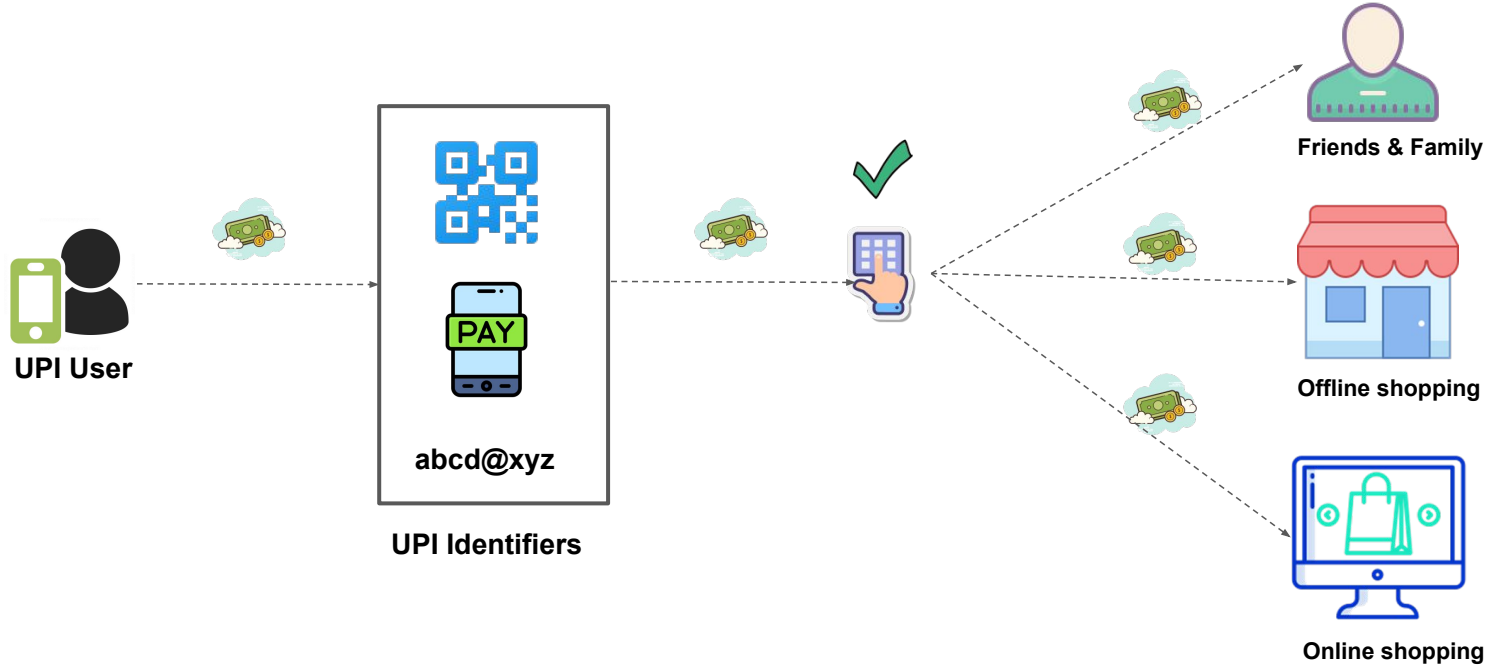
# Security and Privacy Advice for UPI Users in India

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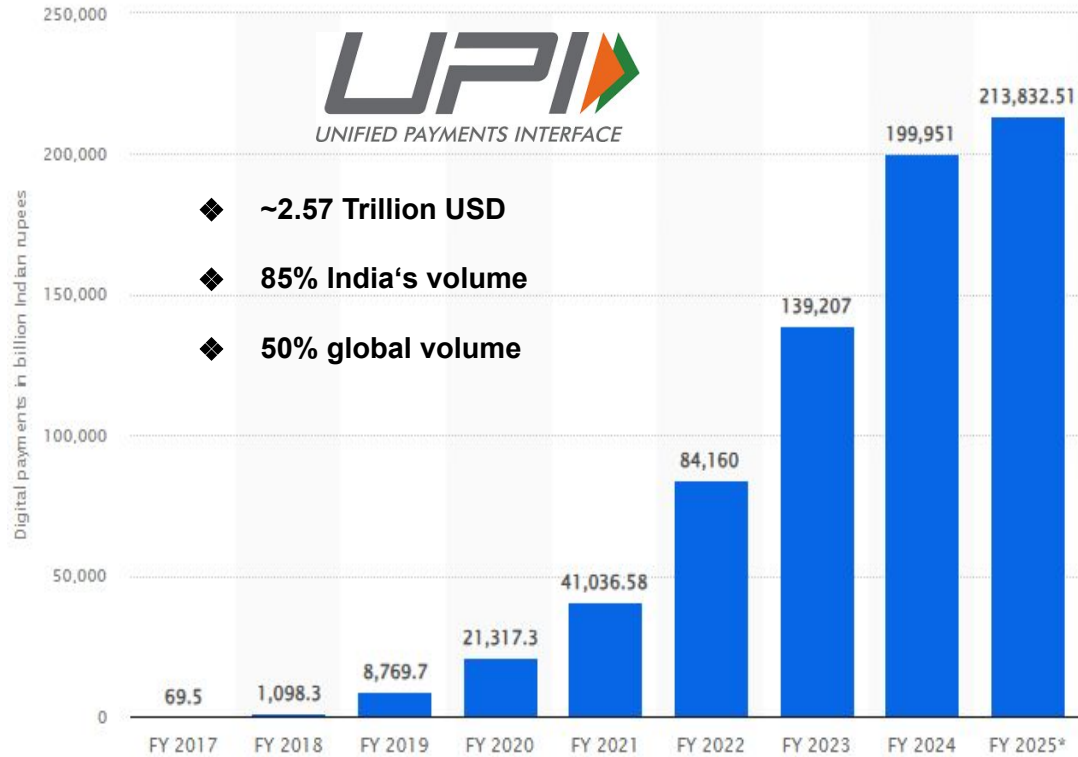
# Unified Payments Interface (UPI) enables payments: instant, easy, anytime, everywhere.



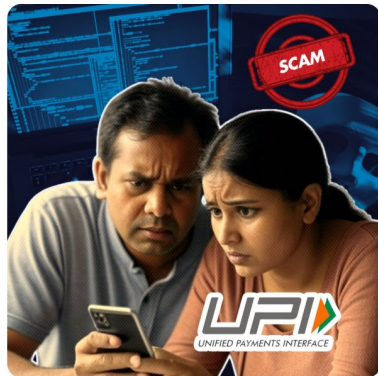
Transaction limit - 1 INR to 1 Lakh INR/day ~ 1 Cent to 1158 USD/day



## UPI transactions in 2025 showcase growth and adoption in India's digital payments.



# When payments get smarter, so do scammers!



CONSUMER SAFETY

## 1 in 5 Indian UPI Users Hit by Fraud Since 2022: Survey; RBI, NPCI Launch New Safeguards from June 30

A nationwide survey reveals 20% of UPI users faced fraud, prompting urgent new security measures by authorities.

 News Desk June 27, 2025

## UPI fraud cases surge by 85% in FY24: Key insights and data

For the ongoing FY24-25 period, 8,566 crore transactions have already been recorded, reflecting the platform's growing adoption even as fraud cases continue to rise.

## Digital Frauds, Including In UPI, Have Doubled: Home Ministry To Parliament

Data from the Union Home Ministry shows that in 2023-24, as many as 13.42 lakh incidents of UPI frauds were reported, compared to the 7.25 lakh reported in the previous year.

Written by: [Neeta Sharma](#) | [India News](#) | Mar 26, 2025 22:16 pm IST 



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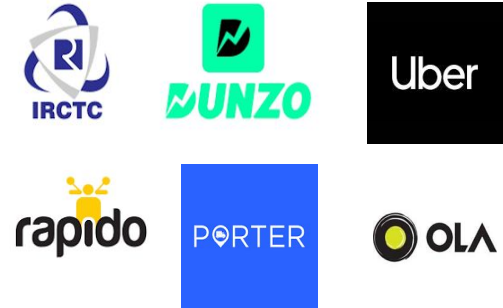
## E-commerce Apps



## Food Delivery Apps



## Transportation Apps



## How do we improve UPI security for users?

**RQ1:** What are UPI users' security perceptions, concerns, behaviors, and rationales?

**RQ2 :** Where do they learn their security awareness and behavior?

**RQ3 :** How does this correspond to official advice from banks, UPI providers, and regulatory bodies?



# Two-step approach studying UPI advice available and user-perception.

## Methodology:

- 1) Advice Analysis of **16 UPI entities**.
  - a) 2 regulatory bodies, 10 banks and 4 UPI applications.
  - b) Keywords like UPI, safety, security, privacy, tips, advice etc.
- 2) Semi-structured Interviews with **26 UPI users in India** using convenience sampling.

### 1) User Background

- Education
- Work
- Introduction to UPI
- Initial Reasons for UPI

### 2) User Mental Models & Motivations

- Major reasons
- Day-to-day usage
- Type of transactions
- UPI apps & frequency

### 3) Security Concerns & Challenges

- Watchful scenarios
- Transaction concerns
- Technical challenges
- Concerns with theft/lost device

### 4) Level of Awareness

- Handling issues
- Resolving problems
- Knowledge gaps
- Importance of safety

### 5) Safety Measures & Sources

- General safety steps
- Source of measures
- Device and application safety
- Guidance from UPI entities



## Categorized all available UPI advice into 6 distinct categories for comprehensive analysis.

### 1. *UPI Transaction Security Advice*

- *“Entering UPI PIN only for sending money”*
- *“Scanning QR only for sending money”*
- *“Check receivers' details”*



## Categorized all available UPI advice into 6 distinct categories for comprehensive analysis.

### 2. UPI User Data Protection Advice

- *“Never share personal, banking details”*
- *“Don’t save banking credentials on phone”*
- *“Don’t share details via calls, texts, emails”*



## Categorized all available UPI advice into 6 distinct categories for comprehensive analysis.

### 3. *Password Protection Advice*

- *“Never share PIN, OTP, CVV, Password”*
- *“Create strong/complex unique PIN”*
- *“Change PIN, password regularly”*



**Categorized all available UPI advice into 6 distinct categories for comprehensive analysis.**

#### ***4. Device and UPI Application Security Advice***

- *“Avoid public Wi-Fi networks”*
- *“Avoid third-party screen share apps”*
- *“Install and update valid anti-virus”*



**Categorized all available UPI advice into 6 distinct categories for comprehensive analysis.**

***5. Customer Support and Reporting Sources***

- *“Use valid helpline sources”*
- *“Download apps from Google Play/Apple store”*
- *“Report unauthorized transactions”*



**Categorized all available UPI advice into 6 distinct categories for comprehensive analysis.**

## ***6. Handling Unknown Situations***

- *“Avoid clicking unknown links”*
- *“Avoid unknown emails, texts, calls”*
- *“Avoid suspicious apps, cashback offers”*



## Participants avoid revealing financial information due to risk of financial exploitation.

*“It's [sharing financial information] a **risk**. So I think it should **not be mentioned publicly**, also where they live or how much they are earning.”*

— P02

Concern

Protective behavior

*“I think I **won't disclose salary** [. . .] obviously I would share it on a **personal level**, and I won't include it in a public post.”*

— P20

Participants treat financial details as highly sensitive, choosing to share them only in trusted, private interactions.



## Participants express concerns about fake profiles and the misuse of information, including unauthorized sharing and identity theft.

*“I know a man who is already married and has a child. I have seen his matrimonial profile in one of the groups [...] and I **felt that this is a scam.**”*

— P21

Concern

Protective behavior

*“If you see that the profile is quite **old and not a new one** [...] then you can get an idea that this person **cannot be fake.**”*

— P02

To avoid deception and fraud, users screen profiles, limit what they share, and rely on community for background checks.



## Participants fear that sharing personal contact and identifiable details increases the risk of harassment and abuse.

*“[Impersonators] talk in girl’s voice and call them, and they **kidnap** them and ask for ransom. It has been happening since long time ago, like 5, 6 years.”*

— P11

Concern

Protective behavior

*“They [people] should **not post their names and their parent’s name** [. . .] any information that clearly indicates who this person is.”*

— P05

To protect their identity and avoid harassment participants withhold names numbers and locations and prefer safer contact methods like email or social media.



## Participant use cross-platform verification of profiles (like LinkedIn, Instagram) to establish trust.

*“We can add them on **Snapchat** and ask for their live photos, or we can also go to their followers there, we can **check their friends** and ask about the person.”*

— P03

*“You can also get all the information, like from where the person has done **schooling, college, and graduation**. If person is currently working, then which company he or she is currently working at. Then you can also find the company members, you can also send a message to them and ask the person.”*

— P17

**Users build trust by verifying profiles across multiple social platforms, combining social and professional information to confirm authenticity.**



## Participants suggested platforms to restrict image download options and verification mechanisms for privacy reasons.

*“I would feel safer posting pictures if platforms prevented screenshots and image downloads.”*

— P08

*“They could have a **checkmark** beside them saying that this is the verified identity. Then, perhaps, people will be **more comfortable**.”*

— P09

**Users strongly desire privacy features and platform-level verification to feel safer sharing personal photos and information online.**



## Recommendations to UPI users and entities

### Recommendations to UPI Users :

1. Rely on official websites or banking apps for accurate information and updates.
2. Familiarize with all UPI settings for enhanced security and convenience.
3. Be cautious with QR codes, especially in unknown situations, to prevent fraudulent transactions.
4. Refrain from sharing information with unfamiliar individuals or taking guidance.

### Recommendations to UPI Entities :

1. Improve the accessibility of advice on websites and commonly used platforms for users.
2. Prioritize educating their users about device and app-related security.
3. Conduct targeted awareness campaigns, addressing diverse user knowledge.
4. Ensure promotion and accessibility of all security options in UPI apps, highlighting advanced features.



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## Study Motivation:

- UPI is widely implemented and used across.
- UPI enables instant payments for millions but rising fraud threatens user trust.

## Findings :

- Users are aware of basic safety measures but not to significant extent.
- Entities offer vast amount of advice on websites but doesn't completely reach end-users.

## Methodology:

- Advice Analysis of 16 UPI entities –  
2 regulatory bodies, 10 banks and 4 UPI applications.
- Semi-structured Interviews with 26 UPI users in India.

## Recommendations:

- Users should stay updated with official safety advice and available features and settings.
- Entities should promote targeted advice and educate through various platforms.



*Deepthi Mungara, Harshini Sri Ramulu, Yasemin Acar,  
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