IJRAR.ORG E-ISSN: 2348-1269, P-ISSN: 2349-5138
INTERNATIONAL JOURNAL OF RESEARCH AND ANALYTICAL REVIEWS (IJRAR) | IJRAR.ORG
An International Open Access, Peer-reviewed, Refereed Journal

A Study on Consumer Usage Patterns of Fintech Services in Public and Private Sector Banks in Ahmedabad.

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Abstract

UPI and QR-code payment is the fintech service that bank customers in Ahmedabad use most: 115 of 124 respondents (92.7%) use it. This study surveyed 124 customers who hold accounts in selected public and private sector banks. It looked at three things: which fintech services people use, how often and in what pattern they use them, and whether their views on service quality, information accuracy, and security and bank reputation change with how often they use fintech.

After UPI, the most used services were money transfer (65.3%), mobile/DTH recharge (62.1%), online shopping (61.3%) and bill payment (58.1%). Investment (36.3%) and insurance (23.4%) were used much less. Google Pay was the leading app (83.9%). Almost half of the respondents (46%) use fintech "always". Customers of public and private sector banks used services in a very similar way, and age, gender, education, income and occupation did not change how often people used fintech. Awareness did: 51% of aware customers were "always" users, against 20% of those who were not aware.

Frequent users held clearly better views. People who use fintech "always" rated service quality, information accuracy and security significantly higher than other users (one-way ANOVA, $p < 0.05$ for all three). Views on bank reputation did not differ significantly by frequency of use ($p = 0.126$). The study suggests that banks should focus on building awareness, giving users confidence about data safety, and improving customer support, rather than relying on their brand name alone.

Keywords: fintech, UPI, digital banking, public sector banks, private sector banks, service quality, security concerns.

1. Introduction

Fintech, short for financial technology, uses modern technology to make financial services faster, easier, and cheaper. Paying a shopkeeper by scanning a QR code, recharging a phone from an app, or buying insurance online are all examples of fintech in daily life.

India has become one of the world's largest users of digital payments. The Unified Payments Interface (UPI), launched in 2016 by the National Payments Corporation of India (NPCI), allows people to send money instantly from a mobile phone. Government programmes such as Digital India and Jan Dhan Yojana, the 2016 demonetisation, and the COVID-19 pandemic all pushed more people towards digital payments.

Banks are at the centre of this change. Public sector banks such as the State Bank of India (SBI) and Bank of Baroda (BOB) serve a very large and varied customer base. Private sector banks such as HDFC, ICICI and Axis are often seen as quicker to adopt new technology. At the same time, third-party apps such as Google Pay, PhonePe and Paytm now handle most UPI payments, even though the money still sits in a bank account.

Ahmedabad is the largest city in Gujarat and a major trading and business centre. It has a strong culture of small business and a growing young, educated workforce, which makes it a useful place to study how ordinary bank customers use fintech.

1.1 Need for the study

Most studies of fintech in India look at adoption in general or at one type of service such as UPI. Fewer studies look at a single city, compare customers of public and private sector banks, and check whether people who use fintech more often see it differently. Banks need this information to decide where to invest: in better service, in better information, in stronger security, or in their brand. This study tries to fill that gap for Ahmedabad.

2. Review of literature

Past research gives four main ideas that shape this study.

Why people adopt technology. The Technology Acceptance Model (Davis, 1989) says people adopt a technology when they find it useful and easy to use. The Unified Theory of Acceptance and Use of Technology (Venkatesh, 2003) adds social influence and supporting conditions. (Hu, 2019) extended this model to fintech services offered by banks and found that trust in the bank and perceived risk strongly shape whether users adopt fintech.

What fintech is and how it changes banking. (Arner, 2026) Describe fintech as a new stage in the long link between finance and technology, speeded up after the 2008 financial crisis. (Gomber, 2017) Group fintech into payments, lending, investment, insurance and advisory services. This grouping is the base for the list of services used in this study.

Service quality and information quality. The SERVQUAL model (Parasuraman, 1988) explains service quality through reliability, responsiveness, assurance, empathy and tangibles. For digital services, the (DeLone, 2003) model of information system success shows that system quality, information quality and service quality together drive user satisfaction and continued use. In this study, items like "fast and reliable", "customer support" and "available 24/7" measure service quality, while "accurate balance", "timely transaction details" and "OTP on time" measure information accuracy.

Security, trust and bank reputation. Perceived risk is one of the biggest barriers to fintech use. (Ryu, 2018) found that worries about financial loss, legal issues and security make users hesitant, while convenience and economic benefits make them willing. (Gefen, 2003) showed that trust works together with ease of use and usefulness in online settings. A bank's reputation acts as a signal of trust: customers may feel safer using a fintech service when it comes from a bank they already know.

Research gap. Much of this work tests whether people intend to adopt fintech. Less is known about how actual frequency of use relates to what people think about service quality, accuracy, security and reputation, especially at the city level and across public and private sector bank customers. This study looks at that link in Ahmedabad.

3. Objectives and hypotheses

3.1 Objectives

1. To identify the different types of fintech services mostly used by customers of public and private sector banks in Ahmedabad.
2. To examine the use patterns of fintech services by consumers of selected public and private sector banks in Ahmedabad.
3. To examine whether customers' perceptions of service quality, information accuracy, security and bank reputation differ with their frequency of fintech use.

3.2 Hypotheses

For Objective 2:

- **H01:** Frequency of fintech use does not depend on demographic factors (gender, age, education, occupation, income, marital status).
- **H02:** Frequency of fintech use does not depend on the type of bank the customer holds an account with (public, private or both).
- **H03:** Frequency of fintech use does not depend on awareness of the bank's fintech services.

For Objective 3:

- **H04:** There is no significant difference in perceived **service quality** across frequency-of-use groups.
- **H05:** There is no significant difference in perceived **information accuracy** across frequency-of-use groups.
- **H06:** There is no significant difference in perceived **security** across frequency-of-use groups.
- **H07:** There is no significant difference in perceived **bank reputation** across frequency-of-use groups.

4. Research methodology

This is a descriptive and analytical study based on primary data from 124 bank customers living in Ahmedabad.

Element	Details
Research design	Descriptive and analytical (cross-sectional survey)
Area of study	Ahmedabad city, Gujarat
Population	Customers holding accounts in public and/or private sector banks
Banks covered	Public: SBI, Bank of Baroda, Union Bank, PNB and others. Private: HDFC, ICICI, Axis, Kotak Mahindra and others
Sampling method	Convenience sampling (non-probability)
Sample size	124 respondents
Data collection tool	Structured online questionnaire (Google Form), August 2025 to June 2026 (82% of replies came by December 2025)
Measurement	Demographics; awareness and app use; multiple-choice list of services; frequency of use (Never, Sometimes, Often, Always); 22 statements on a 5-point Likert scale (1 = Strongly disagree to 5 = Strongly agree)

Element	Details
Statistical tools	Percentages, mean and standard deviation, Cronbach's alpha, chi-square test, one-way ANOVA, Kruskal–Wallis test, Mann–Whitney U test, Spearman correlation
Level of significance	5% ($p < 0.05$)

4.1 How the perception scores were built

The questionnaire had four groups of statements: service quality (6), information accuracy (6), security (5) and bank reputation (5). Each group had mostly positive statements, and three groups also had one negative statement (for example, "The fintech app is more difficult than the traditional banking system").

Reliability was checked with Cronbach's alpha, where 0.70 or above is usually accepted. When the negative statements were included (after reverse scoring), alpha fell to about 0.46–0.54, which is too low. The negative statements were answered in a very mixed way, which suggests some respondents misread them. They were therefore kept for item-level discussion but left out of the group scores. The final scores are reliable:

Table 4.1 descriptive statistics of Study Variables

Perception area	Statements used	Cronbach's alpha
Service quality	5	0.770
Information accuracy	5	0.775
Security	4	0.786
Bank reputation	5	0.874

Each respondent's score for an area is the average of their answers to its statements, so it runs from 1 (very negative) to 5 (very positive).

4.2 Data cleaning

Spelling differences in free-text answers (for example "Ahmedabad", "Make" for Male, "Nutral" for Neutral) were corrected. Two overlapping income options ("Up to 5 lakhs", "5–15 lakhs") were merged into the nearest band. Names and e-mail addresses were removed and not used in analysis.

5. Profile of respondents

The sample is young and well educated: average age is 30.5 years, 74% are 35 or younger, and 85% are graduates or above. Most respondents (68.5%) hold accounts in both a public and a private sector bank.

Table 5.1 Respondents Profile

Characteristic	Group	Number	Percent
Gender (n = 124)	Male	72	58.1
	Female	52	41.9
Age (n = 124)	18–25 years	54	43.5
	26–35 years	38	30.6
	36–45 years	19	15.3

Characteristic	Group	Number	Percent
	46 years and above	13	10.5
Marital status (n = 124)	Unmarried	72	58.1
	Married	51	41.1
	Other	1	0.8
Education (n = 124)	Post graduate	51	41.1
	Graduate	41	33.1
	Ph.D. / Post-doctorate	14	11.3
	12th	15	12.1
	10th	3	2.4
Occupation (n = 122)	Private service	49	40.2
	Student	40	32.8
	Self-employed	15	12.3
	Government service	11	9.0
	Homemaker	5	4.1
	Retired	2	1.6
Annual income (n = 80)	Up to ₹2 lakh	12	15.0
	₹2–4 lakh	19	23.8
	₹4–6 lakh	16	20.0
	₹6–8 lakh	13	16.3
	Above ₹8 lakh	20	25.0
Type of bank (n = 124)	Both public and private	85	68.5
	Public sector only	29	23.4
	Private sector only	8	6.5
	Not stated	2	1.6
Account in primary bank (n = 124)	Savings	118	95.2
	Current	6	4.8

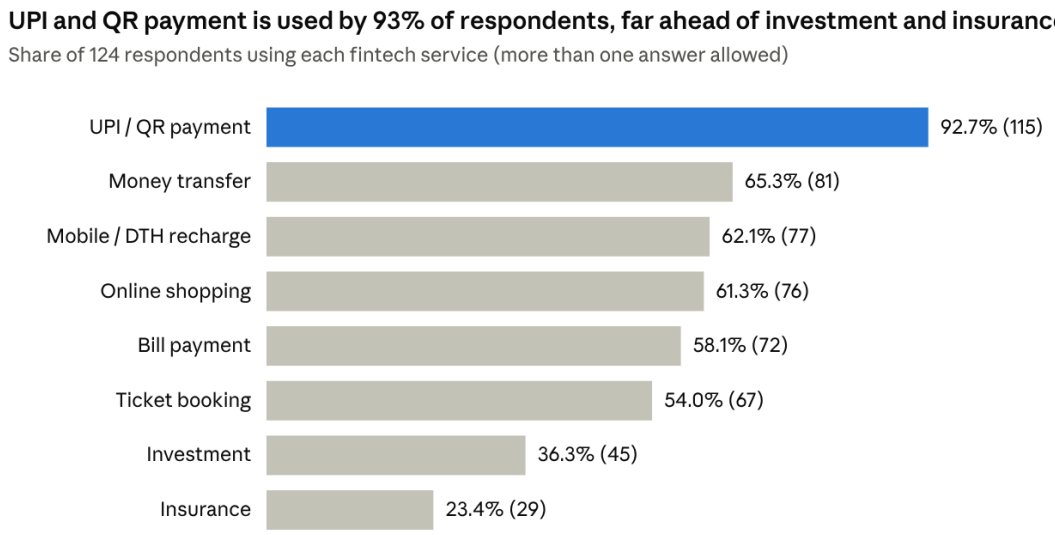
44 respondents did not state their income, so income results should be read with care.

Banks held. Among public sector banks, SBI was the most common (57 respondents), followed by Bank of Baroda (23), Union Bank (10) and PNB (6); 38 named another public bank. Among private sector banks, HDFC led (36), followed by ICICI (24), Axis (22) and Kotak Mahindra (5); 24 named another private bank.

6. Objective 1: Types of fintech services used

Payment services lead by a wide margin. UPI/QR payment is used by almost everyone, while investment and insurance through fintech are used by only about one in three and one in four respondents.

Figure-1 Fintech Services Uses



Survey of 124 bank customers in Ahmedabad, 2025–26 · multiple-response question

The services fall into three clear levels:

- Daily payments (used by over 90%): UPI/QR payment.
- Regular transactions (used by 54–65%): money transfer, mobile/DTH recharge, online shopping, bill payment and ticket booking.
- Wealth and protection (used by 23–36%): investment and insurance.

On average, each respondent uses 4.5 of the 8 services (median 5). About 22% use only one service, while 16% use all eight.

6.1 Public vs private sector bank customers

Customers of both types of banks use fintech services in much the same way. No service showed a significant difference between the groups (chi-square test, all $p > 0.05$).

Table 6.1 Public and Private sector banks descriptive statistics

Service	Public sector only (n = 29)	Both public and private (n = 85)	Private sector only (n = 8)	Chi-square p-value
UPI / QR payment	89.7%	95.3%	87.5%	0.072
Money transfer	75.9%	61.2%	75.0%	0.457
Mobile / DTH recharge	72.4%	57.6%	75.0%	0.437
Online shopping	65.5%	61.2%	50.0%	0.860
Bill payment	51.7%	57.6%	75.0%	0.412
Ticket booking	51.7%	54.1%	62.5%	0.959

Service	Public sector only (n = 29)	Both public and private (n = 85)	Private sector only (n = 8)	Chi-square p-value
Investment	31.0%	38.8%	37.5%	0.631
Insurance	13.8%	24.7%	50.0%	0.148

One pattern is worth noting even though it is not statistically significant: insurance and investment use rise as customers move from public-only to private-bank relationships. The private-only group is very small (8 people), so this needs a larger sample to confirm.

6.2 Fintech apps used

Google Pay is by far the most popular app, used by 104 respondents (83.9%). Paytm (48, 38.7%), PhonePe (37, 29.8%) and BHIM (24, 19.4%) follow. Most people (57%) rely on a single app; the rest use two to four apps. Google Pay leads in every bank group, while Paytm and PhonePe are more common among customers who also hold a private sector bank account.

UPI/QR payment is the most used fintech service, followed by money transfer, recharge, online shopping and bill payment. Investment and insurance are the least used. Public and private sector bank customers do not differ significantly in the services they use.

7. Objective 2: Use patterns of FinTech services

7.1 How often people use FinTech

Fintech is part of daily life for most respondents: 84% are aware of their bank's fintech services, 85.5% say they use a fintech app, and 46% use fintech "always". How often people use fintech depends on awareness, not on who they are or which bank they hold.

Table 7.1 Descriptive Statistics of Fintech Uses

Frequency of use	Number	Percent
Always	57	46.0
Often	25	20.2
Sometimes	25	20.2
Never	17	13.7
Total	**124**	**100**

Two in three respondents (66%) use fintech often or always. The 26–35 age group (63% "always") and people in private service (57% "always") are the heaviest users. Students are more spread out: only 33% use FinTech "always".

7.2 Frequent users use more services and more apps

The more often a person uses FinTech, the wider the range of services and apps they use. Both differences are statistically significant (Kruskal–Wallis test).

Table 7.2 Descriptive statistics of Frequent Users

Frequency group	**Average number of services used (out of 8)**	**Average number of apps used (out of 4)**
Never (n = 17)	2.3	1.2
Sometimes (n = 25)	3.4	1.4
Often (n = 25)	4.8	1.8
Always (n = 57)	5.6	2.0
Test result	H = 28.21, p < 0.001	H = 15.32, p = 0.002

In simple words, regular users do not just pay by UPI more often; they also move on to bill payments, shopping, ticket booking, investment and insurance. Fintech use grows step by step, starting with payments.

7.3 Awareness and frequency of use

Awareness has a strong link with use. Half of the aware customers use fintech "always", while 40% of the unaware customers never use it.

Table 7.3 Descriptive statistics of Awareness

Aware of bank's fintech services?	Never	Sometimes	Often	Always	Total
Yes	9 (8.7%)	19 (18.3%)	23 (22.1%)	53 (51.0%)	104
No	8 (40.0%)	6 (30.0%)	2 (10.0%)	4 (20.0%)	20

Chi-square = 17.89, df = 3, p < 0.001.

7.4 Does frequency of use depend on the customer's profile?

Table 7.4 Descriptive statistics of study variables

Factor	**Chi-square**	**df**	**p-value**	**Result**
Gender	1.45	3	0.695	Not significant
Age group	8.86	9	0.450	Not significant
Marital status	1.60	6	0.952	Not significant
Education	15.70	15	0.402	Not significant
Occupation	15.84	15	0.393	Not significant
Annual income (n = 80)	17.70	12	0.125	Not significant
Type of bank (public / private / both)	9.04	9	0.434	Not significant
Awareness of fintech services	17.89	3	< 0.001	**Significant**

Some cells in these tables have small counts, so the chi-square results are a guide rather than final proof.

Hypothesis results: H01 (demographics) and H02 (type of bank) are **accepted**: frequency of use does not depend on gender, age, education, occupation, income, marital status or bank type. H03 is **rejected**: frequency of use does depend on awareness.

Fintech use in Ahmedabad is frequent and wide. Use is spread evenly across age, gender, income and bank type, which shows that fintech has become a mass habit rather than a privilege of one group. Awareness is the key factor: customers who know about their bank's fintech services use them far more often, and frequent users take up a wider range of services.

8. Objective 3: Perceptions by frequency of fintech use

Customers who use fintech "always" have significantly better views of service quality, information accuracy and security than less frequent users. Views on bank reputation do not change significantly with frequency of use.

8.1 Overall perceptions

Overall, respondents view fintech positively. All four areas score close to 4 ("Agree") on the 5-point scale.

Table 8.1 Descriptive statistics of Overall perception

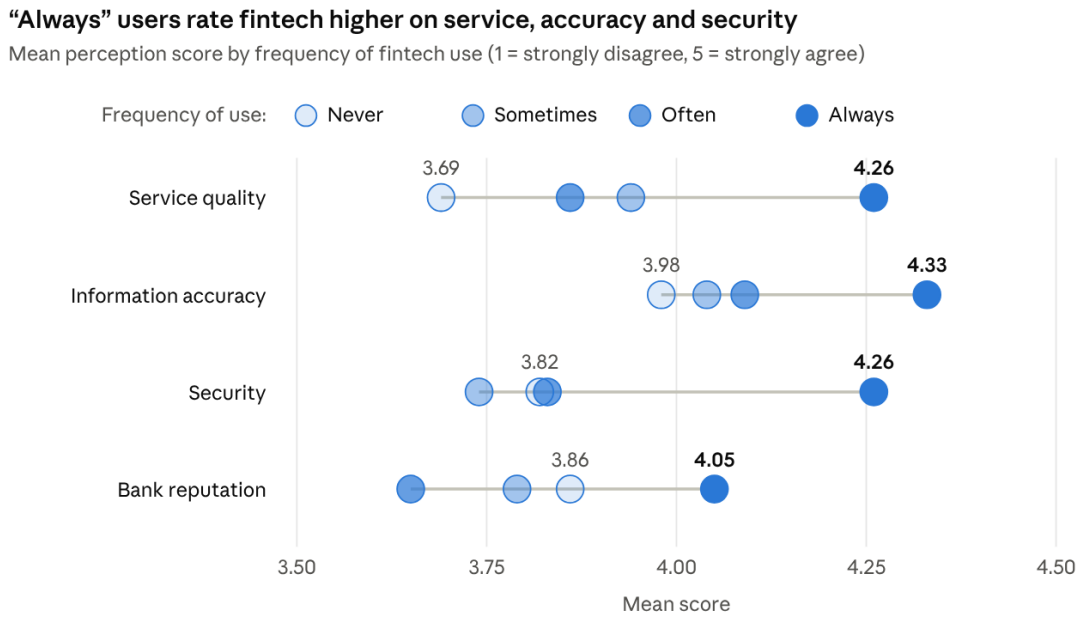
Perception area	Mean	Standard deviation	Level
Information accuracy	4.18	0.55	High
Service quality	4.04	0.60	High
Security	4.01	0.66	High
Bank reputation	3.89	0.75	Moderately high

At the statement level, the strongest points are an accurate account balance (4.35), timely and correct transaction details (4.28), fast and reliable service (4.26) and OTPs that arrive on time (4.22). The weakest points are the belief that personal and financial data is safe (3.75), customer support when needed (3.81) and the role of bank reputation in motivating use (3.80).

The three negative statements tell an important story. About 39.5% of respondents agree that they hesitate to use fintech because of security worries, 39.5% say the app sometimes shows confusing or incorrect information, and 37.1% find the app harder than traditional banking. So, while the average view is positive, a sizeable minority still has doubts.

8.2 Do perceptions change with frequency of use?

Figure 2: Customer perception about Fintech



Survey of 124 bank customers in Ahmedabad, 2025–26 · group sizes: Never 17, Sometimes 25, Often 25, and Always 57

The pattern is clear: the "Never", "Sometimes" and "Often" groups give fairly similar scores, and the "Always" group stands well above them in three of the four areas.

Table 8.2 Descriptive statistics study objectives.

Perception area	ANOVA F (3, 120)	ANOVA p	Kruskal–Wallis H	K–W p	Effect size (η^2)	Hypothesis
Service quality	6.13	< 0.001	14.12	0.003	0.133 (medium)	H04 rejected
Information accuracy	3.19	0.026	7.88	0.049	0.074 (medium)	H05 rejected
Security	5.82	< 0.001	16.04	0.001	0.127 (medium)	H06 rejected
Bank reputation	1.94	0.126	6.22	0.101	0.046 (small)	H07 accepted

The Kruskal–Wallis test, which does not assume normal data, gives the same conclusions as ANOVA. This matters because the spread of service quality scores was not equal across groups (Levene's test p = 0.049).

Which groups differ? Pairwise Mann–Whitney tests show that the difference comes from the "Always" group:

- **Service quality:** Always users score higher than Never (p = 0.009), Sometimes (p = 0.028) and Often (p = 0.002) users.
- **Security:** Always users score higher than Never (p = 0.034), Sometimes (p = 0.001) and Often (p = 0.003) users.

- **Information accuracy:** Always users score higher than Sometimes ($p = 0.033$) and Often ($p = 0.046$) users; the gap with Never users is close to significant ($p = 0.060$).
- **Bank reputation:** No consistent difference.

The Never, Sometimes and Often groups do not differ from each other in any area.

Strength of the link. Treating frequency as an ordered scale (Never = 0 to Always = 3), Spearman correlations are positive but modest: security $\rho = 0.33$ ($p < 0.001$), service quality $\rho = 0.31$ ($p < 0.001$), information accuracy $\rho = 0.24$ ($p = 0.007$) and bank reputation $\rho = 0.15$ ($p = 0.092$, not significant).

Perceptions of service quality, information accuracy and security differ significantly with frequency of fintech use, and the main gap is between "always" users and everyone else. Perceptions of bank reputation do not differ significantly. Because this is a survey at one point in time, the study cannot say which comes first: good experiences may lead to more use, or more use may build confidence. Most likely, both work together.

9. Discussion

Payments open the door. UPI/QR payment is used by nearly everyone, and frequent users go on to use many more services. This supports the idea that fintech adoption grows in steps: people start with simple, low-risk payments and then, as trust builds, move to bills, shopping, investment and insurance. Investment and insurance remain the least used, which is in line with Ryu (2018): when more money is at stake, people feel more risk.

Third-party apps lead, banks stay in the background. Google Pay is used by 84% of respondents, regardless of whether they bank with a public or private sector bank. The bank provides the account, but the customer's daily experience is mostly through a third-party app. This may explain why bank type made no difference to how people use fintech.

Fintech has become a mass habit. Frequency of use did not depend on age, gender, education, income, occupation or bank type. Only awareness mattered. This fits the Technology Acceptance Model (Davis, 1989): once people know a service exists and find it easy and useful, they use it, whoever they are.

Experience and trust grow together. "Always" users rate service quality, accuracy and security clearly higher. This matches the DeLone and McLean (2003) model, where good system and information quality lead to satisfaction and continued use. It also suggests a "confidence gap": occasional users have not yet had enough good experiences to feel fully safe.

Bank reputation is not the driver. Unlike the other three areas, views on bank reputation did not change with frequency of use, and this area had the lowest average score. Customers seem to judge fintech by how well it works, not by the name of the bank behind it. This differs from studies that treat trust in the bank as a main driver (Hu et al., 2019), and may again reflect the strong role of third-party apps.

10. Conclusion

This study of 124 bank customers in Ahmedabad finds that fintech use is high, frequent and similar across public and private sector bank customers. UPI/QR payment is the most used service, followed by money transfer, recharge, shopping and bill payment, while investment and insurance lag behind. Awareness is the one factor that clearly drives frequency of use. People who use fintech "always" have significantly better views of service quality, information accuracy and security, but their view of bank reputation is no different from other users. In short, what keeps customers using fintech is a service that works well and feels safe, not the bank's name alone.

11. Suggestions

- **Build awareness.** Banks should actively promote their own fintech services in branches, through SMS and through simple video guides, since awareness is the strongest link to use.
- **Move users beyond payments.** Banks can offer easy, small-ticket entry points for investment and insurance (for example, small SIPs or simple term insurance inside the app) to frequent UPI users.
- **Strengthen data-safety messaging.** About 40% of respondents still hesitate because of security. Clear in-app messages about how data is protected, quick fraud reporting and visible safety features can close this gap.
- **Improve customer support.** Support availability scored among the lowest items. Chat support, call-back options and faster complaint resolution inside the app are needed.
- **Reduce confusing information.** Nearly 40% said apps sometimes show confusing or incorrect information. Simpler screens and clearer transaction messages, especially in Gujarati and Hindi, would help.
- **Focus on occasional users.** The biggest gain lies in turning "sometimes" and "often" users into regular users through rewards, reminders and guided first-time use of new services.

12. Limitations and scope for future research

- The sample (124) was chosen by convenience and is young and well educated, so results may not represent all bank customers in Ahmedabad.
- Only 8 respondents banked with private sector banks alone, which limits the public vs private comparison.
- 44 respondents did not report income.
- Some answers were inconsistent: all 17 "Never" users still named a fintech app they use, so "Never" may mean "rarely" or "not through my banks own app".
- The negative statements had to be left out of the perception scores because they lowered reliability.
- The survey was taken at one point in time, so cause and effect cannot be proven.

Future studies could use a larger random sample across Gujarat, compare banks' own apps with third-party apps directly, include rural customers and older adults, and track the same users over time.

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