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Research Article

A Study on Strategies to Enhance Payment Banks Usage Among Students of Selected Higher Education Institutions of North India with Reference to Rajasthan

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Abstract:

Payment Banks - a differentiated model for financial inclusion by Reserve Bank of India Payment Banks introduced in 2015 represent a new and differentiated banking model designed to further financial inclusion among the unbanked and under-banked population in India. This has been accomplished through an expansion of digital payment systems following demonetisation in 2016 and the UPI revolution. However, payment bank adoption remains limited among students enrolled in higher education institutions (HEIS) of North India, particularly in Rajasthan. This paper will analyse strategies to enhance usage of payment bank services among this demographic based exclusively on secondary data sources from RBI annual reports up to 2022-23; NPCI publications; PMJDY portal data; Dun & Bradstreet databases; and peer reviewed Scopus indexed literature published up to 2023. Key barriers that have been identified as limitations to adopting payment bank services are – insufficient awareness of these services by students; trust deficiencies with regards to security of personal information; restrictive scope of service offerings by Payment Banks; digital illiteracy gaps between students and technology used by Payment Banks; and perceived risk associated with transaction process. A multi-part strategy will be proposed by the author to build adoption of payment bank services among students enrolled in HEIS in northern India - including campus-based financial literacy programmes; product design initiatives that target the needs of students; technological advances that make it easier for students to use their mobile devices to access payment bank services; partnership initiatives between payment bank managers and educational policy makers/regulators; trust-building mechanisms to address student concerns about security and confidentiality of personal information; and policy level interventions to support the development of both technology and the capabilities of both students and teachers in using them.

Keywords: Payment Banks, Financial Inclusion, Digital Payments, Student Adoption, Rajasthan, RBI, NPCI, UPI, Fintech Strategy, Higher Education Institutions, North India

Introduction

The Indian financial services ecosystem has undergone a fundamental paradigm shift since 2008. A convergence of regulatory innovation, technological advancements and expansion in financial inclusion initiatives driven by the government have been driving forces behind this transformation. The Reserve Bank of India (RBI) acted upon the recommendations of the Nachiket Mor Committee on the

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Committee on Comprehensive Financial Services for Small Businesses and Low-Income Households. The RBI, based upon the recommendations of the Committee, introduced the guidelines for the licensing of a new type of differentiated bank -- the Payment Bank in November 2014. In August 2015, the RBI granted in principle licenses to eleven entities which signalled the launch of the Payment Bank Era in India (RBI, 2015) ^[16].

A Payment Bank is authorized to accept demand deposits of up to Rs. 200,000 per individual customer; issue debit cards; issue prepaid payment instruments (PPIs); provide internet banking facilities and facilitate domestic money transfers. Notably, a Payment Bank is restricted from lending money; issuing credit cards; receiving deposits from Non-Resident Indians (NRIs) etc. (RBI, 2014) ^[15]. These restrictions position Payment Banks as transactional and saving institutions rather than credit intermediaries thereby positioning them to serve low-income individuals and/or first-time banking customers.

The rationale for introducing Payment Banks was part of India's overall financial inclusion strategy. The RBI developed the National Strategy for Financial Inclusion (NSFI) 2019-24 in collaboration with the Government of India and other regulatory bodies (SEBI, IRDAI and PFRDA). The objectives included: ensuring all villages have banking services available to each village within a distance of 5 km by March 2020; developing digital payments systems that enable India to transition towards a cashless economy by March 2022; and enabling every adult in India to be able to access a financial service provider via their mobile phone by March 2024 (RBI, 2020) ^[17].

By early 2023, there were six operational Payment Banks in India: Airtel Payments Bank, India Post Payments Bank (IPPB), Fino Payments Bank, Jio Payments Bank, Paytm Payments Bank, and NSDL Payments Bank. Amongst these, Airtel Payments Bank had pioneered Payment Banking in Rajasthan when it launched its first Payment Bank pilot in November 2016 with the slogan "Banking is now at your fingertips – India's First Payment Bank" (Exegue, 2022) ^[4]. IPPB, utilizing its network of 1.55 lakh post offices and three lakh postal employees, had collected over six crores of accounts by 2023 (IPPB Annual Report, 2022-23) ^[6] focusing primarily on rural and semi-urban demographics.

Although an enabling regulatory and institutional structure exists for the adoption of Payment Banks amongst students studying in Higher Educational Institutions (HEIs) located in North India -- a demographic that is digitally engaged; economically transitioning; and institutionally accessible -- the level of adoption of Payment Banks amongst students in North India-based HEIs remains significantly lower than possible. Students constitute a highly relevant demographic for Payment Banks: they are digital native consumers with very high smartphone penetration rates; they are at a stage of forming their financial behaviour patterns; and they are geographically clustered on campus environments thereby facilitating targeted interventions. Therefore, understanding why students have not adopted Payment Banks to a greater extent; and identifying effective strategies to enhance this

adoption rate is therefore both academically and a policy imperative.

Rajasthan provides a particularly relevant case study location. Rajasthan is home to numerous HEIs including Banasthali Vidyapeeth (a Deemed University with a large residential student body); the University of Rajasthan; Rajasthan Technical University; and several private universities. Additionally, the state has considerable rural and semi-urban demographics meaning that students enrolled into higher education institutions in Rajasthan comprise many first-generation banking users who could potentially benefit from Payment Banks' mobile-first/low-KYC features.

This research utilizes secondary data methodology to: (i) track the development and financial performance of Payment Banks in India until 2022-23; (ii) situate this within India's evolving digital payment and financial inclusion trends; (iii) identify impediments to Payment Bank adoption among students; and (iv) outline a holistic strategic framework for enhancing such adoption.

2. REVIEW OF LITERATURE

There have been many scholarly works on Digital Payment Banks and digital financial inclusion in India since 2015. Below is a review of the most important contributions through to 2023.

Pramani & Iyer (2023) ^[13] used a grounded theory methodology with interview data from target customer groups (migrant labourers and small vendors) and Payment Bank Managers to find the primary reasons why there is a low level of uptake. They determined the three major barriers to be lack of awareness, lack of confidence/ trust, and lack of a perceived need. Additionally, they found that the current delivery channels i.e., bank mitras, did not offer any additional benefits to customers compared to using the Payment Bank model. Most importantly, Pramani & Iyer's research was conducted at a time when COVID-19 impacted all countries and therefore exposed the vulnerable nature of financially excluded populations while it rapidly increased the demand for digital payments.

Gupta *et al.* (2019) ^[5] in their publication titled "Examining the moderating effects of perceived credibility in the UTAUT framework for predicting payment banks' adoption intent among Indian customers" extended the Unified Theory of Acceptance and Use of Technology (UTAUT) framework with perceived credibility to investigate how credible a customer believes a Payment Bank to be (i.e., secure and private) affects an individual's adoption intention for Payment Banks. Their SEM analysis revealed that performance expectancy, effort expectancy, social influence, and facilitating conditions were significant predictors of behavioural intention to utilize Payment Banks. Furthermore, Gupta *et al.*'s (2019) ^[5] research demonstrated that perceived credibility moderated the relationship between performance expectancy and adoption intention.

Kajol *et al.* (2022) ^[7] completed a systematic review of 132 studies related to digital financial transactions adoption in India published in Technological Forecasting and Social Change (Elsevier, SSCI-indexed). Kajol *et al.*'s (2022) ^[7] synthesis indicated that usage cost, complexity, aversion to adapting new technologies, perceptions of risk, and concern about data privacy were the top five barriers to digital financial transaction adoption in India. Therefore, these findings can be applied to the use of Payment Banks by students in India who are especially concerned about transaction fees and data privacy issues when selecting a bank or other financial institution.

In addition, Singh & Rana (2017) ^[22] investigated students' perceptions regarding the use of digital payment systems in India and reported that student perceptions concerning security and usability were positively correlated with an individual's intention to adopt digital payment systems. Consequently, Singh & Rana's (2017) ^[22] findings support including building trust and enhancing users' experiences into the central strategic components of a payment banks adoption strategy for students.

Finally, Mishra & Bisht (2013) ^[8], authors of an article in Telecommunications Policy (Elsevier), identified infrastructure constraints and digital illiteracy as two limitations to mobile banking adoption in semi-rural and rural areas in India. Although Mishra & Bisht's (2013) ^[8] study was focused on mobile banking; however, the framework that they developed is relevant to explaining the challenges faced by students in adopting payment banks in Rajasthan's Tier-2 and Tier-3 educational institutions.

ResearchGate's (2023) bibliometric study on digital payment research in India, focusing on Scopus-indexed publications from 2010 to 2023, concluded that India accounts for approximately 79.4% of global publications on digital payment topics. As a result, the research themes of consumer adoption, trust, and financial literacy validated the academic

relevance and timeliness of the focus of this paper's research question.

Additionally, Dvara Research Foundation's (2022) ^[1] report "Tracking Performance of Payment Banks Against Inclusion Goals" identified significant differences in deposit growth rates across Payment Banks. For example, Paytm Payments Bank deposits grew by 350% over a 9-month period commencing March 18, while deposits declined for Fino Payments Bank during the same period. Finally, Dvara Research Foundation (2022) ^[1] reported that by April 2019 Paytm Payments Bank accumulated deposits exceeding Rs. 500 crores. While the above-mentioned data may be somewhat dated, it does illustrate the commercial feasibility of this business model if properly promoted.

Rajan & Singh (2018) ^[14] explored the roles of social influence and financial literacy in digital banking adoption among young consumers in India. Rajan & Singh (2018) ^[14] discovered that peer influence and higher education level financial literacy were significant accelerators of adoption. Thus, this supports campus-based intervention methods presented within section eight of this paper.

3. OBJECTIVES OF THE STUDY

The main goal of this research is as follows:

1. Identify ways to grow Payment Banks' use by students at the Higher Education Institutions (HEI) in North India, particularly those in Rajasthan.

Secondary goals are:

1. To assess how Payment Banks have performed financially and how their number has grown from 2015-2016 through 2022-2023 based on available information.
2. Determine the present state of India's Digital Payment Ecosystem, and whether or not it will contribute to students adopting Payment Banks.
3. Determine the structural/behavioural impediments to students adopting Payment Banks.
4. Propose a multi-faceted strategic plan for increasing Payment Bank use among students attending HEIs in Rajasthan

4. RESEARCH METHODOLOGY

This study uses a descriptive/analytic research methodology. Because we are mapping macro level performance, identifying sectorial barriers for performance improvement, developing a strategic framework (and not measuring student level adoptions) secondary data methodology will be sufficient. It should also be noted that using secondary data has an inherent weakness in that no direct measures can be made of attitudinal information with respect to the respondents, therefore, it would make sense to collect primary data by surveying

students at higher education institutions in Rajasthan as the logical next step for the program.

All data used in this study have been drawn from sources published up to and including the year 2023. The secondary data sources are listed in Table 1 below.

4.1 DATA SOURCES

Table 1: Secondary Data Sources Used in the Study (Data up to 2023) Source: Compiled by Authors

S.No.	Source	Data Accessed	Relevance to Study
1	RBI Annual Reports (2015–16 to 2022–23)	Payment Bank regulatory framework, deposit limits, licensing data	Primary regulatory source
2	RBI Report on Trend & Progress of Banking in India 2022–23	Differentiated bank performance, scheduled commercial bank data, financial inclusion metrics	Sector performance benchmarking
3	RBI Report on Trend & Progress of Banking in India 2019–20	Payment Bank baseline, CASA data, financial inclusion milestones	Historical baseline
4	NPCI UPI Ecosystem Statistics (up to December 2023) ^[10]	UPI transaction volume, value, app-wise market share (monthly)	Digital payment adoption metrics
5	Pradhan Mantri Jan-Dhan Yojana Portal (pmjdy.gov.in)	Cumulative account opening data, deposit amounts, beneficiary counts (up to 2023)	Financial inclusion baseline
6	RBI Financial Inclusion Index (FI-Index) 2021–2023	Composite FI measurement: Access (35%), Usage (45%), Quality (20%)	Macro financial inclusion indicator
7	RBI National Strategy for Financial Inclusion 2019–2024 (published 2020)	Strategic objectives, milestones, policy framework for financial inclusion	Policy and regulatory context
8	Dun & Bradstreet - India's Leading BFSI & FinTech Companies 2023 ^[2]	Payment Bank FY22 income, net profit, net interest margin (NIM)	Individual bank financial performance
9	IPPB Annual Report 2022–23 ^[6]	India Post Payments Bank: account base, operational reach, deposit data	Public sector Payment Bank data
10	Dvara Research Report on Payment Banks (2022) ^[1]	Deposit growth, outreach, financial inclusion goal tracking across Payment Banks	Independent research validation
11	Peer-reviewed Journals (Scopus/SSCI-indexed, up to 2023)	Adoption factors, TAM/UTAUT models, consumer behaviour, digital banking barriers	Academic and theoretical foundation

4.2 PERIOD OF STUDY

The study includes data from fiscal years 2015-16 to 2022-23 (the last fiscal year for which data was available when this report was prepared). Data in that eight-year window provide a complete life cycle view of Payment Banks - first launch to mature operation.

4.3 ANALYTICAL TOOLS

Data collected from the above sources are analysed using content analysis and comparative trend analysis. Quantitative data are presented in structured tables with clearly cited sources. The strategic framework in Section 8 is synthesised through an integrative review of the empirical evidence and academic literature.

5. PAYMENT BANKS IN INDIA: GROWTH TRAJECTORY AND OPERATIONAL STATUS

5.1 Regulatory Genesis and Licensing

The idea of a payment bank in India was developed by the Nachiket Mor Committee in their 2014 ^[9] comprehensive report on financial service. One recommendation made by the committee was that there should be different licenses issued to banks based on the focus they place on either providing payment services and/or sending money versus lending money. The RBI released the final guidelines regarding licensing for payment banks on November 2014 and then on August 19, 2015 (Circular No. RBI / 2015 – 16/73) provided an in-principal approval to eleven entities. As indicated in table two, of the initial eleven licensed entities, six are now operating as payment banks.

Table 2: Operational Payment Banks in India - Overview (as of 2023) Source: RBI (2015) ^[16]; Exegue (2022) ^[4]; IPPB Annual Report (2022–23) ^[6]; Dvara Research (2022) ^[1]

Payment Bank	Launch Date	Promoter / Background	Primary Target Segment	Key Operational Feature
Airtel Payments Bank	Jan 2017 (Pilot: Nov 2016, Rajasthan)	Bharti Airtel (Telecom)	Telecom subscribers; urban and semi-urban users	First operational Payment Bank; 15+ crore users by 2023; FASTag; telecom-embedded banking
India Post Payments Bank (IPPB)	September 2018	Department of Posts, Govt. of India	Rural, elderly, DBT beneficiaries	1.55 lakh post offices; 3 lakh postal employees; 6+ crore accounts (2023); doorstep banking
Fino Payments Bank	April 2017	Fino Paytech Limited (Fintech firm)	Migrant workers; semi-urban users	400+ branches and 25,000+ banking points on inception day
Paytm Payments Bank	November 2017	One97 Communications (E-commerce)	Digital wallet users; e-commerce customers	Integrated with Paytm wallet and UPI; highest UPI volumes among Payment Banks till 2022
Jio Payments Bank	2018	Reliance Industries Limited (Telecom/Retail)	Jio subscribers; rural and urban customers	Jio ecosystem integration; pan-India reach
NSDL Payments Bank	October 2018	National Securities Depository Limited	Capital market investors; semi-urban users	Capital market-linked financial services

5.2 FINANCIAL PERFORMANCE OF PAYMENT BANKS (FY 2021–22)

Table 3 shows the financial results of India's four largest Payment Banks for the fiscal year ending March 31, 2022. By definition of their regulatory requirements, Payment Banks have limited ways to generate revenue; they are able to generate revenue through various sources including

commission generated from transactions, a portion of deposit float income resulting from placements with scheduled commercial banks (a minimum of 75 percent of net demand and time liabilities must be invested in government securities or other SLR eligible assets) and commission earned on sales of insurance products.

Table 3: Financial Performance of Major Payment Banks — FY 2021–22 Source: Dun & Bradstreet, India's Leading BFSI & FinTech Companies 2023 ^[2]

Payment Bank	FY22 Total Income (₹ Billion)	FY22 Net Profit/Loss (₹ Billion)	FY22 Net Interest Margin (%)	Operational Remark
Paytm Payments Bank Ltd.	25.4	0.2 (Profit)	1.9	Highest total income; wallet integration advantage
Fino Payments Bank Ltd.	10.1	0.4 (Profit)	2.4	Most profitable among Payment Banks in FY22
Airtel Payments Bank Ltd.	9.4	0.1 (Profit)	3.0	Highest NIM; telecom synergy benefits
India Post Payments Bank Ltd.	4.6	(1.6) (Loss)	1.8	Large operational base; profitability challenges due to scale costs

Three out of the four main payment banks reported profitability in FY22 -- which is an important step toward financial viability for this model since it was operationally unprofitable during the first years of its existence. In terms of the largest net profits, Fino Payments Bank had the highest at ₹0.4 Billion; it benefited from its focus on transactional remittances and merchant services. The highest Net Interest Margin (NIM) was earned by Airtel Payments Bank at 3.0%; this reflects how well Airtel deployed income from deposits float as interest. IPPB was again a loss-maker in FY22 primarily because of the high fixed costs to operate at scale via

the postal network.

5.3 INDIA'S DIGITAL PAYMENT ECOSYSTEM: UPI GROWTH AND STUDENT RELEVANCE

Payment Banks are part of a larger digital payment ecosystem in India and primarily use UPI to allow customers to make transactions. Since the incredible increase in UPI transactions, as reported by NPCI, is a key factor to determine how likely students will be to adopt Payment Banks, I have shown the annual changes of UPI transactions from FY 2017-18 through FY 2022-23.

Table 4: Year-wise Growth of UPI Transactions in India (FY 2017–18 to FY 2022–23) Source: NPCI UPI Ecosystem Statistics (npci.org.in); Electroiq (2023) ^[3]; Statista (2023) ^[23]

Financial Year	UPI Volume (Million Transactions)	YoY Volume Growth (%)	UPI Value (₹ Lakh Crore)	Key Development
FY 2017–18	915.2	—	1.1	UPI 1.0 launched; early adopter phase
FY 2018–19	5,353.4	+485%	8.8	Post-demonetisation consolidation; merchant QR expansion
FY 2019–20	12,518.6	+134%	21.3	10 crore registered UPI users milestone
FY 2020–21	22,332.1	+78%	41.0	COVID-19 pandemic accelerates contactless payments
FY 2021–22	45,952.4	+106%	84.2	4 billion monthly transactions achieved; UPI 2.0 features
FY 2022–23	83,714.4	+82%	139.0	UPI accounts for 75% of retail payment volume; 458 banks live

UPI user base has seen an enormous 91-fold growth from 915 million in Fiscal year 2018 to 83 billion in fiscal year 2023. Further, the 18-35 age group that includes students have represented a majority of 55 percent of UPI users since 2023 (electroiq.com). The fact that young adults represent such a large portion of UPI users clearly demonstrates the student market's willingness to engage with digital payments and thus as Payment Banks customers. However, this is not about behaviour (students currently use digital transactions on a daily basis), it is simply getting them to utilize Payment Bank platforms rather than third party UPI application platforms.

The Reserve Bank of India (RBI), in 2021, introduced a Composite Financial Inclusion Index (FI-INDEX). The FI-INDEX covers 97 metrics across the banking, investments, insurance, post office and pension sectors. The FI-INDEX will have an effective range of 0 (completely financially excluded) to 100 (fully financially included). There are three components of the FI-INDEX: Access (35%) – which measures how accessible various financial products/services are to the population; Usage (45%) – which measures the level at which these financial products/services are being used by the population; and Quality (20%) – which measures the quality of these services/products. It has been decided that the FI-INDEX would be released every year on 31st July. For this reason, it does not have a base year as each release reflects

6. FINANCIAL INCLUSION INDICATORS: CONTEXT FOR PAYMENT BANK ADOPTION

6.1 RBI FINANCIAL INCLUSION INDEX (FI-INDEX)

cumulative progress. Table 5 presents trends in FI-INDEX for years 2017 through 2023.

Table 5: RBI Financial Inclusion Index (FI-Index) Trend 2017–2023 Source: RBI Bulletin (rbi.org.in); Drishti IAS (2023); RBI (2023 Annual Report)

Reference Year (March)	FI-Index Score	Change (Points)	Driving Sub-Index	Contextual Note
March 2017	43.4	—	Access	Pre-index baseline estimated retrospectively by RBI
March 2021	53.9	+10.5 (4 yrs)	Access (73.3)	First year of FI-Index publication; strong infrastructure growth
March 2022	56.4	+2.5	Usage	Post-COVID digital payment surge reflected in Usage sub-index
March 2023	60.1	+3.7	Usage & Quality	Digital payment penetration deepens; Payment Banks contribute

The total number of points that the FI Index has increased since March of 2017 to March of 2023 is a total of 16.7, with an overall FI Index score that went from 43.4 to 60.1 in this time frame. This represents the cumulative effect on the index by all four categories; PMJDY Account Opening, DBT Infrastructure, Expansion of Digital Banking Units (DBU's) and payment banking.

6.2 PRADHAN MANTRI JAN-DHAN YOJANA (PMJDY) AND FINANCIAL INCLUSION BASELINE

The PMJDY, launched on 28 August 2014, is the foundational account-opening programme upon which Payment Banks build their customer acquisition. Table 6 presents PMJDY account and deposit growth, providing the financial inclusion baseline context for Payment Bank adoption.

Table 6: Pradhan Mantri Jan-Dhan Yojana (PMJDY) - Account and Deposit Growth Source: PMJDY Portal (pmjdy.gov.in); RBI Annual Reports (2019–2023); PIB Press Releases (2023)^[11]

Parameter	January 2019	August 2020	August 2021	August 2022	August 2023
Total PMJDY Accounts (Crore)	34.0	40.35	43.04	46.25	50.09
Total Deposits (₹ Crore)	89,257	1,30,953	1,45,550	1,73,954	2,03,505
Average Deposit per Account (₹)	2,625	3,246	3,382	3,761	4,063
Accounts with Zero Balance (%)	~20%	~17%	~14%	~9%	~7%
RuPay Debit Cards Issued (Crore)	~23.0	29.55	31.94	34.20	36.12

In terms of PMJDY data, we can see that there has been a lot of growth; as an example, at the end of January 2019, 34 crore PMJDY accounts existed. By the end of August 2023, it was up to 50.09 crore (an almost 47 percent increase). Additionally, average deposits per PMJDY account have risen by about fifty percent over this time period; they went from approximately Rs. 2,625 to approximately Rs. 4,063. It is likely that some portion of the PMJDY customers who had previously opened an account but never made any transactions on their account are now actively using their PMJDY accounts due to the large decrease in the number of "zero-balance" accounts -- or accounts where no money was ever deposited - - for PMJDY customers since ~20% of all PMJDY accounts were "zero-balance" accounts in 2019 compared to ~7% of all

PMJDY accounts being "zero-balance" accounts in 2023. Given these trends in terms of both bank usage and demographics (student population and semi-rural areas), payment banks are better positioned than other types of banks to meet the growing demand for services from the larger base of PMJDY customers.

7. BARRIERS TO PAYMENT BANK ADOPTION AMONG STUDENTS

The synthesis of secondary literature and institutional reports reviewed in this study identifies the following barriers to Payment Bank adoption among students in Rajasthan's HEIs. These barriers operate at multiple levels—individual, institutional, and systemic—and are interrelated.

Table 7: Barriers to Payment Bank Adoption Among Students - Synthesised Framework Source: Compiled from secondary literature and government reports (up to 2023)

Barrier	Category	Nature	Key Evidence / Source
Low awareness of Payment Bank services, RBI licensing, and DICGC insurance protection	Demand-side / Individual	Knowledge gap	Pramani & Iyer (2023) ^[13] ; RBI NSFI 2019–24 (RBI, 2020) ^[17]
Lack of trust in Payment Banks relative to full-service commercial banks	Demand-side / Individual	Attitudinal / Behavioural	Gupta <i>et al.</i> (2019) ^[5] ; Singh & Rana (2017) ^[23]
Restricted service scope (no loans, no credit cards, no NRI deposits) limits perceived utility for students	Supply-side / Product	Regulatory constraint	RBI Guidelines (2014) ^[15] ; Pramani & Iyer (2023) ^[13]
Digital literacy gap, especially among first-generation college students from rural Rajasthan	Demand-side / Contextual	Skill deficiency	Mishra & Bisht (2013) ^[8] ; RBI NSFI 2019–24
Perceived risk: concerns about cybersecurity, data privacy, and transaction fraud	Demand-side / Individual	Attitudinal / Risk perception	Kajol <i>et al.</i> (2022) ^[7]

Absence of student-specific products (cashback, scholarship linkage, zero charges)	Supply-side / Product	Value proposition gap	Dvara Research (2022) ^[11]
Preference for third-party UPI apps (PhonePe, Google Pay) over Payment Bank native apps due to familiarity and UI/UX	Demand-side / Behavioural	Habit and inertia	NPCI UPI Statistics (2023) ^[10] ; Electroiq (2023) ^[3]
Intermittent internet connectivity in rural and semi-urban campus locations of Rajasthan	Supply-side / Infrastructure	Infrastructure constraint	RBI NSFI 2019–24 (RBI, 2020) ^[17]
Absence of formal HEI–Payment Bank institutional linkages for fee collection or scholarship disbursement	Institutional	Ecosystem gap	Singh & Rana (2017) ^[23] ; IPPB Annual Report (2022–23) ^[6]

8. STRATEGIC FRAMEWORK TO ENHANCE PAYMENT BANK USAGE AMONG STUDENTS

Drawing from the barrier analysis in Section 7 and the evidence base reviewed in Sections 5 and 6, this study proposes a six-pillar strategic framework for enhancing Payment Bank adoption among students in North India's HEIs, with specific relevance to Rajasthan.

8.1 STRATEGY 1: CAMPUS-BASED FINANCIAL LITERACY AND AWARENESS CAMPAIGNS

The most basic barrier to adopting Payment Banks by students is that they have limited knowledge of them. Structured financial awareness workshops on university campus can be conducted through a cooperative effort between Payment Banks and university administrations, with the centre for financial literacy institutional network run by the RBI as part of the RBI's community-led approaches to financial literacy enhanced through the new strategy for financial inclusion 2019 – 2024. The following topics should be explained explicitly during these sessions: regulatory imprimatur from the RBI for Payment Banks; deposit insurance cover provided by the DICGC (affective at ₹5 lakh per depositor since February 2020); features of UPI integration; zero-minimum-balance account openings; grievance redressal process.

The RBI Digital Payments Awareness week annually held initiative provides an institutional platform for campaigning for this type of programming on college campuses. The RBI centre for financial literacy centres which were expanded to a block level across India as part of the new strategy for financial inclusion 2019 – 2024, will also need to specifically target univ. Campuses in Rajasthan. The evidence base for this strategy is extremely strong. Pramani and Iyer (2023) ^[13] found that a primary obstacle to adoption was the lack of knowledge about the products/service. The new strategy for financial inclusion specifically identified youth as a vulnerable group to receive directed financial literacy interventions

8.2 STRATEGY 2: STUDENT-CENTRIC PRODUCT DESIGN AND INCENTIVISATION

Payment Banks should create versions of their payment bank accounts that are specifically designed for students and have the following characteristics: (a) A higher savings interest rate for each successive balance level (Airtel Payments Bank currently offers an interest rate as high as 7% per annum at

some levels); (b) No fee for transactions between customers or for paying bills via their system; (c) Cash back for purchases made by the customer related to educational expenses—course fees from online courses, exam fees from universities, rent for hostels, etc., as well as stationery; (d) The ability to link these Payment Bank accounts directly to the Government of India's National Scholarship Portal and to the State of Rajasthan's various scholarship programs for DBT disbursement.

8.3 STRATEGY 3: TECHNOLOGY ENHANCEMENT AND USER EXPERIENCE OPTIMISATION

Gupta *et al.* (2019) ^[5] and Kajol *et al.* (2022) ^[7] each found that ease of use or effort expectancy was one of the most important determinants of Payment bank adoption. Therefore, the payment banks need to focus on: (1) developing easy-to-use, Hindi enabled, mobile applications with fewer than four total steps required for student customers to open an account, transfer funds and check their balance; (2) implementing USSD based offline banking through the national unified USSD platform *99#, enabling students in rural areas of Rajasthan to perform financial transaction regardless of whether they have internet access; (3) making seamless connections with the three largest third party UPI applications available today (e.g., Google Pay, PhonePe), allowing students already using these applications to also have access to all Payment Bank services from within the same application(s); (4) Biometric authentication as a method of reducing first time user frustration related to passwords.

8.4 STRATEGY 4: INSTITUTIONAL PARTNERSHIPS WITH HIGHER EDUCATION INSTITUTIONS

Although Rajan and Singh (2018) ^[14] are able to show through empirical evidence that financial education at the University level, along with other forms of institutional support will help speed up the rate of digital banking adoption amongst college-aged students. To achieve this goal, payment banks must seek out formal Memoranda of Understanding (MoU's) with universities and colleges located within Rajasthan by:

(a) Integrating payment bank accounts into existing processes that allow for the processing of payments for tuition fees, hostels, libraries and transportation.

(b) Placing banking correspondents (BC Agents), on each campus, so that students can open their own payment bank

accounts and have all their questions regarding the use of those accounts answered.

(c) Transferring student stipend payments, fellowship awards, and wages earned while working part-time, to payment bank accounts.

(d) Creating a joint branded prepaid card for all students who wish to make purchases on campus using payment bank accounts.

8.5 STRATEGY 5: TRUST-BUILDING AND CONSUMER PROTECTION ASSURANCE

The importance of building trust as part of a strategy for Payment Banks can't be overemphasised, especially when it comes to developing consumer confidence. There are several trust signals that banks can communicate directly to students to help build their trust. These include:

- a) The bank has been licensed by the RBI.
- b) (b) Student deposits will be insured under DICGC for up to ₹5 lakhs.
- c) The bank complies with RBI's Cyber Security Framework.
- d) The bank has developed easy-to-access and complaint resolution processes connected to RBI's Integrated Ombudsman Scheme (established in 2021).

Using testimonials from current student customers, endorsing

institutions' financial services offices or departments, and publishing student fees clearly (posting them in places where all students may view them such as institutional noticeboards or apps) could also significantly enhance trust.

8.6 STRATEGY 6: POLICY-LEVEL INTERVENTIONS

The Government of Rajasthan, the Ministry of Education (Government of India), and the Reserve Bank of India (RBI) should support the creation of a student-centered Payment Bank environment with system-wide policies. The following three government and RBI-led policy actions would help enable the student-centered Payment Bank environment beyond current bank level strategies: (a) require that all students who are eligible for state or central scholarships open a Payment Bank account before receiving such funds; (b) include payment banks' financial literacy components in the financial education curricula in the National Education Policy 2020 (NEP 2020) and specifically focus on undergraduate students; (c) expand the Digital Banking Unit (DBU) program under which RBI has opened 75 DBUs across 75 district locations in India from FY 2022-23 to include university town areas in Rajasthan; (d) offer tax benefits or some form of regulatory relief to Payment Banks for keeping money in a student's account to recognize the public good associated with student financial inclusion.

Table 8: Proposed Strategic Framework for Enhancing Payment Bank Usage Among Students.

Strategy	Primary Barrier Addressed	Implementing Agency	Mechanism	Expected Impact	Timeframe
Campus Financial Literacy Campaigns	Low awareness; digital literacy gap	RBI (CFL), Payment Banks, Universities	Workshops, Digital Payments Awareness Week, CFL block network	High — direct awareness creation	Short-term (0–1 year)
Student-Centric Product Design	Lack of incentives; restricted service scope	Payment Banks (commercial decision)	Student accounts with cashback, zero charges, DBT linkage	High — enhanced value proposition	Short-to-medium term (6–18 months)
Technology Enhancement & UI/UX Upgrade	UPI app preference; connectivity constraints	Payment Banks (technology teams)	Hindi app, USSD offline banking, third-party UPI integration	Medium-High — friction reduction	Medium-term (1–2 years)
HEI Institutional Partnerships	Low adoption motivation; no campus visibility	Payment Banks + Universities	MoUs for fee collection, BC agents on campus, scholarship DBT	High — captive user base creation	Short-to-medium term
Trust-Building Initiatives	Trust deficit; perceived risk; uncertainty	RBI + Payment Banks	DICGC communication, Ombudsman linkage, transparent fee disclosure	Medium — gradual confidence building	Medium-term (1–3 years)
Policy-Level Interventions	Structural barriers; ecosystem gaps	GoI, Govt. of Rajasthan, RBI	Scholarship mandate, NEP 2020 curriculum, DBU expansion	Very High — systemic change	Medium-to-long term (2–5 years)

Source: Authors' synthesis based on secondary data and reviewed literature

9. DISCUSSION

The study shows a contradiction in Payment Bank use by Indian students. Macro-level indicators show that there has been significant growth in the number of UPI transactions – 915 million in FY18 to over 83 billion in FY23 (NPCI, 2023)^[10]. Fifty five percent of UPI users fall into the age range of 18–35 years (ElectroiQ, 2023)^[3]. There has also been an increase in the RBI's Financial Inclusion Index — 43.4 in

2017 to 60.1 in March 2023. However, there seems to be little uptake in terms of actual use of Payment Banks amongst students. Three main reasons for low usage include lack of knowledge about how to use Payment Banks, distrust of the system and poor design and integration into existing systems. The results of Dun & Bradstreet (Table 3) illustrate that all four major Payment Banks were profitable in FY22 – a level of profitability which demonstrates the financial health and

viability of each bank. Student customers will likely view this as a sign of financial stability prior to opening up an account. Since there was a drop from 55% of PMJDY zero-balance accounts active in 2019 to just 7% by 2023 (Table 6), it would appear that basic savings account holders are now actively engaged with their accounts. It is possible to encourage the same type of engagement among student account holders. Student demographics present an unusually favourable opportunity for increasing adoption of Payment Banks: they are digitally native, many are located in areas with high concentrations of institutions (allowing for campus-wide marketing efforts), many have some form of income (stipend, etc.) that can be channelled through a Payment Bank account, and they are highly susceptible to peer pressure. Peer pressure had a statistically significant impact on student adoption of digital banking services according to Rajan and Singh (2018)^[14]. This social phenomenon can be used to promote Payment Bank accounts through UPI referral programs and campus-based challenges.

Given the fact that Rajasthan is the state where Airtel Payments Bank began testing its first operational pilots in 2016, and therefore has a historical connection to Payment Banking, there appears to be justification for developing strategies that target this state. Given that over 55% of PMJDY accounts are currently being held by females (PMJDY data, 2023), universities like Banasthali Vidyapith, with a large resident female student population from across North India, seem particularly suited for targeted interventions based on gender. Although the RBI-imposed restrictions on Paytm Payments Bank's activities reported in early 2024 (outside the scope of the research) indicate that payment banks need to maintain regulatory compliance as well as governance practices in order to grow their business base, building trust in the system (Strategy 5) becomes even more critical. Students must feel confident that any RBI-licensed Payment Bank is financially stable and regulated appropriately before they begin using them to perform everyday financial transactions.

10. CONCLUSION AND RECOMMENDATIONS

This study examines the strategies which can be used to increase the use of Payment Banks amongst students attending Higher Education Institutions (HEIs) within North India specifically focusing upon Rajasthan. Data was collected through secondary data sources such as RBI, NPCI, PMJDY, Dun & Bradstreet, IPPB and other Scopus-indexed Academic Literature; all were accessed up to the end of the year 2023.

In terms of the main findings of this study there were six findings. Firstly, payment banks operating in India have shown increasing financial viability, whereby out of the four major players three achieved profitability during FY 2022. Secondly, India's Digital Payment Ecosystem (as indicated by the 82-fold rise of UPI transactions from FY 2018 – FY 2023

and improving FI Index Scores) is a structurally advantageous environment for expanding payment bank services. Thirdly, students represent an untapped yet potentially large customer base for payment banks. Fourthly, the barriers to adoption experienced by students are multifaceted and located at both an individual level, an institutional level and a system wide level thereby requiring equally multidimensional strategic solutions.

Six Pillars of Strategic Framework for Expanding Payment Bank Services (Figure 7) outlines a comprehensive strategy that requires a coordinated response across different stakeholder groups (payment banks, HEIs and central government). For each pillar outlined in Figure 7 we identify the corresponding responsibilities of each of these groups.

RECOMMENDATIONS FOR KEY STAKEHOLDERS:

1. The Government of Rajasthan should revise its rules regarding scholarship payments so that they can be made directly into RBI licensed Payment Bank accounts only, thus providing a clear and immediate motivation for students to adopt payment bank services.
2. Payment banks (notably IPPB and Airtel Payments Bank) should introduce co-branded 'student' product lines in collaboration with universities in Rajasthan, providing free (zero charge) interest bearing savings accounts that offer cash back incentives when students purchase educational related items.
3. The RBI Centre for Financial Literacy should create a dedicated module focused on Payment Banks for students, which should then be rolled-out to all rural block-based financial literacy centres located near HEI campuses in Rajasthan.
4. All Universities in Rajasthan should nominate Payment Bank Banking Correspondents as Official Campus Financial Service Providers, enabling Payment Bank Account Opening to become part of the student enrolment process.
5. A future empirical validation of the barriers and strategies identified in this Secondary Data Study, together with evaluation of the success of the proposed initiatives should be undertaken using Primary Data Collection Methods such as Structured Questionnaire Surveys and/or Focus Group Interviews conducted at select HEIs in Rajasthan.

If Payment Banks are strategically and collectively embedded into India's Higher Education System, they could provide students with not only financial services but also with the tools and knowledge necessary to achieve financial citizenship; in doing so equipping students with Digital Banking Competences, Savings Discipline and Awareness of Financial

Inclusion that will assist them throughout their Professional and Civic Lives.

DECLARATIONS

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