

Access Without Use: The Gap Between Financial Inclusion and Digital Payment Adoption in Northeast India

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Abstract

India has largely solved the problem of financial account access without solving the problem of account use. This paper measures that distinction for Northeast India, a region almost entirely absent from the digital payments literature. Using published figures from the World Bank Global Findex Database 2025, the Pradhan Mantri Jan-Dhan Yojana (PMJDY) programme, the Reserve Bank of India, and regional banking statistics, two simple indices are constructed: an access index, defined as the region's share of PMJDY accounts divided by its share of national population, and a use index, defined as digital transactions per capita divided by the national rate. The Northeast returns an access index of 1.31, meaning it holds proportionally more accounts than the national average, and a use index of 0.28. Arunachal Pradesh returns a use index of 0.27, with 1.041 digital transactions per capita against a national 3.85. The region is therefore over-included on access and under-included on use by a factor of roughly five. This pattern is corroborated at the national level: 26% of PMJDY accounts were classified inoperative in August 2026, and Global Findex records Indian account dormancy at 16% against a global average of 6%. The finding implies that policy aimed at opening accounts has reached its useful limit in the Northeast, and that the binding constraint has moved to the infrastructure and trust conditions required to transact.

Index Terms—financial inclusion, digital payments, Unified Payments Interface, account dormancy, Jan-Dhan Yojana, Northeast India, Arunachal Pradesh, financial infrastructure

I. INTRODUCTION

A. Background

India has built one of the largest retail payment systems in the world in under a decade. Annual Unified Payments Interface (UPI) transaction volume rose from 1.78 crore in 2016–17 to more than 24,162 crore in 2025–26, an almost 13,000-fold increase, and monthly volume crossed 2,300 crore transactions for the first time in May 2026 [3]. Over the same period the Pradhan Mantri Jan-Dhan Yojana opened 59.04 crore basic bank accounts holding deposits of ₹3.15 lakh crore [10]. The Reserve Bank of India's Financial Inclusion Index rose from 64.2 in March 2024 to 67.0 in 2025 and 70.0 in March 2026, with the most recent gain driven by the usage sub-index rather than by access [2].

These are national aggregates, and they describe a system rather than a household. A payment rail can carry enormous volume while large numbers of people never touch it, and an account can exist without ever being used. The distinction between having an account and using one is the subject of this paper.

B. The Access–Use Gap

The World Bank's Global Findex Database 2025 makes the distinction measurable. In 2024, 89% of Indian adults held a financial account, but only 48.5% made or received a digital payment during the year, and only 42% owned a smartphone [1]. All three figures share the same denominator, so the distance between them is the access-to-use gap directly: 40.5 percentage points (Fig. 1).

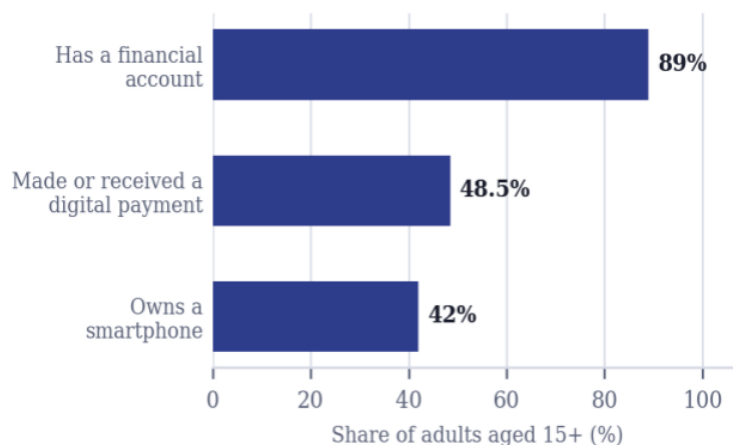
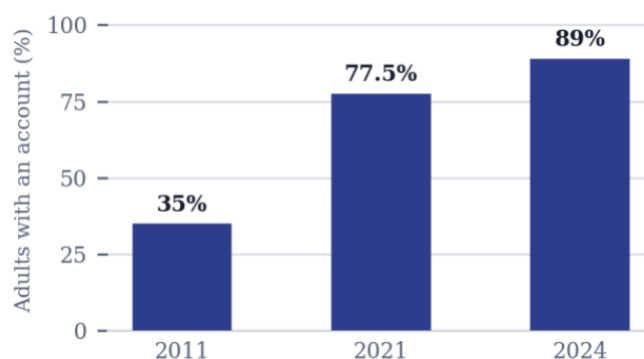


Fig. 1. Account access ran well ahead of digital payment use in India. Share of adults aged 15 and over, 2024. Source: World Bank, Global Findex Database 2025 [1].

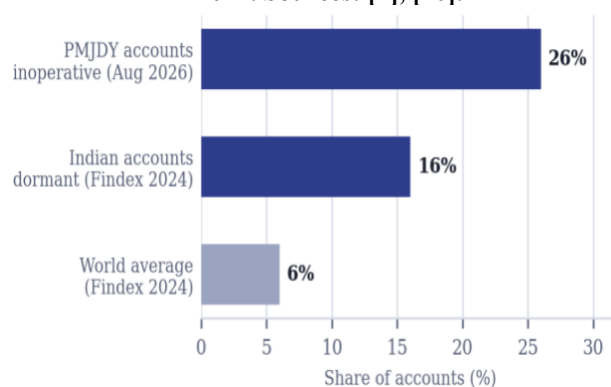
The access side of that gap closed remarkably fast. Account ownership among Indian adults rose from 35% in 2011 to 77.5% in 2021 and 89% in 2024 (Fig. 2), driven largely by Jan-Dhan account opening and by Aadhaar-linked direct benefit transfers [1], [10].

Fig. 2. Account ownership among Indian adults, 2011–2024. Source: World Bank, Global Findex Database 2025 [1].



The usage side did not keep pace, and the residue is visible in dormancy statistics from two independent sources (Fig. 3). Global Findex records that 16% of Indian account holders had a dormant account in 2024, against a global average of 6% [1]. Indian administrative data puts the figure higher still: of 59.04 crore Jan-Dhan accounts recorded in August 2026, 15.37 crore, or approximately 26%, were classified inoperative, and a further 5.72 crore carried a zero balance [10]. Average balance across all Jan-Dhan accounts stood at roughly ₹5,338.

Fig. 3. Three measures of unused accounts. PMJDY figures are as of August 2026; Findex figures refer to 2024. Sources: [1], [10].



C. Existing Research

The adoption literature converges on a small set of determinants. The Unified Theory of Acceptance and Use of Technology (UTAUT) identifies performance expectancy, effort expectancy, social influence, and facilitating conditions as the constructs predicting technology uptake [4]. Sharma and Sharma extend the framework for rural India, adding a psychological empowerment construct and arguing that continued use, rather than first adoption, is the outcome that matters in low-income settings [5]. Work applying diffusion of innovation theory to UPI reaches compatible conclusions about relative advantage and compatibility [6], and a mixed-methods UTAUT2 study of low-income UPI users finds that trust and perceived risk weigh more heavily in that population than in general-population samples [7].

Studies of rural barriers are more concrete. A survey of rural Uttar Pradesh identifies network reliability, low digital literacy, fear of fraud, and inconsistent merchant acceptance as the constraints that recur across districts [8]. Institutional analyses reach the same list from the supply side, noting that last-mile connectivity and agent networks determine whether a formally included household can transact at all [9], [12].

D. Research Gap

What this literature does not contain is the Northeast. Indian evidence on digital payment adoption is drawn overwhelmingly from high-density mainland states, where connectivity, banking density, and merchant networks differ from those of the region's hill districts by a wide margin. Arunachal Pradesh, the largest state in the region by area and among the sparsest by population density, appears in this literature scarcely at all.

The omission matters beyond regional completeness. Almost all Indian financial inclusion policy is designed around expanding access, and that design implicitly assumes access is the binding constraint. If access in a region has already reached or exceeded the national rate while use has not, then further account opening in that region cannot produce further inclusion, and a policy that continues to pursue it is aimed at the wrong target. Establishing whether this is the case is an empirical question that regional data can answer.

E. Research Objectives

This paper has three objectives: (i) to measure financial account access in Northeast India relative to the national rate; (ii) to measure digital payment use in the region, and specifically in Arunachal Pradesh, relative to the national rate; and (iii) to determine whether the two move together, as an access-constrained model would predict, or diverge.

The study is descriptive. It reports and compares published aggregates and constructs simple ratios from them. It does not estimate a causal effect of access on use, and no causal claim is made anywhere in this paper.

II. DATA AND METHOD

A. Data Sources

Five published sources are used. The World Bank Global Findex Database 2025 supplies national account ownership, digital payment use, smartphone ownership, and account dormancy for 2024 [1]. Reserve Bank of India releases the Financial Inclusion Index and its sub-indices [2]. NPCI product statistics supply UPI transaction volume [3]. Jan-Dhan programme data, including the August 2026 breakdown of inoperative and zero-balance accounts obtained under the Right to Information Act, supply account counts, deposits, and dormancy [10]. Regional banking statistics compiled for the Northeast supply the region's share of Jan-Dhan beneficiaries, branch density, credit-deposit ratios, and per-capita digital transaction counts for September 2023. No primary data were collected for this study, and no figure reported below is the author's estimate. Where a quantity is computed rather than quoted, the computation is stated explicitly and its inputs are cited.

B. Constructing the Access and Use Indices

The two indices are deliberately simple, so that any reader can reproduce them from the cited figures. The **access index** is the region's share of national Jan-Dhan beneficiaries divided by its share of national population. A value of 1.00 means the region holds accounts in exact proportion to its population; above 1.00 means it holds more than its share. The **use index** is the region's digital transactions per capita divided by the national figure for the same month. A value of 1.00 means the region transacts at the national rate. Both indices are unitless ratios, which is what makes the comparison legitimate: they place a count of accounts and a count of transactions on a common scale defined by the national rate, without requiring the two underlying quantities to be measured in the same units or at the same moment.

C. Limitations of the Method

Three limitations bound the interpretation and are stated here rather than in the conclusion, because they affect how the results should be read. First, the sources carry different vintages. Per-capita transaction figures refer to September 2023; Jan-Dhan dormancy figures to August 2026; Findex figures to 2024. The indices

therefore describe a period rather than an instant, and a reader should not treat the ratio of two differently dated quantities as a same-moment measurement.

Second, per-capita transaction counts include all digital transaction types, not UPI alone, and are computed on total population rather than on the adult population that Findex uses. The two are not interchangeable, and neither is used as a substitute for the other here.

Third, an aggregate for the Northeast conceals substantial variation between its eight states, and a state aggregate conceals variation between districts. Arunachal Pradesh is reported separately for this reason, but even a state figure averages across hill districts and the Itanagar–Naharlagun capital complex, which differ considerably in connectivity and merchant density.

III. RESULTS

A. Access Meets or Exceeds the National Rate

On every access measure available, the Northeast is at or above the national average. The region accounts for 5.1% of Jan-Dhan beneficiaries in India while holding approximately 3.9% of the national population, giving an access index of 1.31 [13]. Branch density moved the same way: regional rural bank branches in the Northeast rose from 1.4 to 1.8 per lakh population between 2013 and 2022, ending above the national figure of 1.5, and scheduled commercial bank offices in the region expanded 88% over the decade against 54% nationally [13]. Arunachal Pradesh specifically recorded a 62% increase in regional rural bank branches over the same period. Whatever else constrains financial inclusion in the Northeast, the availability of an account is not obviously it.

B. Use Falls to Roughly a Quarter of the National Rate

Digital transaction activity tells the opposite story. In September 2023, digital transactions per capita stood at 1.041 in Arunachal Pradesh and 1.0944 across the Northeast, against a national figure of 3.85 [13]. Arunachal Pradesh therefore transacted at 27.0% of the national rate and the region as a whole at 28.4% (Fig. 4).

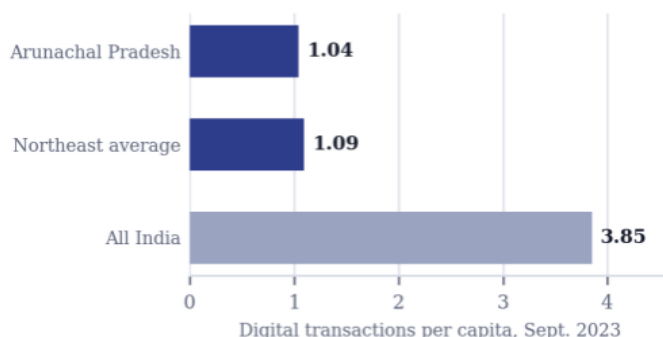


Fig. 4. Digital transactions per capita, September 2023. Arunachal Pradesh transacts at roughly one quarter of the national rate. Source: [13].

C. The Access–Use Index

Placing the two on the same scale gives the paper’s central result . The Northeast returns an access index of 1.31 and a use index of 0.28; Arunachal Pradesh returns a use index of 0.27. Dividing use by access, the region converts its above-average account access into transactions at approximately 0.21 of the rate that national proportionality would predict.

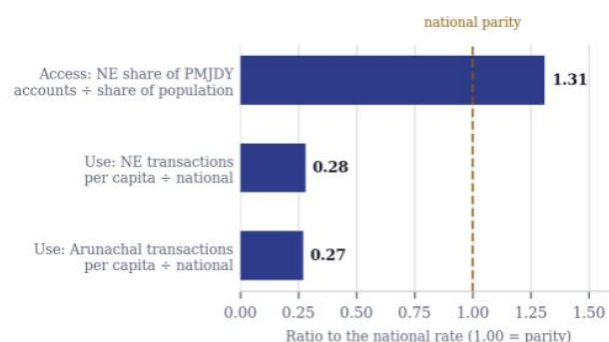


Fig. 5. Access and use relative to the national rate, where 1.00 denotes parity. The Northeast holds proportionally more accounts than India as a whole and transacts at roughly a quarter of the national rate. Author’s calculations from [13].

Access and use do not merely differ in level. They point in opposite directions relative to the national benchmark, which is not what an access-constrained model predicts. Under such a model a region with above-average account penetration should transact at or near the national rate.

D. Dormancy Corroborates the Divergence

Account dormancy provides an independent check on the same phenomenon, and it is measured on accounts rather than on transactions. Nationally, 15.37 crore of 59.04 crore Jan-Dhan accounts were inoperative in August 2026, approximately 26%, with a further 5.72 crore at zero balance and an average balance across all accounts of about ₹5,338 [10]. Global Findex independently records Indian account dormancy at 16% in 2024, against a global average of 6% [1].

The regional signature is visible within these figures. Assam ranked fourth among all Indian states for the absolute number of zero-balance Jan-Dhan accounts, at 36.30 lakh, placing a Northeastern state in the national top five on this measure despite the region holding under 4% of the national population [10]. The states ahead of it Uttar Pradesh, Bihar, and West Bengal are each several times larger.

E. Deposits That Do Not Circulate

A fifth indicator points the same way. The credit–deposit ratio for scheduled commercial banks averaged 46% across the Northeast between 2013 and 2022, and 25% in Arunachal Pradesh, among the lowest in the region [13]. A low credit–deposit ratio means deposits accumulate locally without being lent back into the local economy. Taken with the transaction and dormancy figures, this describes an account that functions as a container rather than as a channel. Money enters it, largely through transfers and wages, and leaves it as cash. The account is real, it is counted in every inclusion statistic, and it is doing almost none of the work that financial inclusion is supposed to represent.

IV. DISCUSSION

A. Interpretation

Three explanations could in principle account for the divergence. An access explanation holds that the constraint is the account itself; the Northeast’s access index of 1.31 rules this out for the region as a whole. An infrastructure explanation holds that accounts exist but the network, the device, or the merchant network does not support transacting. A trust explanation holds that the capability exists but is not exercised, because users fear loss, error, or fraud. The aggregate data available here cannot separate the second explanation from the third, and this paper does not claim to. What the data do establish is that the first explanation, which is the one implicitly assumed by most Indian financial inclusion policy, does not fit the Northeast. The constraint has moved downstream of account opening.

The credit–deposit finding offers weak support for the infrastructure reading over the trust reading, since a purely trust-based reluctance would be expected to depress transacting without equally depressing the lending side of the banking relationship. This is suggestive rather than decisive, and it is offered as such.

B. Comparison with Existing Literature

The barrier rankings reported for rural Uttar Pradesh network reliability, digital literacy, fear of fraud, merchant acceptance [8] are consistent with an infrastructure-and-trust reading, and the low-income UTAUT2 findings on the weight of perceived risk point the same way [7]. Sharma and Sharma’s argument that continued use rather than first adoption is the relevant outcome in rural India [5] is precisely what the divergence documented here demonstrates at regional scale: a framework that measures adoption at the point of account opening will record the Northeast as a success.

Where this paper departs from the existing literature is in the direction of the access measure. Most rural Indian studies describe settings where access and use are both below the national average, and treat the two as moving together. The Northeast is a case where they move apart, and apart in the direction that makes access-expansion policy ineffective.

C. Policy Implications

If the constraint is no longer accessible, then account-opening targets are the wrong instrument for the Northeast, and reporting them as inclusion progress overstates what has been achieved. Two implications follow.

First, inclusion reporting for the region should be based on transacting accounts rather than opened accounts. The Reserve Bank’s Financial Inclusion Index already separates access from usage; publishing the usage sub-index at state level would make the divergence documented here visible in official statistics without requiring any new data collection.

Second, the marginal rupee of inclusion spending in the Northeast is likely better spent on the conditions for transacting network coverage in hill districts, merchant onboarding, and grievance redressal that works in local languages than on opening further accounts in a region that already holds more than its proportional share.

D. Limitations and Future Research

Beyond the methodological limits set out in Section II-C, three substantive limitations apply. The analysis is entirely secondary; no household in the Northeast was asked anything for this paper, and aggregate ratios cannot say why individuals do not transact. The per-capita transaction figures are from September 2023 and adoption may have moved since. And the Northeast aggregate averages across eight states with markedly different conditions.

Two follow-up studies would address the most serious of these. A household survey in a Northeastern settlement, measuring account ownership and thirty-day use alongside a ranked set of barriers, would distinguish the infrastructure explanation from the trust explanation, which aggregate data cannot do. A comparison of two settlements matched on banking access but differing in network coverage would test the infrastructure explanation directly. The author intends to pursue the first of these in Naharlagun, Papum Pare district.

V. CONCLUSION

India's account access figures are among the fastest-improving in the world, and its payments infrastructure is among the largest. Neither fact establishes that the households counted in those statistics are using the accounts they hold. Nationally, the distance between 89% account ownership and 48.5% digital payment use is 40.5 percentage points, and roughly a quarter of Jan-Dhan accounts are inoperative.

In Northeast India the divergence is sharper and runs in an unexpected direction. The region holds proportionally more accounts than India as a whole, at an access index of 1.31, while transacting at roughly a quarter of the national rate, at a use index of 0.28. Arunachal Pradesh records 1.041 digital transactions per capita against a national 3.85. A region that appears successful on every access measure is, on the measure that matters, among the least included in the country.

The practical consequence is that inclusion measured by access has stopped being informative in this region. Whether the residual constraint is infrastructural or a matter of trust is a question that aggregate statistics cannot settle, and that a household survey can.

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