

Financial Inclusion and Regional Inequality in India: Insights from the Financial Inclusion Index & PMJDY

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Abstract

This study analyzes the extent of financial inclusion across India's 36 states through the development of a Multidimensional Index for Financial Inclusion (IFI). The IFI is constructed using three core dimensions: penetration, availability, and usage of banking services, offering a comprehensive measure of financial inclusiveness. Financial inclusion serves as a critical driver of equitable economic growth by ensuring access to affordable financial services, including savings, credit, insurance, and remittance facilities. India's journey toward inclusive finance has evolved through multiple policy milestones, beginning with bank nationalization and rural credit expansion, and advancing through recent digital initiatives such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) and issuance of Rupay Debit card. These efforts have substantially improved account ownership and the adoption of digital financial services. However, significant disparities persist, particularly in rural and marginalized regions where access and usage remain limited. The findings of this paper provide valuable insights for policymakers, highlighting the need to strengthen institutional frameworks and enhance financial literacy to achieve inclusive growth. Despite noteworthy progress, the continued exclusion of large population segments underscores the importance of making financial inclusion a central component of India's sustainable development and economic empowerment agenda.

Keyword: Regional Disparity, PMJDY, Financial Inclusion, FII, EAG States.

Introduction

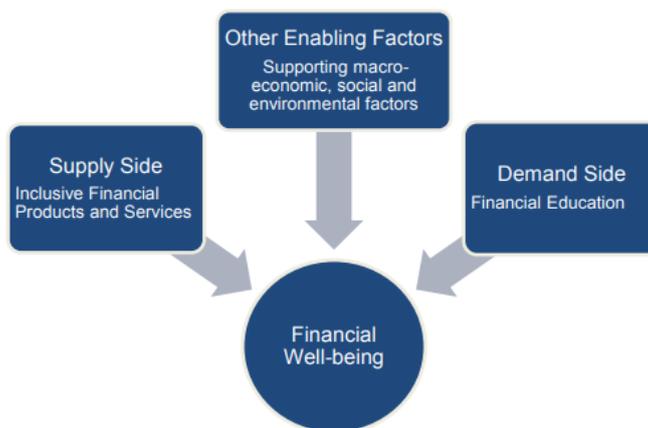
Financial inclusion, defined as the availability of banking services at an affordable cost for disadvantaged and low-income groups, is regarded as an essential component of efforts to foster inclusive economic growth in developing countries. It is widely believed that extending access to institutional financial services to deprived and unbanked women can help address their exclusion and promote empowerment. Financial inclusion has been regarded by successive governments as a top priority, making the assessment of its progress a crucial task. Such assessments provide a concrete and clear understanding of the pace and direction in which financial inclusion goals set by the Reserve Bank of India and the Government of India are being achieved. One of the most effective tools for measuring financial inclusion is the Financial Inclusion Index (FII). This index is constructed by combining multiple parameters to capture the extent of financial inclusion. It serves as an approximate measure of the basic level of inclusion across states, districts, regions, or even towns. Its utility lies in its ability to provide insights at both macro and micro levels, enabling meaningful comparisons and highlighting clear distinctions in financial inclusion between different geographic units.

Financial inclusion has become a cornerstone for advancing inclusive and sustainable economic growth, emphasizing equitable access to financial products and services across all social strata, especially among marginalized and low-income groups. As economies increasingly prioritize inclusive development models, accurately measuring the scope and depth of financial inclusion has gained significance for evaluating the

equity and effectiveness of financial systems. Over the past two decades, researchers have introduced a range of frameworks and multidimensional indices, each capturing distinctive aspects of financial inclusion rooted in conceptual variations and methodological advances. The earliest influential work, Sarma (2008, 2010), mapped financial inclusion using three core dimensions: penetration, availability, and usage, quantifying accessibility through bank account prevalence, infrastructure through outlet density, and engagement via credit and deposit volumes relative to GDP. Building upon this, Arora (2010) refocused measurement on outreach, ease, and cost, integrating user-centric barriers such as procedural complexity and financial charges. Gupte, Venkataramani, and Gupta (2012) further expanded analysis by aggregating outreach, usage, ease, and cost via a geometric mean, offering nuanced insights into service adoption and affordability, while frameworks such as Kunt and Klapper (2012) leveraged Global Findex data to empirically assess account ownership, savings, credit usage, and insurance adoption worldwide.

Subsequent models have sought to incorporate behavioral and qualitative dimensions, with Rahman (2013) introducing metrics for accessibility, take-up rates, responsible use, and satisfaction, thereby recognizing variables like willingness and ability to participate in formal financial systems. Yorulmaz (2013) proposed refined computational approaches via normalized inverse Euclidean distance, emphasizing regional disparities from an ideal inclusive state. Parallel to these, seminal contributions by Beck, Kunt, and Peria (2007), Honohan (2005), and the CGAP (2009) presented frameworks deconstructing inclusion into payments, savings, credit, and delivery mechanisms, broadening the scope beyond banking to encompass the spectrum of financial services.

India's specific context has yielded further innovations in measurement. CRISIL's Inclusix Index (2013) offered a district-level composite based on branch, credit, and deposit penetration using scheduled commercial bank data, though it faced limits in accounting for non-banking institutions and qualitative indicators. Amberkhane et al. (2014) addressed such gaps by integrating drag factors including population growth and governance and infrastructure parameters, weighting the financial ecosystem across banks, NBFCs, and insurance, thus highlighting enabling and constraining contextual forces. Goel and Sharma (2017) articulated spatial and demographic diversity in access, detailing ATM and branch density per population and area. Recognizing regional heterogeneity, Indian research has advanced state and district-level indices such as Mehrotra et al. (2009), which accentuated rural outreach, and NABARD's NAFINDEX, which shifted focus toward household-level metrics linked to wellbeing and livelihoods, incorporating savings, borrowing, investments, insurance, and financial literacy. These gradual methodological shifts from simple bank-centric measures to multidimensional household- and ecosystem-based indices reflect the increasing complexity of financial landscapes as microfinance, insurance, and digital financial services proliferate.



1.2 Literature Review:

The literature on financial inclusion presents it as a core element of social inclusion, emphasizing the integration of economically marginalized and vulnerable groups into the formal financial system. Financial exclusion, conversely, represents the systemic processes that restrict access to basic banking and financial services for certain communities, thereby exacerbating inequality and poverty. Leyshon and Thrift (1995) conceptualized financial exclusion as the set of mechanisms that prevent specific social groups from participating in the formal financial network. In similar terms, the Asian Development Bank (2000) described financial inclusion as the provision of diversified financial services such as credit, savings, payment systems, insurance, and remittances to poor households and small enterprises, highlighting its potential for economic empowerment. Sinclair (2001) defined financial exclusion as the inability to access financial products suited to individual needs, linking it to barriers stemming from cost, geographical distance, institutional inefficiency, or negative customer experiences.

The Treasury Committee (2004) of the United Kingdom described financial inclusion as the ability of individuals to obtain appropriate financial products and services according to their circumstances. Carbo et al. (2005) and Conroy (2005) articulated financial exclusion as the involuntary inability of certain population segments, especially low-income groups, to access formal banking systems. Mohan (2006) further explained financial exclusion as the lack of access to fair, safe, and affordable financial products offered by mainstream institutions. Supporting this perspective, the United Nations (2006) proposed that an inclusive financial sector should provide access to credit, insurance, savings, and payment systems to all eligible individuals and enterprises.

Over time, research focus shifted from defining financial inclusion to developing methods for its measurement. The challenge in quantification arises from its multidimensional nature spanning access, usage, availability, and quality. Early studies measured inclusion simply by the proportion of the population holding a bank account, though such an approach offered a limited view by ignoring frequency and adequacy of usage. Claessens (2006) noted that financial exclusion is difficult to measure due to limited cross-country data on household and firm-level financial behavior. To address this limitation, Honohan (2008) employed an econometric estimation of households' access to banking services for multiple countries using survey data. However, subsequent researchers emphasized that mere account ownership does not equate to financial participation, as psychological barriers, opportunity costs, and service quality influence effective utilization.

Beck, Demirgüç-Kunt, and Peria (2006) introduced the concept of banking sector outreach, which encompasses both access and actual use of financial services by households and businesses. Claessens (2006) elaborated that access includes dimensions such as cost, proximity, scale, and quality of services. Accordingly, financial inclusion research distinguishes between *access*, referring to service availability, and *usage*, reflecting active engagement. Barriers to inclusion arise from various causes: geographic limitations in sparsely populated regions, socio-economic constraints among low-income or marginalized communities, and informational asymmetries affecting small enterprises' creditworthiness (Beck and de la Torre, 2006; Anderloni and Carluccio, 2007). Thus, financial exclusion may not merely result from supply-side deficiencies but also from demand-side factors, including lack of awareness and financial literacy. Peachy and Roe (2006) suggested that complete access is characterized by at least one bank account for every two adults (0.5 ratio) and a deposit-GDP ratio of 100%. They further noted that a cash-deposit ratio below 20% indicates high financial integration within the banking sector. Meanwhile, Beck and de la Torre (2006) proposed that nations reach "near-complete access" if their banking penetration measures exceed the mean value of developed economies.

Though valuable, these indicators fail to capture the overall multidimensionality of financial inclusion when used individually. Consequently, composite indices have been developed to aggregate information across different dimensions. Sarma (2012) advanced this idea by developing the Index of Financial Inclusion (IFI), which integrates three primary dimensions penetration, availability, and usage into a single numerical measure. The IFI approach allows for country and state-level comparisons and the evaluation of policy impacts over time. By normalizing data across dimensions and applying a distance-based methodology, it accounts for disparities in both outreach and utilization. This multidimensional framework effectively bridges gaps left by earlier unidimensional measures and is now widely used in both cross-country and regional analyses to assess progress toward inclusive financial systems.

In sum, the literature on financial inclusion reveals its evolution from a narrow focus on bank account access to a holistic framework encompassing accessibility, affordability, and actual usage. Contemporary studies emphasize the dynamic interplay between supply-side infrastructural expansion and demand-side behavioral determinants. The measurement of financial inclusion, through indicators and composite indices like the IFI, continues to advance empirical understanding, guiding policymakers toward targeted interventions aimed at achieving equitable and sustainable financial integration.

Dimension	Indicator name	Variables	Source
Usage	Number of Deposit Accounts	% of adults with a formal savings account	Demirgüç-Kunt & Klapper 2013,2015
	Number of Loan Accounts	% with formal borrowing or credit access	
	Account Ownership	Proportion of adults owning any formal financial account	
	Savings	Total amount or prevalence of savings accounts	

	Credit or Loan Usage	Proportion of population with access to credit or loans	
Access	Access to Bank Branches	Branch density per 100,000 population	Honohan (2007), Chakravarty & Pal (2010)
	Number of ATMs	ATMs per 100,000 population	
	Distance to Service Points	Geographical distance or travel time to nearest branch or ATM	
Barriers	Affordability	Costs associated with opening or maintaining accounts	Chakravarty & Pal (2010), Dabla-Norris et al. (2015), Chakravarty & Pal (2010), Mishra (2007)
	Financial Literacy / Awareness	Knowledge or awareness about financial products	
	Trust in Financial System	Level of trust or confidence in financial institutions	
	Barriers to Access	Costs, distance, documentation, trust issues	

Different researchers have adopted varied approaches in defining and measuring financial inclusion. For instance, Honohan (2007) focused on formal bank accounts and deposits as a share of per capita GDP. Sarma (2008) measured inclusion through three dimensions: **Penetration** (number of bank accounts per 1,000 population), **Availability** (number of bank branches and ATMs per 1,000 population), and **Usage** (number of beneficiaries). Mehrotra et al. (2009) examined indicators such as the number of bank offices, deposit accounts, deposit volumes at the rural level, and district-level credit from banks.

1.3 Objective of the study:

1. To develop and compute the Financial Inclusion Index (FII) for all 36 states of India using PMJDY data.
2. To analyze the variation in financial inclusion levels across different states based on the FII scores.
3. To compare the financial inclusion levels between EAG (Empowered Action Group) states and non-EAG states.
4. To provide policy recommendations for enhancing financial inclusion in under performing states.

1.4 Methodology: This study seeks to construct a comprehensive Financial Inclusion Index (FII) to systematically assess and compare state-level variations in financial inclusion across India. The index, ranging from 0 (no inclusion) to 1 (complete inclusion), is designed to evaluate the extent of financial access through three core dimensions banking penetration, banking disbursement, and availability of banking services. Following the multidimensional framework proposed by Sarma (2008), the methodology employs normalization techniques to ensure comparability among states and capture the heterogeneity of financial outreach.

To construct the Financial Inclusion Index (FII) for the 36 states of India, we adopt the framework proposed by Sarma (2008) as our base reference. Sarma evaluates financial inclusion using three key dimensions:

Penetration (or Accessibility), Banking Disbursement, and Banking Usage, drawing from an all-India dataset and employing a methodology inspired by the Human Development Index (HDI) calculation. Each dimension is computed as:

$$d_i = \frac{(A_i - m_i)}{(M_i - m_i)}$$

where, i = i th indicator; D = dimension; d = variables of dimension; A = actual value; m_i = minimum value; and M = maximum value (Sarma, 2008). The above Formula represents $0 \leq D \leq 1$, higher D_i means higher inclusion in the i th dimension. If the n dimension is considered, the D_i will be defined in the n dimensional Cartesian space as $D_i = (d_1, d_2, d_3, \dots, d_n)$. In this study, the total beneficiary under PMJDY, the balance available in these account and the Rupay debit cards issued to beneficiaries are compared with the estimated population of 2025 chosen to represent as the i th (d_1, d_2, d_3) in the cartesian three dimensional space where $0 \leq d_1, d_2, d_3 \leq 1$. In three-dimensional Cartesian space, the worst possible scenario is complete financial exclusion at the (0,0,0) point, while the best possible scenario is located at (1,1,1) point of complete financial inclusion. The FII for the i th state, then its normalized inverse Euclidean distance from D_i , to the reference point $I = (1, 1, 1, \dots, 1)$ that is used to determine the precise formula is;

$$FII = 1 - \sqrt{\left[\frac{(1 - D_1)^2 + (1 - D_2)^2 + (1 - D_3)^2}{3} \right]}$$

In above formula, the numerator of second component is the Euclidean distance D_i and the ideal point I . To normalize it divided by $\sqrt{3}$ ($n=3$ I.e, $\sqrt{n}=\sqrt{3}$ and the inverse result, and then subtract from 1. Value are normalized so that they range from 0 to 1. A higher FII score indicates a more financially inclusive states due to inverse distance. States are divided under three categories:

1	$0.67 < FII \leq 1$	High FII
2	$0.33 < FII \leq 0.67$	Medium FII
3	$0 < FII \leq 0.33$	Low FII

1.5 Source and Data Frame for the Study

This section presents an updated overview of the coverage and impact of the Pradhan Mantri Jan Dhan Yojana (PMJDY) on financial inclusion across various states and Union Territories of India, using the latest data available on the PMJDY official website as of 2025. The analysis focuses on multiple dimensions, including the total number of accounts opened in both rural and urban areas, the aggregate number of beneficiaries, and the issuance of RuPay debit cards. A special emphasis has been given to identifying the leading performers among states and UTs.

The data retrieved and analyzed demonstrates the deepening penetration of financial services, particularly in rural areas where access to formal banking has historically been limited. Using PMJDY data as foundation in this study aims to collect information by measuring Financial inclusion index for 36 states of India. Overall, this 2025 update underscores PMJDY's role as a transformative initiative in bridging the financial inclusion gap across India.

Explanation of the Estimated Population Formula:

In the assessment of financial inclusion through the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme, the estimated population pertains to the demographic eligible for the scheme specifically, individuals aged 18 to

59 years. Because the most recent official census data comes from 2011, researchers use population projections and growth rates to estimate the population for years such as 2025. This involves applying a growth factor to the 2011 population figures. To isolate the eligible age group, the total projected population is multiplied by 0.60, representing the proportion of people aged 18 to 59 in the population. This method assumes a constant growth rate and stable age distribution over the short term, which is reasonable given demographic trends over such periods.

The population estimation methodology is grounded in the national population projection report, which utilizes Census 2011 data as a base. The demographic data are smoothed to correct age-reporting errors using weighted averages. The cohort component method is the primary tool for projection in major states; it incorporates fertility, mortality, and migration data drawn from the Sample Registration System (SRS) and demographic models like Gompertz. For smaller states and union territories, exponential growth models based on historical growth rates are applied instead. The projections are typically calculated at five-year intervals, up to 2036.

Estimating the eligible population requires extracting the proportion of people aged 18-59 by applying the multiplier to the total projected population. This targeted approach ensures the focus remains on the segment that can realistically open accounts and benefit from the PMJDY scheme. Additional adjustments involve migration and sex ratio considerations, with international migration being negligible.

Overall, this method, combining robust demographic modeling and proportionate age group extraction, provides a reliable and academically validated framework to estimate the population eligible for financial inclusion initiatives like PMJDY, supporting effective policy implementation and impact assessment.

$$\text{Estimated Population 18-59 year 2025} = (\text{population 2022} \times 1.0068)^3 \times 0.60$$

These values are adjusted for three years of population growth at an annual growth rate of 0.68%, applied compounding annually.

Where,

- a) Population 2022: Your known population estimate in 2022.
- b) $(1.0068)^3$: Compound growth factor over three years (from 2022 to 2025).
- c) 0.60: The proportion of the population between 18 and 59 years.

This index serves as an effective tool for assessing the extent of financial inclusion across regions at a given point in time and for evaluating the impact of policy interventions over different periods. In this study, a state-wise Index of Financial Inclusion for India is computed to facilitate inter-state comparisons. According to Formula of , the normalization process for banking penetration, disbursement, and banking services used in the FII index calculation involves scaling the raw data relative to the estimated population within the 18-59 age group for each state. This process ensures comparability across states with different population sizes, allowing for a fair assessment of financial inclusion levels.

Table :1

State Name	Estimated Population (18-59)	Estimated Population (18-59)	Total Beneficiaries(PMJDY)	Balance in beneficiary accounts (in crore)	No. of Rupy cards issued

	years) in 2022	years) in 2025			to beneficiaries
Andaman And Nicobar Islands	111,180	113464	63,839	46.87	37,985
Andhra Pradesh	15,501,300	15819682	16,888,901	5,504.47	10,537,778
Arunachal Pradesh	427,080	435852	477,295	257.76	319,143
Assam	9,818,100	10019754	25,328,747	6,670.43	15,088,628
Bihar	33,045,000	33723712	66,408,925	29,158.96	47,879,869
Chandigarh	311,700	318102	338,508	202.76	216,685
Chhattisgarh	8,298,840	8469290	18,471,044	8,222.27	11,250,611
Delhi	5,253,660	5361565	6,889,358	3,454.99	5,318,049
Goa	451,860	461141	224,398	205.24	159,173
Gujarat	18,779,040	19164743	19,620,439	11,334.23	14,932,219
Haryana	7,774,500	7934181	10,848,704	7,389.92	7,458,089
Himachal Pradesh	1,927,680	1967273	2,029,344	1,491.31	1,334,409
Jammu And Kashmir	3,689,700	3765483	2,235,850	1,747.82	1,793,118
Jharkhand	10,534,560	10750930	20,110,434	11,222.14	13,695,250
Karnataka	19,125,780	19518605	21,080,921	10,932.60	13,115,771
Kerala	10,863,780	11086912	7,221,849	3,460.81	3,918,336
Ladakh	75,540	77092	19,785	26.91	14,454
Lakshadweep	19,320	19717	10,338	18.47	7,789
Madhya Pradesh	22,996,740	23469071	46,190,661	16,908.77	34,371,171
Maharashtra	34,479,660	35187839	37,103,645	18,419.45	26,265,518
Manipur	904,320	922894	1,084,200	291.78	705,246
Meghalaya	941,160	960491	893,284	498.78	541,304
Mizoram	345,540	352637	426,794	213.72	200,474
Nagaland	608,280	620773	412,859	137.9	309,920
Odisha	13,161,120	13431437	23,477,270	11,572.99	16,841,782
Puducherry	436,140	445098	271,290	122	168,895
Punjab	8,332,080	8503213	9,649,693	4,759.87	6,873,693
Rajasthan	21,680,460	22125756	37,756,068	22,130.65	28,021,135
Sikkim	183,660	187432	107,405	54.04	73,217
Tamil Nadu	22,528,560	22991275	18,120,814	6,595.26	13,134,053

Telangana	10,943,520	11168289	13,116,667	4,907.75	9,035,679
The Dadra And Nagar Haveli And Daman And Diu	183060**	186820	243,435	186.62	171,687
Tripura	1,147,740	1171313	1,140,550	637.99	621,655
Uttar Pradesh	62,388,180	63669573	101,500,323	57,592.49	69,122,050
Uttarakhand	3,176,280	3241518	3,972,061	2,756.12	2,683,534
West Bengal	28,043,220	28619201	54,788,413	25,923.63	35,719,951

Table 1 source-(Pradhan Mantri Jan-Dhan Yojana | Department of Financial Services | Ministry of Finance, 2025)

**Census of India 2011 Population Projections for India and States 2011-2036

1.6 Data Analysis:

Banking penetration is measured by the ratio of PMJDY account holders to the eligible adult population (aged 18–59). Banking disbursement reflects the monetary depth of inclusion by comparing total deposits in PMJDY accounts with the corresponding population base, while banking services availability is gauged by the proportion of Rupay debit cardholders to the eligible population. The composite FII for each state is derived using the inverse normalized Euclidean distance from the ideal inclusion point (1,1,1). States are subsequently ranked and classified into high, medium, and low inclusion categories. This methodological framework offers an integrated approach to quantifying the impact of PMJDY, enabling evidence-based policy interventions aimed at reducing regional inequalities and promoting inclusive financial growth nationwide.

Step-wise explanation of the normalization process:

Step 1: Data Collection: Collect the total number of beneficiaries, the total account balance (disbursement amount), and the number of Rupay debit cards issued for each state. Calculate the estimated population aged 18-59 in each state for 2022, using the population projections and age group proportion (60%).

Step 2: Calculate Relevant Ratios: This ratio indicates the proportion of the eligible population that has access to banking accounts.

- **Banking Penetration (D1):**

$$D_1 = \frac{\text{Number of Beneficiaries}}{\text{Estimated Population (18-59)}}$$

- **Banking Disbursement (D2):**

$$D_2 = \frac{\text{Total Bank Account Balance (disbursed amount)}}{\text{Estimated Population (18-59)}}$$

- Represents the disbursement per capita in the 18-59 age group.

- **Banking Services (D3):**

$$D_3 = \frac{\text{Number of Rupay Debit Cards Issued}}{\text{Estimated Population (18-59)}}$$

Step3: The normalization process described converts raw ratios from their original range to a standardized scale between 0 and 1, making it easier to compare and combine different indicators across states. The formula applied,

$$d_i = \frac{(A_i - m_i)}{(M_i - m_i)}$$

This method ensures comparability and fairness in composite index calculations. The study simplifies further by noting that if ratios already naturally fall within the range, normalization may sometimes be unnecessary (e.g., a ratio of 1 indicates complete inclusion, such as every person having a bank account).

Table:2

State Name	Banking Penetration(per lakh)	Banking Disbursement(per lakh)	Banking Service s(Per lakh)	D1	D2	D3	State wise Financial Inclusion Index
Andaman And Nicobar Islands	56263.89	41.31	33477.72	0.134732952	0.232414172	0.111721797	0.157995797
Andhra Pradesh	106758.79	34.80	66611.82	0.357070355	0.153142718	0.363058899	0.284407064
Arunachal Pradesh	109508.55	59.14	73222.82	0.369192253	0.449471536	0.413222328	0.409715312
Assam	252788.10	66.57	150588.80	0.5398871	0.539887547	0.7343531	0.734353951
Bihar	196920.57	86.46	141976.86	0.754084379	0.782062667	0.934757223	0.806585252
Chandigarh	106414.92	63.74	68118.08	0.355539022	0.505425044	0.374465459	0.408046229
Chhattisgarh	218094.36	97.08	132840.07	0.847397682	0.911415392	0.865534025	0.871916956
Delhi	128495.28	64.44	99188.37	0.45272188	0.513887863	0.610088505	0.521164842
Goa	48661.50	44.51	34517.23	0.101257523	0.271341232	0.119604714	0.160599917

Gujarat	102377.78	59.14	77915.0 5	0.3377774 16	0.449465 877	0.448794 156	0.409673 973
Haryana	136733.76	93.14	93999.4 8	0.4890790 8	0.863341 878	0.570834 608	0.606766 158
Himachal Pradesh	103155.20	75.81	67830.4 0	0.2978250 1	0.564188 703	0.323163 661	0.383264 337
Jammu And Kashmir	59377.51	46.42	47619.8 7	0.1484052 85	0.294511 069	0.218942 557	0.218339 605
Jharkhand	187057.63	104.38	127386. 66	0.7105478 78	1 962	0.823955 962	0.804403 447
Karnataka	108004.24	56.01	67196.2 5	0.3625884 07	0.411424 178	0.367528 686	0.380125 013
Kerala	65138.51	31.22	35342.0 0	0.1738111 27	0.109570 191	0.125865 438	0.135985 237
Ladakh	25664.30	34.91	18749.1 4	0 0	0.154489 775	0 0	0.048704 823
Lakshadweep	52432.41	93.68	39504.3 5	0.1179353 31	0.870163 508	0.157529 717	0.291797 634
Madhya Pradesh	196815.04	72.05	146453. 05	0.7535555 34	0.606513 501	0.968629 313	0.731330 054
Maharashtra	105444.51	52.35	74643.7 4	0.3512681 7	0.366744 216	0.423965 244	0.379870 466
Manipur	117478.30	31.62	76416.8 0	0.4042493 62	0.114430 745	0.437410 668	0.303423 016
Meghalaya	93002.90	51.93	56357.0 4	0.2965055 69	0.361703 544	0.285276 752	0.313667 694
Mizoram	121029.25	60.61	56849.9 5	0.4198773 17	0.467265 957	0.288989 447	0.387387 046
Nagaland	66507.19	22.21	49924.8 1	0.1798225 56	0 0	0.236461 664	0.132881 817
Odisha	174793.44	86.16	125390. 77	0.6566014	0.778329 875	0.808877 811	0.739495 404
Puducherry	60950.64	27.41	37945.5 9	0.1553653 45	0.063242 956	0.145607 919	0.120434 333
Punjab	113482.91	55.98	80836.4 2	0.3866160 29	0.410879 364	0.470882 354	0.421706 965

Rajasthan	170643.07	100.02	126644.87	0.638337314	0.947019516	0.818402573	0.764355879
Sikkim	57303.39	28.83	39063.19	0.13929155	0.080530317	0.154067568	0.124053804
Tamil Nadu	78816.05	28.69	57126.25	0.234018317	0.078767778	0.291086029	0.196267921
Telangana	117445.62	43.94	80904.77	0.404120898	0.264489572	0.47147046	0.374063111
The Dadra And Nagar Haveli And Daman And Diu	130304.57	99.89	91899.69	0.460750929	0.945496135	0.554883731	0.595076664
Tripura	97373.59	54.47	53073.32	0.315747415	0.392592971	0.260365579	0.320734717
Uttar Pradesh	159417.31	90.46	108563.71	0.588950087	0.830641821	0.681300874	0.684187104
Uttarakhand	122537.07	85.03	82786.34	0.426456955	0.764358518	0.485647353	0.534870205
West Bengal	191439.35	90.58	124811.14	0.729953186	0.83217891	0.804549991	0.784523856

Source: Author's Calculation

In table 2, State-wise analysis of the Financial Inclusion Index (FII) across India, using normalized indicators for banking penetration, disbursement, and services (denoted D1, D2, D3), shows significant variation in financial inclusion achievement. Progressive states like Assam, Jharkhand, Odisha, Bihar, West Bengal, and Chhattisgarh exhibit high FII values (0.73 to 0.87), reflecting stronger consistency in access, usage, and service availability per lakh population. In contrast, states and UTs such as Ladakh, Sikkim, Kerala, Goa, and Puducherry show much lower FII scores (around 0.05 to 0.16), signifying persistent financial exclusion due to weaker banking networks and usage. The comprehensive spread highlights persistent regional disparities, with EAG and North-Eastern states showing improvements where policy focus and delivery have increased outreach, while some smaller UTs and southern states lag in achieving inclusive growth. This index, constructed through the displaced ideal method, effectively reveals where targeted improvements in banking access, disbursement channels, or service delivery could further raise inclusion levels in lagging regions.

Figure 1

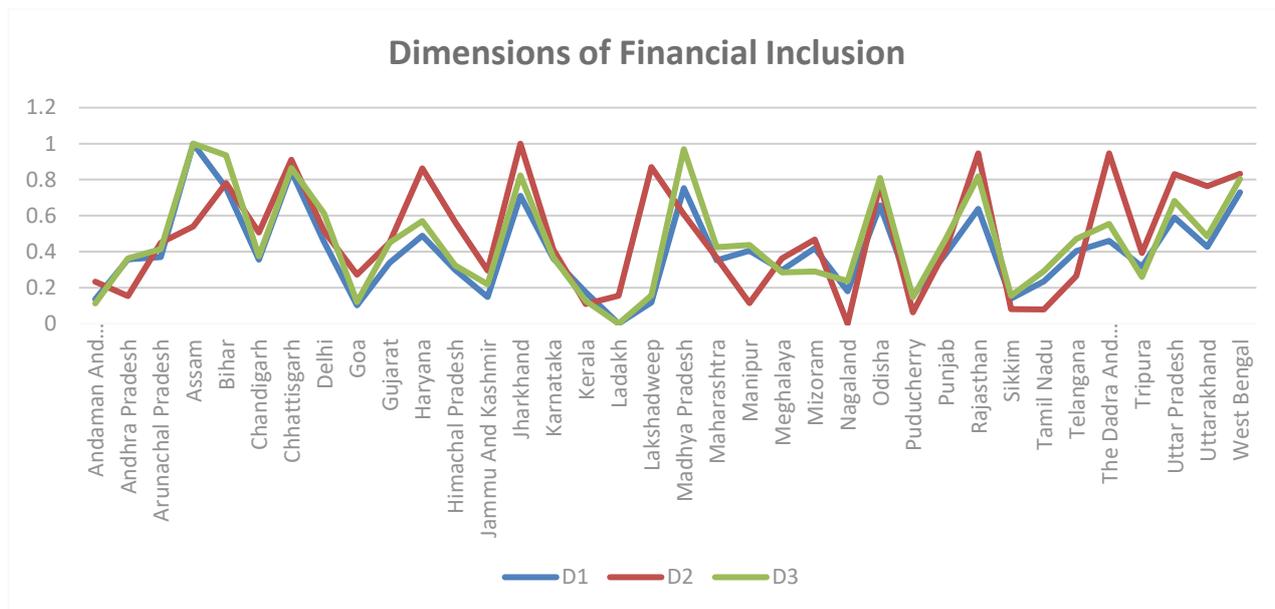


Table:3

State Name	State wise Financial Inclusion Index	Rank	State Name	State wise Financial Inclusion Index	Rank	State Name	State wise Financial Inclusion Index	Rank
Chhattisgarh	0.871916956	1	Delhi	0.521164842	13	Manipur	0.303423016	25
Bihar	0.806585252	2	Punjab	0.421706965	14	Lakshadweep	0.291797634	26
Jharkhand	0.804403447	3	Arunachal Pradesh	0.409715312	15	Andhra Pradesh	0.284407064	27
West Bengal	0.784523856	4	Gujarat	0.409673973	16	Jammu And Kashmir	0.218339605	28
Rajasthan	0.764355879	5	Chandigarh	0.408046229	17	Tamil Nadu	0.196267921	29
Odisha	0.739495404	6	Mizoram	0.387387046	18	Goa	0.160599917	30
Assam	0.734353951	7	Himachal Pradesh	0.383264337	19	Andaman And Nicobar Islands	0.157995797	31
Madhya Pradesh	0.731330054	8	Karnataka	0.380125013	20	Kerala	0.135985237	32
Uttar Pradesh	0.684187104	9	Maharashtra	0.379870466	21	Nagaland	0.132881817	33
Haryana	0.606766158	10	Telangana	0.374063111	22	Sikkim	0.124053804	34
The Dadra And Nagar Haveli And Daman And Diu	0.595076664	11	Tripura	0.320734717	23	Puducherry	0.120434333	35
Uttarakhand	0.534870205	12	Meghalaya	0.313667694	24	Ladakh	0.048704823	36

Authors Calculation

Source: Author’s calculation

Table3: The table presents a state-wise Financial Inclusion Index (FII) ranking for 36 Indian states and union territories, reflecting the relative access and usage of financial services across these regions. The FII is a composite index, with higher values indicating better financial inclusion. The table displays a state-wise Financial Inclusion Index for 36 Indian states and Union Territories, ranked from highest to lowest based on index values. Chhattisgarh leads with the highest financial inclusion score (0.87), followed by Bihar (0.81), Jharkhand (0.80), and West Bengal (0.78), indicating strong banking access, digital financial use, and inclusion indicators in these states.

Figure: 2

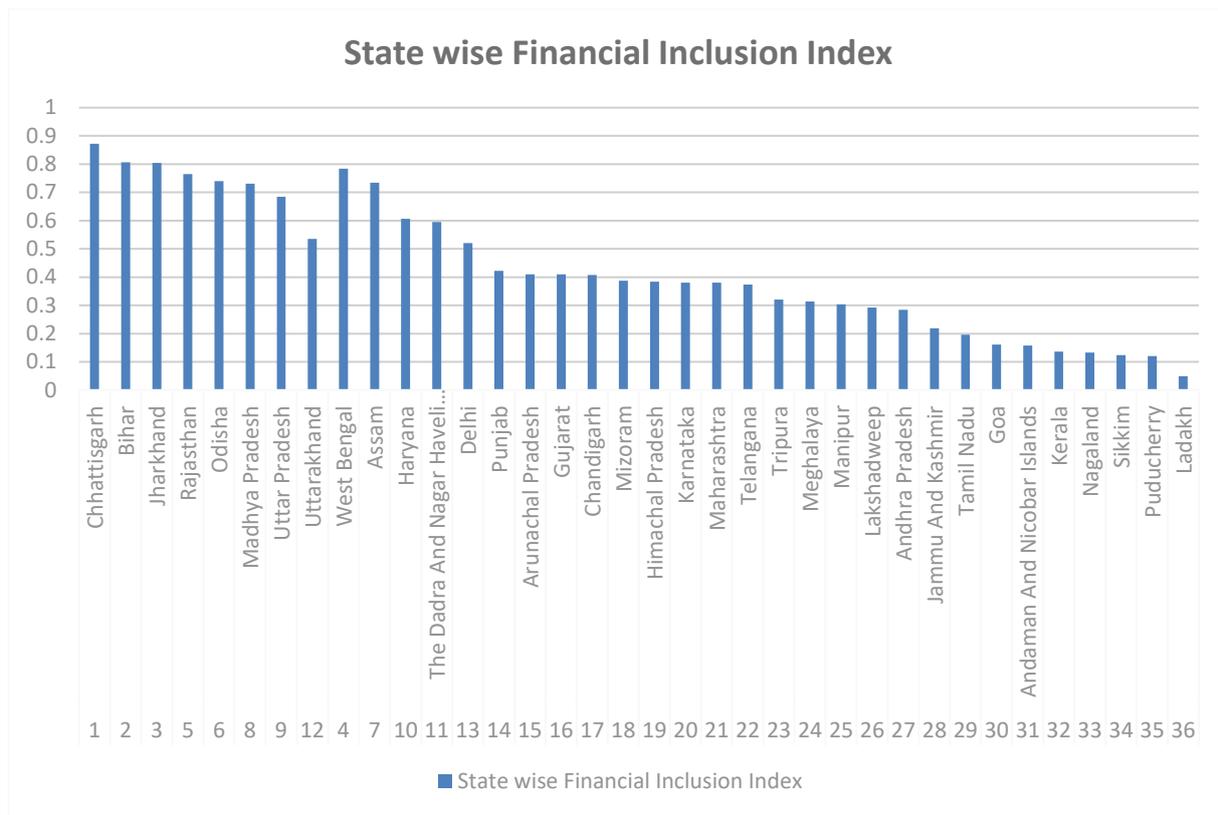


Table 4: Comparison of EAG & Non EAG states based on Financial Inclusion Index:

State Name	State wise Financial Inclusion Index	Rank	Status of FII	EAG States
Chhattisgarh	0.871916956	1	High FII	
Bihar	0.806585252	2	High FII	
Jharkhand	0.804403447	3	High FII	
Rajasthan	0.764355879	5	High FII	
Odisha	0.739495404	6	High FII	
Madhya Pradesh	0.731330054	8	High FII	
Uttar Pradesh	0.684187104	9	High FII	
Uttarakhand	0.534870205	12	Medium FII	

State Name	State wise Financial Inclusion Index	Rank	Status of FII	NON EAG States
West Bengal	0.784523856	4	High FII	
Assam	0.734353951	7	High FII	
Haryana	0.606766158	10	Medium FII	

The Dadra And Nagar Haveli And Daman And Diu	0.595076664	11	Medium FII
Delhi	0.521164842	13	Medium FII
Punjab	0.421706965	14	Medium FII
Arunachal Pradesh	0.409715312	15	Medium FII
Gujarat	0.409673973	16	Medium FII
Chandigarh	0.408046229	17	Medium FII
Mizoram	0.387387046	18	Medium FII
Himachal Pradesh	0.383264337	19	Medium FII
Karnataka	0.380125013	20	Medium FII
Maharashtra	0.379870466	21	Medium FII
Telangana	0.374063111	22	Medium FII
Tripura	0.320734717	23	Low FII
Meghalaya	0.313667694	24	Low FII
Manipur	0.303423016	25	Low FII
Lakshadweep	0.291797634	26	Low FII
Andhra Pradesh	0.284407064	27	Low FII
Jammu And Kashmir	0.218339605	28	Low FII
Tamil Nadu	0.196267921	29	Low FII
Goa	0.160599917	30	Low FII
Andaman And Nicobar Islands	0.157995797	31	Low FII
Kerala	0.135985237	32	Low FII
Nagaland	0.132881817	33	Low FII
Sikkim	0.124053804	34	Low FII
Puducherry	0.120434333	35	Low FII
Ladakh	0.048704823	36	Low FII

Table 5: ANOVA

State wise Financial Inclusion Index					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.774	2	.887	137.628	.000
Within Groups	.213	33	.006		
Total	1.987	35			

The ANOVA table helps us see if there are real differences between groups (here, states) in the Financial Inclusion Index. It does this by comparing the differences between group averages to the differences within each group. A high F-value (137.628) means the variation between groups is much larger than the variation inside groups. The p-value (0.000) tells us this result is statistically significant, meaning the differences between the states are very unlikely to be due to chance. This shows that the financial inclusion levels truly differ across the states studied.

Table 6: Multiple Comparisons						
Dependent Variable: State wise Financial Inclusion Index						
LSD						
(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
High FII	Medium FII	.32196069957 3*	.03481568881 7	.000	.25112764808	.39279375106
	Low FII	.56835306532 5*	.03430324679 6	.000	.49856258497	.63814354568
Medium FII	High FII	- .32196069957 3*	.03481568881 7	.000	- .39279375106	- .25112764808
	Low FII	.24639236575 3*	.03092450598 2	.000	.18347598527	.30930874624
Low FII	High FII	- .56835306532 5*	.03430324679 6	.000	- .63814354568	- .49856258497
	Medium FII	- .24639236575 3*	.03092450598 2	.000	- .30930874624	- .18347598527
*. The mean difference is significant at the 0.05 level.						

This LSD (Least Significant Difference) multiple comparisons table shows which pairs of Financial Inclusion Index groups (High, Medium, Low) have significant mean differences. The “Mean Difference (I-J)” column shows how much the average score differs between two groups. The star (*) indicates the difference is statistically significant at the 0.05 level. The “Sig.” column (.000) means the difference is highly significant. The “95% Confidence Interval” shows the likely range for the true difference in means. All group comparisons (High vs Medium, High vs Low, Medium vs Low) are significant, meaning the average Financial Inclusion Index is truly different across all three groups.

1.7 Result and Discussion: The study calculated the Financial Inclusion Index (FII) for 36 Indian states and Union Territories based on three dimensions banking penetration, disbursement, and availability of banking services using a weighted multidimensional approach similar to the Human Development Index. The results reveal significant regional disparities in financial inclusion across India. Nine states demonstrated high inclusion, thirteen fell in the medium range, and fourteen recorded low inclusion levels. Several Empowered

Action Group (EAG) states performed well, indicating the success of targeted policy initiatives, while regions such as Manipur, Lakshadweep, and Ladakh lagged due to infrastructural constraints and limited digital connectivity. The relatively lower performance of southern states like Tamil Nadu and Kerala underscores the persistence of urban–rural divides and localized challenges.

The findings affirm the transformative impact of the Pradhan Mantri Jan Dhan Yojana (PMJDY) in broadening financial access nationwide. However, persistent inequalities highlight the need for tailored, region-specific strategies to deepen financial inclusion. The FII proves to be a valuable policy instrument, enabling evidence-based assessment, targeted interventions, and efficient resource allocation. Strengthening financial infrastructure, enhancing digital adoption, and fostering equitable access to banking services remain critical policy priorities. In conclusion, the study emphasizes that achieving comprehensive financial inclusion in India requires a sustained, multidimensional approach that integrates technological innovation, institutional reforms, and social inclusion measures. Such efforts are essential to ensure that all states, especially underserved and remote regions, benefit equally from India's financial inclusion agenda and contribute to inclusive national growth.

1.8 Limitations:

The presented index faces significant limitations due to data constraints and methodological challenges. A key restriction arises from the absence of updated census data, as India has not conducted a national census since 2011. Consequently, the index relies heavily on estimated population figures, which may not accurately represent the current demographic realities across states. These population estimates, often projected using a uniform annual growth rate of 0.68 percent, overlook state-specific variations in fertility, migration, and urbanization patterns. Such assumptions can distort state-wise comparisons and undermine the precision of the findings. Therefore, while the index offers a broad understanding of trends, its interpretation should be approached with caution, recognizing the inherent uncertainty and approximations within the underlying demographic and statistical estimates.

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