ACCELERATING FINANCIAL INCLUSION IN INDIA

Shamika Ravi

BROOKINGS INDIA

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1. INTRODUCTION

By making financial services accessible at affordable costs to all individuals and businesses, irrespective of net worth and size, financial inclusion strives to address and offer solutions to the constraints that exclude people from participating in the financial sector. Research shows that countries with deeper levels of financial inclusion—defined as access to affordable, appropriate financial services— have stronger GDP growth rates and lower income inequality. (Demirguc-Kunt et al. 2017; King and Levine 1993; Beck et al. 2000; Clark et al. 2006; Beck et al. 2007; Demirguc-Kunt and Levine, 2009).

In recent years, careful research on financial habits, needs and behaviours of poor households has yielded information on how they manage their complex financial lives. This has also facilitated product design and solutions of financial instruments that are more suitable to their needs (Morduch et al. 2010).[1]

In this paper, we seek to investigate the extent of financial inclusion achieved in India based on the latest available data. We analyse latest empirical trends across all states (rural and urban) for various financial instruments, outreach of financial institutions and the changes in the enabling institutions which actively promote financial deepening in India. The financial instruments that we study include bank accounts, credit outreach, insurance products, pension and payments. The financial institutions that we study include banks (ATMs, branches), the postal system, microfinance institutions and Self Help Groups as well as new institutions such as small banks and payment banks. We also analyse the role of expanding enabling institutions, specifically Aadhaar and the telecommunication network across India, which has helped facilitate the growth of financial inclusion across the country.

In 2014, 62 percent of adults globally reported having a bank account as per the Global Findex. In India this was merely 53 percent[2], but the extraordinary push for bank accounts through the Pradhan Mantri Jan Dhan Yojana (PMJDY) since then has taken this number to 80 percent (Global Findex 2017 Report).[3] As per the government's own data, as of 13th February 2019, 34.43 crore accounts have been opened under the PMJDY.[4] This implies in absolute terms, India still has a large unbanked population, which is likely to be targeted in the coming years.

The patterns and behaviours poor households' exhibit around financial management, shed light on the complex financial lives they lead in order to survive on variable low incomes. While research and policy debates have focused on access to credit, poor and marginalised groups require access to a full range of financial services to effectively manage their economic lives. Financial inclusion in a diverse country like India must hence be studied as a spectrum of services, in order to encapsulate the different dimensions of the populations they aim to service.

Certain sections of society (for example — the poor, rural populations, women) are typically-excluded from wage-earning employment opportunities, living and working in the informal economy.[5] In economic terms, their consumption and production decisions become intertwined and there arises a greater need to smooth consumption, manage risks and sustain livelihoods. These sections of society have the lowest access to formal

[1] Collins, D., Morduch, J., Rutherford, S., & Ruthven, O. (2010). Portfolios of the poor: how the world's poor live on $2 a day. Princeton University Press.

[2] Demirgüç-Kunt, Asli, et al.2015. "The global findex database 2014: Measuring financial inclusion around the world." http://documents.worldbank.org/curated/en/187761468179367706/pdf/WPS7255.pdf

[3] Demirguc-Kunt, Asli; Klapper, Leora; Singer, Dorothe; Ansar, Saniya; Hess, Jake. 2018. Global Findex Database 2017 : Measuring Financial Inclusion and the Fintech Revolution. Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/29510 License: CC BY 3.0 IGO

[4] https://www.pmjdy.gov.in/account

[5] Sastry, N. S. (2004). Estimating informal employment & poverty in India. New Delhi, India: Human Development Resource Centre.

financial instruments, forcing them to rely on age-old informal mechanisms: relatives, friends, money-lenders, savings schemes or money under the mattress. These informal mechanisms are insufficient and unreliable as well as very expensive. Financial exclusion hence imposes large opportunity costs on those who suffer from it the most. When coupled with information asymmetries and high transaction costs, the poor who lack collateral or credit histories are stuck in a bad equilibrium with no escape.[6]

Geographic exclusion is exposed through inaccessibility, distances and lack of proper infrastructure; social exclusion is exposed through illiteracy and class and caste barriers. Historically, the primary responsibility of financial inclusion in rural areas lay with the cooperative sector and commercial banks, but they were unable to bring rural populations into the fold. Informal employment, lack of collateral and the inability of rural populations to approach and negotiate with formal financial institutions, makes it easier for an entire subsection of our population to go unbanked. Institutional credit has long alienated small farmers from borrowing, linking lending to landholding status of borrowers. The Socio-economic Caste Census 2011 reveals that more than half of the rural households depend on manual casual labour and another 30 percent depend on cultivation for their livelihood.[7] Reliance on non-institutional credit agencies by rural households was as high as 44 percent in 2012 as per the All-India Debt and Investment Survey (AIDIS).[8] However, given the significant push for institutional access through various market reforms and government schemes, this number is likely to have risen. The relative position of various states and union territories in terms of bank branch coverage, normalised by population (demographic bank penetration), paints a dismal picture. Most notably, the rural versus urban divide as given in the data, stresses on the importance of serving unbanked, poor and rural populations of India.

Several policy and financial regulatory initiatives have aimed to make substantial progress in terms of financial inclusion indicators— branch penetration, account density or credit and deposit numbers. Landlines as a low-cost vehicle of communication and Aadhaar as unique biometric identifier have expanded rapidly. As one of the world's most developed cell phone markets, both public and private cell phone operators have vastly expanded in recent years their reach and coverage in remote and previously inaccessible areas. The Self Help Group movement in India has helped bring about a profound transformation in rural areas. Microfinance Institutions (MFIs) have played a significant role in facilitating inclusion, as they are uniquely positioned in reaching out to the rural poor. Many of them operate in a limited geographical area, have a greater understanding of the issues specific to the rural poor, enjoy greater acceptability amongst the rural poor and have flexibility in operations providing a level of comfort to their clientele. [9]

Social protection nets for vulnerable and poor households against medical shocks have been guaranteed under health insurance schemes such as the Pradhan Mantri Jan Arogya Yojana (Ayshman Bharat Yojna) that will help poor household smooth consumption and cope with risks better. Furthermore, an integral part of helping the poor build assets is protecting those assets. India is prone to natural disaster risk and lacks domestic safety nets, making insurance products a significant and growing area for financial providers. All these services have aided in the focused and targeted distribution of benefits to unbanked populations, in order to improve the efficacy of distribution and minimise leakages.

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6 Cull, Robert, Tilman Ehrbeck, and Nina Holle. 2014. "Financial Inclusion and Development: Recent Impact Evidence." Focus Note 92. Washington, D.C.: CGAP.
http://www.cgap.org/sites/default/files/FocusNote-Financial-Inclusion-and-Development-April-2014.pdf

7 https://rbi.org.in/scripts/PublicationReportDetails.aspx?ID=836#CH1

8 https://rbi.org.in/scripts/PublicationReportDetails.aspx?ID=836#CH1

9 Rangarajan Committee (2008) Report of the Committee on Financial Inclusion. The Government of India.

Macroeconomic evidence shows that countries with deeper financial inclusion tend to grow faster and reduce income inequality (Beck et al. 2007).[10] Developing inclusive financial systems hence is an important component for economic and social progress on the development agenda. Evidence also shows that financial access improves local economic activity. Several settings over the past decades have offered an opportunity to assess the impact of financial access compared to a baseline in quasi-experimental settings at the local economy level. A study by Burgess and Pande used state-level panel data in India to provide evidence that opening bank branches in rural unbanked locations was associated with significant reductions in rural poverty.[11] Access to formal financial institutions aside, microfinance institutions and self-help groups remain a leading model for providing financial services to the poor, new models and technology developments have provided opportunities for scaling outreach, deepening penetration and moving beyond brick and mortar delivery channels.

Evidence from a variety of Randomised Controlled Trials (RCTs) suggests that growing access to financial instruments has a positive impact on self-employment, business activities and household consumption (Bauchet et al. 2011).[12] Even though impact varies across individual product categories, most RCTs so far, however, show improvements in households' abilities to make appropriate choices. For individuals that do not own businesses, microcredit helps them manage cash-flow spikes and smooth consumption. Access to microcredit also leads to a general increase in consumption levels as it lowers the need for precautionary savings. For business owners, microcredit helps them invest in assets that enable them to start or grow their businesses and increases their ability to cope with risk. (See Banerjee and Duflo 2011,[13] Dupas and Robinson 2013[14]). Overall evidence of savings and increased access to credit has shown positive impacts for small business owners and households. Furthermore, randomised evaluations of health and weather-based index insurance, show strong positive impacts on households and farmers helping them mitigate risk and manage shocks. (See, Cole, et al. 2013[15]; Karlan, Osei-Akoto, Osei, and Udry 2014[16], Thornton et al 2010[17])

Given the participation barriers and capital market imperfections, policy interventions that foster financial inclusion are important to study. While strong institutions and policy efforts are effective in tackling financial exclusion, it is important to study a wider array of financial instruments to understand the multi-dimensional characteristics of poor populations. At any given time, a poor individual saves and borrows in informal ways and has multiple ongoing financial relationships. Vulnerability to risk and the lack of instruments to cope with external shocks adequately make it difficult for poor people to escape poverty.[18] Lacking a formal bank account makes it difficult for the poor to save, which makes it less likely for them to cope with unexpected emergencies. As markets develop, the spectrum of

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[10] For more see – Beck, T., Demirgüç-Kunt, A. and Levine, R., 2007. Finance, inequality and the poor. Journal of economic growth, 12(1), pp.27-49. http://siteresources.worldbank.org/DEC/Resources/Finance_Inequality_and_the_Poor.pdf

[11] Burgess, Robin, and Rohini Pande. 2005. "Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment." American Economic Review, Vol. 95, No. 3: 780–95.

[12] Bauchet, Jonathan, Cristobal Marshall, Laura Starita, Jeanette Thomas, and Anna Yalouris. 2011. "Latest Findings from Randomized Evaluations of Microfinance." Forum 2. Washington, D.C.: CGAP, Financial Access Initiative, Innovations for Poverty Action, and Abdul Latif Jameel Poverty Action Lab.

[13] Banerjee, Abhijit V., and Esther Duflo. 2011. Poor Economics. New York: Perseus Books.

[14] Dupas, Pascaline, and Jonathan Robinson. 2013a. "Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya." American Economic Journal—Applied Economics, 5 (1): 163–92.

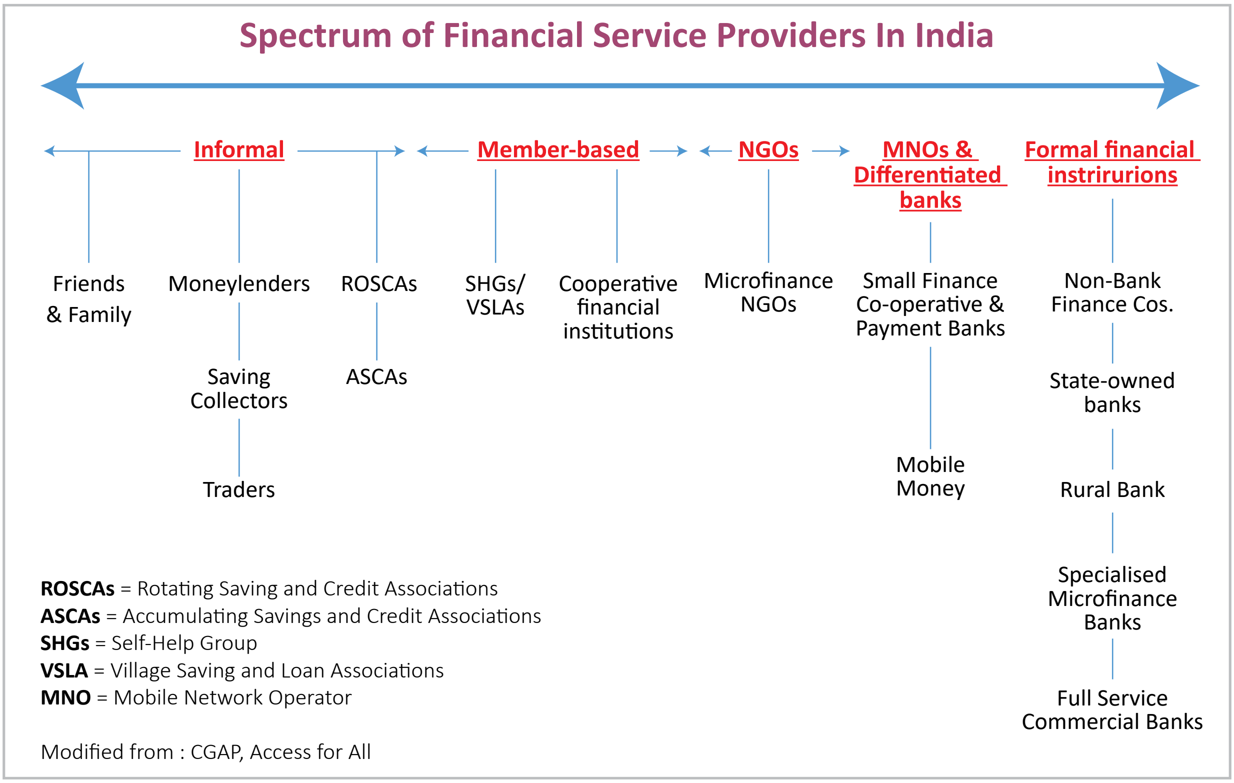
[15] Cole, Shawn, Xavier Giné, Jeremy Tobacman, Petia Topalova, Robert Townsend, and James Vickery. 2013. "Barriers to Household Risk Management: Evidence from India." American Economic Journal— Applied Economics, 5 (1): 104–35.

[16] Karlan, Dean, Isaac Osei-Akoto, Robert Osei, and Chris Udry. 2014. "Agricultural Decisions after Relaxing Credit and Risk Constraints." Quarterly Journal of Economics.

[17] Thornton, R. L., Hatt, L. E., Field, E. M., Islam, M., Solís Diaz, F., & González, M. A. (2010). Social security health insurance for the informal sector in Nicaragua: a randomized evaluation. Health economics, 19(S1), 181-206.

[18] Cull, Robert, Tilman Ehrbeck, and Nina Holle. 2014. "Financial Inclusion and Development: Recent Impact Evidence." Focus Note 92. Washington, D.C.: CGAP. http://www.cgap.org/sites/default/files/FocusNote-Financial-Inclusion-andDevelopment-April-2014.pdf.

***Figure 1:** Spectrum of Financial Service Providers in India*[19]



financial service providers also develops, going from informal community-based models to more formal, regulated sources of financial services. (Refer to Figure 1).

As the Indian financial ecosystem evolves, any form of financial inclusion going forward must recognise broad needs and to study the impact of such inclusion, one must include not only policy mandates but also wider metrics. From a policy standpoint, studying such metrics will not only deepen our understanding of the impact of financial inclusion but also answer critical questions on how to achieve it. Hence, it is important to identify a full range of financial services available to the poor -- savings, credit and insurance.

In this paper, we seek to investigate the depth of financial inclusion, both rural and urban, in India. We study the issue from various standpoints, such as— products, institutions and enabling systems. In section 1, financial inclusion in India is analysed by studying products or schemes that promote savings, access to credit, payments, insurance (general, crop, life and health) and pension. The progress towards integrating the under-banked and unbanked into formal banking is gauged through new zero balance accounts under the "Banking for all" scheme (Pradhan Mantri Jan Dhan Yojana- PMJDY). Increase in access to loans by the unbanked and the under-banked is measured by the loans issued supported by MUDRA (Micro Units Development and Refinance Agency) bank. Launched by the Prime Minister in 2015, the MUDRA bank provides loans at low rates to micro-finance institutions and non-banking financial institutions, which then provide credit to Medium, Small & Micro Enterprises. Additionally, we study India's achievements in the direction of becoming a pensioned society by analysing uptake of various State pension products.

[19] Modified and adapted from Source: Helms, B., 2006. Access for all: building inclusive financial systems. Washington, DC, C-GAP.

In section 2, we study penetration of banking as an institution across India. We analyse how banks — small, payments, commercial as well as public sector —have contributed towards the goal of financial inclusion. The Indian Post Bank has addressed the absence of brick and mortar infrastructure in villages, thereby revolutionising the banking landscape across rural India. Self Help Groups (SGH's) and Micro Finance Institutions (MFI's) continue to play a critical role in enabling access to credit for the poor.

Innovations and policy interventions in India have been aimed at reducing barriers to access existing financial institutions (for example, relaxing of minimum balance restrictions) and bringing banking options geographically closer to people, but as the data shows, far more needs to be done.. Section 3 sheds light on enabling systems that help reach the unbanked and under-banked such as tele-density (cell phones and landlines) and broadband networks which allow for Aadhaar-enabled Payment Systems (AePS). We also look at the rate at which AePS have penetrated the Indian Payment systems.

Section 1: FINANCIAL INSTRUMENTS

1. **Savings instruments:**

   The most significant addition to bank accounts (as a savings instrument) in India in the last few years has been through the push of the **Pradhan Mantri Jan-Dhan Yojana (PMJDY).** The PMJDY is the government's flagship effort to expand formal financial services to the poorest sections of Indian society. The scheme directed all public sector banks to open accounts for all individuals with no mandatory balance requirements. In order to encourage scheme uptake individual incentive to open PMJDY accounts such as an allowable overdraft amount of Rs 5000 and various zero-premium insurance policies. Based on the hypothesis that having a formal bank account provides a reliable, relatable and safe place to save, the PMJDY has helped increase bank account ownership in India by providing an alternate to informal savings.

   A vast majority of literature has highlighted the positive consequences of having access to formal saving instruments: on savings increase (Aportela, 1999; Ashraf et al. 2010a), on productive investment (Dupas and Robinson, 2009), on consumption (Dupas and Robinson, 2009; Ashraf et al., 2010b), and female empowerment (Ashraf et al., 2010b). Keeping this in mind, policy actions such as the PMJDY help foster and enhance the level of financial inclusion in a country, especially for unbanked or under-served populations. Studying the number of bank accounts opened under the PMJDY scheme hence provides a lens into the status, scope, reach and usage of formal banking services for the population we aim to study. For the purpose of our analysis, we extract data from both the PMJDY website regarding total PMJDY beneficiaries, rural beneficiaries, urban beneficiaries, and accounts opened at the state level.

   To understand the depth of penetration of the scheme in terms of bringing banking services to the under and unbanked populations of India, Table 1 shows data on both rural and urban beneficiaries as well as beneficiaries who opted for the service of a debit card (Rupay). When looking across states and Union Territories, we find that Chandigarh, Chhattisgarh and Delhi show high rates of PMJDAY accounts per capita rural population. Assam, Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Odisha and Manipur show high urban beneficiaries to urban population ratios. When we look at the average account balance in PMJDY accounts across India we find that it stays consistently under Rs. 5000 (exception states are Tripura, Goa and the union territory of Lakshadweep) indicating that the scheme is in fact bringing the economically disadvantaged under the umbrella of formal banking. Additionally, roughly eight of every 10 beneficiaries opt for the services of a Rupay card, resulting greater access to the benefits of digital payments and ATM withdrawals for PMJDY beneficiaries.

Table 1: PMJDY Account beneficiaries by States and Area Type

State Name	Beneficiaries at rural/semi-urban centre bank branches (% of rural population)	Beneficiaries at urban/metro centre bank branches (% of urban population)	Total Beneficiaries (% of total population)	Average Balance per Account	No. of RuPay cards issued to beneficiaries (% of total beneficiaries)
A & N Islands	10%	7%	9%	4644	79%
Andhra Pradesh	13%	30%	18%	1727	82%
Arunachal Pradesh	16%	36%	21%	3169	85%
Assam	39%	74%	44%	2149	78%
Bihar	26%	118%	36%	2349	82%
Chandigarh	77%	11%	12%	4172	82%
Chhattisgarh	44%	80%	52%	1859	71%
Dadra & Nagar Haveli	37%	9%	24%	4082	68%
Daman & Diu	25%	10%	14%	3659	77%
Delhi	89%	17%	19%	3891	86%
Goa	14%	3%	7%	5618	83%
Gujarat	19%	23%	20%	2879	83%
Haryana	19%	33%	24%	4169	87%
Himachal Pradesh	15%	19%	15%	4862	81%
Jammu & Kashmir	19%	9%	16%	4264	81%
Jharkhand	34%	40%	35%	2427	84%
Karnataka	18%	24%	20%	2523	80%
Kerala	9%	11%	10%	3121	72%
Lakshadweep	24%	1%	6%	15984	98%
Madhya Pradesh	25%	70%	37%	1477	79%
Maharashtra	17%	22%	20%	2182	71%
Manipur	21%	63%	34%	2121	77%
Meghalaya	17%	13%	17%	4515	63%
Mizoram	21%	33%	27%	2440	27%
Nagaland	6%	21%	11%	1882	81%
Odisha	28%	51%	32%	2944	81%
Puducherry	11%	7%	8%	2486	83%
Punjab	20%	24%	21%	3787	85%
Rajasthan	26%	52%	32%	2668	78%
Sikkim	14%	14%	14%	3536	84%
Tamil Nadu	12%	15%	14%	1736	86%
Telangana	21%	31%	25%	1548	80%
Tripura	21%	24%	22%	7563	77%
Uttar Pradesh	18%	42%	24%	3026	80%
Uttarakhand	20%	27%	22%	4243	84%
West Bengal	35%	34%	35%	3520	81%

Source: PMJDY
Note: Population estimates by Brookings India.

2. **Credit:**

With respect to expanding credit outreach and availability, a major addition to the existing credit landscape has been the **Pradhan Mantri MUDRA Yojana (PMMY)**. According to the micro units credit refinance agency (MUDRA), the PMMY was launched in 2015 for providing loans classified as MUDRA loans of upto 10 lakh to non-corporate and non-farm small/micro enterprises. These loans are given by Commercial Banks, Regional Rural Banks (RRBs), Small Finance Banks, Cooperative Banks, Microfinance Institutions (MFIs) and Non-banking financial companies (NBFCs). The borrower can also apply online through a portal. PMMY offers credit for micro units at various levels of growth. These three products are namely 'Shishu', 'Kishore' and 'Tarun' to signify the stage of growth, development and funding needs of micro unit or entrepreneur. These gradations also provide a reference point for the next phases of graduation and growth.

When we look at the expanse of MUDRA loans across states in India in Table 2, we see that at the state level, Tamil Nadu tops all states of India in terms of loan sanctions of Rs. 25,331.68 crores, closely followed by Karnataka with Rs. 23,009.73 crores and Maharashtra with Rs. 22,751.40. It's encouraging to see massive growth across the top ten performing PMMY states and that a number of MSME'S and new entrepreneurs are getting access to credit to set up businesses or expand existing ones. The top ten states contribute 71 percent of total sanctions. To accurately gauge the growth of micro-credit through PMMY scheme, Table 2 further reports comparative position of states in terms of loans sanctioned during the previous year.

Table 2: *Top 10 Performing PMMY States*

State Name	Target (2017-18)	Sanction Amount (2017-18)	Sanction Amount (2016-17)	Growth (%)
Tamil Nadu	23,083.75	25,331.68	18,052.68	40%
Karnataka	22,049.76	23,009.73	18,002.55	28%
Maharashtra	22,242.92	22,751.40	17,286.66	32%
Uttar Pradesh	21,592.85	22,077.89	15,282.61	44%
West Bengal	18,871.92	20,552.19	15,695.01	31%
Bihar	17,190.56	15,919.40	12,190.60	31%
Madhya Pradesh	14,672.07	14,886.15	10,506.45	42%
Rajasthan	11,815.11	13,862.55	9,024.71	54%
Gujarat	11,505.73	11,386.52	7,781.94	46%
Odisha	11,290.08	11,558.91	7,891.34	46%

Source: MUDRA annual report

Table 3 studies PMMY at the regional level. From the analysis, it can be seen that while in terms of number of accounts, the East & North-East region tops, with almost 35 percent of the total number of loan accounts sanctioned, but their share in terms of loan amounts was around 27 percent, lower than 30 percent of the southern region. The share of number of accounts and sanction amount remains the lowest in the western region of India. At the all-India level, the sheer number of total new accounts opened and their regional diversity indicates greater progress towards financial inclusion in terms of credit.

Table 3: *PMMY by Regions*

Region	No. of Accounts 2017-18	Sanction Amount 2017-18	No. of Accounts 2016-17	Sanction amount 2016-17	Growth (%) Sanction Amt.
North	8,464,083	60,535.36	6,667,731	41,884.86	45%
% age share	18%	24%	17%	23%	
East	12,764,868	48,744.33	12,838,524	43,115.35	13%
% age share	27%	19%	32%	24%	
North East	4,395,809	18,553.80	1,599,339	6,650.34	179%
% age share	8%	7%	4%	4%	
South	14,464,973	76,259.92	11,430,144	52,876.65	44%
% age share	30%	30%	29%	29%	
West	8,040,860	49,583.68	7,165,309	36,001.35	38%
% age share	17%	20%	18%	20%	
Total	48,130,593	253,677.10	39,701,047	180,528.54	

Source: MUDRA Annual Report
Zones as defined by Zonal Council of India

As discussed earlier, PMMY loans are advanced in three categories based on magnitude or size of loan - Shishu (up to Rs. 50,000), Kishore (above Rs. 50,000 and up to Rs. 5 lakh) and Tarun (Above 5 lakh and upto Rs. 10 lakh). It can be seen in Table 4 that Shishu loans, in terms of both uptake and amount sanctioned, had the highest share. This smallest variant of the loans offered under PMMY accounted for nearly 88.65 percent in terms of number of accounts. The astounding growth in the number of Shishu loan accounts indicates the function the scheme has played in terms of financial inclusion in credit. The share of Kishor loan accounts increased to 9.67 percent in FY 2017-18 compared to 6.71 percent in FY 2016-17. Share of Tarun loan also increased slightly.

Table 4: *PMMY by Loan Type*

Category	No. of loan accounts (2017-18)	Sanction Amount (2017-18)	Sanction Amount (2016-17)	%age change
Shishu	42,669,795	106,001.60	85,100.74	24.56%
	88.65%	41.78%	47.13%	
Tarun	4,653,874	86,732.15	53,545.14	61.97%
	9.67%	34.19%	22.66%	
Kishore	806,924	60,943.36	41,882.66	45.50%
	1.68%	24.06%	23.20%	
Total	48,130,593	253,677.11	180,528.54	

Source: MUDRA Annual Report

3. **Insurance:**

According to the Insurance Regulatory Development Authority of India, the insurance industry of India consists of 57 insurance companies of which 24 are in the life insurance business and 33 are non-life insurers. In terms of general insurance, that is the non-life insurers, there are six public sector insurers. While among the life insurers, Life Insurance Corporation (LIC) is the sole public sector company. Apart from these, there is a sole national re-insurer, namely, General Insurance Corporation of India (GIC Re). Other stakeholders in the Indian Insurance market, as reported by IRDAI, include agents (individual and corporate), brokers, surveyors and third party administrators servicing health insurance claims.

The Government of India has taken a number of initiatives to boost the insurance industry. Under the aegis of Ayushman Bharat, the National Health Protection Scheme (NHPS) was launched to provide coverage of up to Rs 500,000 (US$ 7,723) to more than 100 million vulnerable families. Given the massive effort in terms of extending insurance coverage, the scheme is expected to increase penetration of health insurance in India from 34 percent to 50 percent. Additionally, in terms of crop insurance, the government launched the Pradhan Mantri Fasal Bima Yojana (PMFBY). It is a government-sponsored crop insurance scheme launched in January 2016. As of 2017-18, over 47.9 million famers benefitted under this scheme.

Table 5 presents a brief snapshot of the insurance sector in India over the past five years. India saw a striking increase, with reference to the domestic pace of growth thus far, in terms of both Insurance density and penetration. A big jump in health insurance, excluding standalone health insurances in the year 2017-18, stands out in Table 5 and can be credited to the launch of Ayushman Bharat. The number of reported grievances also saw a big dip, indicating improving industry standards.

***Table 5:** Summary of Indian General Insurance Sector*

PARTICULARS	2013-14	2014-15	2015-16	2016-17	2017-18
PROFILE					
No of General Insurance companies (including reinsurers)	29	29	30	31	35
Insurance penetration	0.80	0.70	0.72	0.77	0.93
Insurance density	11	11	11.50	13.20	18
BUSINESS FIGURES					
Number of new policies issued excluding Standalone health Insurers	1,048.23	1,202.24	1,257.61	1,542.63	1,707.71
Gross Direct Premium (Within & Outside India)	79,934	87,151	99,333	130,971	153,438
Market share of PSUs – General Insurance Companies. Including specialised (GDP within India)	55.83	55.09	54.50	53.44	51.06
REDRESSEL OF CONSUMER GRIEVANCES					
No. of grievances reported during the year	63,335	60,688	59,083	52,104	43,995
No. of complaints reported with the Ombudsmen at difference centres	8,803	7,145	8,920	10,883	12,059

Source: IRDAI

When compared to international insurance penetration, India has only reached halfway. India performs quite well in terms of life insurance penetration; however, in terms of life insurance density, we still lag considerably. Insurance Density has remained a challenge for India, as can be seen in Table 6. However, schemes like crop insurance (PMFBY) and NHPS will improve India’s performance in the years to come.

Table 6: Insurance Density

Year		Insurance Penetration		Insurance Density	
	Insurance Type	India*	World	India*	World
2013	Total	3.90	6.30	52	652
	Life	3.10	3.50	41	366
	Non-Life	0.80	2.80	11	285
2014	Total	3.30	6.20	55	662
	Life	2.60	3.40	44	368
	Non-Life	0.70	2.70	11	294
2015	Total	3.40	6.20	55	621
	Life	2.70	3.50	43	346
	Non-Life	0.70	2.80	12	276
2016	Total	3.49	6.28	59.7	638.3
	Life	2.72	3.47	46.5	353
	Non-Life	0.77	2.81	13.2	285.3
2017	Total	3.69	6.13	73	650
	Life	2.76	3.33	55	353
	Non-Life	0.93	2.8	18	297

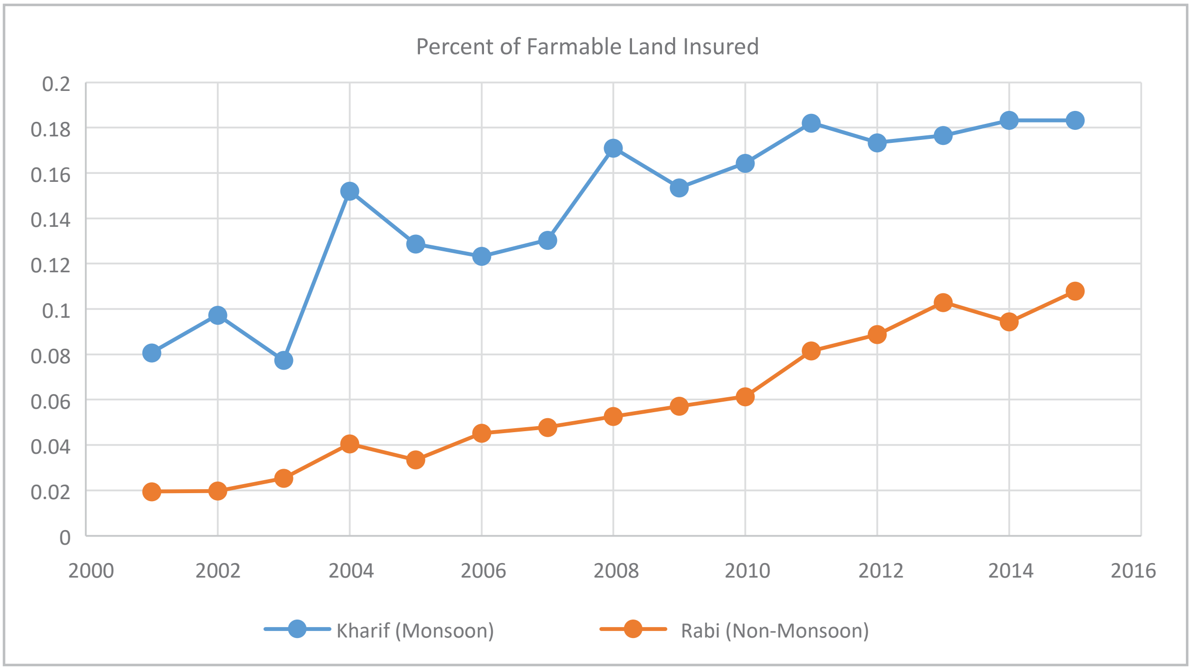
Source: Swiss Re, Sigma various volumes; data relates to Calendar year;
Insurance penetration is measured as ratio of premium to GDP;
Insurance density is measured as ratio of premium (in US Dollar) to total population.
** data relates to financial year.*

a. Crop Insurance:

In a country like India, where households remain dependent on farming and agriculture and grow relatively few or no cash crops, it creates extreme cyclical liquidity management problems. Coupled with climatic events, India's geographic diversity implies that some regions (or groups of regions) tend to suffer from a calamity, drought, or flooding. Direct-to-farmer finance is an important pathway towards poverty alleviation and meeting the vast demand for smallholder finance. India's primary coping method is the creation of various insurance policies for farmers to mitigate production and price risks. By having all farmers pay into the insurance pool dependent on the level of risk they are exposed to, the government can ensure that all farmers within the system have a coping mechanism in case the ever-predictable calamity strikes. The weather index insurance market in India is the world's largest[20] and while an array of products have been tried, there remains a striking absence of rigorous statistical analysis to assess the uptake, success and impact of these schemes. Since gaps in government data abound, it is currently difficult to rigorously assess the impact of these programs as well as provide informed analysis of uptake and spread in rural areas. However, for our analysis, we analyse state-level information on insured lands and farmers from the Agricultural Insurance Corporation of India. This data comprises of crop insurance information from both public and private players, including farmers covered under government schemes such as the Pradhan Mantri Fasal Bima Yojana etc.

[20] Clarke, Daniel Jonathan and Clarke, Daniel and Mahul, Olivier and Rao, Kolli N. and Verma, Niraj, Weather Based Crop Insurance in India (March 1, 2012). World Bank Policy Research Working Paper No. 5985. Available at SSRN: https://ssrn.com/abstract=2016750

***Figure 2:** Percent of Farmable Land Insured*



Source: Ministry of Agriculture and Family Welfare (Insurance), Agricultural Census (Arable Land)

As one can see from Figure 2, there is a general positive trend in crop-land being insured in India. There also exists a 6-10 percentage point disparity between land ensured during the monsoon growing season and land ensured during non-monsoon season. This is to be expected as there is greater uncertainty during the monsoon season.

There is a limit to our understanding due to the ceiling on the data. Although, detailed farm holding data exists within the Agricultural Census, similarly detailed insurance information is lacking. With better information, we could discover whether only big farmers were getting insured, how states compared to each other and what the claims ratios were. A state-by-state comparison of insurance cover, levels of insurance fraud, how fast and often claims are paid out are also topics for future research and analysis. Right now, all we can say is that insurance levels are going up, and that farmers are more likely to insure during the monsoon.

b. Health Insurance:

The Pradhan Mantri Jan Arogya Yojana (PMJAY) or the National Health Protection Scheme (NHPS) was launched in 2018 as a centrally-sponsored scheme under the Ayushman Bharat Mission of Ministry of Health and Family Welfare in India (MoHFW). According to its mission statement, the scheme aims at making interventions in primary, secondary and tertiary care systems, covering both preventive and promotive health, to address healthcare holistically. The scheme aims to establish the goal of the 2017 The National Health Policy which had envisioned Health and Wellness Centres as the foundation of India's health system. Given its aim, it follows that the MoHFW has desined it as an umbrella of two major health initiatives namely, Health and Wellness Centres' and National Health Protection Scheme (NHPS). In the spirit of dovetailing ministry efforts, the scheme is formed by subsuming multiple schemes including the Rashtriya Swasthya Bima Yojana, Senior Citizen Health Insurance Scheme (SCHIS), etc. According to the MoHFW, Ayushman Bharat-National Health Protection Scheme will cover over 10 crore poor and vulnerable families (approximately 50 crore beneficiaries) providing coverage up to 5 lakh rupees per family per year for secondary and tertiary care hospitalisation.

To ensure uptake, the scheme beneficiary are allowed to take cashless benefits from any public or private impaneled hospitals across the country. Hence, the benefits of the scheme are portable across the country. According to MoHFW, the National Health Protection scheme is designed to be an entitlement-based scheme with entitlement decided on the basis of deprivation criteria in the Socio-Economic Caste Census (SECC) database.

4. **Pension:**

India is a young country and it is expected to remain so for the next couple of decades. According to Census 2011, about 50 percent of the population was under the age of 25 years and almost 90 percent of the population was below the age of 60 years. According to Pension Fund Regulatory and Development Authority of India (PFRDA), the proportion of working age population stood at 44 percent in 2015. While according to the Registrar General of India, the share of the elderly in the total Indian population has risen to 8.6 percent in 2011 from 5.6 percent in 1961 as the population continues to age with each passing day. Further, according to the Population Projections for India and States 2001-26 (based upon the 2001 census of India), this would increase further to 12.4 percent by 2026.

Based upon these estimates while just one in 12 Indian is a sexagenarian now, by 2050 every fifth Indian will be one. Thus, by 2050, India would be in a demographic position similar to today's developed countries. The age dependency ratio as per 2011 census data stood at 142 per 1000, in other words, the ratio was of one elderly person for seven people of working age. As per technical projections, the old age dependency ratio will rise to 192 per 1000 by 2026. This implies that for each elderly person, we would have only five people of working age.

According to PFRDA, "the landscape of the Indian pension system includes non-contributory social pension schemes financed by the government to provide minimum level of protection." This is done through programs like the National Social Assistance Programme (NSAP), which gives a mandatory defined benefit pension scheme on pay-as-you-go basis (for Civil Service Pension for employees who joined service before 2004), the Employees' Provident Fund (EPF), Employees' Pension Scheme (EPS) under the EPFO, other Statutory Provident Funds like Coal Mines, Seamen's, Assam Tea Plantations etc. schemes, the National Pension System (NPS) for Central government employees (who joined on or after 1st January 2004 on mandatory basis) and employees of those states that have joined the NPS scheme (NPS is provided to all citizens on a voluntary basis covering both employees and self-employed including those in the unorganised sector), Public Provident Fund, retirement and superannuation plans offered by insurance companies and mutual funds."

In 2015, the Atal Pension Yojana (APY) was launched by the Prime Minister and the scheme is being implemented with a focus on the unorganised sector. APY subscribers shall get a government guaranteed pension of Rs 1000, Rs 2000, Rs 3000, Rs 4000 or Rs 5000 depending upon the contribution level opted by them. As per official PFRDA estimates, APY pension scheme has a total of about 48.64 lakh subscribers and corpus of Rs. 1751 crore as on 31st March, 2017.

Table 7 shows the sector-wise performance of National Pension scheme (Atal Pension Yojana). We can see that the enrolment of subscribers in NPS increased sizeably from 122.35 lakh 2016 to 154.37 lakh in 2017. We can also see a massive 103 percent growth– All Citizen—NPS accounts. The growth of total number of subscribers during 2016-17 is 26.2 percent— a huge step towards India being a pensioned society.

***Table 7:** Sector wise performance of Atal Pension Yojana (NPS)*

Sectors	2016#	2017#	Absolute Increase	Growth (%)
Central Government	1,657,623	1,788,699	131,076	7.9
% to total	13.5	11.6		
State Government	2,923,882	3,332,526	408,644	14
% to total	23.9	21.6		
Corporate	473,515	585,650	112,135	23.7
% to total	3.9	3.8		
UoS (All Citizen)	215,372	439,097	223,725	103.9
% to total	1.8	2.8		
NPS Lite/Swavalamban	4,480,014	4,429,342	-50,672	-1.1
% to total	36.6	28.7		
APY	2,484,895*	4,863,699	2,378,804	95.7
% to total	20.3	31.5		
Total	12,235,301	15,439,013	3,203,712	26.2

Source: PFRDA
Note: # data relates to financial year.

However, Table 8 shows that India has a long way to go compared to other countries in terms of pension fund investment. Table 8 depicts this size of investment over the time period between 2010-2015 for select countries. In general, pension funds have witnessed an increase in investments. However, while China has witnessed a positive year-on-year growth, the trend is linearly downward. In contrast, India has a varied movement with alternate years of high and low growth. In comparison, the OECD states pension fund investments grew on average by 4.3 percent over the five-year period between December 2010 to December 2015.

***Table 8:** Total investment of pension funds in selected countries, in millions of US$, 2010-2015*

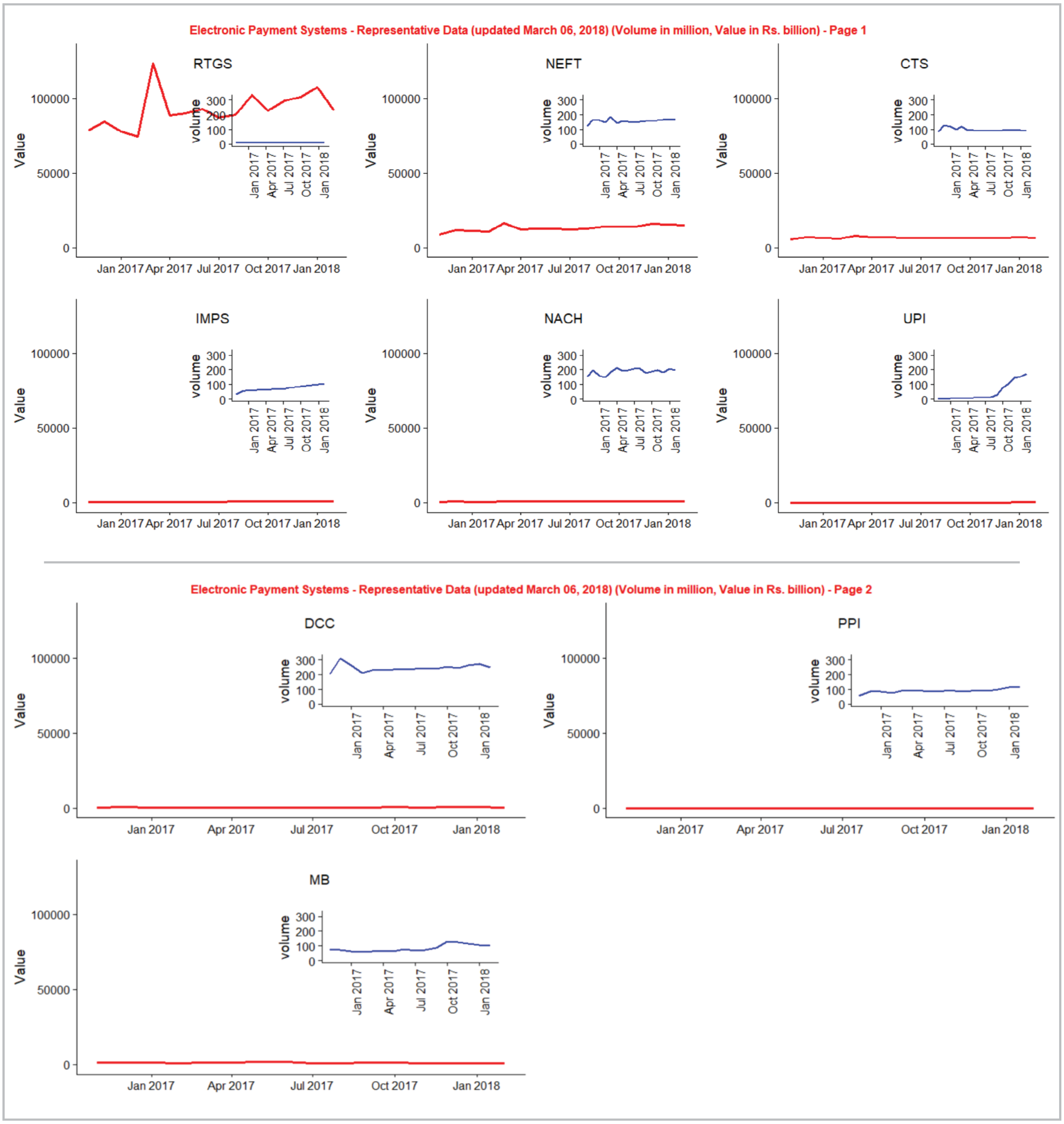
Countries	2010	2011	2012	2013	2014	2015
United Kingdom	2,018,041	2,232,598	2,529,995	2,810,564	2,784,630	2,690,204
United States	11,041,475	11,021,671	11,926,687	13,712,784	14,240,069	14,249,746
Brazil	319,785	308,273	315,153	273,965	250,471	174,675
China	42,413	56,659	76,650	98,896	125,658	146,746
India	3,347	2,848	5,450	6,819	11,465	16,253

7. **Payments:**

India has multiple payments and settlement systems (both gross and net settlement systems). For gross settlement, the Reserve Bank of India lists Real Time Gross Settlement (RTGS) system. While net settlement systems include Electronic Clearing Services (ECS Credit), Electronic Clearing Services (ECS Debit), credit cards, debit cards, the National Electronic Fund Transfer (NEFT) system, Immediate Payment Service and Unified Payments Interface (UPI). Unified Payments Interface (UPI) is an instant real-time payment system developed by the National Payments Corporation of India for facilitating inter-bank transactions. According the NPCI, the interface is regulated by the RBI and it works by instantly transferring funds between two bank accounts on a mobile platform. Any UPI app can use payment and transfer funds to and from UPI-enabled banks.

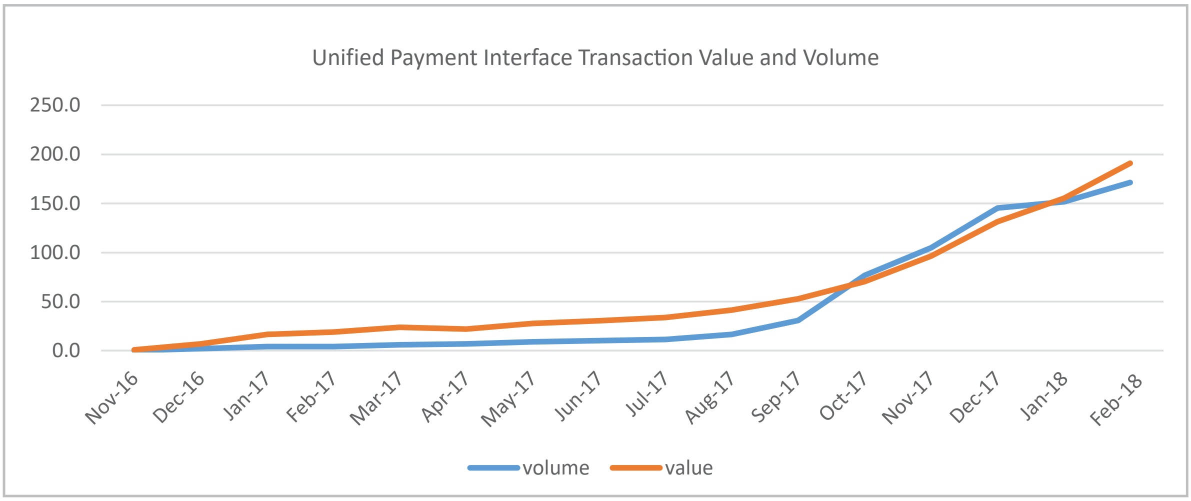
Figure 3 shows an overall increase in electronic payment systems in India while Figure 4 focuses on just UPI payment systems. The spike in volume and value in USSD mode of transactions stands out. It is clear from Figure 4 that UPI is growing and has the potential of bringing the financial service of seamless third-party transfers and bill settlement to people who don't yet have easy access to brick and mortar banks.

Figure 3: *Electronic Payment Systems in India – Value and Volume*



*Source: RBI, *from NCPI, # 8 issuers for goods and services transactions only; Volume are in Millions and Value are in Billions [Legend: RTGS-Real Time Gross Settlement, NACH - National Automated Clearing House, IMPS - Immediate Payment Services, NEFT- National Electronic Fund Transfer, UPI-Unified Payments Interface, PPI- Prepaid Payment Instruments, CTS- Cheque Truncation System, DCC- Debit & Credit Cards, POS- Point of sale (We dropped USSD because of small numbers)]*

Figure 4: *Unified Payment Interface Transactions – Value and Volume*



Source: RBI and NCPI; Volume are in Millions and Value are in Billions

Section 2: FINANCIAL INSTITUTIONS

This section explores the processes of the institutions—banks (and types of differentiated banks), self-help groups (SGH's) and Micro Finance Institutions (MFI's)—that help achieve greater financial inclusion in India.

1. Scheduled Commercial Banks and Public Sector Banks:

a. Priority Sector Lending is a mandate given by the Reserve Bank of India (RBI) to banks in India for providing a specified portion of their lending to a few specific "priority" sectors. According to the RBI, these sectors and segments include agriculture and allied activities, micro and small enterprises, poor people for housing, students for education and other low-income groups and weaker sections. The categories under priority sector lending in India are as follows:

- Agriculture
- Micro, Small and Medium Enterprises
- Export Credit
- Education
- Housing
- Social Infrastructure
- Renewable Energy
- Others

The overall objective of the priority sector lending programme is to ensure that adequate institutional credit flows into some of the vulnerable sectors of the economy. This is essentially meant for an all-round development of the economy as opposed to focusing only on the financial sector.

b. **ATMs:** As per the October 2009 Policy Review, the RBI took steps by freeing branch opening in towns and villages with populations below 50000 and domestic commercial banks were instructed to ensure that one-third of any bank expansion should happen in under-banked areas.[21] Within the broader hypothesis that formal banking remains a key driver for financial inclusion, large proportions of the population that are excluded from the formal financial system also tend to show higher poverty ratios and higher inequality.[22] Hence, the role that physical brick and mortar bank branches and ATMs play especially in rural areas can not be underestimated. Various studies have also corroborated this fact. Ravikumar (2013) made an attempt to assess the role of the banking sector in the financial inclusion process in Indi by studying branch penetration, ATM penetration, population per branch, distribution of banking branches etc and found a strong relationship between the indicators studied and the level of financial inclusion. Paramasivan and Ganeshkumar (2013)[23] also concluded that branch density has a significant impact on financial inclusion in India. To test the same, for our analysis, we acquired state-wise ATM breakdowns by private, public, and foreign banks, annual location-breakdowns of ATMs, and state-wise number of Rural Banks from the RBI.

[21] https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?ID=572

[22] Ravikumar, T. (n.d.). Assessing role of banking sector in financial inclusion process in India. Retrieved from http://www.microfinancegateway.org/sites/default/files/mfg-en-paper-assessing-role-of-banking-sector-in-financial-inclusion-process-in-india-may-2013.pdf

[23] Paramasivan, C., & Ganeshkumar, V. (2013). Overview of Financial Inclusion in India. International Journal of Manage- ment and Development Studies, 2(3), 45–49.

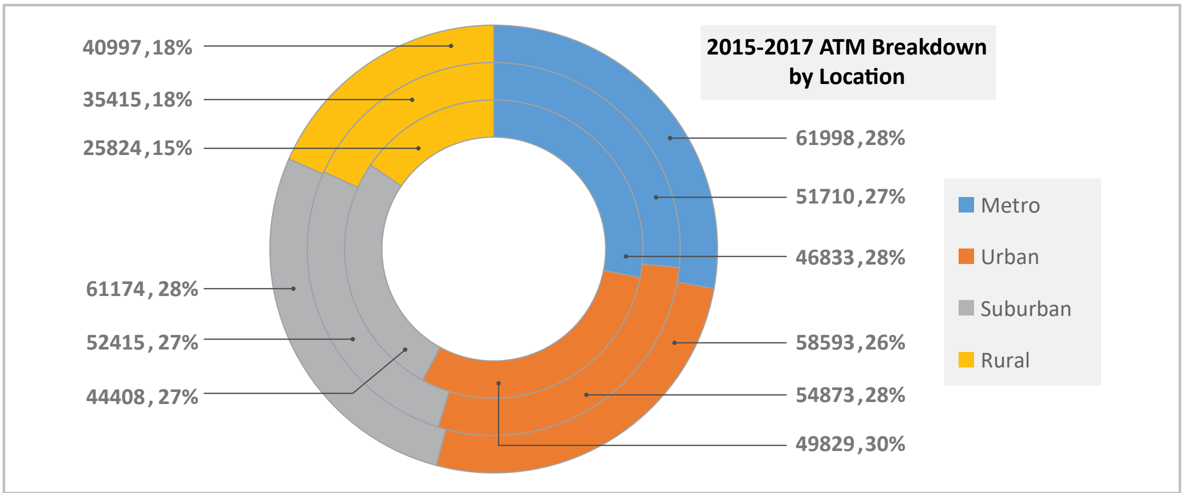
Table 9: Total investment of pension funds in selected countries, in millions of US$, 2010-2015

Region and States	2014	2017	Growth %
Northern India	18.6	21.9	18%
Haryana	21.4	24.4	14%
Himachal Pradesh	20.8	27.0	30%
Jammu and Kashmir	15.1	18.3	21%
Punjab	22.4	25.6	14%
Rajasthan	9.4	12.3	30%
Chandigarh	55.9	59.4	6%
Delhi	44.0	46.8	7%
Northeast India	14.3	11.8	-17%
Arunachal Pradesh	12.3	16.9	37%
Assam	9.5	11.3	20%
Manipur	35.5	10.8	-70%
Meghalaya	10.2	12.6	24%
Mizoram	8.9	13.9	56%
Nagaland	13.1	14.8	13%
Tripura	45.5	12.5	-73%
Central India	7.6	10.6	40%
Chhattisgarh	9.8	11.8	20%
Madhya Pradesh	10.2	12.6	24%
Uttar Pradesh	5.7	9.1	59%
Uttarakhand	20.9	24.4	17%
East India	8.1	10.5	30%
Bihar	4.9	7.1	46%
Jharkhand	8.6	10.4	21%
Orissa	11.5	15.1	31%
Sikkim	25.8	28.7	11%
West Bengal	9.9	12.3	24%
West India	16.6	20.8	26%
Goa	56.2	62.9	12%
Gujarat	15.9	18.6	18%
Maharashtra	16.3	21.3	30%
Dadra and Nagar Haveli	24.9	31.8	28%
Daman and Diu	34.0	40.1	18%
South India	20.1	27.8	38%
Andhra Pradesh	17.0	23.7	40%
Karnataka	20.6	27.4	33%
Kerala	21.5	27.4	28%
Tamil Nadu	22.4	33.1	48%
Puducherry	37.2	34.8	-6%
Non-aligned UTs	23.1	25.8	12%
Lakshadweep	16.6	23.0	38%
Andaman and Nicobar Islands	24.1	26.3	9%

Source: RBI (ATM), Brookings India (Population Estimates)

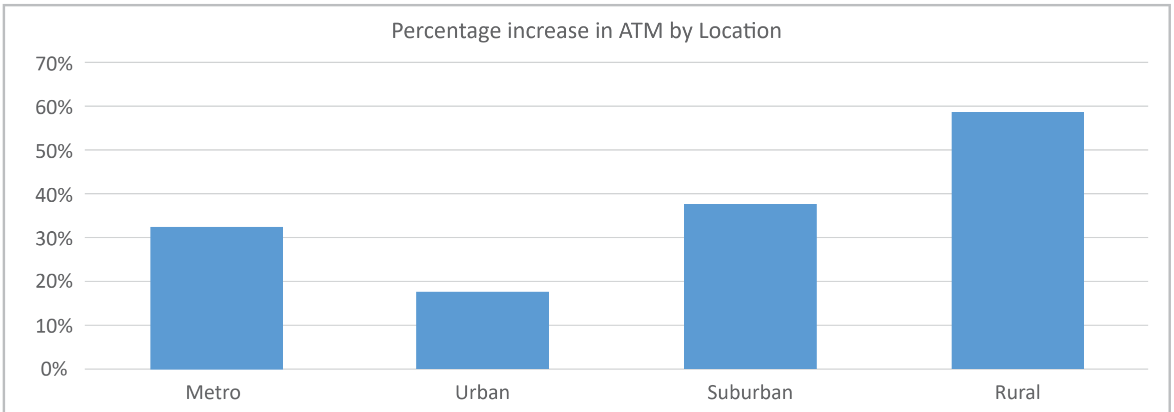
As Table 9 indicates, there has been an enormous growth of ATMs in India in the last few years. Between 2014 and 2017, ATMs grew by 28% from 13.27 ATMs per 100,000 people to 17.19 ATMs per 100,000 people. Furthermore, overall ATM growth in rural areas is comparatively more compared to urban areas. Although most regions experienced double digit growth, some regions experienced double digit declines such as Tripura and Manipur (which experienced a 70% loss). Puducherry's decline is also troubling, although it only suffered a loss of 6%. The two most urbanized regions, Delhi and Chandigarh, barely saw a 7% increase. This is probably due to a saturation effect – since these regions already have a significant number of ATMs

Figure 5:[24] *ATM Locations*



Source: RBI

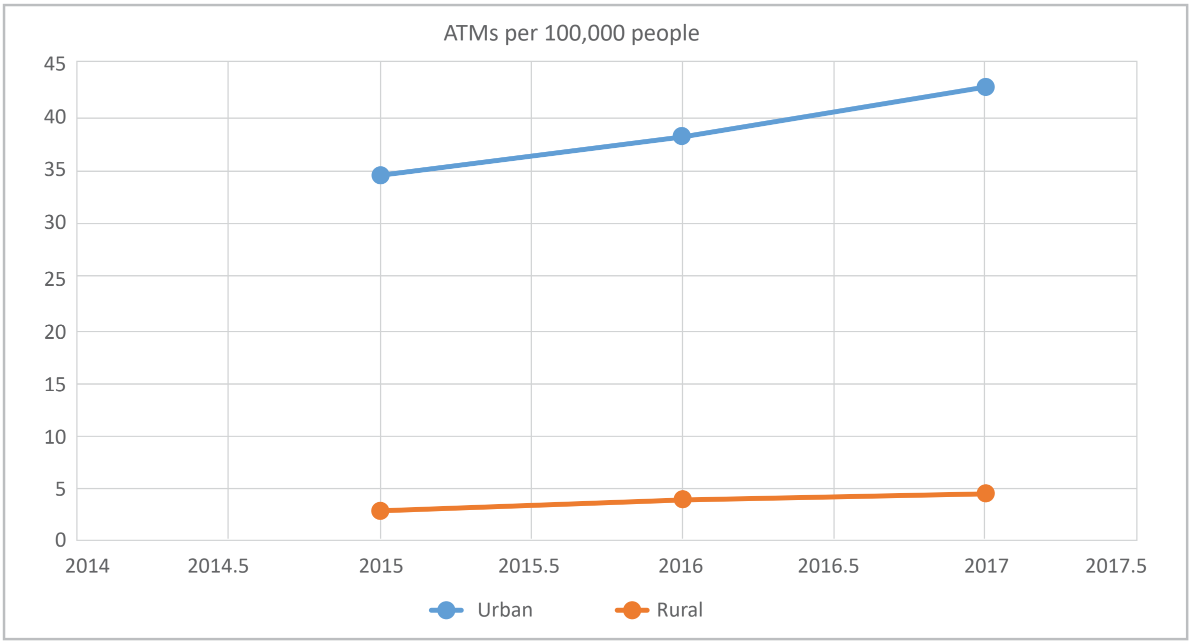
Figure 6: *Percentage increase in ATM by Location*



Source: RBI

[24] Outermost layer is 2017, innermost layer is 2015

Figure 7: ATM coverage by population



Source: RBI (ATM), Brookings India (Population Estimates)

As Figure 6 & 7 show, the largest increase in ATMs in the last few years has been in rural areas. However, as figure 7 shows, significant work still needs to be done before Rural Areas come close to matching Urban Areas.

2. Rural Bank Penetration

As Table 10 indicates, there has been an enormous growth of Rural Banks in terms of branches over the last two years. Overall, the number of rural banks as a percentage of population has grown by 34 percent. Only Lakshadweep saw a decrease in rural bank branches, and all growth is (apart from the unaligned Union Territories) in the double digits. Jharkhand, Nagaland, Mizoram, Arunachal Pradesh, and Delhi achieved a growth of less than 20 percent.

Table 10: Rural Bank Branches by population

Region and States	2014	2017	Trend 2014-2017
Northern India	5.78	8.33	44%
Haryana	5.57	9.23	66%
Himachal Pradesh	14.07	17.79	26%
Jammu and Kashmir	6.77	8.90	31%
Punjab	8.75	13.91	59%
Rajasthan	3.64	4.98	37%
Chandigarh	22.95	35.24	54%
Delhi	12.84	15.61	22%
Northeast India	3.54	4.32	22%
Arunachal Pradesh	5.64	6.35	13%
Assam	3.06	3.69	21%
Manipur	2.36	3.25	37%
Meghalaya	5.61	6.58	17%
Mizoram	9.31	11.91	28%
Nagaland	3.14	3.74	19%
Tripura	5.74	7.60	32%
Central India	3.50	4.68	34%
Chhattisgarh	3.76	5.87	56%
Madhya Pradesh	3.21	3.98	24%
Uttar Pradesh	3.30	4.43	34%
Uttarakhand	9.60	12.34	29%
East India	3.52	4.47	27%
Bihar	2.45	3.15	29%
Jharkhand	4.11	4.87	19%
Orissa	5.16	6.87	33%
Sikkim	10.68	15.23	43%
West Bengal	3.91	4.90	25%
West India	4.21	5.71	36%
Goa	35.42	48.99	38%
Gujarat	4.77	6.79	42%
Maharashtra	3.62	4.73	31%
Dadra and Nagar	3.75	7.81	108%
Daman and Diu	4.85	11.66	141%
South India	4.91	6.97	42%
Andhra Pradesh	4.92	6.78	38%
Karnataka	6.44	8.95	39%
Kerala	1.43	2.17	52%
Tamil Nadu	5.15	7.57	47%
Puducherry	1.06	1.70	60%
Non-aligned UTs	5.87	6.00	2%
Lakshadweep	51.96	66.51	28%
Andaman and Nicobar Islands	7.96	8.82	11%

Source: RBI (Rural Banks), Brookings India (Population Estimates)

3. **India Post Payments bank (PPB)**

India Post Payments Bank aims to provide banking services to urban and rural areas, but its primary focus is on the rural segment. By leveraging the reach and trust that India Post enjoys in the minds of the public, coupled with simple, affordable and convenient digital solutions, it offers Door Step (assisted) Banking to rural populations through the Gramin Dak Sevaks (GDS), Postal Assistants and across Post Office counters.

Channels of India Post Payments bank:

a) Counter Operations
b) ATMs / Micro ATMs
c) Doorstep, Mobile and Internet Banking, Aadhaar Based Payments
d) Pre-paid instruments such as mobile wallets, Point of sale , Mobile PoS etc.
e) USSD / UPI etc

According to the 2017-18 Department of Post Annual Report the Post Office Savings Bank operates a host of products, such as, Savings Accounts, Recurring Deposit (RD), Time Deposit (TD), Monthly Income Scheme (MIS), Public Provident Fund (PPF), National Savings Certificate (NSC), Kisan Vikas Patra (KVP), Senior Citizens Savings Scheme (SCSS) and Sukanya Samriddhi Accounts. India Post Payment Bank has opened nearly 19 lakh accounts with Bihar and Odisha topping the list with 4.23 lakh and 3.24 lakh accounts respectively.

Additionally, India Post also supports India's aim of moving towards being a pensioned society. It is a point of presence for National Pension System (NPS) (All citizens Model). The schemes is designed such that any citizen of India between 18 to 65 years of age as on the date of submission of his/her application can join the NPS. The pension contributions are invested in various schemes by different Pension Fund Managers appointed by Pension Fund Regulatory and Development Authority (PFRDA).

Additionally, the IPPS has been used to further the welfare agenda with the Sukanya Samridhi Account, a new Small Savings Scheme for the welfare of girl children. Under the scheme, a legal or natural guardian can open one account in the name of one girl child and maximum two accounts in the name of two different girl children up to 10 years from the date of birth of the girl child. According to the Department of post, Ministry of Communications, Annual Report 2017-18, 16.07 lakh accounts were opened during 2016-17 with total deposit of Rs. 5002.44 crores and 10.06 lakh accounts have been opened during 2017-18 with total deposit of Rs.3574.33 crores upto November 2017.

4. **New Differentiated Banks: Small Banks and Payments Banks**

Following the recommendations of the Nachiket Mor committee on financial inclusion in 2014, new differentiated small and payments banks were introduced in India. Small finance banks primarily undertake basic banking activities of acceptance of deposits and lending to unserved and underserved sections including small business units, small and marginal farmers, micro and small industries and unorganised sector entities.

There are two kinds of banking licenses that are granted by the Reserve Bank of India – Universal Bank License and Differentiated Bank License. After the recommendations of the Nachiket Mor Committee in 2014, the RBI granted in-principle approvals to 11 entities for setting up payments banks (PBs) in August 2015 and 10 for Small Finance Bank (SFB) in September 2015.[25]

[25] https://www.ideasforindia.in/topics/money-finance/explainer-india-s-payments-banks.html

(i) Small Finance Banks:

On 17 September 2015, the RBI announced that it had given provisional licenses to 10 entities who would have to convert into small finance banks within one year, out of the 71 entities that had applied. Eight out of these ten entities were microfinance NBFCs, reiterating RBIs agenda of financial inclusion.[26] Capital Small Finance Bank was the first small finance bank to begin operations, opening with 47 branches on 24 April 2016. Currently 10 small banks operate in India.[27] While there are no restriction in the area of operations of small finance banks, the objectives of setting up of small finance banks is to further financial inclusion by:

a. Functioning as a vehicle for small savings

b. Providing supply of credit to small business units; small and marginal farmers; micro and small industries; and other unorganised sector entities, through high technology-low cost operations.

(ii) Payment Banks:

Out of 41 applicants, the RBI issued payment bank licenses to 11 organizations. Bharti Airtel launched India's first live payments bank named Airtel payment bank in March 2017, followed by Paytm payment bank, India Post payment bank, Fino Payment bank and Aditya Birla Payment Bank. Currently, India has 7 payment banks.[28] The objective of setting up of payments banks was to further financial inclusion by:

a. Functioning as a vehicle for small savings

b. Providing payments/remittance services to migrant labour workforce, low-income households, small businesses, other unorganised sector entities and other users.

However, payment banks are not allowed to lend to customers and have to deploy their funds in government papers and bank deposits. Within 6 months of receiving their licenses, Cholamandalam Distribution Services, Sun Pharmaceuticals and Tech Mahindra surrendered their licenses citing longer gestation periods of profitability of payments banks, issues with the licensing policy and restrictions in operations in terms of deposit amounts imposed by the RBI.[29,30] Raghuram Rajan, the then-governor stated that surrender of licensing reflected companies not doing proper assessment while applying for the banking license.[31]

5. Self Help Group's

SGHs are registered informal financial networks which usually have a membership of 15-20 members from low-income families. They pool funds, and give loans to members on a need basis. SHG-Bank linkages are essentially formal connections between a self-help group and a bank such that the self-help group as an entity can request loans/make deposits within the bank. The ability for informal networks to tap into formal networks is important in a country where many within the low-income population lack access to formal financial services. Simultaneously, RCT's on microcredit and savings groups across the world (most notably in India and Phillippines)[32] have presented clear evidence of the positive impacts — promoting savings, effectively using credit, providing safety nets to participants, building household resilience, these positive impacts come across in various lengths of participation, in various countries and for various program components. With this premise,

[26] http://indiamicrofinance.com/small-finance-bank-licences-8-rbi.html
[27] https://rbi.org.in/scripts/banklinks.aspx
[28] https://rbi.org.in/scripts/banklinks.aspx
[29] https://blog.ipleaders.in/what-is-payment-bank/
[30] https://www.livemint.com/Opinion/AkQRSzBKVC1DmiZN31W9DN/Payments-banks-How-many-more-will-call-it-quits.html
[31] https://www.livemint.com/Opinion/AkQRSzBKVC1DmiZN31W9DN/Payments-banks-How-many-more-will-call-it-quits.html
[32] Bauchet, J., C. Marshall, L. Starita, J. Thomas, and A. Yalouris (2011). "Latest Findings from Randomized Evaluations of Microfinance." Access to Finance Forum, Reports by CGAP and Its Partners, No. 2. Consultative Group to Assist the Poor.

it remains important to understand the impact informal financial networks such as SHGs have on the state and status of financial inclusion as well as the important role the SHG-Bank linkage program has played in linking the unorganised sector to the formal banking sector.

We utilise data from NABARD Microfinance report to gauge the overall progress under SHG-Bank linkage program during past three years in Table 11 gives an account of savings, credit disbursement and credit outstanding of total SHGs and under NRLM and NULM during the past three years.The SGH began as a pilot in 1992, with an aim to empower the rural poor, in general, and rural women in particular. According to the NABARD website, SHG Bank Linkage Program is now the largest community-based microfi nance initiative with 85.77 lakh SHGs as on 31 March, 2017, covering more than a hundred million rural households. 6.73 lakh savings linked SHGs where added during 2016-17. A major portion (70.4%) of these savings linked SGH's are from priority states indicating the urge for connecting the poor households in less developed States with the development process through SHG-BLP. Harmonized and coordinated efforts by NABARD and NRLM to enhance the coverage of eligible SHGs under the National Rural Livelihood Mission (NRLM) has resulted in a net addition of nearly 2.9 lakh SHGs under its fold during the year according to NABARD. The domain of SHGs consists of 85.4% women groups and is the central programme for empowerment of the poor rural women in the country.

Table 11: *Overall Progress Under SHG-Bank Linkage Programme (No. of SHGs in lakh, Amount in Crores)*

Particulars		2014-15		2015-16		2016-17	
		No. of SHGs	Amount	No. of SHGs	Amount	No. of SHGs	Amount
SHG Savings with Banks as on 31st March	Total No. of SHGs	76.97 (3.59%)	11,059.84 (11.74%)	79.03 (2.68%)	13,691.39 (23.79%)	85.77 (8.53%)	16,114.23 (17.69%)
	Of Total, All Women SHGs	66.51 (6.38%)	9,264.33 (15.61%)	67.63 (1.68%)	12,035.78 (29.92%)	73.22 (8.26%)	14,283.42 (18.67%)
	% of Women Groups to Total	86.41	83.77	85.58	87.91	85.36	88.64
	Of Total, NRLM/SGSY Groups	30.52 (34.92%)	4,424.03 (78.56%)	34.57 (13.27%)	6,244.97 (41.16%)	37.44 (8.30%)	7,552.70 (20.94%)
	% of NRLM/SGSY Groups to Total	39.65	40.00	43.74	45.61	43.65	46.87
	Of Total, NULM/SJSRY Groups	4.33	1,071.81	4.46 (3.00%)	1,006.22 (6.12%)	5.45 (22.42%)	1,126.86 (11.99%)
	% of NULM/SJSRY Groups to Total	5.63	9.69	5.64	7.35	6.36	6.99
Loans Disbursed to SHGs during the year	Total No. of SHGs	16.26 (19.03%)	27,582.31 (14.84%)	18.32 (12.67%)	37,286.90 (35.18%)	18.98 (3.60%)	38,781.16 (4.01%)
	Of Total, All Women SHGs	14.48 (25.69%)	24,419.75 (16.07%)	16.29 (12.50%)	34,411.42 (40.92%)	17.16 (5.34%)	36,103.13 (4.92%)
	% of Women Groups to Total	89.05	83.53	88.92	92.29	90.42	93.09
	Of Total, NRLM/SGSY Groups	6.43 (28.45%)	9,487.69 (27.26%)	8.16 (26.91%)	16,785.78 (76.92%)	8.86 (8.58%)	17,336.26 (3.28%)
	% of NRLM/SGSY Groups to Total	39.54	34.40	44.54	45.02	46.69	44.70
	Of Total, NULM/SJSRY Groups	1.05	1,871.55	1.11 (5.71%)	2,620.22 (40.00%)	1.06 (-4.5%)	2,675.77 (2.12%)
	% of NULM/SJSRY Groups to Total	6.46	6.79	6.06	7.03	5.60	6.90
Loans Outstanding against SHGs as on 31st March	Total No. of SHGs	44.68 (6.46%)	51,545.46 (20.06%)	46.73 (4.59%)	57,119.23 (10.81%)	48.48 (3.74%)	61,581.30 (7.81%)
	Of Total, All Women SHGs	38.58 (13.27%)	45,901.95 (26.97%)	40.36 (4.61%)	51,428.91 (12.04%)	42.84 (6.14%)	56,444.24 (9.75%)
	% of Women Groups to Total	86.35	89.05	86.37	90.04	88.36	91.66
	Of Total, NRLM/SGSY Groups	18.46 (41.24%)	19,752.74 (94.08%)	21.91 (18.69%)	26,610.16 (34.72%)	24.91 (13.69%)	29,994.43 (12.72%)
	% of NRLM/SGSY Groups to Total	41.32	38.32	46.89	46.59	51.37	48.71
	Of Total, NULM/SJSRY Groups	3.18	3,462.62	3.13 (-1.57%)	3,979.75 (14.93%)	3.18 (1.60%)	4,133.29 (3.86%)
	% of NULM/SJSRY Groups to Total	7.12	6.72	7.00	6.97	6.55	6.71

Figures in parenthesis show % increase or decrease over previous year
Source: NABARD

6. **Microfinance institutions**

Microfinance is a financial intermediation mechanism in which individuals gain access to small amounts of credit in order to enable grassroot-level entrepreneurship and consumption smoothing. These happen through joint liability or individual contracts, but the defining characteristic is the absence of collateral. These loans are given regardless of the availability of traditional credit scores or collateral (which BPL individuals lack), and have considerably lower interest rates compared to local alternatives (pay-day lenders). Microfinance institutions can include “Grameen Bank”[33] style solidarity groups or community-based organisations, such as village loan associations. Players in the Indian microfinance market range from not-for profits organisations trying to achieve developmental objectives to commercial banks that view microfinance as sound banking, source of deposits, and low-risk mass lending.

MFIs have served unbanked or under-banked, poor populations in Indian rural areas (especially those that lack geographical proximity to formal bank branches) for the last three decades. While there is consensus across literature of microfinance positively impacting people’s lives, microeconomic evidence of impact on well-being is mixed (for more, see Randomised Controlled Trial results on credit from Morocco, Peru, India[34,35,36,37]). Despite the mixed results, it is imperative to provide a holistic analysis of the extent of financial inclusion in rural India, and to include indicators of microfinance’s progress in banking the unbanked. For our analysis, we extract and analyse data from MFIN’s Micrometer publications. MicroFinance Institutions Networks (MFIN) is an association/self-regulatory authority of both Microfinance institutions (MFIs) and Non-Banking Finance Companies (NBFCs). MFIN has facilitated setting up a database that consists of over 30 million micro borrowers and about 60 million loan accounts and MFIN members account for over 90 percent of Indian Microfinance market.

Our analysis misses out the significant outreach that microfinance has through non-government organisations. These are mostly grant driven credit programs confined to local markets. While majority of microfinance in India is extended though the NBFCs, these smaller NGO-MFIs are important across the country. Most NGO-MFIs have specific social goals that are tied to the microcredit programs, for example, girl’s education, health outcomes, women’s empowerment etc.

33 As developed by Nobel-laureate Dr. Muhammad Yunus of the Grameen Bank in Bangladesh.
34 See Innovation for Poverty Action [eg: https://www.poverty-action.org/printpdf/6526]
35 Gash, M., & Odell, K. (2013). The evidence-based story of savings groups: A synthesis of seven randomized control trials. A publication of the Savings-led Financial Services Group at SEEP.
36 Allen, H., & Panetta, D. (2010). Savings groups: What are they. Washington DC: SEEP Network, 2.
37 Karlan, D. S. (2001). Microfinance impact assessments: The perils of using new members as a control group. Journal of Microfinance/ESR Review, 3(2), 5

***Table 12:** Microfinance expansion from 2014-2017*

States	Operational MFIs (2017)	MFIN Trend	Gross Loan Portfolio (Cr)	GLP (2014-17) Trend	Clients (lakh)	Clients (2014-17) Trend
Assam	9	50%	402	-67%	2.9	-69%
Bihar	18	6%	3373	109%	20.9	15%
Chhattisgarh	16	100%	875	154%	5.9	56%
Delhi	5	-44%	70	-79%	0.3	-87%
Gujarat	12	-37%	517	-42%	3.7	-58%
Haryana	11	10%	570	153%	3.8	76%
Jharkhand	13	18%	932	182%	6.1	40%
Karnataka	12	-37%	5475	89%	26.1	-2%
Kerala	7	0%	1680	55%	7.0	-24%
Maharashtra	25	0%	3442	37%	19.4	-23%
Madhya Pradesh	20	-9%	2688	74%	18.9	11%
Odisha	14	27%	3458	207%	20.4	33%
Punjab	8	0%	688		4.5	
Rajasthan	14	0%	774	25%	4.7	-30%
Tamil Nadu	10	-47%	3375	-15%	19.3	-53%
Uttarakhand	10	0%	286	10%	2.1	-17%
Uttar Pradesh	16	7%	3494	68%	24.4	27%
West Bengal	13	8%	2582	-34%	15.5	-61%

Source: MFIN (Micrometer Issue: 10, 14, 18, 22)[38]

[38] Data is only available for states with more than five MFIN members active.

Table 13: *Microfinance expansion 2014-2017*

States	Branches (2017)	Change in no. of Branches 2014-17	Loan Amount (Cr)	Change in Loan Amount 2014-17	Average Amount per Loan	Change in Average Amt per Loan (2014-17)
Assam	130	-58%	149	-68%	21950	13%
Bihar	691	8%	1241	127%	20183	15%
Chhattisgarh	311	61%	272	114%	20782	33%
Delhi	14	-76%	74	-42%	34119	34%
Gujarat	225	-35%	159	-45%	23685	39%
Haryana	162	91%	142	89%	22479	14%
Jharkhand	245	43%	314	214%	20855	35%
Karnataka	1020	9%	2223	168%	21684	99%
Kerala	247	-6%	528	67%	20843	15%
Maharashtra	802	-2%	1075	47%	21186	47%
Madhya Pradesh	856	31%	884	67%	22263	40%
Odisha	565	9%	1347	379%	21253	48%
Punjab	128		175		22105	
Rajasthan	211	-17%	271	51%	20367	10%
Tamil Nadu	754	-44%	939	-28%	21627	50%
Uttarakhand	78	0%	70	-15%	22090	37%
Uttar Pradesh	1024	44%	903	53%	23425	24%
West Bengal	621	-54%	1005	-26%	19473	6%

Source: MFIN (Micrometer Issue: 10, 14, 18, 22)[39]

[39] Data is only available for states with more than five MFIN members active.

Section 3: ENABLING INSTITUTIONS FOR FINANCIAL INLCUSION

This section explores systems that are enabling institutions to better reach the un-banked and under-banked areas and populations in India. The two systems that we study are both fundamentally based on leveraging technology – Aadhaar and Telecommunications networks.

1. **Aadhaar enabled Payment Systems (AePS):**

   Aadhaar Enabled Payment System (AEPS) is a type of payments system that is based on the Unique Identification Number and allows Aadhaar cardholders to make financial transactions through Aadhaar-based authentication In order to use AEPS, your bank account must be linked to Aadhaar.

   It can be used to transfer funds, make payments, deposit cash, make withdrawals, make enquiry about bank balance, etc. AEPS allows customers to make payments using their Aadhaar number and by providing Aadhaar verification at point of Sale (PoS) or micro ATMs. AEPS is an initiative of the National Payments Corporation of India (NPCI) to encourage cashless transactions in India.

   AePS also facilitates disbursements of government schemes like NREGA, Social Security pension, Handicapped Old Age Pension etc. of any Central or State Government bodies using Aadhaar authentication. Since it uses Aadhaar number and biometric information, it encourages financial inclusion and serves the underbanked sections of society.

2. **Tele-density and broadband expansion:**

   For this paper, we refer to the number of telecommunication devices (wireless and wireline) as a percentage of an area's population. Having a landline or cellphone connection along with a bank account allows greater financial integration as an individual is able to check on the status of their accounts, insurance policy, or loan status. Phone lines can be further manipulated into providing internet access, which can then give individuals access to online banking. For the purpose of our analysis, we use data provided by the Telecommunications Regulatory Authority of India (TRAI) circle wise analysis of cell & landline penetration. While it is true that expanding landlines and cellphones and reliance on technology-enabled channels alone will not help in achieving the goal of creating an inclusive financial system, studying telecommunication penetration does have the potential of being a force multiplier in achieving it. It can enable cost-effective delivery and communication channels that provide easy access and build trust in formal banking institutions. For future research, quality of wireless internet or broadband services, access and use of mobile technology can help provide further gateways into the lives of the rural poor, as well as capture the requirements for technology platforms on which the financial inclusion landscape in India is being built rapidly (For example –Aadhaar enabled payment systems). For an analysis of telecom subscribers as a Percentage of Population as per the different circles and greater disaggregated data please see appendix 1.

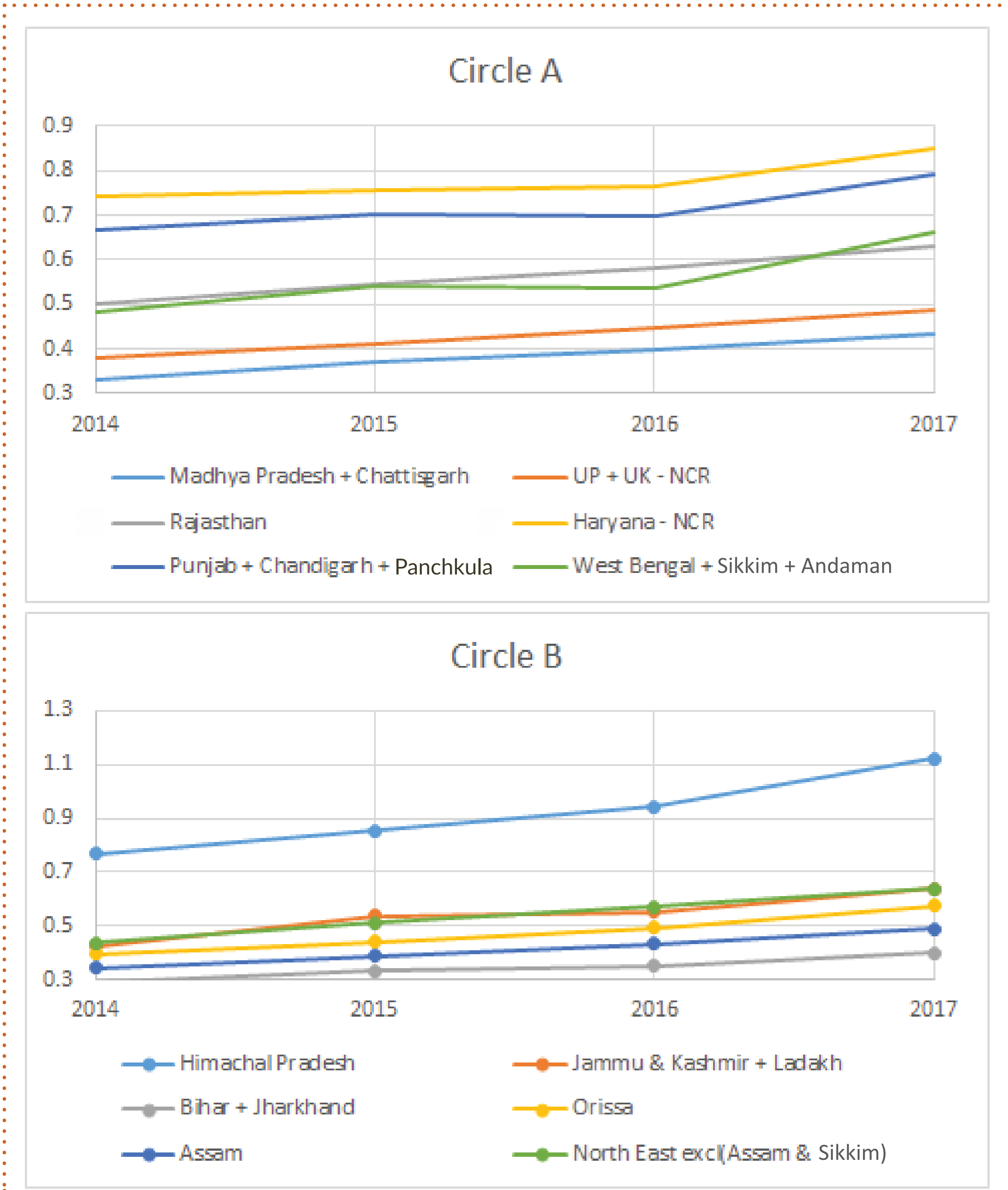
***Table 14:** Telecommunication Subscriptions (Wireless + Wireline) as Percentage of Population (2017)*

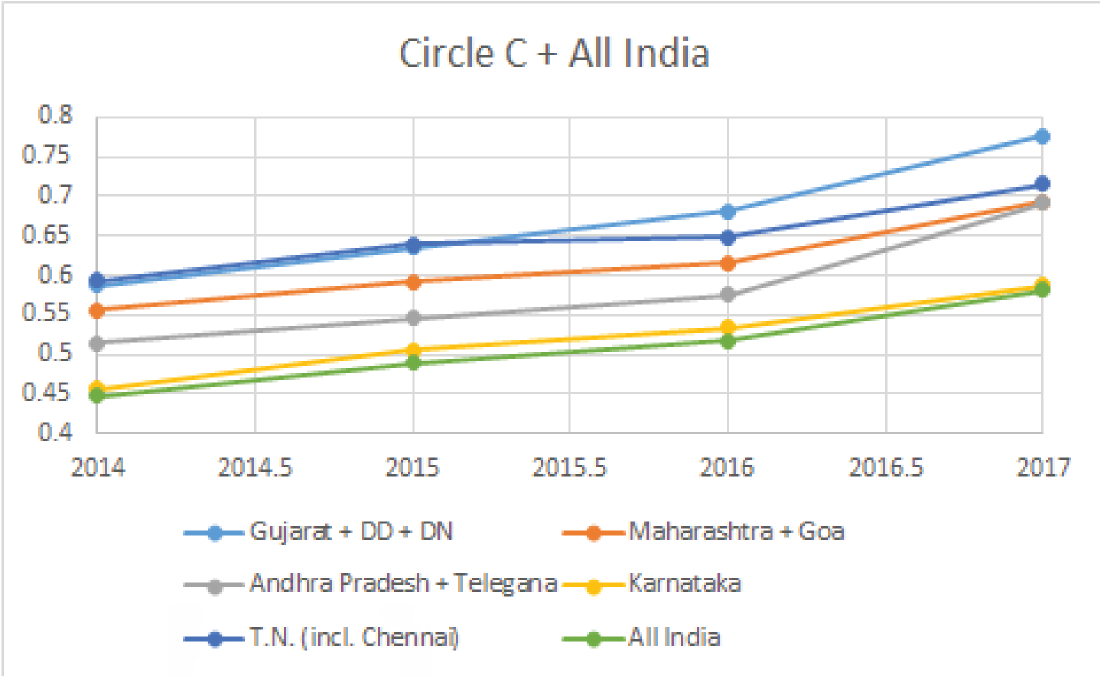
Circle	Total	Rural	Urban	Urban Rural Difference
Andhra Pradesh + Telangana	98%	69%	149%	80%
Assam	67%	49%	170%	121%
Bihar + Jharkhand	58%	40%	163%	123%
Delhi (NCR)	170%	27%	225%	198%
Gujarat + DD + DN	113%	78%	158%	80%
Haryana - NCR	122%	85%	187%	102%
Himachal Pradesh	149%	112%	478%	366%
Jammu & Kashmir + Ladakh	93%	64%	166%	102%
Karnataka	111%	59%	187%	128%
Kerala + Lakshadweep	121%	126%	117%	-9%
Madhya Pradesh + Chattisgarh	67%	44%	131%	87%
Maharashtra + Goa	111%	69%	159%	90%
North East excl (Assam & Sikkim)	86%	64%	138%	75%
Odisha	79%	57%	183%	126%
Punjab + Chandigarh + Panchkula	123%	79%	186%	107%
Rajasthan	92%	63%	176%	113%
T.N. (incl. Chennai)	124%	72%	177%	105%
UP + UK	78%	49%	177%	128%
West Bengal + Sikkim	92%	66%	143%	76%
India	93%	58%	165%	107%

Source: TRAI (Wireless + Wireline Subscribers), Brookings Institute (Population Estimates)
Legend: DD +DN refers to Daman & Diu and Dadar & Nagar Haveli, NCR refers to National Capital Region, T.N. refers to Tamil Nadu and UP + UK refers to Uttar Pradesh and Uttarakhand.

We see from Table 14, that there is significant variation amongst the various circles in telecommunication subscriptions as percentage of population. For total percentage, India as a whole hovers around 93 percent. However, for circles like Assam, Bihar + Jharkhand, Madhya Pradesh + Chhattisgarh subscribers as percentage of population are well below 70 percent. On the other hand, circles like Delhi, Himachal Pradesh, Punjab, Tamil Nadu, Kerala, and Haryana hover well above 120 percent. When we look at rural-urban breakdowns, we see a massive disparity between values. Rural areas average at 58 percent, while urban areas average at 165 percent. Certain states do well above the norm in rural areas like Himachal Pradesh and Kerala which are above 100 percent. The Delhi rural numbers should however be taken with a grain of salt; as most rural residents travel to short distances to areas classified as urban in order to get a telecommunication subscription. Lastly, all urban areas are well above 100 percent and they average to around 165 percent of telecommunication subscribers as percentage of population. Himachal Pradesh sticks out due to its extremely high subscription rate that is just shy of 500 percent.

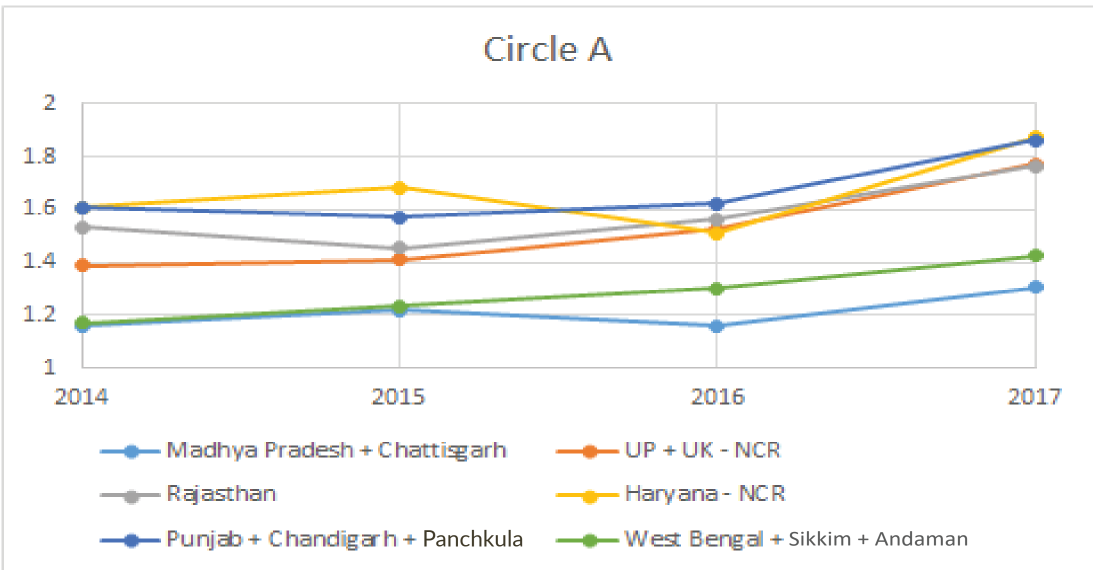
Figure 8: *Rural Telecom Subscribers as Percentage of Rural Population*

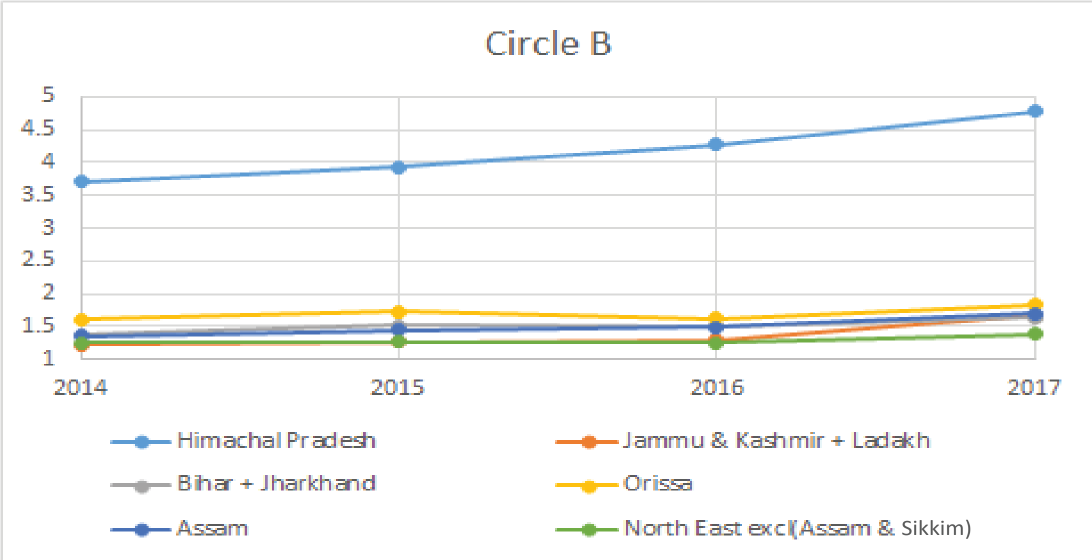


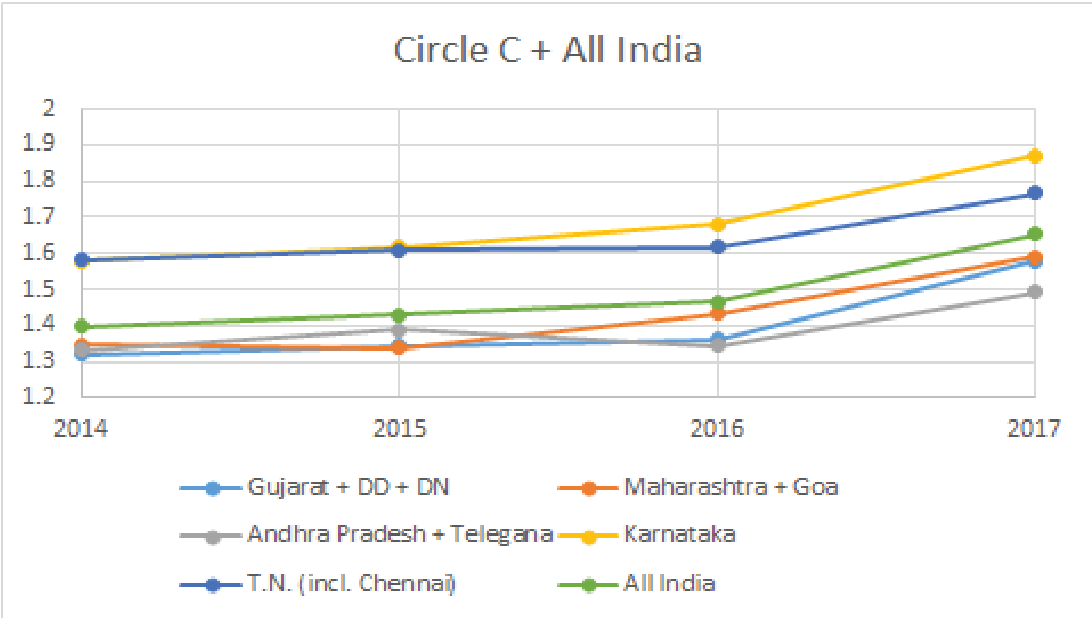


Source: TRAI (Subscribers per Circle), Brookings Population Estimates (Population per Circle)

***Figure 9:** Urban Subscribers as Percentage of Urban Population*

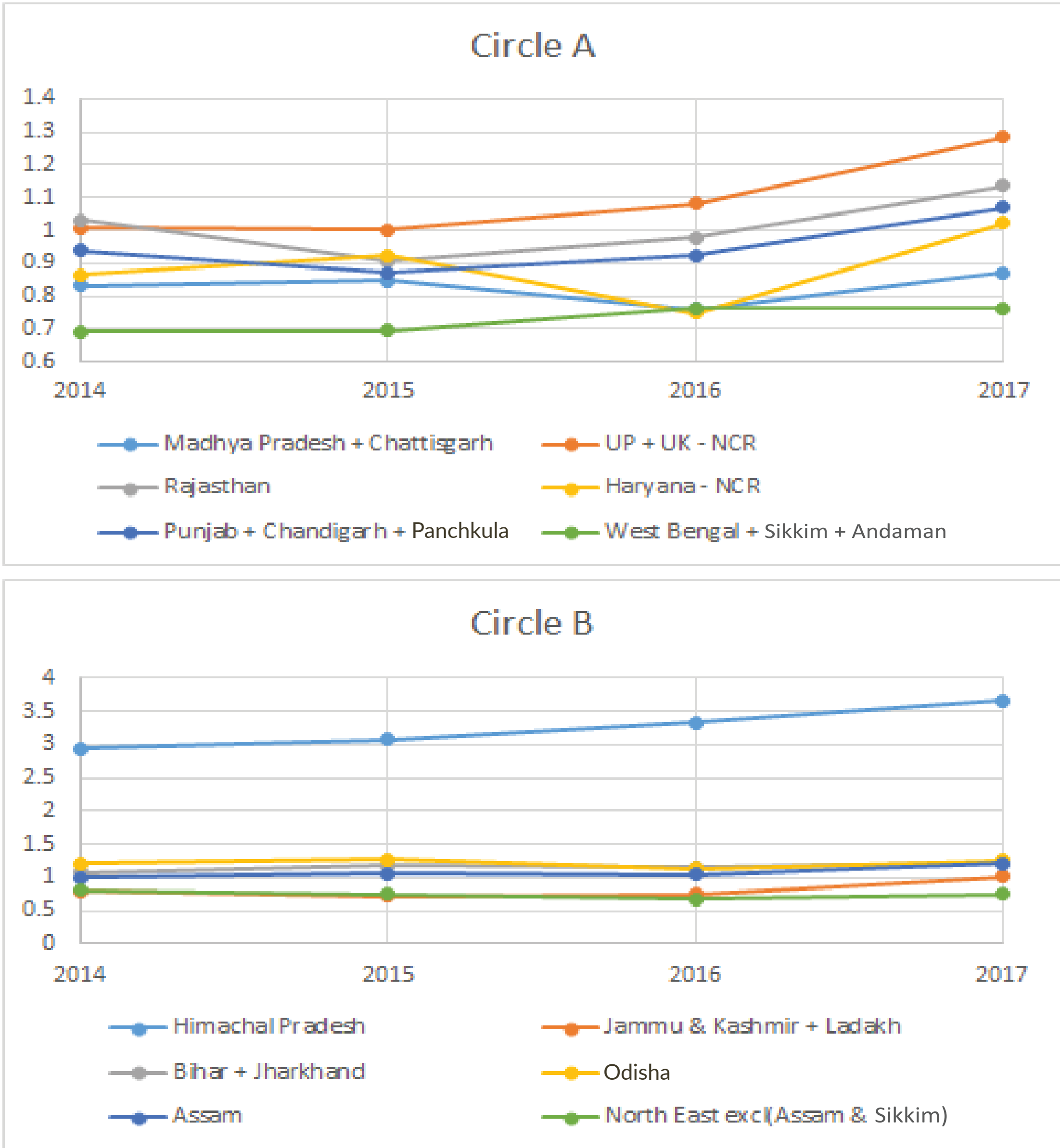


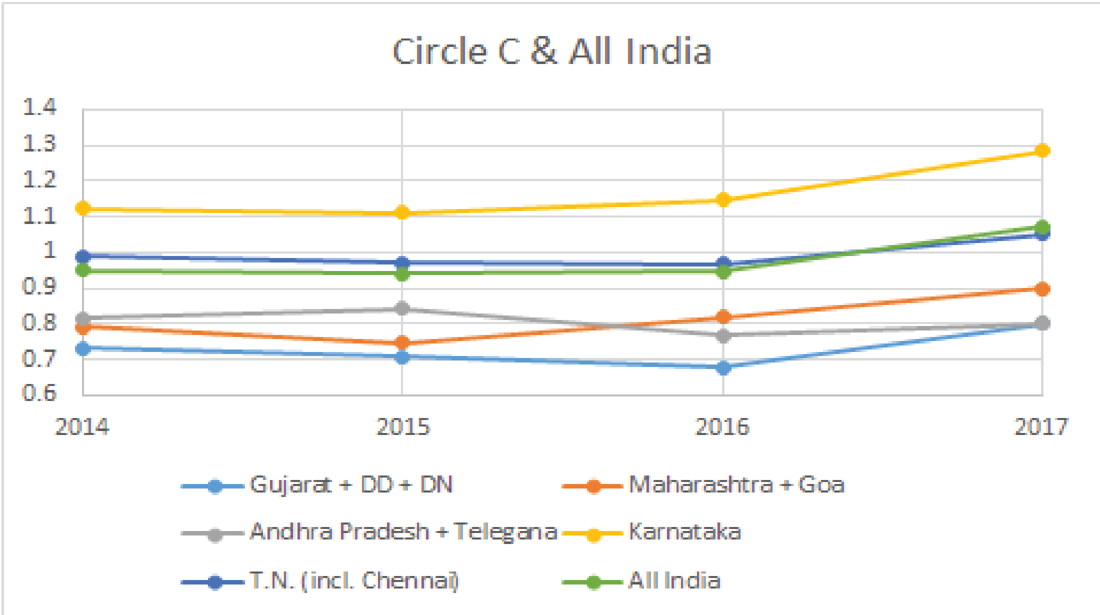




Source: TRAI (Subscribers per Circle), Brookings Population Estimates (Population per Circle)

Figure 10: Difference in Urban-Rural Subscription rates





Source: TRAI (Subscribers per Circle), Brookings Population Estimates (Population per Circle)

The numbers provided by the TRAI are not unique identifiers, meaning that many individuals will possess both wireline and wireless subscriptions, and potentially multiple wireless subscriptions. Keeping this in mind, we should note that all figures are upwardly biased.

When we look at Figure 8, we note that rural subscriptions as a percentage of rural population has been steadily increasing. However, these growth rates have significantly more variation than the total increases. The average increase from 2014 to 2017 is 30 percent. However, the average increases vary across Circles. For instance, the increase in Circle B is above 45 percent, while the average variation for Circle A is well below 25 percent. This is undoubtedly due to the difference in starting point for Circle A and Circle B. The slow growing states of Circle A had at least 66 percent subscription rate in 2014. While all the states in Circle B except Himachal Pradesh had at most 42 percent subscription rate in 2014. When considering and comparing growth across circles we must acknowledge and contextualise where we start from. The fastest growers in our analysis are Himachal Pradesh, Jammu & Kashmir, Odisha, Assam, and the Northeast which all have at least 39 percent growth. The slowest growers are Haryana and Punjab which have 14 percent and 18 percent growth respectively.

Looking at Figure 9, we note that the urban subscriptions as percentage of urban population has been steadily increasing at a mostly consistent rate. The average increase from 2014 to 2017 is 18 percent. A few circles like Jammu & Kashmir, Assam, and Uttar Pradesh +Uttarakhand had above 25 percent, while only the Northeast, Assam, and TamilNadu have had below 12 percent.

Looking at Figure 10, we see a wide disparity in circles in terms of trends of Urban-Rural difference in subscription rates. India as a whole witnessed an increase in the Urban-Rural divide of 13 percent from 2014-2017. However, some circles like the Northeast and Andhra Pradesh have actually seen a dip in the divide. Others like Uttar Pradesh + Uttarakhand, Himachal Pradesh, Jammu & Kashmir, and Assam have seen over 20 percent increases. The Urban-Rural divide looks set to increase further in future years.

Due to proliferation of wireless telephones and competitive pricing, we will continue seeing an increase in telecommunications presence in urban areas. At the same time, due to the limited returns of cell towers in not-so-densely populated rural areas, we also believe that we will see an increase in Rural areas in the coming years. Telecommunications companies should focus their sights on the slowly emerging rural market.

While there are no direct methods of testing the relationship between teledensity and financial inclusion, we can only infer that growing number of landlines and cellphones in rural areas will in general improve connectivity and access to formal banking institutions. An indirect connection can also be made between telecommunications and access to internet.

CONCLUSION

India has witnessed a decade of experimentation in the area of financial inclusion. There have been numerous government and market interventions aimed at improving the financial lives of its people through introduction of market reforms and implementation of national schemes in a mission mode. As governments, providers and other stakeholders start taking proactive approaches that recognise the diversity of barriers to access, the heterogeneity of consumers and the variety of financial needs among various underserved or excluded groups, it becomes imperative to study the landscape within which financial inclusion is delivered. With this motivation, this paper set out to examine the depth and breadth of financial inclusion in India by focusing on products, institutions and enabling systems.

Products refer to a wide array of financial instruments (and respective policies) that promote access to savings (PMJDY), credit (MUDRA), payments, insurance via different government policies such as the NHPS and pensions through government initiatives to move the overall agenda of financial inclusion in India. Thereafter we study institutions that promote the penetration of formal banking services in India through the Indian Post Banks, Microfinance institutions, expansion of Self-Help Groups, introduction of differentiated banks such as small banks and payments banks in the Indian financial sector. In the last section of the report, we look at enabling systems such as mobile and telephone coverage and Aadhaar enabled Payment Systems.

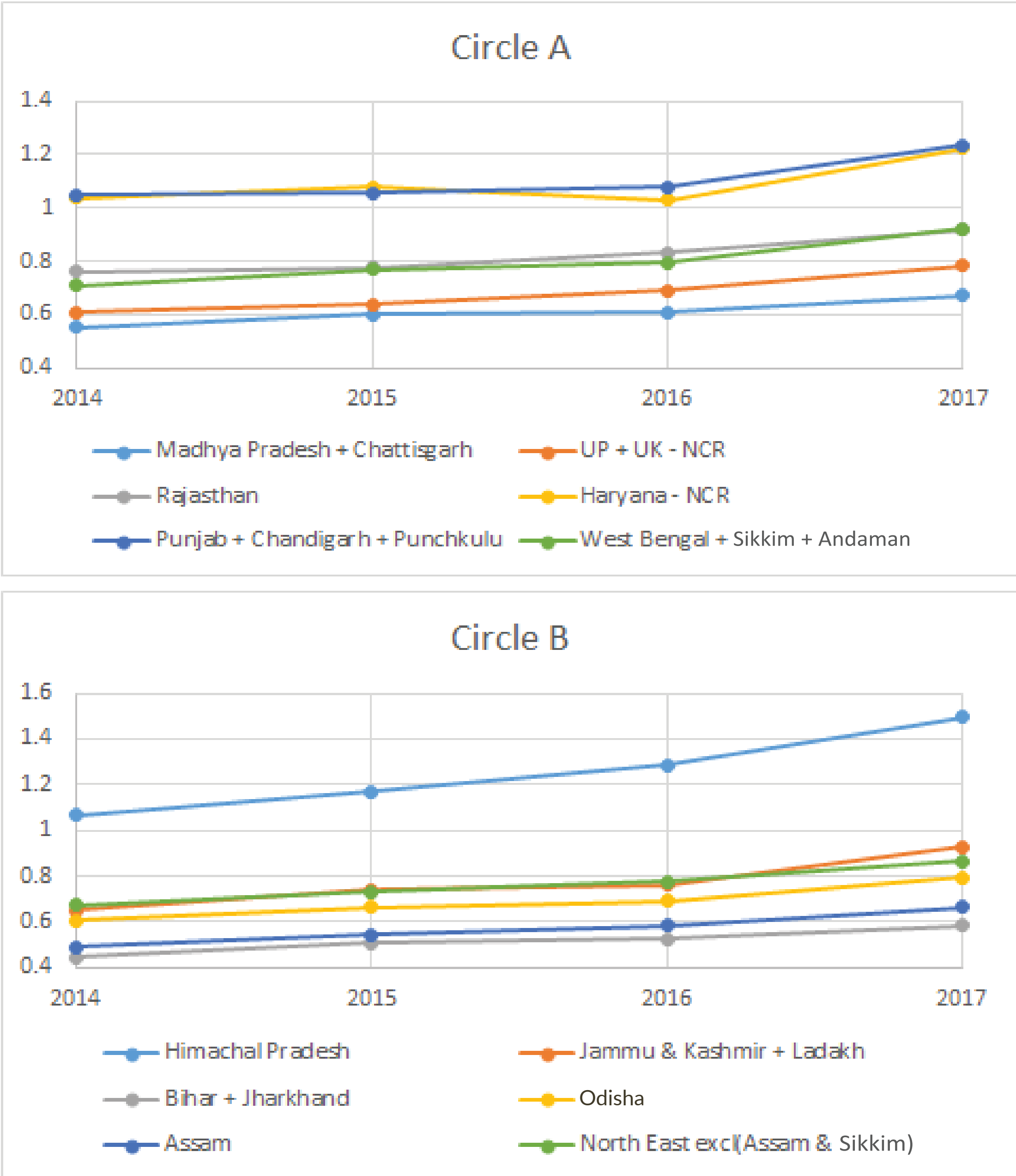
The overall result show that while India has made tremendous progress in some areas, such as opening bank accounts, there is much work remaining in extending other financial instruments across the country. While government policies have addressed the constraints by implementing numerous schemes targeting specific market segments such as rural population, women etc. the basket of financial services available remain limited across several segments. There are significant variations across states in expansion of specific financial instruments. There are pockets of exclusion in the eastern and north-eastern parts of India. The next phase of government financial inclusion policies should particularly target such areas for expanding access to financial instruments beyond bank accounts to include credit, insurance and pensions.

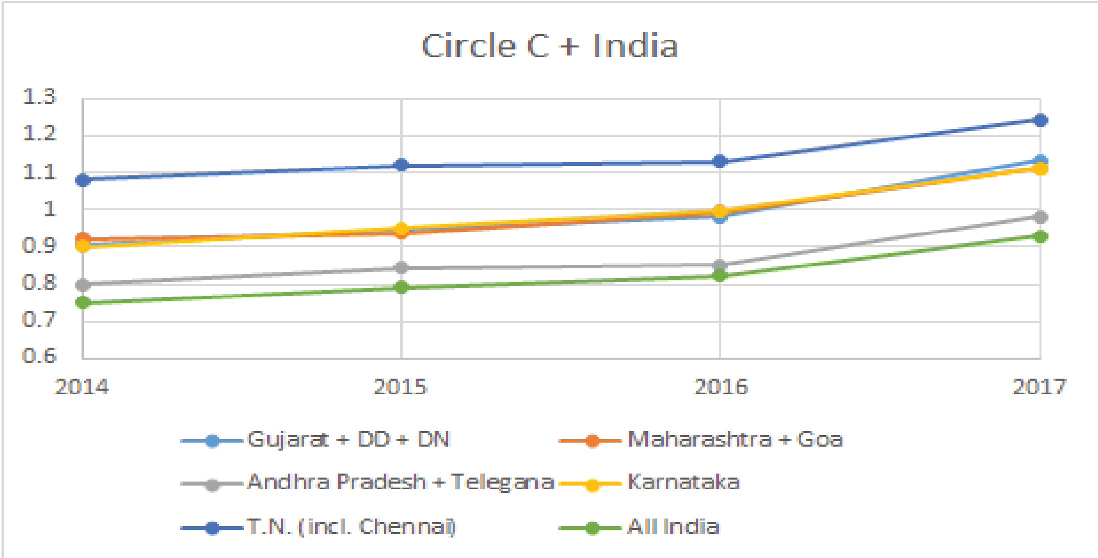
The biggest source of financial inclusion expansion in India, beyond bank accounts, are technology-enabled solutions. India has witnessed a significant increase in telecommunication connectivity throughout the country. Coupled with the rollout of Aadhaar, this has created a unique opportunity to make massive gains in financial inclusion. These gains are largely concentrated in urban areas of the country but have spread beyond Tier 1 and Tier 2 cities to smaller cities, townships and semi-urban areas due to improved infrastructure and connectivity across all states of the country.

Future improvements in financial inclusion will demand more sophisticated and affordable products and services. These are essential for smoothing consumption across different types of income shocks and to improve the quality of life of ordinary Indians.

Appendix:

Figure 11: Telecom Subscribers as a Percentage of Population





Source: TRAI (Subscribers per Circle), Brookings Population Estimates (Population per Circle)

Looking at Figure 11 above, we note that subscriptions as percentage of population has been steadily increasing for the last four years at roughly the same rate across India. The average increase from 2014 to 2017 is 23 percent, however some circles like Himachal Pradesh, J&K, and Assam have grown by over 35 percent. Himachal Pradesh is particularly interesting because it has one of the highest subscription rates in the country. The slowest growing states are Punjab and Tamil Nadu which already have well above 100 percent subscription rate.

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About theAuthor

Shamika Ravi

Shamika Ravi is Director of Research at Brookings India and a Senior Fellow of Governance Studies Program, at Brookings India and Brookings Institution Washington D.C. She is also a Member of the Economic Advisory Council to the Prime Minister of India. She leads the Development Economics research vertical at Brookings India, where the focus is on financial inclusion, health, gender inequality and urbanisation. Ravi is a visiting professor of Economics at the Indian School of Business where she teaches courses in Game Theory and Microfinance. She is affiliated with the Financial Access Initiative of New York University and is an independent director on the board of Microcredit Ratings International Limited. She was part of the Enforcement Directorate of Microfinance Institutions Network in India and has served as independent director on boards of several leading microfinance institutions.

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