An Assessment of Regional Financial Penetration in Contemporary India

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Abstract

The present study endeavours to present a comparative scenario of financial penetration across regions in the contemporary India. The study classifies India into six regions i.e. southern, western, central, eastern, northern-eastern and northern region. The secondary data extracted from economic political weekly research foundation, census report, MOSPI and RBI has been used for the assessment of financial penetration for the period 2006 to 2016. The study reveals improvement in the each of the dimension i.e. Bank Penetration, ATM & Branch Availability, and Credit & Deposits; across the regions. Further study also reveals that gap between two streams i.e. upper and lower, is not merely significant but also exhibited better index position for the upper stream regions relatively to lower stream regions. However, states such as Bihar, Jharkhand, Orissa, Sikkim from eastern region; Chhattisgarh, Madhya Pradesh, Uttar Pradesh from Central region; provides scope for ameliorating financial penetration in lower stream regions. As these states are currently endeavour towards their developmental efforts and so these could provides room for improving the financial service engagements in the future.

Keyword: Financial Inclusion, Penetration, Financial Inclusion Index

JEL Classification: G20, G21, G29
Introduction

The concept of financial inclusion – traces its roots in the late 1990s, when United Nations Capital Development Fund (UNCDF) work at the local level included support for microcredit institutions. Since then, UNCDF moved towards the broader concept of microfinance, promoting access to a variety of financial services, especially savings, based on the evidence that savings were actually much more in demand especially from the most vulnerable segments of societies (UNCDF). However, the prerequisite of a well integrated financial inclusion system has been now acknowledged by the policy makers from most of the nations of world. Indeed it is an essential component in today’s dynamic economic environment if the economy is seeking for enhanced inclusive development scenario. There is literature evidence that financial inclusion models can support overall economic growth and the achievement of broader development goals. According to the report by the McKinsey Global Institute “Digital finance alone could benefit billions of people by spurring inclusive growth that adds $3.7 trillion to the GDP of emerging economies within a decade”. Further when household’s accesses to financial services are constrained, it becomes one of the important reasons for persisting inequalities. Economic theory proposes that unrelenting inequalities has a negative impact on the long term growth prospects of an economy (World Bank, 2007). While establishing causality between financial development and economic growth has been quite wearisome, with no simple answers, the evidence of a strong link between financial development and economic growth has continued to rise (Gattoo and Akhtar, 2014). The interest in the financial inclusion discourse across developing and developing world stems from the recognition that a strong and vibrant financial system does not necessarily imply increasing financial to all across the societal divide (Honohan, 2004).

Background: Financial Inclusion in India

In India, policies have considerably evolved over the past six decades without using the terminology of Financial Inclusion. Initially the development of financial policy constantly focused mostly on credit than on any other financial service [Rao (2007)]. Since 1947, the development of India's financial sector has ensued impressive advancement and consolidation of access to banking services (credit) especially in rural areas. The All India Rural Credit Survey- 1951(AIRCS) stated that more than 90 percent of rural credit needs were being met by moneylenders or other informal sources. The share of banks in total credit was too low as 1 percent in total rural debt. This called upon the government intervention with regards to rural financial market. Consequently, in 1955, the State Bank of India (SBI) was established to extend banking facilities on a large scale, particularly to the rural and semi-urban areas in the country, and also to serve various other public purposes. Further, aiming to strengthening the financial access for the poor’s, the nationalization of fourteen mainstream commercial banks took place in July 1969. This brings them under the ambit of public sector that could better serve as per the development needs in accordance with the conformity with the national policies and objectives.
Further, six more banks were nationalised in April 1980. India undertook a colossal drive for bank branch expansion, particularly in the rural areas in the 1970s and 1980s. In addition to SBI, Regional Rural Banks (RRBs) were established to cater to the need of rural farmers. As a result, India witnessed a phenomenal growth in its formal rural banking system not only in terms of geographical spread, but also with regards to deposit mobilisation and disbursement of credit. Public sector banks accounted for more than 90 percent of the commercial banking business. Number of bank branches expanded quite robustly leading to (more than six times) reduction in population per office reaching 10,000 people per office in 2012 from 64 thousand per office in 1969 (Basu and Srivastava, 2006; R.B.I. 2013). Following bank nationalisation, the share of banks in rural household debt increased to about 29 per cent in 1981 and 1991 while the share of formal or institutional sources in total debt reached 61.2 per cent before declining in 1991. Correspondingly, the share of moneylenders apparently declined steadily over these four decades, from 69 percent in 1951 to less than 16 percent in 1991 (AIDIS, 1991). However, the same figure rose to about 30 percent for the year of 2002 (AIDIS, 2002). These surveys do point towards the fact that lot of affirmative action has been done by various institutional agencies to percolate the rural credit markets, more till economic reforms were initiated in 1991. Till the reforms a strict government policy did ensure the development of rural credit markets, however at the cost of the financial efficiency. After 1991 economic reforms, the state phased out of rural credit markets paving way to competition and efficiency regime. India being such a vast country geographically, variations in access to credit and rural indebtedness with respect to various regions and even within various regions has long been witnessed and continues even today. Each region has its own developmental problems and peculiar specificities in relation to rural financial markets. Thus the present study endeavours to present a comparative scenario of financial penetration across regions in contemporary India. The study classifies India into six regions i.e. southern, western, central, eastern, northern-eastern and northern region. The period from 2006 to 2016 has been used for the assessment of financial penetration.

Concepts and Definitions: Financial Inclusion (Exclusion)

Financial inclusion (or, alternatively, financial exclusion) has been defined in the literature in the context of a larger issue of social inclusion (or exclusion) in a society. One of the early definitions by Leyshon and Thrift (1995), define financial exclusion as referring to those processes that serve to prevent certain social groups and individuals from gaining access to the formal financial system. According to Sinclair (2001), financial exclusion means the inability to access necessary financial services in an appropriate form. Exclusion can come about as a result of problems with access, conditions, prices, marketing or self-exclusion in response to negative experiences or perceptions. Carbo et al. (2005) have defined financial exclusion as broadly the inability (however occasioned) of some social groups to access the financial system. The Government of India’s ‘Committee on Financial Inclusion in India’ begins its report by defining financial inclusion “as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as the weaker sections and low income groups at an affordable cost” (Rangrajan, 2008). Therefore the present study defines financial inclusion as a process that ensures the ease of access, availability, and usage of the formal financial system for all members of an
The approach used here indicates several dimensions of financial inclusion, viz., accessibility, availability, and usage of the financial system. These dimensions together build an inclusive financial system. Further, as banks are the portal to the most basic forms of financial services, banking inclusion/exclusion is often used as corresponding to financial inclusion/exclusion.

**Review of Literature**

Babych, Grigolia & Keshelava, (2018) explores the causes that effects low level of financial inclusion and literacy among the poor, young and rural population. The paper also articulates the present policy initiatives taken by Georgia government to further improving the financial access among households and SMEs. Primary as well as secondary sources have been uses for this study by Interviews with commercial bank and MFI executives point largely in the same direction. The study found that many SMEs would like to borrow more than their financial situation could allow. The study revealed presence of adequate access despite it there was the low usage of financial services. Further the poor households completely by passed in financial access while credit access has been significantly increasing except SMEs.

Similarly, Cámara, & Tuesta (2014), measure the extent of financial inclusion at country levelfor eighty-two developed and less-developed countries via relying on demand and supply-side information for computation. The degree of financial inclusion is determined using three dimensions i.e. usage, barriers and access to financial inclusion. Further, weights assigned to the dimensions are determined endogenously by employing a two-stage Principal Component Analysis. The composite index offers a comprehensive measure of the degree of financial inclusion, easy to understand and compute. Further the study finds that access is the most crucial dimension for determining the level of financial inclusion. Julie (2013) articulates the relationship between financial inclusion and economic growth in Kenya. The study is based upon the secondary data extracted from Kenya National Bureau of Statistics and Central Bank of Kenya for the financial year from 2002-03 to 2011-12 annually. The study revealed that depth of the financial sector has generally promoted economic growth in Kenya. Further, it was also noticed that strong functioning capital markets increases economic performance, investment and growth in Kenya.

Izquierdo & Tuesta (2015) analyse the link between Financial Inclusion and individual characteristics of household and enterprises in Peru. The study is based on quantitative approach; both secondary and primary data has been used. The results of the study explore that people who are facing difficulties in accessing the formal financial system, the same, belongs to backward and more vulnerable group of the society as well (women, individuals living in rural areas and young people). Further, results show that, financial products like loans and mortgages is the better than saving products for financial inclusion in case of households in Peru. While, in case of enterprises, significant factors that affect financial inclusion are education and formality as per the study. Olawumi, Lateef, & Oladeji (2017) empirically investigated the relationship between financial deepening and bank performance. Indeed, it has bridged the gap between economists’ belief and empirical work in the literature by establishing a strong and positive contribution of financial deepening to selected commercial banks profitability. The study revealed that each component of financial deepening indicators has a strong relationship and are statistically significant; this provides...
empirical evidence that financial deepening made positive contributions to the level of profitability of the selected commercial banks in Nigeria. This study also concludes that contributions of each component of financial deepening to selected commercial banks performance is strong and are statistically significant. 

Singh et al., (2014) in their study focus upon utilizing the existing resources such as Mobile phones, Banking Technologies, India Post Office, Fair Price Shops and Business Correspondents (BCs) thereby making it more efficient and user friendly for the interest of the rural population as well as the formal sector.

Vaidya, Mahajan, & Garg (2018) exhibit that financial inclusion level is affected significantly by the percentage of literates as well as by the population density in various districts of Himachal Pradesh. Though marginal workers and banking parameters (population per bank, credit-deposit ratio) demonstrated no signs of impact on financial inclusiveness in Himachal. Rao (2013) showed that around one third the households in three districts are still marginalized with limited or no access to basic financial services including that of microfinance and insurance and thus emphasising greater focus on the micro and distributional dimensions of financial resources. The study supports significant regional variances in banking outreach across districts of Andhra Pradesh. More importantly, the study also highlights an important role of SHGs, financial literacy and infrastructure in exploring banking outreach. Social exclusion of low income families such as SCs, STs, and OBCs results in illiteracy, inhibition, pattern of occupation and poor physical access has also being highlighted by the study.

Bhuvana, & Vasantha (2016) stated in his study that districts of Tamil Nadu have very low level of financial inclusion in the rural areas. Therefore suggest that GOI and concern authorities should consider those districts which are excluded from receiving financial services to revamp the status of financial inclusion in India. Ananth & Öncü (2013) called for paradigm shift, especially on the part of banks, financial inclusion is bound to fall short of expectations and advantage of this vacuum has been taken by informal service providers. Therefore, study proposes that the banking sector should make efforts to expand inclusion beyond the consideration of capital cost or as a charitable expense, and should take it as a long-term investment for the future. Kainth (2013) found low level of Financial Inclusion in Punjab around 0.354. However the study also encountered wide variation across different districts of Punjab, the estimated value of Coefficient of Variation being 133.30 per cent. And therefore felt an imperative need to introduce banking facilities and service in rural areas. Chattopadhyay (2011) discovers that although there has been an improvement in outreach activity in the banking sector, the accomplishment in respect of financial inclusion is not significant in West Bengal. An index of financial inclusion (IFI) has been developed in the study using data on three dimensions of financial inclusion. The analysis based on index revealed that Kolkata district leads with the highest value of IFI, while rest of the districts show a very low level of financial inclusion. Thus, a whole-hearted effort is called for from all the corners of the society, viz., bankers, beneficiaries and regulators in order to make financial inclusion more meaningful and effective.

Dixit & Ghosh (2013) focuses on to understanding inclusive growth phenomenon its need and financial inclusion as an instrument to attain it with reference to its extent in Indian economy using
secondary data source. The study believes that financial literacy and level of awareness continue to remain an issue with regard to usage of financial services/products. Therefore the study calls for coordination of all the stakeholders like sectoral regulators, banks, governments, civil societies, NGOs, etc. to achieve the objective of financial inclusion. Nair (2011) argued that through passively encouraging microfinance institutions to expand without limits in a policy and institutional vacuum, the state had created the conditions for a crisis. She believes that rural distress in Andhra Pradesh is an outcome of this vacuum. Thus, mentioned reviews utterly emphasize that financial inclusion is imperative not only for the inclusive growth but also for mitigating the deep rooted poverty especially in rural areas. However the existing literature is silent upon the regional disparities from a macro prospect and need to be focused upon. Therefore the present study endeavours into this direction through focusing upon a comparative scenario of financial penetration across regions in the contemporary India.

Materials and Methods

The study utilizes a multidimensional approach while constructing the financial inclusion index (FII). The methodology to compute the FII index is similar to the methodology adopted in constructing the HDI, HPI, and GDI. The FII index is computed separately by further incorporating the dimension index for each of dimensions i.e. Bank Penetration, ATM & Branch Availability, and Credit & Deposits. In addition, the study gives equal weights to each dimension. The dimension index for each of the dimension, \( d_i \), is computed by the following formula.

\[
d_i = \frac{a_i - m_i}{M_i - m_i} \quad \text{eq. 1}
\]

Where,

- \( a_i \) = Actual value of dimension \( i \)
- \( m_i \) = minimum value of dimension \( i \)
- \( M_i \) = maximum value of dimension \( i \)

Eq. 1 ensures that \( 0 \leq d_i \leq 1 \). Higher the value of \( d_i \), higher will be the state’s achievement in dimension \( d_i \). If \( n \) dimensions of financial inclusion are to be considered, then, it will be represented by \( D_i = (d_1, d_2, d_3 \ldots d_n) \) on the \( n \)-dimensional space. Thus the FII constructed incorporates information on the chosen dimensions in one single number lying within the range of 0 to 1, where 0 represent the worst and 1 indicates complete penetration in terms of financial inclusion. The financial inclusion index (FII), for the \( j^{th} \) is measured by normalizing the inverse distance of the point \( d_i \) from the point of complete penetration i.e. 1. Thus, the formula for measuring financial inclusion index is as follow:

\[
FII = 1 - \sqrt{\frac{(1-d_1)^2 + (1-d_2)^2 + (1-d_3)^2 + \ldots + (1-d_n)^2}{n}} \quad \text{eq. 2}
\]
Result and Discussion

Dimension One: Region-wise Banking Penetration

The size of the “banked” population, i.e. number of people having a bank account is a measure of the banking penetration of the system. Further, in absence of the data on “banked” population, number of bank accounts as a proportion of the total population as an indicator of dimension 1 has been used in the study. Fig 1.1 shows the region-wise banking penetration for the total period from 2006 to 2016. The figure shows the penetration via bank accounts for per thousand populations stood exceptionally better for southern region\(^6\); better for northern region\(^1\) while moderate for western region\(^5\). On the other side, the penetration stood lower in case of central\(^4\) and eastern regions\(^3\) while relatively poor for north-eastern region\(^1\). Further, the figure clearly shows that despite the regional differences penetration of bank accounts on per thousand populations have significantly improved across all region, no doubt, the year 2016 registered a downfall throughout all regions.

![FIG 1.1: REGION WISE PER 1000 BANK ACCOUNTS](image)

Source: EPWRF, Census 2011

Dimension Two: Availability of Banking Services

In an economy, inclusive financial system meant an available of banking services to its users at ease. Most of the literature generally used number of ATM & Bank Branch on per Lakh population as proxy of smooth financial services in the economy. Contextually, Fig 1.2 shows the region-wise status of ATM availability per Lakh population. The figure clearly shows that ATM availability is not only relatively good in the South region\(^6\) but also inclined sharply in the later years followed by northern\(^1\) and western regions\(^5\) in their chronology. While, it’s relatively lower for central\(^4\), north-eastern\(^2\) and eastern regions\(^3\). No doubt with the passage of time the ATM availability across all regions has been speed up by the banking sectors is praiseworthy.
Fig 1.3 shows region-wise branch availability per lakh population. Once again the southern region secured a better position followed by northern region. The performance of western region is moderate. The remaining regions namely central, eastern, and north-eastern performance is relatively lower. Despite it as revealed by the fig, that significant improvement has been made in increasing the availability of branch facilities across all regions for the period 2006-16.

Source: EPWRF, Census 2011

Dimension Three: Usage of Banking Services

The third dimension plays a crucial role in transforming the notion of an inclusive financial system into reality. Indeed it is indispensable that the banking services are adequately utilized in order to strengthen the overall financial system. The study incorporate the two basic services of the banking system i.e. credit and deposit; as the third dimension. Accordingly, the volume of credit and deposit a proportion of the state’s GDP has been used to measure it. Erstwhile, Fig 1.4 presents the deposit value as percentage of Gross State Domestic Product. The figure shows that northern region has highest share of Bank Deposits. Followed by western, eastern, central and lastly by north-eastern regions. On the other side the southern region, surprisingly, shows relatively lower deposits. Despite it, the deposit of bank as a percent of SGDP has raised significantly over the period, except 2016 that witnessed a downfall for in all regions.

Source: EPWRF, Census 2011
The fig 1.5 shows the regional flow of bank credit as a percent of State Gross Domestic Product (SGDP). The fig clearly shows that initially western region has higher percent of credit flow (as a percent of SGDP) from the banking sector; however, from 2010 onwards the northern region\(^1\) went ahead to western region. It was followed by eastern\(^3\), central regions\(^4\). While the southern\(^6\) and north-eastern\(^2\) regions hold a lower position in the flow of bank credit. Interestingly, the credit flow that has inclining pattern take an exceptionally mark as it encountered a downfall in the last year.

Source: MOSPI, RBI

Regional Status of Financial Inclusion Index

Fig 1.6 shows regional status of financial inclusion index for the period 2006 to 2016. Surprisingly, fig shows trajectory of financial inclusion index have been clustered under two streams i.e. upper and lower. The fig reveals that gap between the two streams is significant that clearly indicates that upper stream regions are relatively better than the lower stream regions. Despite this none of the region exhibits complete penetration for the financial services. The upper stream consists of northern\(^1\), western\(^5\) and southern\(^6\) while
lower stream include of central\(^4\), eastern\(^3\) and north-eastern\(^2\) region of India. Foremost, trajectory shows a better financial inclusion index for the northern region followed by western region. This trajectory of northern region shows further improvement till 2010 and afterward it deteriorated with every passage of time. The western region values for FII remain stable till the initial three years, afterward; it also deteriorated from 2009 onward although improvement has seen in the last year performance i.e. 2016. The southern region values for FII show relatively consistent performance across all year, no doubt, the last year values deteriorated in the same as well. In the lower stream, the trajectories are different across regions i.e. central\(^4\), eastern\(^3\), north-eastern\(^2\) regions. The central region shows a downward pattern for the FII values while eastern region follows a seesaw pattern and contrary to it, north-eastern region depicting an upward or improving indexing value for FII.

![Figure 1.6: Regional Status of Financial Inclusion Index](image)

**Figure 1.6: Regional Status of Financial Inclusion Index**

Source: Authors' Calculation

**Conclusion**

Foremost, study reveals improvement in each of the chosen dimension i.e. Bank Penetration, ATM & Branch Availability, and Credit & Deposits; across the regions (excluding the slowdown in 2016). The second section reveals trajectory of financial inclusion index that have been clustered under two streams i.e. upper and lower. The study reveals that gap between the two streams is not merely significant but also exhibited better index position for the upper stream regions relatively to lower stream regions though the study cannot deny the regional disparities (on the basis of geographical, socio-political structure of the regions). Neither promoting the financial services, blindly, is a viable solution to improve the regional financial penetration. However, states such as Bihar, Jharkhand, Orissa, Sikkim from eastern region; Chhattisgarh, Madhya Pradesh, Uttar Pradesh from Central region; provide ample scope for ameliorating financial penetration in lower stream regions. As these states are currently endeavoured towards their
developmental efforts and so these could provide room for improving the financial services engagement in the future. No doubt, the most crucial is to include those who are currently excluded from the formal financial system; and thus there is a need to bring the flexibility in the formalities of financial system, so it becomes accessible to the needy at least.

Endnotes:

1. The northern region includes states of Haryana, Himachal, Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Chandigarh & Delhi.
2. Similarly, north-eastern region comprises states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland & Tripura.
3. Bihar, Jharkhand, Orissa, Sikkim, West-Bengal, Andaman & Nicobar Island has been grouped together for the purpose of eastern region.
4. Central region consist of Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Uttarakhan and Uttarakhand.
5. Western region comprises Goa, Gujarat, Maharashtra, Dadra & Nagar, Haveli and Daman Diu.
6. At last, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep, Telangana and Pondicherry has grouped under southern region.

References

1. All-India Debt and Investment Survey, AIDIS, 1991.
2. All-India Debt and Investment Survey, AIDIS, 2002.


### Appendix 1: Regional Status of Financial Inclusion Index

<table>
<thead>
<tr>
<th>Year</th>
<th>NORTHERN REGION</th>
<th>NORTHEASTERN REGION</th>
<th>EASTERN REGION</th>
<th>CENTRAL REGION</th>
<th>WESTERN REGION</th>
<th>SOUTHERN REGION</th>
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<tr>
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**Source:** Authors Calculation