

## FINANCIAL INCLUSION IN INDIA: AN OVERVIEW OF THE NORTH-EASTERN STATES

Aminuz Zaman<sup>1</sup>, Dr. Surajit Kr Bhagowati<sup>2</sup>

<sup>1</sup> Research Scholar, Department of Commerce, Gauhati University, India.

<sup>2</sup> Principal, ADP College, Assam, India.

### Abstract:

The primary objective of financial inclusion is to provide the disadvantaged group people with basic financial services at an ease and affordable cost. India although, achieving heights of financial inclusiveness, is challenged by continuous inter-regions disparities. To access the existing situation of the North-Eastern regions of India, which is less developed and geographically isolated than its counterparts. The study analyses 3 dimensions namely-availability, accessibility and uses of financial services and amalgamating them into an extensive and multidimensional financial inclusion index. The empirical result of this study shows that Tripura is most financial inclusive state among all the eight states of North-Eastern region of India followed by Meghalaya and Sikkim. However, the extent is poor in Mizoram, Assam, Arunachal Pradesh, Manipur and Nagaland as exhibited by lower financial inclusion index (FII).

**Keywords:** Financial Inclusion, Financial Inclusion Index, Multi-Dimensional Index, North-East India.

### 1. Introduction:

Financial inclusion attempts to make financial services accessible and affordable to all business and individuals, despite of their own net worth or company size. Financial inclusion attempts to remove hurdles that exclude people from access of formal financial sector and using various financial services to enhance their lives. The primary objective of financial inclusion is to promote the disadvantaged groups with ease access to financial services. An inclusive financial system can lead in efficiency to the economy of a nation in terms of appropriate allocation of financial resources to the deficit sector from surplus one. Financial inclusion as defined by C. Rangarajan Committee (2008) as “The process of ensuring access to financial services and timely adequate credit where needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost.” Financial inclusion as defined by Raghuram Rajan Committee (2009) “Financial inclusion, broadly defined, refers to universal access to wide range of financial services at reasonable cost. These include not only banking products but also other financial services as insurance and equity products.” The Raghuram Rajan Committee (2009) also expressed that households need ease access to formal financial services extremely for emergency planning and risk alleviation, along with wealth formation depending on the level of comprehension of financial products, services and risk perception. For a rapid growing economy such as India holding an emerging market for financial services, the challenge is higher to include all disadvantageous group under a sole umbrella of financial inclusion. India, however achieving financial inclusiveness, is challenged by continuous inter-region disparities. In the absence of more and more financial inclusive system can lead the growth of informal financial sources of credit which can exploit the large section of society who are excluded from the formal financial system. For assuring fuller participation by all and to mitigate the inter region disparity, the barriers that exclude fuller participation must be identified. With the guidance of a comprehensive financial index, the existing financial system can be well understood and help the authorities for set up better financial inclusive policies which can address all the deprived people. Being a multidimensional index, financial inclusion indicator can be appropriate to focus on locating the extent of financial inclusion. The financial inclusion index (FII) is comparable and consequently can help measuring the present situation of

financial inclusion across states. It can additionally identify the dimensions that needs further attention on the part of financial inclusive policy makers.

## **2. Review of Literature:**

Understanding the need of a comprehensive indicator, (Sarma, 2008) recommend to construct a multidimensional financial inclusion index to obtain the extent of financial inclusion which lie in between 0 and 1. While constructing the index of financial inclusion (IFI), 3 dimensions were studied namely- banking penetration, availability of banking services and usage of the banking system. As it was also stated by Sarma that each indicator individually provides only partial information which can mislead the perception of coverage financial inclusion. A comprehensive system that includes several features will be more representative of the actual financial scenario. (Gupte, Venkataramani, & Gupta, 2012) evaluated financial inclusion index for India applying the formula used by United Nations Development Programme (UNDP) to compute Human Development Index (HDI) in 2010, as a geometric mean of 4 crucial dimensions- outreach, usage, ease and cost of transactions. In a cross-country analysis (Sarma & Pais, Financial Inclusion and Development, 2011) determined per capita income, electronic and physical connectivity and information availing as crucial factors describing the level of financial inclusion. The study recommends that countries having little urbanization and literacy along with poor connectivity and high level of income inequality tend to have low financial inclusion. To understand the actual scenario and barriers on proper execution of financial inclusion agenda in North-Eastern states of India (Thangasamy, 2014) conducted research on the basis of banking indicators. In this study it was mentioned that in North Eastern states development of banking system was only a post nationalization phenomenon. Even there was no Commercial banks in many states of North Eastern region before 1969 like Arunachal Pradesh and Mizoram. The crucial barriers in maximizing financial inclusion in North Eastern region is regional disparity, financial illiteracy and lack of financial awareness. (Chakma, 2014) revealed that there are various factors in a region give way to informal financial systems like- fully dependent on traditional handicraft skills, agriculture and inadequate infrastructure. The author recommends employing Public Private Partnership (PPP) model in the region to mitigate the barriers, develop infrastructure and growing financial market linkage. Being economically deprived and geographically isolated, North Eastern region of India is always remained at lowest level of financial inclusiveness. Hence, an empirical study is much needed to analyze the current situation.

## **3. Objectives of the Study:**

- A) To compute the degree of financial inclusion in North eastern States of India and India as a whole by framing a multi-dimensional index.
- B) To compare and examine the correlative status of all the states of North East India regionally and nationally in terms of their ranking of financial inclusion.

## **4. Methodology:**

### **4.1 Scope and Data Source:**

The present study proposes to invent an extensive and more financial inclusive index for all states of North-East India, and for the whole nation for the year 2021 to access the more current scenario. The required data for the present study have been collected from authentic sources like reports published by Reserve Bank of India, Statistical Yearbook of India, Basic statistical returns of Scheduled Commercial Banks in India and Election commission of India. However, the present study is constructed by availing of current database on some specific indicators only that could make the index higher representative.

#### 4.2 Constructing the Financial Inclusion Index:

For constructing the composite index of this study, the method applied by (Sarma, 2008) is employed which is almost similar to the method UNDP used to frame the multidimensional indexes for measuring HDI with some improvements in methodological to make IFI free from criticized limitations of the HDI. For the purpose of framing FII, at first dimension index  $d_i$  computed for dimension  $i^{\text{th}}$  dimension. Dimensions which integrate more than one indicator, each of them is normalized by using the formula (1) and the dimension index is calculated as simple weighted average, granting equal weights to each indicator. In an 'n'- dimensional cartesian time, the economy 'i' will be represented by point  $D_i = (d_1, d_2, d_3, d_4, \dots, d_n)$ , higher value of dimension index will show higher procurement in that respective dimension. At the same time point  $O = (0, 0, 0, 0, \dots, 0)$  indicates the worst situation and point  $I = (1, 1, 1, 1, \dots, 1)$  will be the highest achievement in all integrated dimensions. Normalization make sures that  $0 \geq d_i \leq 1$ .

$$d_i = \frac{(A_i - m_i)}{(M_i - m_i)} \quad (1)$$

where,  $A_i$  = Actual value of dimension i,  
 $m_i$  = Minimum value of dimension i, and  
 $M_i$  = Maximum value of dimension i.

The composite FII for  $i^{\text{th}}$  economy is determined by following formula, presenting normalized inverse Euclidean distance of point  $D_i$  from the ideal point  $I = (1, 1, 1, 1, \dots, 1)$ , then taking inverse normalized distance.

$$FII = 1 - \frac{\sqrt{(1-d_1)^2 + (1-d_2)^2 + (1-d_3)^2}}{n} \quad (2)$$

In order to make the FII value lies in between 0 and 1, the normalization is done and inverse distance is taken, thereby higher value of the FII represent to higher financial inclusion (Sarma, 2008).

#### 4.3 Dimensions and Indicators:

Earlier studies attempted to evaluate FII including several dimensions that varies from one another. On the basis of earlier studies, the present study tries to developed the multidimensional FII which includes 3 dimensions as it were availability, accessibility and uses of banking products and services. Some particular indicators are also allocated in every dimension to attain the degree of financial inclusion. The dimension of availability is contemplated to attain whether the financial services are available, both in terms of demographic as well as geographic indicators. For the purpose, this dimension incorporates 4 specific indicators viz-

- i) Bank branch per sq. km (Geographic branch penetration)
- ii) Bank branch per 10000 adult population (Demographic branch penetration)
- iii) ATMs per sq. km (Geographic ATM penetration)
- iv) ATMs per 10000 adult population (Demographic ATM penetration).

Dimension of accessibility is one of the significant indicators of financial inclusion through which extent of financial inclusion can be determined. Population with highest proportion deposits and credits will represent higher inclusion of people in the formal financial sector. Hence, the present index incorporates proportion of population have access and using financial services in the form of deposits and credits per 1000 adults. An inclusive financial service will be misrepresented, if higher proportion of population possessing bank account but doesn't use it at all. To have a standard calculation of financial inclusion, it should include data on the uses of financial services by the banked population. The present study contains total credits and deposits and CD ratio as represent the uses by customers.

**5. Findings and Discussion:**

**5.1 Dimension of Availability:**

Table 1: Dimension of availability

| States               | Geographic branch penetration |        | Demographic branch penetration           |        | Geographic ATM penetration |        | Demographic ATM penetration     |        | Dimension 1 |      |
|----------------------|-------------------------------|--------|--|--------|----------------------------|--------|---------------------------------|--------|-------------|------|
|                      | Bank branches per sq. km.     | d11    | Bank branches per 10000 adult population | d12    | ATMs per sq. km.           | d13    | ATMs per 10000 adult population | d14    | d1          | Rank |
| Arunachal Pradesh    | 0.0020                        | 0      | 2.1532                                   | 0.1578 | 0.0032                     | 0      | 3.4018                          | 0.3277 | 0.1214      | 8    |
| Assam                | 0.0385                        | 0.6861 | 1.3024                                   | 0      | 0.0556                     | 0.7360 | 1.8817                          | 0      | 0.3555      | 4    |
| Manipur              | 0.0094                        | 0.1391 | 1.7363                                   | 0.0805 | 0.0177                     | 0.2036 | 3.2724                          | 0.3002 | 0.1809      | 5    |
| Meghalaya            | 0.0162                        | 0.2669 | 4.9394                                   | 0.6750 | 0.0197                     | 0.2317 | 6.0161                          | 0.8914 | 0.5163      | 2    |
| Mizoram              | 0.0100                        | 0.1504 | 2.5197                                   | 0.2258 | 0.0084                     | 0.0730 | 2.1277                          | 0.0530 | 0.1256      | 7    |
| Nagaland             | 0.0109                        | 0.1672 | 1.4206                                   | 0.0219 | 0.0195                     | 0.2289 | 2.6693                          | 0.1698 | 0.1470      | 6    |
| Sikkim               | 0.0231                        | 0.3966 | 3.6915                                   | 0.4432 | 0.0314                     | 0.3960 | 5.0196                          | 0.5751 | 0.4527      | 3    |
| Tripura              | 0.0552                        | 1      | 6.6933                                   | 1      | 0.0537                     | 0.7092 | 6.5199                          | 1      | 0.9273      | 1    |
| North Eastern Region | 0.0187                        | 0.3139 | 1.6701                                   | 0.0682 | 0.0257                     | 0.3160 | 2.3048                          | 0.0912 | 0.1973      |      |
| All India            | 0.0470                        | 0.8459 | 1.6940                                   | 0.0726 | 0.0744                     | 1      | 2.6842                          | 0.1730 | 0.5229      | -    |

In table 1, the dimension of availability of financial services is calculated as a weighted mean of four indicators namely- bank branches per sq. km, bank branches per 10000 adult population, ATMs per sq. km and ATMs per 10000 adult population and giving equal importance to all. All indicators individually are calculated employing formula (1). Tripura accomplish highest availability of financial services amongst all other North-Eastern states, even it is higher than the average of all India as a whole. However, Arunachal Pradesh followed by Mizoram indicates very poor availability of banking services. In the state of Nagaland is also not satisfactory as well. Arunachal Pradesh, Mizoram, and Nagaland need more attention ranking first, second and third from bottom respectively.

**5.2 Dimension of Accessibility:**

Table 2: Dimension of Accessibility

| States            | Deposits per 1000 adult population (Rs. In Crore) | d21    | Credit per 1000 adult Population (Rs. In Crore) | d22    | Dimension 2 |      |
|-------------------|---|--------|---|--------|-------------|------|
|                   |   |        |   |        | d2          | Rank |
| Arunachal Pradesh | 24.8767   | 0.6381 | 7.5133  | 0.3776 | 0.5079      | 4    |
| Assam             | 7.4619  | 0      | 3.5898  | 0      | 0           | 8    |

|                      |         |        |         |        |        |   |
|----------------------|---------|--------|---------|--------|--------|---|
| Meghalaya            | 10.1890 | 0.0819 | 6.1227  | 0.2438 | 0.1629 | 6 |
| Manipur              | 34.7524 | 1      | 13.1696 | 0.9220 | 0.9610 | 2 |
| Mizoram              | 14.3984 | 0.2542 | 6.0749  | 0.2392 | 0.2467 | 5 |
| Nagaland             | 9.9282  | 0.0904 | 5.6890  | 0.2020 | 0.1462 | 7 |
| Sikkim               | 23.8689 | 0.6012 | 8.6593  | 0.4879 | 0.5446 | 3 |
| Tripura              | 32.8308 | 0.9296 | 13.9797 | 1      | 0.9648 | 1 |
| North Eastern Region | 10.0318 | 0.0942 | 4.5863  | 0.0959 | 0.0950 | - |
| All India            | 16.9346 | 0.3471 | 12.1476 | 0.8237 | 0.5854 | - |

The dimension of accessibility contains information on deposits and credits per 1000 adult population in all the states of North-Eastern Region of India and in India as a whole. The table shows that overall performance of Tripura is comparatively better. The performance of Assam is very poor, ranked first from bottom, with d1 equal 0. Therefore, Assam seeks more attention in this regard. For India, the scenario of accessibility is quite satisfactory.

### 5.3 Dimension of Uses:

Table 3: Dimension of Uses

| States               | Deposit of Scheduled Commercial Banks |        | Total Credit of Scheduled Commercial Banks |        | Credit-Deposit ratio (%) |        | Dimension 3 |      |
|----------------------|---------------------------------------|--------|--|--------|--------------------------|--------|-------------|------|
|                      | Deposits (Rs. In Crore)               | d31    | Credits (Rs. In Crore)                     | d32    | %                        | d33    | d3          | Rank |
| Arunachal Pradesh    | 19525                                 | 0.0006 | 5897                                       | 0.0002 | 30.2                     | 0      | 0.0003      | 8    |
| Assam                | 173014                                | 0.0105 | 83235                                      | 0.0072 | 48.1                     | 0.4313 | 0.1497      | 3    |
| Manipur              | 12323                                 | 0.0001 | 7405                                       | 0.0003 | 60.1                     | 0.7229 | 0.2411      | 1    |
| Meghalaya            | 25821                                 | 0.0010 | 9785                                       | 0.0005 | 37.9                     | 0.1855 | 0.0623      | 6    |
| Mizoram              | 12000                                 | 0.0001 | 5063                                       | 0.0001 | 42.2                     | 0.2891 | 0.0964      | 5    |
| Nagaland             | 12579                                 | 0.0001 | 7208                                       | 0.0003 | 57.3                     | 0.6530 | 0.2178      | 2    |
| Sikkim               | 10604                                 | 0      | 3847                                       | 0      | 36.3                     | 0.1470 | 0.0490      | 7    |
| Tripura              | 28400                                 | 0.0012 | 12093                                      | 0.0007 | 42.6                     | 0.2988 | 0.1002      | 4    |
| North Eastern States | 294266                                | 0.0183 | 134533                                     | 0.0012 | 44.3                     | 0.3407 | 0.1201      | -    |
| All India            | 15443510                              | 1      | 11078050                                   | 1      | 71.7                     | 1      | 1           | -    |

Dimension of uses of banking services is computed as a weighted average of three indicator, giving equal importance to each. Manipur shows highest uses of banking services amongst all other states of North-eastern region of India. However, Arunachal Pradesh requires mor attention ranking first from the bottom, with d1 equal to 0.0003. this study shows states though good performed in availability of Financial services were in comparably declined by uses of banking services.

### 5.4 Financial Inclusion Index:

Using the available information on every indicator, the (FII) Financial Inclusion Index has been calculated for all North-Eastern States, North-Eastern Region and as a whole of India. The



economies are classified into 3 group (Sarma, 2008) based on the value of the respective computed indices.

0 ≤ IFI < 0.3 – low financial inclusion

0.3 ≤ IFI < 0.7 – medium financial inclusion

0.7 ≤ IFI < 1 – high financial inclusion

Table 4: Financial Inclusion Index

| State                | Dimension 1 | Dimension 2 | Dimension 3 | FII    | Level of Financial Inclusion | Rank |
|----------------------|-------------|-------------|-------------|--------|------------------------------|------|
| Arunachal Pradesh    | 0.1214      | 0.5079      | 0.0003      | 0.1808 | Low                          | 5    |
| Assam                | 0.3555      | 0           | 0.1497      | 0.1557 | Low                          | 7    |
| Manipur              | 0.1809      | 0.1629      | 0.2411      | 0.1943 | Low                          | 4    |
| Meghalaya            | 0.5163      | 0.9610      | 0.0623      | 0.3904 | Medium                       | 2    |
| Mizoram              | 0.1256      | 0.2467      | 0.0964      | 0.1537 | Low                          | 8    |
| Nagaland             | 0.1470      | 0.1462      | 0.2178      | 0.1697 | Low                          | 6    |
| Sikkim               | 0.4527      | 0.5446      | 0.0490      | 0.3060 | Medium                       | 3    |
| Tripura              | 0.9273      | 0.9648      | 0.1002      | 0.4034 | Medium                       | 1    |
| North Eastern States | 0.1973      | 0.0950      | 0.1201      | 0.1364 | Low                          |      |
| All India            | 0.5229      | 0.5854      | 1           | 0.3170 | Medium                       |      |

India is attaining financial inclusiveness indicated by a medium financial inclusion index (FII) value of 0.3170. However, North-eastern region of India remained in low level of financial inclusion with FII score 0.1364, even which is lower than some of its states. Tripura is the highest financially inclusive state amongst all other state of North-eastern region. The state Meghalaya and Sikkim are also depicting medium level of financial inclusion with FII 0.3904 and 0.3060 respectively. States showing very lower level of financial inclusion – Mizoram (0.1537), Assam (0.1557), Nagaland (0.1697), and Arunachal Pradesh (0.1808). Mizoram is the highest financially exclusive state amongst other North-eastern states with FII 0.1537.

**Conclusion and Implication:**

Financial inclusion assures extensive and comprehensive growth and development of economy of any nation, enhancing universal socio-economic status. This paper studies the intra-regional financial inclusion for north-eastern states of India and in India as a whole on the basis of multi-dimensional financial inclusion index. In this study an attempt was made to recognize the dimensions where some evaluation has taken place and point out those dimensions that requires further attention. The constructed financial inclusion index (FII) incorporated more possible information, though trouble by the availability of reliable and authentic data. India as a whole performing higher financial inclusion compared to North-eastern region. The study showed that physical availability of banking services is yet to meet the needs in North-eastern region compared to the Indian average. The performance of all North-eastern states except in Assam is good in accessibility of financial services. The worst situation was detected for Arunachal Pradesh in terms of uses of banking services.

The geographic and demographic challenges of North-eastern region of India are broadly vary from other regions of India and hence, needs more attentions to have more financial inclusive growth. Therefore, the policies and programs for this region should be accompanied by such a potential that can nullify the challenges specifically existing in this region. The study

recommends undertaking initiatives to boost financial literacy and therewith make sure active involvement in using banking services. Extension of bank branches to rural and semi-urban areas along with developed infrastructure can encourage investment activities and establish financial inclusiveness in each state of North-eastern India

**References:**

1. Chakma, J. B. (2014). Financial Inclusion in India: A Brief Focus On NorthEast India . *International Journal of Application or Innovation in Engineering and Management*, 224-229.
2. Gupte, R., Venkataramani, B., & Gupta, D. (2012). Computation of financial inclusion index for India . *Procedia-Social and Behavioral Sciences*, 133-149.
3. Sarma, M. (2008). *Index of Financial Inclusion*. New Delhi: Indian Council for Research on International Economic Relations.
4. Sarma, M., & Pais, J. (2011). Financial Inclusion and Development. *Journal of International Development*, 613-628.
5. Thangasamy, E. (2014). Financial Inclusion in North East India: An Analytical Study. *International Journal of Commerce, Business and Management*, 180-188.