Financial Inclusion in India: A State Level Study

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Abstract

The promotion of an inclusive financial system is a policy priority in many countries and so is the case in India. The importance of financial inclusion is widely recognised as lack of it enhances the problem of social exclusion as well. The Indian financial system today has an impressive network of banks, financial institutions and a wide range of instruments. This paper has taken into consideration many dimensions of financial inclusion related with banks like offices, amount and accounts at state level. Financial inclusion is shown by proposing a multidimensional index of financial inclusion (IFI) for the years 2001 and 2014 to analyse the situation on a comparative basis. The values of financial inclusion lies between 0 and 1where, zero defines complete financial exclusion and 1indicates complete financial inclusion throughout India. Most of the states but not all have shown improvement in 2014 in comparison to 2001 and there are changes in rankings as well.

Keywords: *Financial inclusion, IFI, index.*

I. INTRODUCTION

Financial inclusion can play very important role in the growth and development of every country. Financial services are the backbone of every country. Financial inclusion means connecting people with financial services at affordable cost and using this service regularly. As defined by RBI 'Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low income groups at an affordable cost in a fair and transparent manner by mainstream Institutional players'.

Financial Inclusion includes many institutions like banks, self-help groups, LIC, post offices and micro finance institutions etc. But the present study has taken only financial inclusion through banking. Banking includes savings, loans, credit payment, number of offices and ATM etc. but only three determinants have been taken in the present study to show the state- wise financial inclusiveness i.e. number of offices, total amount that includes deposit and credit amount, total account includes deposit and credit account.

II. OBJECTIVES OF THE STUDY

- To construct a composite index of financial inclusion in India at state level.
- To find out the extent of improvement of financial inclusion in India by comparing status of financial inclusion of 2001 and 2014.

III. METHODOLOGY AND DATA DESCRIPTION

The methodology employed in the present work is twofold. First is construction of an index of financial inclusion. In the first stage indices of various dimensions are constructed like (c_1),(c_2) and(c_3), and in the second stage these indices are aggregated to give a composite index of financial inclusion.

Construction of Index of Financial Inclusion (IFI)

Since banks are the gateway to the most basic form of financial services, it is only the extent of accessibility, availability and usability of banking services that has been treated as equivalent to financial inclusion for the purpose of present work.

In the present context, the study consider three basic components of an inclusive financial system, namely, availability of the banking services (c_1), banking penetration (c_2) and usage of banking system (c_3). These components are largely motivated by availability of relevant and consisting data for a large number of states in order to compute a comparable IFI.

Concerning availability of banking services, in an inclusive financial system banking services should be easily available to the users. Thus availability of banking services can be indicated to the number of offices per ten thousand populations.

Regarding banking penetration, an inclusive financial system should have as many users as possible, that is, an inclusive financial system should penetrate widely amongst its users. The size of the 'banked' population, for example the proportion of people having a bank account is a measure of the banking penetration of system. Thus, if every person in an economy has a bank account then the value of this measure would be 1. However, data on the number of the 'banked' people is not readily available and the absence of such data, we use no. of bank accounts of proportion to total population as an indicator of financial inclusion and so on. The data has been presented in ten thousand population to avoid the biasedness due to the different geographical areas and population of all states.

The study has provided the following weights- 1 for the index of banking penetration, availability of banking services and usages. In these three dimensions 0 will indicate the worst situation (complete financial exclusion) and 1 will indicate the best or ideal situation (complete financial inclusion) in the present index.

For the purpose of constructing index for each component of financial inclusion, we utilise an approach similar to that used by United Nation Development Programme (UNDP) for computation of some well-known development indexes . The index of i^{th}component of financial inclusion is computed as

$$Ci = \frac{Ai - mi}{Mi - mi}, \quad i = 1, 2, 3.$$

Where Ai is the actual value of the i^{th} component, mi is the minimum value and Miis the maximum possible value of i^{th} component. It can be varied from the above formula that index of each component of financial inclusion varies between zero and one.

In the second stage, the three indexes c_1, c_2 and c_3 are combined into one. Since, the indexes of components separately do not satisfactorily denote financial inclusion. These component indexes should be aggregated into a single composite index of financial inclusion (IFI).

The index of financial inclusion, IFI, for a country, is then measured by the normalized inverse Euclidean distance of the point c= (from the ideal point I = (w_1, w_2, w_3). The exact formula is

$$IFI = 1 - \frac{\sqrt{(w_1 - c_1)^2 + (w_2 - c_2)^2 + (w_3 - c_3)^2}}{\sqrt{(w_1{}^2 + w_2{}^2 + w_3{}^2}}$$

In formula, the numerator of the second expression is the Euclidean distance of c = (c_1, c_2, c_3) from the ideal point w = (w_1, w_2, w_3), normalizing it by the denominator and subtracting from 1 gives the inverse normalized distance. The normalization is done in order to make the value lie between 0 and 1 and the inverse distance is considered so that higher value of the IFI corresponds to higher financial inclusion.

For simplification, if we consider all dimensions to be equally important in measuring the inclusiveness of a financial system, then w_i = 1 for all i.

In this case, the ideal situation will be represented by the point I = (1, 1, 1) in the n-dimensional space and the formula for IFI will be

$$IFI = 1 - \frac{\sqrt{(1-c_1)^2 + (1-c_2)^2 + (1-c_3)^2}}{\sqrt{3}} \ldots\ldots$$

It can be seen that the value of the index takes value zero for no financial inclusion and unity for complete financial inclusion. Major advantage of this index is that it can be used to compare extent of financial inclusion at different level of aggregation and different point of time.

IV. SOURCES AND DESCRIPTION OF DATA

For the purpose of fulfilment of the objectives of the study, secondary sources of data have been used. For the assessment of the extent of financial inclusion at the state level, the relevant data on the number of bank offices, number of bank accounts, and amount in million has been taken which furnish state wise information for the year 2001 and 2014. The state wise population figures for the year 2011 are available from Census of India. The data on bank account, amount in (million) and offices has been taken from website of RBI on line available at www.rbi.org.com.

V. EMPIRICAL ANALYSIS

Following the classification used by ManidraSarma (2010), depending on the value of IFI, the state level has classified into three categories, namely, high financial inclusion, medium financial inclusion and low financial inclusion.

1. $0.5 \leq IFI \leq 1$ high financial inclusion.
2. $0.3 \leq IFI \leq 0.5$ medium financial inclusion.
3. $0.0 \leq IFI \leq 0.3$ low financial inclusion.

After finding the index, the result shows that in 2014,Chandigarh is financialy included in context of offices ($c_)$, Goa has highest FI(Financial Inclusion) in context of accounts(c_2) and again Chandigarh has highest rank in amount(c_3),(in million). In 2001, Jammu and Kashmir has highest financial inclusion in offices (c_1) and account(c_2) and Maharashtrahad complete financial inclusion in amount(c_3), (in million). In 2001,Jammu and Kashmir had the highest value (0.4464) of financial inclusion and attained the first rank and Chandigarh attained 2nd rank with the value of (0.2176). Manipur had the lowest value (0.0137) of financial inclusion and gained 35th rank, Nagaland had 34th rank with the value of 0.0159. On the other hand, according to the index of financial inclusion 2014, Goa has gained 1st rank with the value of (0.633.52) and Chandigarh with the value of (0.4336) has gained 2nd rank. Manipur has gained 35th rank with the lowest value (0.00078) and Bihar has 34th rank with the value of (0.00274).

According to the results Goa is the only state that has high financial inclusion in (2014) but in 2001, there is not a single state that has the high value of FI. Jammu and Kashmir in (2001) comes in medium range of financial inclusion and Chandigarh and Delhi in (2014) have medium range of financial inclusion. All the remaining states come in lowest range of financial inclusion in 2001 as well as 2014. This condition shows India is far behind in the extent of financial inclusion.

VI. CONCLUSION

A number of studies have established a link between financial development and economic development. In a democratic country like India, where people are free to choose their occupations or means of earning, their livelihood, it necessitates that the fruits of financial development reach to the vast majority of our population, so that they can bring efficiency in their occupation. Although there are many dimensions of financial inclusion that are very important for growth and development of every country the present study has taken three dimensions for finding financial inclusion. The study has found that most of the states but not all have shown improvement in 2014 in comparison to 2001 and there are changes in rankings as well.

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Table:1 Value and rank Of IFI of All States (2001-2014)

REGION/ STATE/ UNION TERRITORY		IFI OF 2001	RANK OF IFI(2001)	IFI OF 2014	RANK OF IFI OF 2014
1	Haryana	0.0857	17	0.13431	13
2	Himachal Pradesh	0.0974	15	0.15584	7
3	Jammu & Kashmir	0.4464	1	0.0842	20
4	Punjab	0.1548	7	0.17149	4
5	Rajasthan	0.0772	20	0.04403	27
6	Chandigarh	0.2176	4	0.4336	2
7	NCT of Delhi	0.2895	2	0.34016	3
8	Arunachal Pradesh	0.0402	29	0.0540	23
9	Assam	0.0438	26	0.01502	33
10	Manipur	0.0137	35	0.00078	35
11	Meghalaya	0.0442	25	0.05587	22
12	Mizoram	0.0376	31	0.08317	21
13	Nagaland	0.0159	34	0.02522	32
14	Tripura	0.0404	28	0.05213	25
15	Bihar	0.0398	30	0.00274	34
16	Jharkhand	0.0555	24	0.03433	29
17	Odisha	0.058	22	0.05341	24
18	Sikkim	0.0432	27	0.14487	10
19	West Bengal	0.1406	11	0.04500	26

20	Andaman & Nicobar Island	0.0557	23	0.11863	15
21	Chhattisgarh	0.0374	32	0.03890	28
22	Madhya Pradesh	0.0775	19	0.03388	30
23	Uttar Pradesh	0.1411	10	0.02838	31
24	Uttarakhand	0.0867	16	0.13467	12
25	Goa	0.2119	5	0.63352	1
26	Gujarat	0.1326	13	0.09045	19
27	Maharashtra	0.2459	3	0.14757	9
28	Dadra & Nagar Haveli	0.0323	33	0.11316	17
29	Daman & Diu	0.0766	21	0.15858	6
30	Andhra Pradesh	0.1386	12	0.09324	18
31	Karnataka	0.1549	8	0.12739	14
32	Kerala	0.1488	9	0.15227	8
33	Tamil Nadu	0.1771	6	0.11619	16
34	Lakshadweep	0.1024	14	0.16157	5
35	Puducherry	0.0788	18	0.14160	11

Source: Author's Calculations