

Analytical study of financial inclusion: A comparative study of state of Gujarat and Maharashtra

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Abstract

The topic of financial inclusion is coming up as an emerging paradigm of inclusive growth which channelizes the measures from top of the pyramid to the vast untouched bottom section. The regulatory bodies and the financial institutions are making all the necessary attempts to improve the levels of financial inclusion. No frill accounts, Pradhan Mantri jandhanyojnas etc are many schemes and initiatives that the central government is attempting to wage the exclusive growth. The present research paper is a comparative study of two states of India that is Gujarat and Maharashtra. The study covers a period of 13 years that is 2005 to 2017 for the two states.

Keywords: financial inclusion, banking, human development index etc

Introduction

A well-developed financial system brings all segments of society into the mainstream of the economy and makes it financially inclusive. In India, there has been a tremendous thrust on financial inclusion in recent times. Experience from large scale projects shows access to repeat finance, at affordable price, for desired amount and customised repayment terms is crucial for poor and vulnerable group of the society, to meet their consumption, exit debt trap and investment in livelihood assets.

Banks have a critical role in providing services including opening savings accounts for community groups, SHGs and their federations; deposit savings; provide credit and remittances. Financial inclusion and financial literacy are twin pillars. While financial inclusion acts from supply side providing the financial products and services that people demand, financial literacy stimulates the demand side – making people aware of what they can demand (Subbarao, D. 2010). Developing economies like India face the problem of low level of literacy, poor accessibility and low demand. The health of the nation's financial system depends upon the ability of its people to effectively manage their own finances. And this over the recent years, financial literacy has become a major area of concern in India. The people at large lack basic knowledge about financial matters concerned with day-to-day money management and saving for long term. The study here take into account two state of India that is Gujarat and Maharashtra. Here we try to find the level of financial inclusion for the two states over a period of 13 years.

Literature Review

Various studies have been conducted from time to time on Financial Literacy and Financial Inclusion across the globe and also in India. (Adela Atkinson, 2013) [2] have observed in an US based study that financial knowledge could be statistically linked to financial practices related to cash-flow management, credit management, savings and investment. (Cyn-Young Park, Jan 2015) observes the impact of poverty and income inequality of financial inclusion. (Hemavathy

Ramasubbin, Ganesan Duraiswamy, 2012) [16] in her paper opined that one common measure of Financial Inclusion was the percentage of adult population having bank accounts. (Arokiyadass, 2013) [4] attempted to understand financial inclusion through bank led model in the state of Odisha. *Bhushan* and (Joseph, A Study of Financial Inclusion and Financial Literacy, 2014) reviews that overall financial literacy level. The level of financial literacy varies significantly among respondents based on various demographic and socio-economic factors like gender, education, income. (Evans, 2015) [12] studies the effects of economic and financial development on financial inclusion in Africa. (Badar Alam Iqbal, 2016) [6] attempted to understand the role banks have in promoting financial inclusion and it also give an overview about different measures that the banks have taken to serve financial inclusion to the untapped masses.

There is lot of research done to empower the society and promote financial inclusion but the bottom section of the pyramid still stays untapped. The regulatory bodies at the central and the state governments along with the banks are trying to bring about successful results. Yet there is large vacuum that still needs to be focused on.

Objective of the study

The core objectives of the present research are as follows:

- To study the levels of Financial Inclusion in the two states
- To study the different measures taken by the state government of the two state to promote financial inclusion.

Research Methodology and Data Analysis

The methodology employed in the present research is twofold. First the construction of index of financial inclusion for the two states and in the second stage the indices are compared.

Construction of Index of Financial inclusion (IFI):

The banking system is the basic gateway to understand and interpret the level of financial inclusion. In the present

research paper the dimensions used to construct the index are Banking Usage, Banking Access and Banking Availability to calculate the IFI (Sarma, 2008). 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 dimension of financial inclusion, we utilize an approach similar to that used by United Nation Development Programme (UNDP) for computation of some well-known development indexes³. The index of ith component of financial inclusion is computed as

$$D_i = \frac{A_i - m_i}{M_i - m_i}$$

i = 1, 2, 3. Where A_i is the actual value of the i th component, m_i is the minimum value and 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 d_1 , d_2 and d_3 are combined into one. Since, the indexes of components separately do not satisfactorily denote financial inclusion. To calculate the IFI vales we have used the approach presented by Mandira sarma (Sharma M. Financial Inclusion and Development: A Cross Country Analysis, September 2008) (2008) These component indexes should be aggregated into a single composite index of financial inclusion (IFI). Hence taking the formula presented by Mandira sarma, the three variables that is penetration, accessibility and usage are assigned equal weight. And after assigning the weights the IFI is computed as

$$IFI = 1 - \sqrt{\frac{(1 - p_i)^2 + (1 - a_i)^2 + (1 - u_i)^2}{3}}$$

Where p_i , a_i , u_i denote indices for penetration, accessibility and usage. The IFI constructed, incorporates the information of three dimensions in one single value lying between 0 to 1.

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.

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.

Empirical Analysis

Following the classification used by Manidra Sarma (2010)^[19], depending on the value of IFI, the state level has classified into three categories, namely, high financial inclusion, medium financial inclusion an 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.

Analysis and Interpretation

Table 1: IFI and its components (Gujarat)

Year	Bank Account(Credit+Deposit A/C)	Population	Account/Population (a)	Branches Per 1000 (b)	credit deposit ratio of SCB	IFI
2005	30,467,515	54140000	56.27542482	0.06926487	55.6	0
2006	32,961,089	54979000	59.95214355	0.06937194	63.7	0.128436
2007	36,156,752	55808000	64.78775803	0.07199685	66.5	0.194119
2008	40,482,002	56626000	71.49013174	0.07491258	63.7	0.20843
2009	43,103,808	57434000	75.04928788	0.07890796	65.3	0.268247
2010	46,049,318	58232000	79.07905962	0.0829956	66.2	0.321528
2011	51,284,466	59020000	86.89336835	0.08851237	70.4	0.430532
2012	57,718,279	59800000	96.5188612	0.09508361	72.8	0.531
2013	68,751,651	60569000	113.5096353	0.10472354	74.7	0.676786
2014	79,715,954	61329000	129.9808476	0.1114807	72.7	0.779312
2015	88,008,157	62081000	141.7634333	0.1175722	75.4	0.888279
2016	97,480,122	62825000	155.1613561	0.12133705	68.9	0.804414
2017	100,156,446	63532000	157.6472423	0.12373292	75.6	

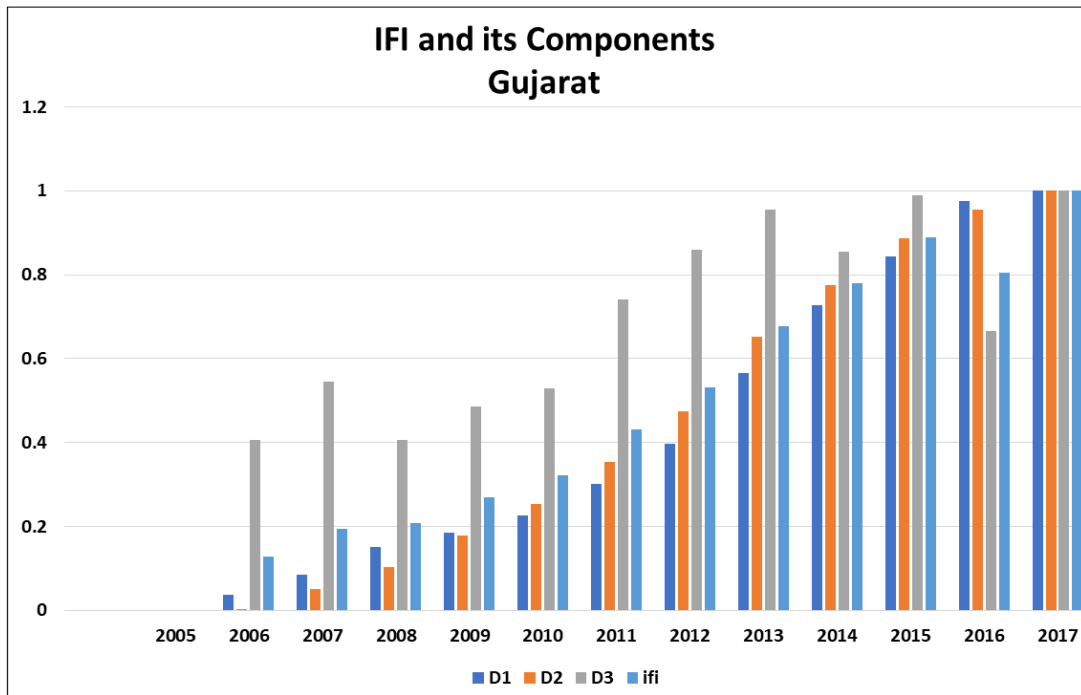


Fig 1

The above chart shows the values of IFI and its components. Gujarat had the highest IFI value of 0.341 in the year 2017 and the lowest IFI of 0.240 in the year 2013. State: Maharashtra

Table 2: IFI and its Components (Maharashtra)

Year	Bank account(Credit+Deposit a/c)	Population	Account/population (a)	Branches per 1000 (b)	Credit deposit ratio of SCB (c2)	IFI
2005	62,989,399	103218000	61.02559534	0.06367107	102.2	0.177515
2006	71,428,024	104804000	68.15391016	0.06349948	96.8	0.169759
2007	89,042,058	106386000	83.69715752	0.06536574	93.9	0.2098
2008	97,233,035	107972000	90.05393528	0.06841589	91.2	0.229002
2009	96,530,773	109553000	88.11330863	0.07188302	82.9	0.137826
2010	109,887,498	111118000	98.89261686	0.07493835	83.0	0.188144
2011	125,763,184	112660000	111.6307332	0.07939819	91.8	0.394142
2012	135,462,467	114184000	118.635244	0.08411862	89.4	0.409871
2013	155,157,465	115697000	134.1067314	0.08998505	89.8	0.488715
2014	173,905,567	117189000	148.3975177	0.09473585	92.0	0.58464
2015	194,644,032	118652000	164.046145	0.09880154	102.9	0.847421
2016	213,447,037	120076000	177.7599495	0.10148573	106.0	0.948512
2017	228,333,960	121509000	187.9152655	0.10194307	106.9	IFI

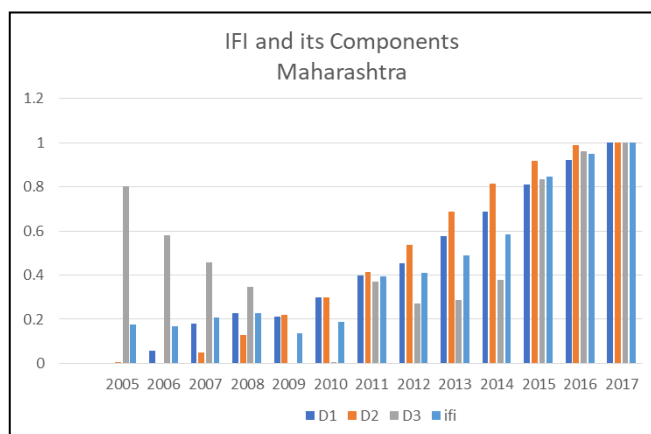


Fig 2

The above chart portrays the value of IFI and its components. The state had highest IFI value of 0.428 in the

year 2017 and the lowest IFI value of 0.321 in the year 2013.

Table 3: Comparative values of IFI (Gujarat AND Maharashtra)

Year	IFI Gujarat	IFI Maharashtra
2005	0	0.177515
2006	0.128436	0.169759
2007	0.194119	0.2098
2008	0.20843	0.229002
2009	0.268247	0.137826
2010	0.321528	0.188144
2011	0.430532	0.394142
2012	0.531	0.409871
2013	0.676786	0.488715
2014	0.779312	0.58464
2015	0.888279	0.847421
2016	0.804414	0.948512
2017	1	1

The above table shows that the IFI values for the two states shows an increasing graph. I the measures taken by the state governments and banks are showing fruit full results, yet there is a long way to achieve financial inclusion.

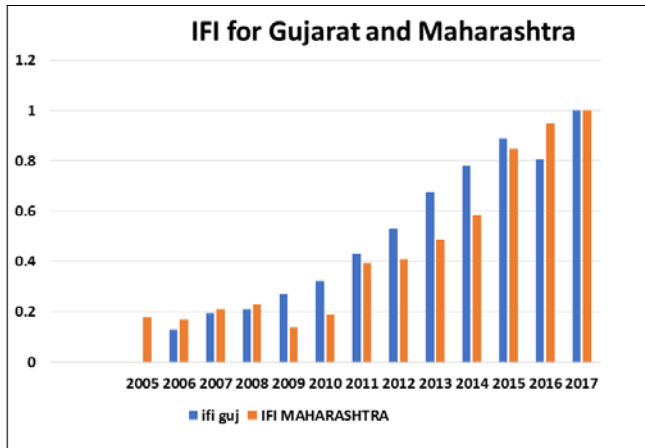


Fig 3

Findings

The above results conclude that the two states have a good working economy yet that does not suffice the requirement of serving financial inclusion to population. The results show that the index of financial inclusion has improved for the two states and the state regulatory bodies are working to implement new measures for financial inclusion. Opening of accounts or no frill accounts do not suffice the issue to implementation. The state of Gujarat saw an uplifting trend in the year 2013 and it has still then worked on improving the trend. Maharashtra started implementing new initiatives since 2015 and it also started showing improvement.

Conclusion

The results show an increasing trend among the two states for the index of financial inclusion. The Government of Gujarat and Maharashtra are taking up initiatives to promote financial inclusion. Swabhima- An initiatives by Bank of Maharashtra is a measure to serve the unbanked sectors and work to encompass the majority of masses through financial inclusion and financial literacy. The two states of comparison have a good upgrading trend and it can work ob banking penetration to a large extent.

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