

Financial Inclusion in India: Determinants and Policy Implications

Introduction

In a 2014 budget speech by India's Finance Minister Arun Jaitley, he outlined the ambitious goal of ensuring that every household in the country would have at least two bank accounts by August 2015. It was seen as an important move by the Indian government to promote the concept of financial inclusion, which can be defined as the process of bringing vulnerable groups of the society within the ambit of the organized financial system and providing them with access to financial services at an affordable cost.

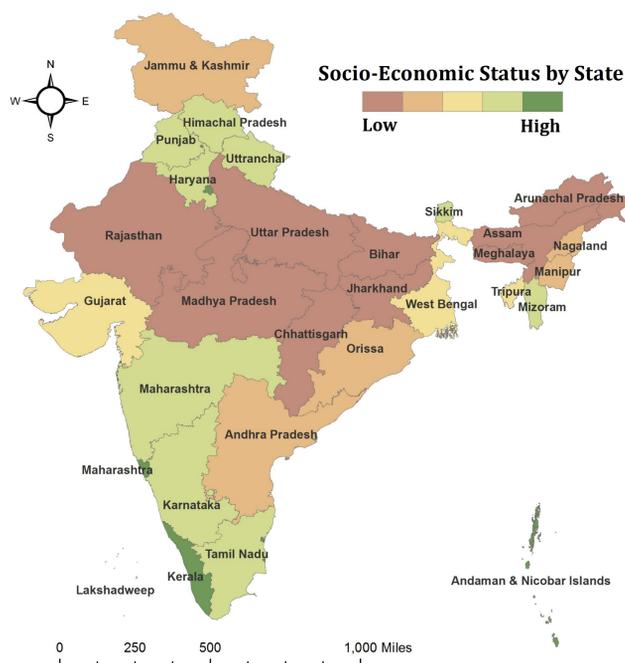
Financial inclusion is often regarded as one of the key cornerstones in the attainment of sustainable socio-economic development and poverty reduction in countries. From the citizens' perspective, easy access to credit provides them with the opportunity to improve their standards of living and mitigates the risk of them being exploited by usurious informal moneylenders. Financial inclusion also benefits the state, as it promotes the notion of inclusive growth and broadens its resource base. In fact, in India's case, it has been found that financial inclusion can lead to its GDP rising by 1 per cent.

Nonetheless, policymakers have long struggled to find the optimal way to stimulate financial inclusion and this paper seeks to address this issue in India's context. To this end, I start off by first evaluating the determinants of financial inclusion, i.e. what causes financial inclusion rates to be high or low, before suggesting a series of policy implementations that can be undertaken to address the root causes of the issue.

Methodology

Data Collection: Three main determinants of financial inclusion were identified, namely the socio-economic status of an area, the quality of its infrastructure and the health of its banking sector. Each determinant can be defined by a variety of sub-variables. For the socio-economic status of an area, this includes per capita income and literacy rates. For the quality of the infrastructure in an area, this can be broken down into the density of national highways and railway networks. For the health of an area's banking sector, this can be further divided into the amount of state funding it receives and the density of bank offices. I then used STATA to run a regression of financial inclusion on the sub-variables. Their statistical significance and adjusted R-squared values can be seen in the summary table on the right.

Maps: I geocoded the data and ranked each sub-variable based on their natural breaks. I then used the field calculator to add up the ranks of each sub-variable to produce the final maps for the three determinants. Each sub-variable had an equal weightage. I similarly reclassified the data for financial inclusion, before doing an attribute query to find the specific areas that have low financial inclusion rates as well as low amounts of the three determinants.



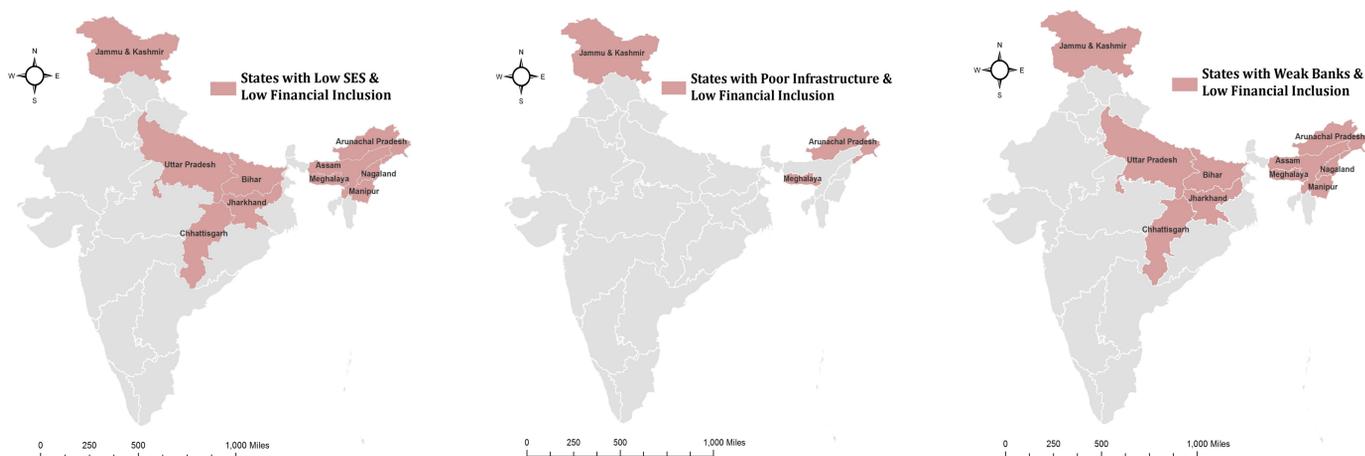
Results & Limitations

There appears to be a significant positive correlation between financial inclusion rates and the two determinants of socio-economic status and the health of the banking sector. 10 of the states that have a low financial inclusion rate also have a low socio-economic status and a weak banking sector. In fact, it is the same 10 states across the two determinants and they both account for 34.3% of the total population. It can be seen that the 10 states are predominantly clustered around the north-east region of the country and they will constitute the areas that require the most work on.

Looking at the results of the regression model conducted, it can be seen that both socio-economic status and the health of the banking sector have one sub-variable that is statistically significant at the 5% level. They are the percentage of the total population with a college degree and the amount of state funding provided to banks in an area respectively. This implies that these two factors may lie at the heart of the issue of

financial inclusion. As a whole, it looks like the health of the banking sector is arguably the most important determinant amongst the three that were considered. It has the highest adjusted R-squared value, which implies that it is best able to explain and account for the variations in financial inclusion rates across states in India.

There are two main limitations with the findings. One, data was derived from various sources that spanned across the years. While information from the India Census was set in 2011, those obtained from the Reserve Bank of India and the Ministry of Road Transport and Highways were from 2012 to 2017. This lack of consistency across the datasets could have affected the accuracy of the spatial analysis. Two, the analysis was conducted on a state and union territory level given the lack of extensive data beyond this spatial unit. As a result, this meant that there were only 35 observations and this could have affected the validity of the regression model.



	Socio-Economic Status (SES)	Quality of Infrastructure	Health of Banking Sector
% of Total Population Accounted For	34.3%	1.4%	34.3%
No. of Significant Sub-Variables at the 5% Level	1 — % of Population with a Degree	0	1 — Amount of State Funding
Adjusted R-Squared Value	0.567	0.164	0.641

Conclusion

This study has showed that the socio-economic status and health of the banking sector in a particular area are the two most important determinants of financial inclusion in India. Thus, if policymakers intend to raise financial inclusion rates in the country, they will need to improve the abilities of the citizens to participate in the formal sector and fully support financial institutions. There are two specific areas that the Indian government can focus on – the education levels of citizens and the amount of state funding that banks receive. To this end, they can invest more in the education system and ensure that individuals in both rural and urban areas have equal access to tertiary education. They can also introduce a stimulus package for banks such that loans can be easily administered to those of lower income.

Sources

Data Sources: Government of India Population Census 2011; Reserve Bank of India; Ministry of Road Transport and Highways (India); CRISIL Inclusive; Tufts GIS Server

Literature: Ambarkhane, Singh and Venkataramani (2016); Chithra and Selvam (2013); Kumar (2013); Garg and Agarwal (2014); Sarma and Pais (2011)

Derek Goh
Introduction to GIS
May 8, 2018
WGS 1984 GCS

