Demand Side Factors Affecting Financial Inclusion

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Abstract

Despite banking expansion, improvement in financial performance, greater competition and diversification of ownership of banks leading to both enhanced efficiency and systematic resilience in the banking sector, existing banking practices tend to exclude rather than attract vast sections of population. There are a host of factors contributing to financial exclusion. These factors may be both from supply side and demand side. The government and RBI take several measures to encourage the supply of financial services to the excluded sector. But the demand factors of financial inclusion attract very little focus. The main aim of this paper is to identify the various demand side factors of financial inclusion and to build a model for the same. Choosing a sample size of 500 using simple random sampling method, the study concludes that out of the several factors the most important factors influencing the demand for financial inclusion are Accessibility, Culture, Assets, Literacy and Income. The study will be very useful for the administrative bodies like the government and RBI to frame rules and regulations and also to initiate several measures for boosting the demand factors of financial inclusion.

Keywords: Financial Inclusion, RBI, Assets

Introduction:

Tectonic changes in macro-economic system of the country in 90’s of the past century leading to liberalization, privatization and globalization have nudged economic and industrial growth on a sustained basis. There has been acceleration in economic growth from 5.8 percent during 1980s to 6.4 percent between 1992-93 and 2005-06. More recently, real GDP growth has averaged more than 8 percent per annum in the three year period ended 2005-06 and growth rate during 2006-07 has been reported over 9 percent. Further, this robust growth rate has been achieved in an environment of macro-economic and financial stability. Taking into account the sharp deceleration in population growth during the past two decades, per capita real GDP growth has recorded a more impressive increase from 3.4 percent per annum during the 1980s to around 6.5 percent per annum in the recent three years.

The Indian economy today is the world’s second fastest growing economy after China. In terms of Purchasing Power Parity (PPP) GDP, India is the world’s fourth largest economy after US, China and Japan. India’s share in the world GDP (PPP) has soared from 4.03 percent in 1991 to almost 6 percent in 2005. Increase in domestic investment to over 30 percent of GDP, financed predominantly by domestic savings has contributed to the economic buoyancy.

Resurgence of manufacturing activity in the country accompanied economic growth. Thus, after registering high growth in mid 1990s followed by stagnation till 2001-02, manufacturing activity picked up and this has been sustained so far registering over 11 percent growth rate during the last two years. The high economic and industrial growth has also been accompanied by high trade growth in both merchandise goods and services. Merchandise exports buoyed up from 5.8 percent of GDP in 1990-91 over 13 percent in 2005-06 and gross invisible receipts from 2.4 percent to 11.5 percent of GDP during the corresponding period. Financial sector has also displayed remarkable performance, as evidenced from sharp surge in bank credit from 30 percent of GDP at end March, 2000 to 48 percent
by end March, 2006. Non food credit extended by Scheduled Commercial Banks registered an average annual growth of 26.1 percent during 2002-03 to 2005-06, notably higher than that of 14.5 percent recorded during the preceding four year period.

Besides, the financial system in India has transformed into a reasonably sophisticated, diverse and resilient system through well-sequenced and co-ordinated policy measures aimed at making the Indian financial sector more competitive, efficient and stable. It has been able to maintain financial stability despite series of exogenous shocks. The financial health of the banks has been significantly strengthened and reasonable degree of competitiveness embedded in financial sector.

However, it is most disconcerting to observe that the high credit growth has not been matched by adequate deposit growth, indicating banks’ relatively less focus on deposit mobilization, especially in non-metropolitan areas. The Reserve Bank has introduced various new measures to encourage the expansion of financial coverage in the country. Financial inclusion is considered essential for fostering economic growth in a more inclusive fashion.

Reviews of Literature

Karthikeyan (2011) in a study titled “Financial Inclusion in India” analyzed the general trend of financial inclusion in India and also the factors affecting financial inclusion. There are several factors affecting access to formal banking system in any country. They include culture, financial literacy, gender, income and assets, proof of identity, remoteness of residence, and so on. Only 34% of the India’s population has access to banking services. The Eleventh Five Year Plan (2007-12) envisions inclusive growth as a key objective. Achieving inclusive growth in India is the biggest challenge as it is very difficult to bring 600 million people living in rural India into the mainstream. The study concludes that one of the best ways to achieve inclusive growth is through financial inclusion.

Ardic et al. (2011) in the paper titled “Access to Financial Services and the Financial Inclusion Agenda Around the World: A Cross-Country Analysis” build a model for determining the number of bank accounts per thousand people and to make a general analysis of the relation between financial inclusion and economic growth. The findings indicate that there is yet much to be done in the financial inclusion arena. Fifty-six percent of adults in the world do not have access to formal financial services. The situation is even worse in the developing world with 64 percent of adults unbanked. Nevertheless, high income countries also have to worry because approximately one in every five adults is unbanked. On the contrary to conventional wisdom, poor people indeed need and use financial services, albeit in small amounts and usually from informal sources as it is costly for formal providers to provide services for such small amounts. Anecdotal evidence suggests that informal financial services are at least 5-10 times more costly and also less reliable than formal ones. Hence, making formal and affordable financial services available for the unbanked would definitely have positive consequences on the lives of these people.

Kpodar, Kangni Andrianaivo and Miasonirina (2011) written a paper titled “ICT, Financial Inclusion, and Growth Evidence from African Countries”. The paper tries to establish a relationship between the ICT variables and the economic growth and thus tries to find out the impact of growth in ICT on the economy. The data consists of a panel of 44 African countries and includes in the sample, with data from 1988 through 2007. The statistical tools used include regression analysis for the model building. The robustness tests have been conducted by using sensitivity analysis. The paper concludes that the interaction between mobile phone penetration and financial inclusion is found positive and significant in the growth regression. Although the rollout of mobile banking is still at its early stage, the results show that in countries where such financial services are available, the joint impact of financial inclusion and mobile phone diffusion on growth is stronger.
Michael and Colin (2011) in the study titled “Mobile Banking and Financial Inclusion: The Regulatory Lessons” described the key elements of mobile banking and the way in which they disaggregate the components of financial transactions principally into exchanges of forms of money, safe-keeping of money, transportation and investment and describes various alternative regulatory approaches to the risks inherent in these different components of financial services. The paper also considers the competition issues related to, on the one hand, the risk of monopoly abuse, and the need to retain an environment that is open to new business models on the other. What mobile banking illustrates in a stark form is the way in which payments systems can be disaggregated into component services, namely exchange, storage, transfer and investment. Regulation should mirror this.

Seire (2010) in the paper titled “Electronic Payments of Cash Transfer Programs and Financial Inclusion”, provided some evidence supporting the hypothesis that providing accessible savings accounts has the potential to induce savings and use of electronic purchase methods by poor people. This has been shown using administrative bank account data from Oportunidades beneficiaries. The paper also highlighted the huge bancarization potential of paying cash transfer programs in bank accounts, and to describe the initial Mexican experience in this regard. The paper concludes that the savings and access to formal savings instruments are important, and cash transfer programs may provide mechanisms to massively increase both.

Handoo (2010), in the paper titled “Financial Inclusion in India: Integration of Technology, Policy and Market at Bottom of the Pyramid” examined the methods of financial inclusion in the world as a whole and also particularly in India. The data for this purpose has been collected from the secondary source (RBI Reports). The paper given an overview of various technologies led models of financial inclusion and depicts how the ecosystem of financial inclusion works and what shapes it up.

Shawn Cole (2010), in the paper titled “Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets?” studied whether price or knowledge drives the most demand for financial services. For this purpose survey was done for data collection in India and Indonesia. Stratified sampling was used to select 112 villages, and from each village, 30 households were randomly selected to participate in the survey, for a total sample size of 3,360 households. In India, the survey covered 15 households in each of 100 villages, located in three districts of India around Ahmadabad, the capital of Gujarat, and focused primarily on poor, subsistence agricultural laborers. Statistical tools like regression analysis, correlation and standard deviation have been used. Using two new surveys from two of the most populous countries in the world, this paper presents compelling new evidence that financial literacy is an important predictor of financial behavior in emerging market countries. The study is however limited to the areas of India and Indonesia.

Research Methodology:

Objectives of the Study

The present study has been undertaken with the following objectives:

1. To identify the demand side factors of financial inclusion.
2. To establish a relationship between the various factors and financial inclusion.
3. To build a model for financial inclusion using the demand side factors, using regression analysis.

Variables of the Study

Dependent variable: Demand for Inclusion
Independent Variables: Inflation, Occupation, Literacy, Resistance to change, Physical Assets, Culture and Society, Accessibility, Transaction Costs, Technology, Fear, Dominance of a group, Readiness to take efforts, Saving, Cost of Living and Income.

**Sampling Procedure**

The sample has been chosen using simple random sampling. The sample includes respondents from the general public who were chosen at random. The sample size for the study is 500. The respondents include people from different age groups, professions, geographical areas etc.

**Hypothesis**

H₀: The demand for financial inclusion is not influenced by Accessibility, Culture, Assets, Literacy and Income.

H₁: The demand for financial inclusion is influenced by Accessibility, Culture, Assets, Literacy and Income.

**Factor Analysis**

KMO and Bartlett’s tests have given the following results:
- KMO measure of sampling adequacy = 0.868
- Bartlett’s test of sphericity- 1170.390 (approx. chi square), 66 (df), .000(sig)

The KMO value is 0.868 which is greater than 0.5, so this is considered to be adequate to proceed with factor analysis of the data. This value clearly indicates that there high correlation among the various variables present study. The Bartlett’s test of sphericity is 1170.390, it is a high value and it is significant at 0.05 level. So it is believed that factor analysis would give reliable information.

For the further proceedings to apply other statistical tools, the factor loadings are given below in the table. The percentage of variance explained is the percentage of total variance accounted for by each factor. The first five components which are the retained factors account for 63.25% of the variance. The first factor Accessibility accounts for 23.94% of variance while the remaining factors like Culture, Assets, Literacy and Income account for 12.15%, 11.02%, 8.39% and 7.76% of the total variance.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Initial Eigen Values</th>
<th>Total</th>
<th>% of Variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>3.59</td>
<td>23.937</td>
<td>23.937</td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td>1.82</td>
<td>12.148</td>
<td>36.085</td>
<td></td>
</tr>
<tr>
<td>Assets</td>
<td>1.65</td>
<td>11.018</td>
<td>47.102</td>
<td></td>
</tr>
<tr>
<td>Literacy</td>
<td>1.26</td>
<td>8.389</td>
<td>55.491</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>1.17</td>
<td>7.764</td>
<td>63.255</td>
<td></td>
</tr>
</tbody>
</table>

Source: Secondary data

**Correlation Analysis**

The correlation analysis shows that Accessibility has the highest correlation (0.650) with it followed by Literacy (0.447), Income (0.442), Culture (0.303) and Assets (0.054). The factor Asset has the lowest correlation with the dependent variables. This means that while Accessibility to Financial Services is the most important of these for driving the demand for financial inclusion, the assets possessed by a person is the least important of these factors as a driver of financial inclusion.
Table 2: Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
<th>Accessibility</th>
<th>Culture</th>
<th>Assets</th>
<th>Literacy</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>0.650</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td>0.303</td>
<td>-0.067</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assets</td>
<td>0.054</td>
<td>-0.004</td>
<td>-0.197</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litera</td>
<td>0.447</td>
<td>0.194</td>
<td>0.163</td>
<td>0.058</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>0.442</td>
<td>0.309</td>
<td>0.138</td>
<td>0.170</td>
<td>0.178</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Secondary data

Multiple Regression Analysis

In this study Multiple Regression Analysis is used for model building. For this purpose the independent variables chosen are Accessibility(X1), Culture(X2), Assets(X3), Literacy(X4) and Income(X5). The dependent variable chosen here is Demand for Financial Inclusion(Y). The model is as follows:

\[ Y = \beta_0 + \beta_1 \text{Accessibility} + \beta_2 \text{Culture} + \beta_3 \text{Assets} + \beta_4 \text{Literacy} + \beta_5 \text{Income} + \varepsilon \]

Regression Models

R represents the degree of correlation between the observed and predicted values of the dependent variable. The R value is 0.806, which indicates, the predicted values of dependent variable using the independent variables are strongly correlated to their observed value of dependent variables. R Square represents the degree of standard deviation in the dependent variable that can be explained using the independent variables. R Square value is 0.650 indicating that the independent variables are strongly associated with the dependent variable.

Table 3: Models Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>S.E. of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.806</td>
<td>0.650</td>
<td>0.110</td>
<td>0.315</td>
<td>1.829</td>
</tr>
</tbody>
</table>

Source: Secondary data

Adjusted R Square indicates that if there is an addition of extraneous predictors to the model it can add significant predictability to the dependent variable. As the value is 0.110, it can be concluded that the models are good fit in nature. The Durbin-Watson Statistic is used to test for the presence of serial correlation among the residuals and the value 1.829 signifies that the residuals are mostly uncorrelated.

Table 4: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>8.106</td>
<td>5</td>
<td>1.621</td>
<td>16.307</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>4.374</td>
<td>44</td>
<td>0.099</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>12.48</td>
<td>49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Secondary data

This table shows that the p value is less than the significance level of 0.05. Hence we reject the null hypothesis. As all the Sig. values are less than the significance level i.e. 0.05, it can be concluded that independent variables are significantly different from each other.
Table 5: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>UC</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-2.13</td>
<td>0.357</td>
</tr>
<tr>
<td>Accessibility</td>
<td>0.292</td>
<td>0.05</td>
</tr>
<tr>
<td>Culture</td>
<td>0.155</td>
<td>0.051</td>
</tr>
<tr>
<td>Assets</td>
<td>0.033</td>
<td>0.045</td>
</tr>
<tr>
<td>Literacy</td>
<td>0.142</td>
<td>0.052</td>
</tr>
<tr>
<td>Income</td>
<td>0.081</td>
<td>0.047</td>
</tr>
</tbody>
</table>

Source: Secondary data

The first variable is the constant which represents the intercept of the regression line on the Y-axis i.e. the Y-intercept. It also represents the predicted value of the dependent variable when all the independent variables are 0.

The regression equation for the above case can be given as

\[
\text{Demand for Financial Inclusion}(Y) = -2.13 + \beta_1 0.292 + \beta_2 0.155 + \beta_3 0.033 + \beta_4 0.142 + \beta_5 0.081
\]

This model will help us to predict the dependent variable given the independent variables.

Findings

The main objectives of the study were to identify the major factors that influence the demand for financial inclusion. The following are the findings of the study:

- The major factors that influence the demand for financial inclusion are identified to be Accessibility, Culture, Assets, Literacy and Income. This has been done by using Factor Analysis. These factors account for 63.26% of the total variance and hence are very significant.
- Multiple regression analysis done proves that there is a relationship between the demand for financial inclusion and the independent variables namely accessibility, culture, assets, literacy and income. This again means that all the remaining ten variables considered initially also influence the demand for financial inclusion but in a smaller way. The major influence on the demand for financial inclusion is exerted by the five variables considered in the regression analysis.
- When we see the correlation of the independent variables with the dependent variables we find that Accessibility has the highest correlation (0.650) with it followed by Literacy (0.447), Income (0.442), Culture (0.303) and Assets (0.054). The factor Asset has the lowest correlation with the dependent variables. This means that while Accessibility to Financial Services is the most important of these for driving the demand for financial inclusion, the assets possessed by a person is the least important of these factors as a driver of financial inclusion.
- The model which has been developed by using the multiple regression analysis will help to predict the value of the dependent variable given the value of the independent variables. This model accounts for about 65% of the variance in the dependent variable. In this model, the most significant factor is accessibility followed by culture, literacy, income and assets. This can be found out by examining the coefficients in the model.

Suggestions

The development of our country depends, to a great extent on financial inclusion. The more the people are aware of and avail the financial services the more is the potential for capital formation and investment in productive activities. This will help in the growth of our country. Financial inclusion will
also make the lives of the rural poor very easy and much better. They will be able to make use of the financial services in the country and better their lives. Hence it can be seen that financial inclusion is necessary for the overall development of our country. This study enables us to suggest the following measures to increase the demand for financial inclusion.

- Since Accessibility is the most influential factor of the demand for financial inclusion the RBI should take some measures that will make financial services more accessible to those who are financially excluded. For this, the Banks may be asked to open branches in rural areas. ATMs may be set up in the rural areas where setting up of Branches is not feasible. Mobile Banking and BC facilities should be expanded to bring more people into the financial system. The best way to increase accessibility to the financially excluded sector at a lower cost is through technology improvement. Hence more investments must be made in R&D for Financial inclusion.

- The culture of the people is the next most influencing factor. This means that the traditions and social practices of the people deter them from using financial services. As a result they are financially excluded. There is a resistance to change and fear of using the modern financial services because of the age old and traditional culture and practices of the people. Since this is deeply rooted in the minds of the people the change cannot be made all of a sudden. Instead the change must be made gradually through awareness programs conducted in the rural areas.

- Literacy which is the third most influencing factor should also be given more importance. The level of literacy should be improved and increased. This will create an awareness among the younger generation about the several benefits of being financially included and hence will motivate them to be financially included. The curriculum in the schools should enlighten the students about the financial system and the benefits of being financially included. This is beneficial to the country as a whole as the literacy levels will increase.

- Income levels also influence the demand for financial inclusion. The employees should be advised about how to invest their income profitably. Higher income levels will increase the savings which will motivate them to invest their savings in a safe and productive asset. This will automatically improve financial inclusion.

- The Assets already possessed by the individuals is the least influential factor. If the assets possessed by the individual are more there are more chances for being financially included. Hence the formation of assets should be encouraged among the individuals.

### Conclusion

Access to safe, easy and affordable credit and other financial services by the poor and vulnerable groups, disadvantaged areas and lagging sectors is recognised as a pre-condition for accelerating growth and reducing income disparities and poverty. Hence financial inclusion becomes very important. Though the government takes several steps to improve the supply side of financial inclusion these measures will not work without adequate demand for financial inclusion. The demand for financial inclusion means the thought and initiative taken by the subjects of the nation to open bank accounts, to use the facilities available in the financial system and to participate in the financial markets. Only with financial inclusion there can be economic development. This is because financial inclusion will help in the pooling up of the funds which remain idle, in the hands of the financially excluded. This will help in capital formation. The capital formed will be put to productive investments and these investments will generate more and more wealth in the economy. Thus the GDP will improve and the nation will prosper. In this study the demand side factors which are very important are identified to be Accessibility, Literacy, Assets possessed by an individual, Culture and Income of the individual. The government should concentrate on promoting both supply side and the demand side of financial inclusion. Only then the rate at which financial inclusion is done will be geared up. The efforts of the government and RBI to improve the supply of financial services will end up in vain if the demand side of financial inclusion is not encouraged. The people should be motivated to make use of our financial system.
for their betterment and also for the nation’s betterment. There should be more investments flowing into R&D for improving technology so that there is free access to financial services. There must be awareness among the people about the benefits of being financially included.

Theories of development advocate that financial development creates enabling conditions for growth through either a ‘supply-leading’ (financial development spurs growth) or a ‘demand-following’ (growth generates demand for financial products) channel. In India, growth with equity has been the central objective right from the inception of the planning process. Accordingly, over the years, initiatives have been taken continuously by the Government and the Reserve Bank to address the issue of inclusive growth. In the future also both the government and the public should realize the importance of financial inclusion and they must act accordingly for realizing the benefits both at the micro and macro levels.

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