



## Financial inclusion of farmers in aspirational districts: A case of Karnataka, India

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The quality of living of most of Indian population may not be equated with the present growth trend, as evidenced by India's ranking of 129 out of 189 nations in the UNDP's Human Development Index (UNDP 2019) and has a lot of heterogeneity across states and inter-districts variation within a state. As a result, the Indian Government identified 115 most backward districts in India and launched the Transformation of Aspirational Districts Programme (ADP) initiative in January 2018 to uplift the districts in reaching key social outcomes. The programme (ADP) focuses on assessing and improving human development outcomes across five major pillars; health and nutrition, education, agriculture and water resources, financial inclusion and skill development, and basic infrastructure.

Majority of the 68% of Indian population living in rural areas depend on agriculture, hence, development of rurality in general and agriculture in particular is the key to the socio-economic growth and prosperity. Despite various efforts to streamline formal sources of credit in rural areas, still the non-institutional credit agencies, professional moneylenders were found to be the most important source of finance (Chinnathambi and Ramachandran 2015). Financial inclusion has potential to connect with the banking habits and aims at providing all financial services in a fair, transparent and equitable manner at affordable cost to sections of underprivileged and low-income segments of society. Since the inception of ADP, lot of efforts were made to improve the conditions, but very few efforts to measure the changes happened in these districts. Present study is an attempt to fill the void.

The study was carried out during 2021 following exploratory research design and selected two aspirational districts of Karnataka, viz. Raichur and Yadgiri ranked among the least performing 10 districts in the aspirational districts' delta ranking of NITI Aayog from the inception of ADP. Two blocks per district and 30 respondents per

block were selected through simple random sampling without replacement making a total sample size of 120. Well-structured interview schedule was used to collect the data from the respondents. The assessment report on ADP reported that financial inclusion and skill development requires a greater attention in the aspirational districts (Michael and Scott 2020). Financial inclusion was considered as one among the five developmental areas with 5% weightage in ADP. A composite index with four sub-indicators, viz.  $S_1$  = Level of Awareness,  $S_2$  = Level of accessibility,  $S_3$  = Level of usage,  $S_4$  = Level of satisfaction was designed to assess extent of financial inclusion. A sub-index was calculated by adding the scores across all the items of particular sub-index where the sum indicates the score of that sub-index. Scores of all the four sub-indices were normalized through the min-max method.

$$U_{ij} = \frac{Y_{ij} - \text{Min } Y_j}{\text{Max } Y_j - \text{Min } Y_j}$$

Where,  $U_{ij}$  = Unit score of the  $i^{\text{th}}$  respondent on  $j^{\text{th}}$  component,  $Y_{ij}$  = Value of the  $i^{\text{th}}$  respondent on  $j^{\text{th}}$  component,  $\text{Max } Y_j$  = Maximum score on  $j^{\text{th}}$  component,  $\text{Min } Y_j$  = Minimum score on  $j^{\text{th}}$  component.

As equal weightage was considered for all the sub-indicators the summation of average index scores of those selected sub-indicators was chosen for the composite index of the extent of financial inclusion. The extent of financial inclusion index is:

$$\frac{\sum S_i}{n} = \frac{S_1 + S_2 + S_3 + S_4}{4}$$

The respondents were grouped into low, medium, and high extent of financial inclusion using the cumulative cube root frequency method. Multiple regression analysis with following regression equation was carried out to study the determinants that show the combined effect of independent variables in explaining the variation on the dependent variable (Extent of financial inclusion).

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 \dots b_n x_n$$

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Where,  $b_0$  = constant,  $Y$  = dependent variable,  $X_1 \dots X_n$  = independent variable,  $b_1 \dots b_n$  = regression coefficient for respective variables. It was found that overall extent of financial inclusion was moderate which accounts for 50%, 28.33% had low extent of financial inclusion and 21.67% reported high extent to financial inclusion. Priyadarshini (2020) found similar trend whereas Kumar and Gupta (2019) reported low level of financial inclusion among the farmers of Prayagraj district of Uttar Pradesh. Sharma and Kukreja (2013) reported that financial inclusion plays a very crucial role to facilitate economic transaction, improve quality of life, protect against vulnerability, make productivity enhancing investments and leverage assets.

*Level of awareness:* Table 1 shows that majority of the respondents had high level of awareness on financial products and services and 31.67% had low level of awareness, whereas 29.16% of respondents had reported moderate level awareness on financial products and services. As such majority of the respondents were having better awareness on the financial products and services. The value of information has increased considerably due to knowledge intensive nature of changing agriculture (Nain *et al.* 2015) and farmers' are still continuing with interpersonal information sources even for critical issues (Ravikumar *et al.* 2015) whereas the ICT tools are mostly used to get benefit of general communication and entertainment purposes (Panda *et al.* 2019). Due to lack of awareness and access to wide range of financial products and services to weaker sections of the society, nearly 40% of individuals in India lack access to basic financial services like savings, credit and insurance. Joseph (2014) reported that 77% of respondents were aware on various financial products and services. The present findings are similar to Jayalakshmi *et al.* (2021) where majority of the agricultural labourers had

average to high level of awareness on financial products and services. Sreelakshmi (2016) also reported that awareness level was high on agricultural gold loans from co-operative banks and commercial banks.

*Level of accessibility:* Accessibility refers to ease with which it is possible for farmers to avail financial products and services. Majority of the respondents reported that they faced difficulty in accessing the financial products and services (Table 1). One-third of the respondents reported financial products and services were ordinarily accessible. Only 30.84% opined that financial products and services were easily accessible. This may be due to lack of financial institutes in the village/locality and far away distance of financial institutes from the residence. Around 10 crore households lacked access to basic financial products and services (Khuntia 2014). Lack of awareness of banking services significantly determines the level of inaccessibility of basic financial products and services (Laha *et al.* 2011). The results are similar to Jayalakshmi *et al.* (2021).

*Level of usage:* Over half of the respondents reported low level of usage on financial products and services and 28.33% reported a medium level followed by 20.83% with high level of usage of financial products and services (Table 1). This might be due to lack of accessibility and due to cumbersome procedures of financial institutes, most of the farmers were least interested in utilising financial products and services. The findings are similar with Sreelakshmi (2016) who found majority of the respondents had low level of usage on financial products and services.

*Level of satisfaction:* Over half of the respondents (55%) were moderately satisfied with the financial products and services available followed by 24.16% with high level of satisfaction and 20.84% were least satisfied with the financial products and services. This may be due to the fact that most of the respondents were benefited with the available financial products and services. Ugwuja and Attah (2020) recommended the central bank of Nigeria to regulate banks to be providing services that yield high level of customer satisfaction. Naik (2012) survey of financial services to farmers in rural areas reported very few of them were satisfied with the financial services such as health insurance and crop insurance.

*Determinates of financial inclusion:* Multiple linear regression was used to predict the effect of determinants on dependent variable (Extent of financial inclusion) (Table 2). The adjusted R square 0.740 indicates that 74% of the variation in the dependent variable was explained by the studied independent variables. The model statistically predicted the outcome variable of financial inclusion. The regression coefficient values obtained from analysis revealed that four variables, viz. mass media exposure, social participation, innovativeness and economic motivation were found to be non-significantly contributing to the extent of financial inclusion, whereas, age, distance to financial institute and education (Illiteracy, Primary) showed negative and significant contribution towards extent of financial inclusion. Thus, with increase in age, distance of financial

Table 1 Distribution of data of sub-indices

| Categories                    | Percentage |
|-------------------------------|------------|
| <i>Level of awareness</i>     |            |
| 01 Low                        | 31.67      |
| 02 Medium                     | 29.16      |
| 03 High                       | 39.17      |
| <i>Level of accessibility</i> |            |
| 01 Difficult                  | 37.50      |
| 02 Moderate                   | 31.66      |
| 03 Easy                       | 30.84      |
| <i>Level of usage</i>         |            |
| 01 Low                        | 50.84      |
| 02 Medium                     | 28.33      |
| 03 High                       | 20.83      |
| <i>Level of satisfaction</i>  |            |
| 01 Least                      | 20.84      |
| 02 Moderate                   | 55.00      |
| 03 Highly                     | 24.16      |

Table 2 Multiple regression analysis of extent of financial inclusion.

| Variable                                   | B      | Standard error | Beta   | t       |
|--------------------------------------------|--------|----------------|--------|---------|
| (Constant)                                 | 0.302  | 0.052          |        | 5.86    |
| Age                                        | -0.002 | 0.001          | -0.223 | -3.77** |
| Annual Income                              | 0.009  | 0.000          | 0.188  | 2.53*   |
| Operational land holding                   | 0.003  | 0.001          | 0.147  | 2.22*   |
| Mass media exposure                        | -0.001 | 0.002          | -0.035 | -0.73   |
| Frequency of visit to financial institutes | 0.007  | 0.002          | 0.228  | 3.57**  |
| Distance to financial institutes           | -0.004 | 0.001          | -0.200 | -3.24** |
| Social participation                       | 0.012  | 0.011          | 0.061  | 1.05    |
| Education (Illiteracy)                     | -0.060 | 0.015          | -0.237 | -3.98** |
| Education (Primary school)                 | -0.038 | 0.011          | 0.196  | -3.31** |
| Education (High school)                    | -0.012 | 0.016          | -0.044 | -0.78   |
| Education (Intermediate)                   | -0.16  | 0.031          | -0.027 | -0.51   |
| Innovativeness                             | 0.004  | 0.002          | 0.091  | 1.82    |
| Economic motivation                        | -0.004 | 0.002          | -0.093 | -1.79   |

\*Significant at 0.05 level of significance, \*\*Significant at 0.01 level of significance.

institutes and education at lower level will decrease the extent of financial inclusion. It might be because most of the age-old individuals lack awareness on the recent financial products and services. Reduced level of formal education is also hindering the individuals from accessing the financial products and services. Operational land holding and annual income were observed to have positive and significant contributors to extent of financial inclusion. Priyadarshini *et al.* (2020) also reported similar relationship between financial inclusion with operational land holding and social participation in different situation. It might be because of increase in the annual income is associated with practices like savings and investment. Hence, higher operational land holding and annual income were associated with higher level of extent of financial inclusion. Priyadarshini *et al.* (2020), Mhlanga and Dunga (2020), and Arun kumar *et al.* (2021) also found similar relation between annual income and extent to financial inclusion. Frequency of visit to financial institutes had positive and significant correlation between financial inclusion. It might be because increase in the number of visits was associated with increase in the knowledge and usage of various financial products and services. Distance to financial institution had negative and significant correlation with financial inclusion, may be the increased distance of financial institution reduced the interest and frequency of visit. Mhlanga and Dunga (2020) also found similar relation between distance and extent to financial inclusion.

#### SUMMARY

The study taken up during 2021 aimed at assessing the extent of financial inclusion and its determinants among the

farmers in two aspirational districts (Raichur and Yadgir) of Karnataka and selected 30 respondents per block from two block per district making a sample size of 120. The overall extent of financial inclusion was moderate. The level of awareness of majority of the respondents on financial products and services was moderate to high, but majority of them reported difficulty in accessing them. The level of usage was found to be low, whereas satisfaction level was moderate. The determinants study revealed that age, distance to financial institute and education (Illiteracy, Primary) were negatively related to extent of financial inclusion. Operational land holding and annual income were observed to be positive and significant. Frequency of visit to financial institute was positive and significant contributor to extent of financial inclusion. The results are clear cut indication for tailored plans, policies and strategies for farmers' financial inclusion.

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