



FINANCIAL INCLUSION – A QUANTITATIVE ASSESSMENT OF THE BENEFITS EXPECTED BY RURAL AND URBAN CLASS

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Abstract

The recent past has witnessed several reforms to cover the population living in rural part of India with a view to reduce inequality of income and encouraging participation of the rural segment of the society in the growth of economy of our country. The proliferation of banking system and other financial products among rural part of the country is expected to act as a catalyst in improving the standard and style of people having enormous entrepreneurship potential but could not give way to their dreams because of lack of important ingredients needed for the same. This paper highlights the views regarding benefits of financial inclusion as prevalent among the urban class of society and the rural class of society and statistically test the difference in their approach using various statistical technique, such as Mann Whitney test and Student t-test, after collecting the information on the Likert scale through a same questionnaire designed for both the sets of respondents – rural as well as urban.

Keywords: *Financial inclusion, Poverty Ratio, Likert Scale, Levene's Test, Mann Whitney test, Student t-test.*



Introduction

According to the Report of the Expert Group to Review the methodology for measurement of poverty status released by Government of India, Planning Commission – 2014 , decline in poverty ratio has been observed in India , in accordance with both expert groups – Rangarajan Committee as well as Tendulkar Committee. The relevant statistics given below in table 1(extracted from the planning commission report) clearly demonstrate the same.

Year	Poverty Ratio Expert Group (Rangarajan Committee)			No. of poor (million)		
	Rural	Urban	Total	Rural	Urban	Total
2009-10	39.6	35.1	38.2	325.9	128.7	454.6
2011-12	30.9	26.4	29.5	260.5	102.5	363
Reduction (% age points)	8.7	8.7	8.7	65.4	26.2	91.6
Year	Expert Group (Tendulkar Committee)					
2009-10	33.8	20.9	29.8	278.2	76.5	354.7
2011-12	25.7	13.7	21.9	216.7	53.1	269.8
Reduction (% age points)	8.1	7.2	7.9	61.5	23.4	84.9

Table 1: Poverty ratio and Number of poor in India

It is important to observe that despite of improvement in the social structure in quantitative terms, the growth has not been accompanied by a commensurate rise in employment and its benefit could not be transmitted to larger section of the society particularly in the low income group and rural sector directly . The collection in higher tax revenue on account of economic growth enabled the government to fund a large social sector spending programme but its visibility at the ground level still seems to be far away . According to the release from the Planning Commission, 25.7% of people in rural areas were below the so-called poverty line and 13.7% in urban areas. This is comparable with 33.8% and 20.9%, respectively, in 2009-10, and 42% and 25.5%, respectively, in 2004-05 .In the recent past, various steps have taken in our country to bring social transformation and upliftment of the disadvantaged segment of the society. The financial inclusion programme clearly articulates the concern of the present system in addressing to the need of people who are deprived of basic financial services such as banking, insurance, etc.

Financial Inclusion – A brief overview

Financial inclusion aims to provide banking and financial services and other related products to all the individuals of society particularly from low income groups and residing in areas having no banking facility. The step would not only help in improving financial literacy among general public but also help in transparent and smooth flow of funds from surplus to deficit as well as from unproductive to productive sector. In the recent past, as witnessed from the RBI Annual Report 2014, various initiatives have been taken in this area including the rollout of financial inclusion plans (FIPs), enhancing the scope of the business correspondent (BC) model, improving credit delivery procedures with respect to the micro and small enterprises (MSE) sector and encouraging the adoption of information and communication technology (ICT) solutions. As a first step towards financial inclusion, 74,414 villages (having population of more than 2000 persons) were identified where no banking facility was available. The banking facility was made available to them through Business correspondents, ATMs and satellite branches. Banking outlets comprising of 2493 branches, 69589 Business correspondents and 2332 through other modes were provided in these unbanked villages. The second phase aims to provide banking facility to approximately 4,90,000 villages (having population less than 2000) by March 31, 2016.

The main benefits which are likely to accrue from the financial inclusion are

Helps in reducing income inequality

Improving distribution of subsidies

Reducing poverty

Increasing social awareness and financial literacy

Increasing employment opportunities

Unlocking economic potential

Freedom from moneylenders

Help in effectively implementing social schemes like old age pension, etc.

Encouraging entrepreneurship

Reducing corruption

Analysis

The present study aims to study perception of the society living in urban area and rural area besides the examining the effectiveness of the financial inclusion programme anticipated in offering the benefits mentioned above.

A survey was conducted among two different groups of society , from the urban area and the rural area . Their expectation with regard to the abovementioned benefits was expressed on the Likert scale where (1) denotes strongly agree, (2) denotes agree (3) denotes neutral, (4) denotes disagree , (5) strongly disagree.

The database summary of results for both the sets are given below in table 2:

Urban class										
	Q_1	Q_2	Q_3	Q_4	Q_5	Q_6	Q_7	Q_8	Q_9	Q_10
MEAN	1.90	2.05	2.20	1.85	2.70	3.10	2.25	1.65	1.85	2.00
MODE	2	2	2	1	3	3	2	2	2	2
StDev	0.8	0.4	0.8	0.8	0.6	0.7	0.9	0.5	0.5	0.6
StErr	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1

Rural Class										
Rural	Q_1	Q_2	Q_3	Q_4	Q_5	Q_6	Q_7	Q_8	Q_9	Q_10
MEAN	3.59	2.09	2.00	2.95	2.91	3.00	1.05	1.05	2.00	2.95
MODE	3	2	2	3	3	3	1	1	2	3
StDev	0.7	0.3	0.0	0.2	0.3	0.0	0.2	0.2	0.0	0.2
StErr	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0

Table 2: Summarized output of information collected through questionnaire

It can be observed from the above statistical figures that both sets of community – rural as well as urban are anticipating benefit from financial inclusion but differs with regard to the effectiveness of the benefits. The respondents from the urban sector are more optimistic with regard to indirect benefits or the macro benefits arising out of financial inclusion such as reduction in inequality of income, increase in social awareness and financial literacy among rural class of population, effective implementation of social schemes and reduction of corruption. The rural class, on the other hand, are more optimistic about the freedom from moneylenders and

effective implementation of social schemes. The issues such as encouragement of entrepreneurship and unlocking of economic potential, due to opening of bank account, does not figure among the expected immediate benefit of financial inclusion. It has been further observed that the responses of rural segment have low standard deviation and standard error as compared to the respondents in the urban category which reflects that the convergence of the approach of rural population with regard to financial inclusion in contrast to diverging vision of urban sector. Prima facie, the responses of the two segments of the society reflect different expectations with regard to benefits emanating from financial inclusion. However, to ensure this fact, statistical analysis has been conducted initially through t-test and subsequently Mann Whitney test, of their responses, which have revealed the fact that there is no significant difference between the expectations of rural and urban segment of society so far as benefits of financial inclusion is concerned.

The null hypothesis in while applying t-test is, there is no significant difference between mean of the responses given by rural and urban class of respondents.

$$\text{i.e. } H_0 : \text{Mean}_{\text{rural}} = \text{Mean}_{\text{urban}}$$

$$H_a : \text{Mean}_{\text{rural}} \neq \text{Mean}_{\text{urban}}$$

The output obtained through SPSS analysis is shown below:

T-Test

Group Statistics					
Group		N	Mean	Std. Deviation	Std. Error Mean
mean	Rural	10	2.1550	.43998	.13913
	Urban	10	2.3590	.86188	.27255

Independent Samples Test							
Levene's Test for Equality of Variances		t-test for Equality of Means					
F	Sig.	T	Df	Sig. (2-tailed)	Mean Differ	Std. Error	95% Confidence

		ence	Differ ence	Interval of the Difference		Lower	Upper			
mean	Equal varian ces assum ed	6.4 81	.020	-.667	18	.513	-. 20400	.30601	-. 8469 0	.4389 0
	Equal varian ces not assum ed			-.667	13.393	.516	-. 20400	.30601	-. 8631 3	.4551 3

From the value obtained under Levene’s Test for equality of variance, we can observe that sig level is 0.02 which is less than 0.05 implying that that the variability in the two segments is not the same. The expectations of benefits stated by people living in urban area vary much more than the expectations of people living in rural area. The results obtained through the test clearly demonstrate that the variability in the two conditions is significantly different. In the light of this observation , the p-value (Sig) in the second row of table holds more importance. However, as can be observed that the p-value is .513 when equal variances are assumed and 0.516 when equal variances are not assumed . This implies that the difference in means is not statistically significant at the .1, .05. and .01 levels. Thus, we can accept the null hypothesis that there is no significant difference between the mean of the responses.

In order to further strengthen our conclusion with regard to assessment of benefits of financial inclusion among rural and urban class, another statistical test namely Mann Whitney test has also been employed using the data collected through the questionnaire. The test is suitable in this situation as it is applicable under the following conditions :

It compare median scores of two samples as a result of which it is much more effective against outliers.

It is a non-paracontinuous-level test it and therefore does not require a special distribution of the dependent variable in the analysis. Thus it is the best test to compare median scores when the dependent variable is not normally distributed.

It is suitable for data expressed in ordinal scale .

The ranks of the total point for all the question by the urban and rural respondent were subject to Mann Whitney test. In order to apply the test , the null hypothesis in this case was that there is no significance difference between median of the responses of rural class and urban class.

i.e. $H_0 : \text{Median}_{\text{rural}} = \text{Median}_{\text{urban}}$

$H_a : \text{Median}_{\text{rural}} \neq \text{Median}_{\text{urban}}$

The output obtained using SPSS , is given below:

Mann - Whitney U Test

group	N	Mean Rank	Sum of Ranks
mean rural	10	9.40	94.00
urban	10	11.60	116.00
Total	20		

Test Statistics		Mean
Mann-Whitney U		39.000
Wilcoxon W		94.000
Z		-.834
Asymp. Sig. (2-tailed)		.404
Exact Sig. [2*(1-tailed Sig.)]		.436b

a. Grouping Variable: group

b. Not corrected for ties.

From the output given above , we can observe that p – value (Asymp. Sig (2 tailed) and Exact Sig. [2*(1-tailed Sig.)] is 0.404 and 0.436 which is greater than 0.05 , we therefore accept the null hypothesis. This implies that despite of differential perception with regard to benefits arising out of financial inclusion , the outlook of both rural and urban population was statistically found to be same when tested by Mann Whitney test . The ranks of the total point for all the question by the urban and rural respondent where subject to Mann Whitney test because this is a

nonparametric test that allows two groups or conditions or treatments to be compared without making the assumption that values are normally distributed.

Conclusion

The Financial inclusion initiative aims to provide series of benefits to people living in rural areas. The urban class would also be benefitted due to fair distribution of subsidy and reduction in corruption besides transformation of social structure and style of living. Not only the individuals would be benefitted through this recourse, but also the corporate and industries would have large opportunities in expanding their customer base and products. Although, the expectations of urban and rural class from financial inclusion appears to be different when they are interacted but statistically they are not significantly different. The conclusion of the study that the expectations of benefit arising from financial inclusion are not statistically significantly different would serve as an input as well as encourage the policy makers in confirming that their vision , while framing policies for the overall development of society , are in the right direction .

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