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A Study on the Impact of Financial Inclusion for Inclusive Development

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Abstract - India has a long history of working towards financial inclusion. The term "financial inclusion" refers to the practise of guaranteeing low-income individuals quick and low-cost access to financial services and credit delivery. Assuring low-income individuals can easily access, use, and benefit from the formal financial system is central to Financial Inclusion's mission to foster economic expansion. Examining elements is crucial for achieving the goal of financial inclusion and, ultimately, for fostering robust economic development that results in equitable growth.

Keywords - Financial inclusion, financial system, credit, income.

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1. INTRODUCTION

In India, the idea of a financially inclusive society is not new. The promotion of economic participation has risen to prominence as a social goal. Since the vast majority of Indians are still excluded from the benefits of inclusive development, achieving financial inclusion has become a significant and difficult task for the country's economy. The availability of credit is seen as a powerful tool for progress. Countries throughout the globe are working towards financial inclusion as a result of the impact that improved access to financial services has on Inclusive Growth.[1]

Banking and other financial institutions serve as the backbone of every thriving economy. If we want to maintain and even increase the growth rate, we need to make sure that the economically disadvantaged are more represented in the process. India must take the road to financial inclusion if it wants to emerge as a major participant on the international stage.[2]

The availability of financial resources is a powerful weapon in the struggle against poverty and for the expansion of economic opportunity. India is home to a sizable banking industry and a well-developed financial infrastructure. It is much easier for individuals and organisations to save money, invest, divide up risks, and make timely and cost-effective payments if they have access to a variety of credit and transaction services. There are clear correlations between the breadth and depth of the financial system and the expansion of the economy.[3-4]

The term "financial inclusion" refers to the practise of guaranteeing low-income individuals quick and low-cost access to financial services and credit delivery. If we want low-income individuals to contribute to economic progress, we need to make sure they can easily access, use, and benefit from the official financial system.[5-6]

Defining and measuring poverty is complex and nuanced. When a person's income and assets are insufficient to cover even their most basic needs, we classify that person as impoverished. It is crucial to accurately assess poverty in order to design, carry out, and evaluate successful anti-poverty initiatives. The term "inclusive growth" refers to the process through which the impoverished are able to participate in and reap the advantages of a country's economic expansion. Therefore, in order to achieve the primary goal of increasing the quality of living and decreasing disparities, it is necessary to take into account the significance of different socioeconomic programmes and policies, such as financial inclusion, for boosting economic development and upliftment of the poor. For a country like India, whose policies are always geared towards economic development in tandem with the eradication of poverty, an accurate measurement of poverty is crucial.[7-8]

Financial inclusion as providing low-cost banking services to large underserved populations. Delivering an economy's financial system to its citizens is what Chakravathy calls "financial inclusion." As stated by the Rangarajan committee, "financial inclusion is the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost." [9]

The field of development and policymakers has recently given more attention to financial inclusion.

The goal of this policy endeavour is to bring the so-called "unbanked" population into the official financial system so that they, too, may benefit from savings, credit, remittances, and insurance. The fact that it can help reduce poverty and bring about social harmony and long-term economic progress has propelled it to the forefront of the development and policy communities.[10]

2. MATERIAL AND METHODS

2.1 Research Methodology

The current investigation is descriptive in character and uses a survey technique. The data is gathered using a structured, non-anonymized, pre-tested questionnaire. Individuals from ten different villages in the Ribhoi area make up the study's population.

2.2 Selection of Variables

Financial inclusion includes things like savings, loans, remittances, financial literacy, and insurance. Inclusion in the financial system is a determinant. There is a mediating effect between social and economic empowerment. Dependent variable inclusive growth

2.3 Designing of the Questionnaire

Due to the importance of primary data for this research, much attention was taken in developing the questionnaire. Primary data was gathered by questionnaires sent to residents of the communities. The survey is broken down into eight distinct sections. The first section is devoted to respondents' personal information, the second to their savings habits, and the third to the loans they have taken out. The respondents' use of remittances facilities is covered in Part 4, while the use of other financial goods like insurance and mutual funds is covered in Part 5. Financial literacy is covered in the sixth section, and the effect of financial inclusion on inclusive growth is discussed in the last section. The last section covers the holy trinity of Jan Dhan, Aadhaar, and mobile phones. The questionnaire section has free-form, multiple-choice, and Likert scale questions.

2.4 Presenting of the Questionnaire

Sixty-two participants from each revenue block participated in the pilot project. Changes, additions, and deletions were made based on responses to the pilot study's questionnaire. Using Cornbach's Alpha, the reliability was determined to be 0.727, indicating 72.7% confidence in the results. An alpha value of 0.7 or higher is deemed adequate by most researchers (George and Mallery, 2001; Pallant, 2005), and a reliability coefficient of 0.5 or higher is generally seen as a good predictor of building dependability (Nunnally, 1976).

The interview schedule for the survey and the development of creative research issues were informed by the pilot study. The researcher was able to form the study's hypotheses and blueprints based on the results of the pilot study. A completed survey for gathering primary data from respondents was prepared.

2.5 Sample design

In the Ribhoi area, 10 villages over three blocks are selected using quota sampling. Respondents are selected from these rural areas using a judgement sampling technique.

2.6 Sample size

The following formula is what the researcher used to decide on a sample size:

Sample size $n = (ZS/E)^2$

Where

Z = Standardized value corresponding to a confidence level of 95% = 1.96S = Sample SD from Pilot study of 62 samples = 0.632

E = Acceptable Error =5% = 0.05

Hence, Sample size = $n = (ZS/E)^2$

$= (1.96*0.0.632/0.05)^2$

= 614

The total number of participants in the study was 614.

To far, 656 answers have been collected from a total of 700 questionnaires distributed throughout 10 communities. 42 replies were determined to be biassed after careful examination. Since only 614 are useable, it is the precise number of people in the sample.

2.7 Anlysis of Data

In order to analyse and understand the data, the researcher was make use of suitable statistical tools and methodologies.

3. RESULTS

3.1 The fraction of the population that has one

Those who indicate they have a savings account status are separated from those who do not. The following table shows a breakdown of the data in terms of frequency..

Table 3.1 : The number of account-holding participants

Bank account	Number of Respondents	Percentage
Yes	520	84.7
No	94	15.3
Total	**614**	**100**

520 out of 614 respondents (84.7%) had a bank savings account based on the facts presented above. One-fifteenth (84/291) of those surveyed do not have a savings account at a major financial institution.

3.2 The amount of people who have had money deposited into their bank accounts via social assistance programmes

In order to analyse the data, respondents are separated into groups depending on the types of social benefit programmes from which they have received money in their bank accounts. The following table provides a frequency distribution of the data.

Table 3.2: Quantity of respondents with bank account deposits from social welfare programmes

Various Schemes	Number of Respondents	Percentage
OAP	48	9.2
NREGS	285	54.8
LPG	84	16.2
Others	103	19.8
Total	**520**	**100**

The numbers in the table show that the majority of respondents (285) are receiving funds through the NREGS scheme (54.8%), followed by the respondents receiving benefits through the LPG scheme (16.2%), and finally the OAP category (9.2%).

3.3 Classification of respondents according to the amount of money kept in their savings accounts

Respondents' minimum savings balances are broken down into four groups: those with less than 100 dollars, between 101 and 500, between 501 and 1000, and between 1001 and 5000. The following table shows the frequency distribution of the aforementioned groupings.

Table 3.3: Classification of Respondents by Keeping a Minimum Balance in Their Savings Account

Maintenance of minimum balance in savings account	Number of Respondents	Percentage
0 -100	2	0.4
101 – 500	54	10.4
501 – 1000	338	65
1001 – 5000	126	24.2
Total	**520**	**100**

The data in the table above reveals that just two respondents had a balance of zero to one hundred rupees in their savings accounts, while sixty-five percent of the total have balances of between five hundred and one thousand. Twenty-four percent (24/126) of respondents had bank balances of between $1,000 and $5,000.

3.4 Average number of family savings accounts

The number of savings accounts held by a family or household is being used to categorise respondents. The results of the analysis are shown in the frequency distribution table below.

Table 3.4: Households' average number of savings accounts

Number of accounts in a house hold	Number of Respondents	Percentage
One	213	41
Two	217	41.7
Three	53	10.2

Four	31	6
More than four	6	1.2
Total	**520**	**100**

From the data shown above, we can conclude that 41.7% of American families have two savings accounts, while the remaining 62.3% have just one. Ten percent, or 53 respondents, have three savings accounts, and three percent, or 31 respondents, have four. There were 520 total respondents. Only six of those polled had more than four family savings accounts.

3.5 Classification of Respondents by Type of Loan Obtained

The following table displays the distribution of respondents into groups depending on whether or not they have secured the loan.

Table 3.5: Loan status is used to divide respondents into four categories.

Loan taker	Number of Respondents	Percentage
Yes	370	71.2
No	150	28.8
Total	520	100

From the data shown above, we can conclude that 370 (or 71.2% of the total) of the 520 respondents who filled out the survey have gotten a loan, whereas 150 (or 28.8%) have not.

3.6 Grouping Respondents According to Their Knowledge Of The Jan Dhan Account Scheme (PMJDY)

Respondents were divided into four categories depending on how well they knew about the Pradhan Mantri Jan Dhan Yojana (PMJDY), a government-run savings programme designed to increase people's access to bank accounts. The following table provides frequency counts for the aforementioned groupings.

Table 3.6: Respondents were divided into four categories depending on how well they knew about the Jan Dhan Account (PMJDY).

Awareness of respondents about PMJDY	Number of Respondents	Percentage
Yes	510	98.1
No	10	1.9
Total	**520**	**100**

From the data shown above, it is apparent that the majority of respondents (510 out of 520) are familiar with the Pradhan Mantri Jan Dhan Yojana (PMJDY) programme, while just 10% are unaware of it.

3.6 Correlation between Respondents' Occupation and Their Savings Behaviour

Table 3.7: There was a correlation between respondents' occupations and the amount they saved.

Occupation	Savings (Rs)				
	Less than 500	501 - 2500	Above 2500	Total	Statistical Inference
Agricultural labour	120(54.5)	90(40.90)	10(4.5)	220	Chi-square value 5.437+
Own business	53 (55.80)	39 (41.10)	3(3.20)	95	df = 8
Farmer	29(61.70)	16(34)	2(4.30)	47	
Private employee	13(50)	13(50)	0	26	
Public/Government employee	9(52.9)	6(35.30)	2(11.80)	17	
Total	224(55.30)	164(40.50)	17(4.20)	405	

The data in the table above does not suggest any correlation between respondents' jobs and their savings rates

3.7 Correlation Between Respondents' Income Type and Their Savings Rate

Table 4.2.65 Relationship Between Source of Income and Individuals' Attempts to Save

Type of Income	Savings				
	Less than 500	501 – 2500	Above 2500	Total	
Daily	133 (54.30)	104 (42.4)	8(3.3)	245	Statistical Inference
Weekly	6 (54.5)	4 (36.4)	1 (9.10)	11	
Monthly	63(63.60)	33(33.3)	3(3)	99	Chi-square value 9.817 + df = 6
Seasonally	22 (44)	23(46)	5(10)	50	
Total	**224 (55.30)**	**164 (40.50)**	**17 (4.20)**	**405**	

Based on the data shown above, it seems that respondents' savings rates are unrelated to their income distributions.

3.7 Correlation between Respondents' Income and the Amount Saved

Table 3.8: shows a correlation between respondents' salary and the amount they saved.

Income group	Savings				
	Less than 500	501 - 2500	Above 2500	Total	Statistical Inference
Up to 30000	123 (59.40)	75(36.20)	9(4.30)	207	Chi-square value 13.555 + df = 8
30001 – 40000	38(46.90)	41(50.60)	2(2.50)	81	
40001-50000	3(30)	5(50)	2(20)	10	
50001-60000	1(33.30)	2(66.70)	0	3	
Above 60000	59(56.7)	41(39.40)	4(3.8)	104	
Total	224(55.30)	164(40.50)	17(4.20)	405	

The data in the table above suggests that savers across all income brackets tend to put away around the same amount each year.

3.8 The Connection Between PMJDY and Knowing When to Avoid an Overdraft:

Table 3.9: shows how familiarity with PMJDY overdrafts relates to the existence of a PMJDY account.

		Pearson Correlation	Significant	N
PMJDY accoun	PMJDY OD awareness	0.229	0.001**	191

Based on the data in the table above, we may predict that account holders are also likely to be familiar with the PMJDY overdraft account. Thus, we cannot accept H0.

3.9 Inclusive Development Impact Of Financial Inclusion

Multiple regression analysis is used to make predictions about INCLUSIVE GROWTH. The value of a criteria may be estimated using multiple regression, a statistical method that takes into account many independent (or predictor) factors. Multi-factor analysis involves considering the relative importance of many variables at once. Modelling the connection between the explanatory and response variables is the main focus of multiple linear regression (MLR).

The model for MLR, given 'n' observations, is:

$y_i = B0 + B1xi1 + B2xi2 + ... + Bpxip + Ei$ where i = 1, 2, ..., n

Ho: There is no significant financial inclusion's effect on inclusive development

H_1: There is significant financial inclusion's effect on

inclusive development.

Economic empowerment (X1), social empowerment (X2), individual growth (X3), and regional development (X4) are used as predictors of inclusive growth (Y) in this research. The non-significant variables are weeded out using a step-by-step regression approach. The study does not include one potential factor -- social empowerment(X2).

The table demonstrates that the combined impact of the three factors on Inclusive Growth was 98.22 percent. Based on the R2 value, it seems that the aforementioned three factors have a significant impact on Inclusive Growth (the dependent variable). However, the factors contribute 96.3% to the dependent variable based on the corrected R square value of 0.963. Significant at the 1% level, the F value (3419.54) indicates that the model is well-fit.

Table 3.10 : Financial inclusion-based multiple regressions for inclusive development

Independent variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Statistical Inference	
	B	Std. Error	Beta				F value
(Constant)	-.784	.433		-1.812	.071	R = 0.982 R^2 = 0.964 AdjustedR^2 = 0.963	57.863***
Individual growth (X3)	1.142	.088	.533	12.914	.000***		
Economic empowerment (X1)	.421	.071	.238	5.930	.000***		
Regional growth (X4)	.638	.117	.220	5.435	.000***		

The table shows that all three of the aforementioned factors have a major bearing on Inclusive development. The level of the dependent variable is most affected by the level of the independent variable, and vice versa. Individual development was shown to have the greatest impact on inclusive growth (=0.533, p0.01), followed by economic empowerment (=0.238, p0.01) and regional development (=0.220, p0.01). Increases in both manufacturing and the service sector activity—and hence in available jobs—are essential conditions for sustained economic expansion. As a result, the unemployment rate fell.

The coefficients of the independent variables in the regression equation are shown in the Beta column of the table.

$$Y = 0.238\ X_1 + 0.533X_3 + 0.220X_4$$

This shows that development at the individual level, followed by economic empowerment and regional growth, has a significant impact on inclusive growth. This is a significant indicator that the primary objective of financial inclusion has been met: to increase low-income people's access to and use of the formal financial system in order to foster personal development and economic empowerment.

The government's efforts to enhance economic prospects and provide equal chances to all members of society's most vulnerable groups have led to a rise in both the fixed and variable job options available to the public. Self-employment has been given a higher priority in government-sponsored programmes like PMEGP (prime minister's employment generation plan), Stand up India, and Pradhan mantri mudra yojana initiatives, which have opened doors for personal development. Subsidised interest rates on bank loans for farmers and a mandatory crop insurance plan (PMFBY) to protect against monsoon-related crop losses show that the government places a premium on the agricultural industry.

Because of this, the unemployment rate has gone down (having a negative beta).

Next, the banks' efforts to raise financial literacy via financial inclusion camps and Digi dhan mela in all districts, particularly in remote communities, have increased consumers' familiarity with banking products. Business correspondents also play a significant role in educating people from low-income backgrounds about the benefits of banking services. This will increase people's knowledge of personal finance, leading to greater economic independence and regional development.

Method Of Measurement

There are nine components to the illustrative measuring model. A random measurement mistake, represented by the corresponding error term, affects the accuracy of the three observed variables used to assess each component. They are all regressed into

their respective factors. In the end, it is proved that all nine components are connected.

The First Model

The early findings from the model show that the model does not well match the data. With 288 possible permutations, a chi-square of 786.725 indicates statistical significance. at p<0.05, χ²⁄df = 2.732; GFI=.901; AGFI= 0.870; RMSEA= 0.058.

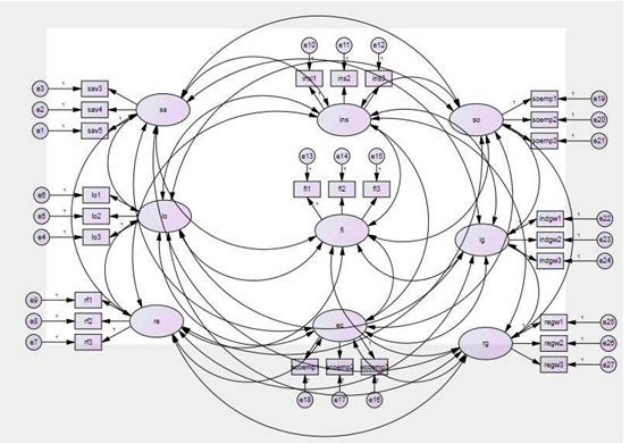

Figure no 3.1 Initial Model

Table 3.11: Fit Indices

Fit statistic	Recommended	Obtained
x^2	-	786.725
Df	-	288
x^2 significance	$p \leq 0.05$	.000
x^2 /df	≤2- 5.0	2.732
GFI	≥ 0.90	.901
AGFI	>0.80	.870
RMSEA	≤0.08	.058

The model is unacceptable, as shown by the fit statistics. Because of this, the model has been adjusted.

Modified Model

Modification Index created the revamped version of the model. The Modification Index implies that the model fit might be statistically improved by correlating the error terms of Savings Item 1 and Savings Item 3. The error terms of Items 7 and 9 are correlated, suggesting that the two observed variables are connected to the same construct called "Remittances," as shown by the modification index. Items 22 and 23 are both tied to the same underlying "Individual" construct, as shown by the modification index's correlation of their respective error terms. The statistical fit of the model might be improved by correlating the error terms between the two variables. Therefore, it is statistically permissible and theoretically relevant to allow their error terms to be connected. The adjusted values of GFI (0.907), AGFI (0.876), and RMSEA (0.055) are consistent with an adequate fit to the data.

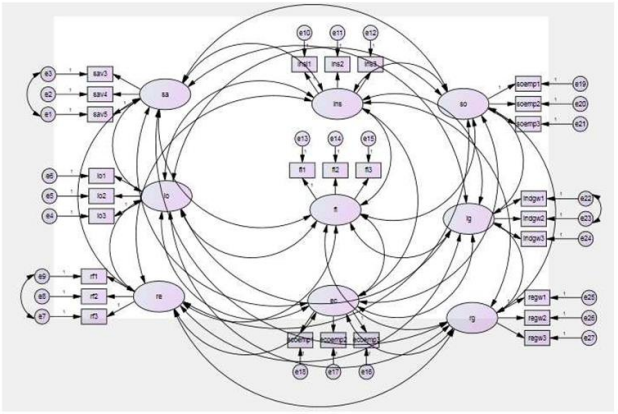

Figure 3.2: Modified Model

Table 3.12: Error correlation and the Deviation of Fit Statistics

Model	χ²⁄df	GFI	AGFI	RMSEA
Before Error Correction	2.732	.901	0.870	0.058
After Error Correction	2.560	0.907	0.876	0.055

Structural Equation Modeling

SEM assumes a correlation between exogenous variables. Savings, loans, remittances, and insurance are the four exogenous factors considered. The route map includes five endogenous variables: financial inclusion, economic empowerment, social empowerment, personal development, and regional growth. Error terms are required for each endogenous variable used in SEM. Therefore, e28, e29, e30, e31, and e32 are the five error terms. The model's endogenous variables are affected by the model's exogenous variables.

The chi-square test for the theoretical structural model yielded a significant result (p0.05) of 863.099 with 304 degrees of freedom, suggesting a poor match. It has been said, however, that the chi square

is very sensitive to sample size, and that larger samples tend to imply a worse fit (Byrne, 2001). All of the other fit metrics fall inside the 0.90 threshold (2df = 2.839, GFI =.887, AGFI = 0.860, RMSEA = 0.060). The model has a construct reliability of 0.813. The statistics of the fit show that the theoretical model matches the data rather well.

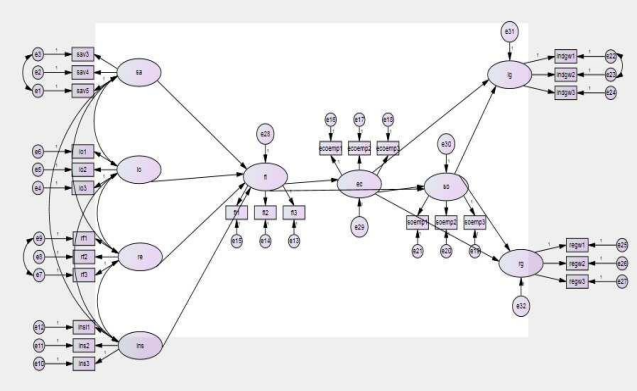

Figure 3.3: Mode d'Equation Structurale

Path Goal Model

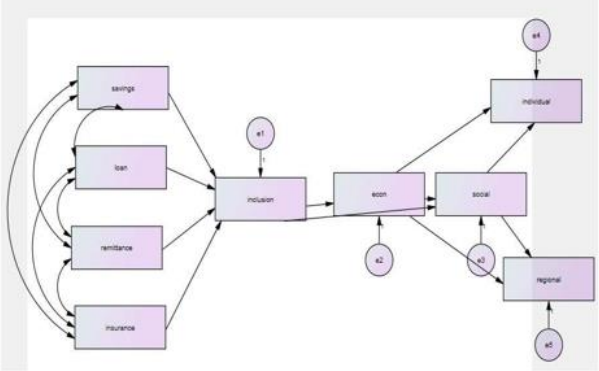

Figure 3.4: Path Goal Model

The route goal model suggests that savings, remittances, and insurance all have a direct impact on financial inclusion at the 5% level. At the 5% level, the impact of financial inclusion on economic independence is clear.

There is a clear correlation between economic and social empowerment, and this correlation becomes substantial at the 5% level. Individual and regional development benefit directly from social empowerment, which is statistically significant at the 5% level. It is also investigated that the 5% level of significance of financial inclusion has an indirect influence on social empowerment. Individual and regional development are impacted indirectly, although economically empowering individuals has a major impact at the 5% level. It may be inferred that economic and social empowerment have mediated the inclusive development to a modest degree.

4. CONCLUSION

The Structural Equation Model examines the relationship between financial inclusion and other variables, finding that savings, remittances, and insurance all have a significant role. It has been noticed that more access to financial services leads to greater economic independence. There is a clear correlation between economic and social empowerment. An individual's and a region's development are both impacted by social empowerment. The indirect link between financial inclusion and increased social agency is also explored. Individual and societal development benefit indirectly from economic empowerment. We infer that economic and social empowerment have mediated the inclusive development to a modest degree.

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