

## Financial Inclusion Index Through Mgnregs in Tamilnadu, India

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### Abstract

The provision of services to economically disadvantaged people in rural areas through payment and receipt in the form of banking services is referred to as financial inclusion. This study's main goal is to calculate the degree of dimensions and the financial inclusion index scores for Tamilnadu's 37 districts. Financial inclusion index has three dimensions Banking Availability services (D1), Penetration (D2), Disbursement (D3). Secondary data has been collected from mgnrega website (2022-23), books and journals. The analysis of the study is to used FII formula and give rank accordingly. The major finding the district of Tiruvannamalai (1.00) leads high financial inclusion index including 8 districts, 10 districts are coming under medium level inclusion and 19 districts belong to low-level financial inclusion. The government have initiated to improve low level financial inclusion districts.

**Keywords:** Financial inclusion index, MGNREGA, Availability, Banking Penetration and Disbursement, Tamilnadu.

### Introduction

Women and vulnerable groups must have access to financing in order to fight poverty and advance social cohesion. This needs to be the center of gravity of our initiatives to support inclusive growth. The adoption of programmes like MGNREGA (the Mahatma Gandhi National Rural Employment Guarantee Act) might facilitate the connection between financial inclusion and women's empowerment. MGNREGA helps achieve more general development objectives by concurrently boosting financial inclusion and women's empowerment. It contributes to the improvement of rural infrastructure, the reduction of gender disparities, the alleviation of poverty, and the promotion of social and economic growth in rural regions. A positive feedback loop is created when financial inclusion and women's empowerment go together because economically empowered women are more likely to engage in financial activities and make decisions that will enhance their general well-being.

### MGNREGA ACT

It seeks empower women and rural labourers by providing additional jobs at a guaranteed minimum wage and by facilitating financial inclusion. The programme directly deposits earnings into bank accounts to reduce corruption, expedite the delivery of benefits, and link wage labourers to bank accounts, even if financial inclusion is not its primary objective.

## Review of Literature

Abdul Azeez and Jawed Akhtar (2011) examined to gauge the extent of financial inclusion gained using the application of MGNREGS, they are developing the IFI. They use 3 dimensions to calculate their financial inclusion index. The total number of banks in which MGNREGS salary transfers of value occur, the proportion of MGNREGS employees who have bank accounts, and the amount of MGNREGS wages paid out through bank accounts are the variables used to measure banking penetration.

Gupta and Fearooz (2014) analysed the researcher's list of the major challenges that banks and post offices must solve to encourage quick financial inclusion. Additionally, the number of bank accounts being opened in the research area has increased significantly. They recommend rising number of awareness programs in villages to completely inform rural populations of basic banking services.

Bhuvana and Vasantha (2016) proposed the researcher analyzed the financial inclusion index through Tamil Nadu, took four dimensions penetrations of the branch, credit, deposit and availability of business correspondent. In many districts of Tamil Nadu, financial inclusion is quite low in rural areas. The Government of India and relevant organizations should consider the districts that don't have access to financial services in order to improve the degree of financial inclusion.

Rifaya Meera and Kaleeswaran (2017) analysed 11 blocks in virudhunagar district, measured High, medium and low-level blocks financial inclusion using FII. Researchers selected three dimensions availability, banking penetration and disbursement, they recommend We cannot attain improved financial inclusion without sufficient employment engagement. Nevertheless, increasing the number of branches is not the answer to being financially included because so many rural poor people lack access to financial services, this leads to appropriate innovation and the development of diverse technologies that serves as a business connector and facilitator.

Jegadeeshwaran and Basuvaraj (2020) The authors analysed 32 districts in tamilnadu, employing FII, high, medium, and low financial inclusion districts were measured. Researchers looked at three factors: availability, accessibility, and use. Reaching out to rural communities has been the fundamental goal of financial inclusion in order to prevent their complete exclusion from the urban poor. The government should support the model of individual business correspondents, that allows the individual as well as the supplier side a chance to profit from it.

Singh, K. (2020) proposed this study, the financial inclusion index was created utilising the main component conduct while accounting for four indicators. The statistics show that between 2019 and 2013, the financial inclusion index's value increased in seven of the 19 districts that were examined. The empirical study mentioned evaluates the factors that determine overall inclusion found that metrics like households with active job cards, fund utilisation, labour cost, and number of employment have a significant impact on financial inclusion.

Pradhan and Chandra Das (2022) The purpose of the study carried out in the Indian state of West Bengal is to evaluate the levels of financial inclusion and how they relate to income in each district of the state. The number of branches, the number of accounts, the amounts of deposits, and the quantities of credit of scheduled commercial banks were the four

banking indicators or dimensions that the researchers used to measure financial inclusion. The research timeframe ranges from 1997 to 2018. The results show that all other districts in West Bengal, with the exception of Kolkata, have poor levels of financial inclusion, as evidenced by their low IFI scores. The state's capital city, Kolkata, comes out as the region with the best record for financial inclusion.

### Importance of Financial Inclusion Index

- It will help in policy formulation by the government.
- It will help in keeping track of the outcomes of government policies and programs related to financial inclusion.
- It will help the government to make necessary modifications to its policies and programs.
- Financial inclusion index will help to focus on lagging areas of financial inclusion so that special efforts could be made.
- It will help India achieve the requirements of G20 FII.

### Objectives

- To understand the financial inclusion index's dimensions.
- To generate financial inclusion Index Score for Tamilnadu's various districts and Rank them accordingly.

### Method of the Study

The secondary data found in books, journals, the mnrega website, and RBI publications were used in the current study. The researcher used data linked to 2022–2023 because the study's findings should be current. FII is a multidimensional indicator created to assess the level of financial inclusion. According to Bhuvana (2016), the FII comprises the dimensions of banking penetration, availability, and disbursement. The IFI ranges from 0 to 1, with 0 representing total financial exclusion from an economy. The availability, penetration, and utilisation dimensions were calculated using variables like deposit and credit, branch count, and credit deposit ratio. The calculation of the financial inclusion index Three formulations been put to use by the researcher. Three distinct formulas were used to determine the FII. FII (2nd formula), followed by the dimension index (1st formula), can be used if just one variable is taken into account for each dimension.

### Dimensions Measure in FII

**Table.1 Dimensions Measure in FII**

Indicator	Dimensions
Financial Inclusion Index	Availability Dimension
	Dimension of banking Penetration
	Dimension of Banking Disbursement

#### a. Financial Inclusion Index (IFI)

The Financial Inclusion Index supports the development of targeted financial inclusion interventions by assisting stakeholders, policymakers, and researchers in identifying gaps in financial access and usage. It allows nations to evaluate the success of their financial inclusion

initiatives and assess how they stack up against regional or international standards by monitoring development over time. It is significant to remember that various organisations and nations may use different unique procedures and indicators to determine the Financial Inclusion Index. The following are the several FII sizes:

### **i. The Availability Dimension (Dimension D1)**

The physical accessibility and existence of formal financial services, products, and institutions within a certain geographic area are referred to as the availability dimension of financial inclusion. In order to meet their various financial demands, it places a strong emphasis on ensuring that people, households, and enterprises have enough access to a variety of financial services. There are about 400 operational banks in the states where MGNREGS personnel can access banking services.

### **ii. Dimension of Banking Penetration (Dimension D2)**

A maximum number of individuals should use an inclusive financial system, meaning that it must be broadly adopted by its users. The number of persons with a current account, which can also be a bank account, is referred to as the "banking population," and it serves as a proxy for the systemic penetration of banks. This indicator would have a value of 1 if every person in the economy had a bank account. Here, we quantify this dimension using the percentage of MGNREGS personnel who have a bank account.

### **iii. Dimension of Banking Disbursement (Dimension D3)**

Many people become accustomed to banking and engage in the financial system since wages are received through banks. Here, we take into consideration the MGNREGS salary that was paid via bank account. The MGNREGA will become the largest programme for the financial inclusion of the rural poor with 74.04 lakh employee accounts, and wages will be paid through this account. The suggested financial inclusion index (FII) values from 0 to 1, with 0 signifying complete financial exclusion, the lowest level of inclusion, and 1 signifying full inclusion. We think that academic scholars and policymakers will benefit most from such an index. The following equation is used to determine the dimensional index of dimension 1.

$$D_i = \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}} \quad (1)$$

As a result, visualise a state as a point (d1, d2, d3) in a three-dimensional Cartesian space, where d1, d2 and d3 represent the dimension indices for districts i that were calculated using the formula above, taking into account the number of banks, the number of bank accounts covered by MGNREGS, and wages disbursed through the bank. The worst-case scenario (complete financial exclusion) is represented in the 3 dimensional Cartesian space by the point (0,0,0), and best-case scenario (full financial inclusion) is represented by the point (1,1,1). The FII for district i is calculated using the point's normalised inverse Euclidean distance from the ideal point (1,1,1) at the point (D1, D2, D3). Algebraically,

$$FII = 1 - \sqrt{((1 - D1)^2 + (1 - D2)^2 + (1 - D3)^2) / 3} \quad (2)$$

According to the FII value, districts are divided into three categories in Table 2.

- $0.5 < FII < 1$  denotes HFL
- $0.3 < FII < 0.499$  denotes MFL

➤  $0 < FII < 0.299$  denotes LFL.

HFL- High Financial Inclusion; MFL -Medium Financial Inclusion; LFL -Low Financial Inclusion.

**Table .2 District wise Dimensions data for Financial Inclusion (2022-2023)**

Sl.No	District	Number of Banks	No.of employees with bank account	Unskilled Wages disbursed through bank account
1	ARIYALUR	31643	238086	8249.98
2	CHENGALPATTU	73287	225425	34084.35
3	COIMBATORE	52761	99730	7686.73
4	CUDDALORE	133043	591847	24050.82
5	DHARMAPURI	45078	232959	11776.91
6	DINDIGUL	67720	319405	29483.06
7	ERODE	29449	161180	17557.37
8	KALLAKURICHI	65311	462829	19356.4
9	KANCHIPURAM	67478	135739	21893.52
10	KANNIYAKUMARI	25177	46504	5489.19
11	KARUR	17627	150398	15262.16
12	KRISHNAGIRI	90437	265258	25907.63
13	MADURAI	94519	289505	24749.24
14	MAYILADUTHURAI	32755	220697	20245.79
15	NAGAPATTINAM	39201	150620	14332.23
16	NAMAKKAL	102841	202126	15601.98
17	PERAMBALUR	30249	152582	7633.14
18	PUDUKKOTTAI	105176	326417	32286.73
19	RAMANATHAPURAM	36391	231738	21547.84
20	Ranipet	47837	159268	16117.59
21	SALEM	134058	386186	26027
22	SIVAGANGAI	96759	207446	24759.46
23	TENKASI	43354	165416	12989.77
24	THANJAVUR	116603	340590	24341.94
25	THE NILGIRIS	25992	42137	2528.34
26	THENI	27779	102392	4118.37
27	THOOTHUKKUDI	94147	164215	16647.35
28	TIRUCHIRAPPALLI	128369	349865	41717.21
29	TIRUNELVELI	58966	117164	12552.63
30	TIRUPATHUR	46801	130799	11589.34
31	TIRUPPUR	106190	163975	20542.25
32	TIRUVALLUR	124434	287187	33597.8
33	TIRUVANNAMALAI	168872	607495	59564.64
34	TIRUVARUR	62741	263570	12661.32

35	VELLORE	52099	156331	15690.96
36	VILLUPURAM	125402	513942	36658.57
37	VIRUDHUNAGAR	47384	245692	26020.74

Source:www.mgnrega.nic.in

From Table 2, Tamil Nadu has the most banks, based on Dimension 1. Tiruvannamalai district and fewest number of banks in Karur district. In dimension 2, the highest number of workers with bank account in Tiruvannamalai district and lowest number of workers with bank account in The Nilgiris. In dimension 3, the maximum wages pay through bank account in Tiruvannamalai district and less amount of wages pay through bank account in The Nilgiris.

**Table.3 Financial Inclusion Index in Tamilnadu**

Sl.No	District	Dimension 1	Dimension 2	Dimension 3	FII	RANK
1	Ariyalur	0.092670832	0.34659278	0.100315764	0.171423119	30
2	Chengalpattu	0.368012166	0.32419812	0.55326187	0.406790716	13
3	Coimbatore	0.232298588	0.10186997	0.090440474	0.139128049	32
4	Cuddalore	0.763106218	0.97232196	0.377347058	0.615040511	4
5	Dharmapuri	0.181500215	0.33752419	0.162152349	0.223081989	23
6	Dindigul	0.331204337	0.49042907	0.47258886	0.426963446	11
7	Erode	0.078164567	0.21056216	0.263499385	0.180360683	28
8	Kallakurichi	0.315276538	0.74411612	0.295041228	0.413686759	12
9	Kanchipuram	0.329604284	0.16556235	0.339523777	0.273835316	20
10	Kanniyakumari	0.049919006	0.00772431	0.051911677	0.036302881	36
11	Karur	0	0.19149106	0.223258171	0.13262569	33
12	Krishnagiri	0.481404344	0.39465436	0.40990194	0.427403423	10
13	Madurai	0.508393666	0.43754223	0.389592242	0.443034064	9
14	Mayiladuthurai	0.100023141	0.31583528	0.310634631	0.235525381	22
15	Nagapattinam	0.142642732	0.19188373	0.206953992	0.180033463	29
16	Namakkal	0.563416972	0.28298706	0.229216131	0.342018221	16
17	Perambalur	0.083453998	0.19535409	0.089500897	0.12126602	34
18	Pudukkottai	0.578855499	0.50283183	0.521744749	0.533357038	7
19	Ramanathapuram	0.124063605	0.33536449	0.333463075	0.257644202	21
20	Ranipet	0.19974214	0.20718023	0.238256163	0.21488228	25
21	Salem	0.769817184	0.60855069	0.411994817	0.571060693	5
22	Sivagangai	0.523204073	0.29239703	0.389771426	0.394355651	14
23	Tenkasi	0.170101491	0.21805475	0.183417052	0.190272142	27
24	Thanjavur	0.65440841	0.52790091	0.382451176	0.508852482	8
25	The Nilgiris	0.055307613	0	0	0.018089667	37
26	Theni	0.06712288	0.10657849	0.02787751	0.066639788	35
27	Thoothukkudi	0.50593408	0.21593044	0.247544283	0.310784064	18
28	Tiruchirappalli	0.732202717	0.54430644	0.687086469	0.645370201	3
29	Tirunelveli	0.273324738	0.13270706	0.17575281	0.191784393	26
30	Tirupathur	0.192892327	0.15682453	0.158863741	0.169362116	31

31	Tiruppur	0.585559853	0.21550593	0.315832373	0.353141714	15
32	Tiruvallur	0.706185328	0.43344217	0.544731338	0.547383758	6
33	Tiruvannamalai	1	1	1	1	1
34	Tiruvarur	0.298284241	0.39166864	0.177658439	0.283825512	19
35	Vellore	0.227921584	0.20198529	0.23077619	0.220120132	24
36	Villupuram	0.71258554	0.83452432	0.598394882	0.699291978	2
37	Virudhunagar	0.196747	0.3600462	0.411885063	0.316714938	17

Source: Computed Secondary data

From Table 3, In 37 districts from Tamilnadu for which 3 dimensions of FII estimated through rank, the district of Tiruvannamalai (1.00) leads high financial inclusion index followed by 8 districts. Madurai (.44303) leads medium financial inclusion index followed by 10 districts. Tiruvarur (.2838) leads low financial inclusion index followed by 19 districts.

**Table. 4 Level of Financial Inclusion**

High level	Medium level	Low level
<ul style="list-style-type: none"> <li>• Tiruvannamalai</li> <li>• Villupuram</li> <li>• Tiruchirappalli</li> <li>• Cuddalore</li> <li>• Salem</li> <li>• Tiruvallur</li> <li>• Pudukkottai</li> <li>• Thanjavur</li> </ul>	<ul style="list-style-type: none"> <li>• Madurai</li> <li>• Krishnagiri</li> <li>• Dindigul</li> <li>• Kallakurichi</li> <li>• Chengalpattu</li> <li>• Sivagangai</li> <li>• Tiruppur</li> <li>• Namakkal</li> <li>• Virudhunagar</li> <li>• Thoothukkudi</li> </ul>	<ul style="list-style-type: none"> <li>• Tiruvarur</li> <li>• Kanchipuram</li> <li>• Ramanathapuram</li> <li>• Mayiladuthurai</li> <li>• Dharmapuri</li> <li>• Vellore</li> <li>• Ranipet</li> <li>• Tirunelveli</li> <li>• Tenkasi</li> <li>• Erode</li> <li>• Nagapattinam</li> <li>• Ariyalur</li> <li>• Tirupathur</li> <li>• Coimbatore</li> <li>• Karur</li> <li>• Perambalur</li> <li>• Theni</li> <li>• Kanniyakumari</li> <li>• The Nilgiris</li> </ul>

From table 3, clearly said that Tiruvannamalai, Villupuram, Tiruchirappalli, Cuddalore, Salem, Tiruvallur, Pudukkottai, Thanjavur these districts are comes under high level financial inclusion. Madurai, Krishnagiri, Dindigul, Kallakurichi, Chengalpattu, Sivagangai, Tiruppur, Namakkal, Virudhunagar, Thoothukkudi these districts exhibit the medium level of financial inclusion. Low level financial inclusions are seen in Tiruvarur, Kanchipuram, Ramanathapuram, Mayiladuthurai, Dharmapuri, Vellore, Ranipet, Tirunelveli, Tenkasi, Erode, Nagapattinam, Ariyalur, Tirupathur, Coimbatore, Karur, Perambalur, Theni, Kanniyakumari, and The Nilgiris districts.

## Findings of the Study

- The highest number of banks, number of workers with bank account and wage disbursement in Tiruvannamali district, Tamilnadu through MGNREGA.
- Nearly 8 districts are coming under high financial inclusion.
- 10 districts belong to medium level financial inclusion.
- 19 districts had come under low financial inclusion.

## Suggestions

- Government has to increase wages and number of working days of the workers.
- The government have initiated to improve low level financial inclusion districts.
- Try to motivate the workers to participate more in works.

## Conclusion

The most susceptible populations, who are mainly situated in rural areas, have been improved by a variety of activities over time. The process of including those who are financially excluded is known as financial inclusion. The largest initiative in India to promote financial inclusion is the MGNREG wage payment program. The vast majority of participating rural households, the majority of whom are poor, now have greater financial literacy thanks to the present payment policy of the MGNREG scheme. The poor now have access to the organized financial sector thanks to bank account opening. The financial inclusion has only been attained to a certain extent because banks have only included those whoever were still excluded and who were already receiving services from numerous financial firms. By conducting local surveys, banks should include the unbanked and completely excluded in order to promote inclusive growth. Thus, financial inclusion in tamilnadu overall 50% of districts had financially included.

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