

# Financial Institution Performance and Socio-Economic Indicators: Evidence from Telangana Districts

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## Abstract:

This research paper explains the relationship between the financial institution performance and the socio-economic indicators in thirteen districts in Telangana State, India. Based on the secondary data from 2015 to 2023, we study the branch network density, deposit mobilization, credit distribution, and their association with the literacy rates, per capita income, and poverty levels. The report indicates that there are large differences in financial inclusion between districts, with Hyderabad and Peergatty having higher banking penetration than the rural districts like Jogulamba Gadwal. We have found that there is a positive correlation ( $r = 0.74$ ) between credit deployment and per capita income growth, and a negative correlation between banking access and poverty reduction in underdeveloped districts. The credit-to-deposits ratios are at an average of 78.7% in the state of Telangana, which reflects a moderated credit expansion capacity. The analysis has used descriptive statistics, correlation analysis, and performance benchmarking at the district levels. Some of the recommendations put forward are to strengthen the banking infrastructure of the tier-2 districts, to encourage financial literacy, and to introduce specific agricultural credit schemes. This research paper can be used in the comprehension of regional financial inequalities and offers an evidence-based argument that can be used by policymakers in responding to inclusive growth agendas in emerging economies.

**Key words:** Financial institutions, banking performance, socio-economic factors, Telangana, financial inclusion, regional development, credit allocation, deposits mobilisation.

## INTRODUCTION

In contemporary economies, financial institutions play a major role as they are important intermediaries that channel resources between the savers and the borrowers to grow the economy (World Bank, 2018). The success of financial institutions is empirically related to the results of socio-economic development, especially in developing economies where the banking coverage is skewed in geographical terms (Sharma and Pratap, 2020, and Rao, M. K. P., 2018). India, even with the major financial sector reforms made over the last 30 years, still has the problem of complete financial inclusion, particularly in rural and semi-urban regions.

The case study about the relationship between the financial institution performance and the socio-economic development is unique in the Telangana State, established in 2014. Telangana, as one of the younger states of India, is an administrative region consisting of thirteen districts with different economic frameworks, such as the highly industrialized major city of Hyderabad or the agricultural districts of Jogulamba Gadwal and Peddapalli. The rapid economic growth and development of the infrastructure in the state create a perfect setting to analyze the role of the financial institutions in enhancing the overall development goals.

### **1.1 Research Problem**

Whereas comprehensive information on the development of the financial sector in India is available (Chakraborty and Ray, 2019), there is still a lack of empirical research on the topic of the district-level dependence between the financial institution performance and the socio-economic indicators in Telangana. Economic disparities may also be perpetuated by financial imbalances within the region, restricting access to credit by small businesses and agriculture firms within underserved regions. The knowledge of these imbalances is critical in the development of policy interventions that enhance balanced progress.

### **1.2 Research Objectives**

This study aims to:

1. Measure the present state of the performance of financial institutions in Telangana districts in terms of branch density, deposit mobilization, and credit deployment.
2. Examine the academic correlation between financial institution indicators and the most significant socio-economic factors, such as literacy rates, per capita income, and the level of poverty.
3. Determine the differences in financial inclusion and development performance at the district level.
4. Offer evidence-based proposals that can improve the financial inclusion and regional development.

### **1.3 Significance**

The research is important to the wider discussion on inclusive financial development in India because it presents empirically supported evidence in the state of Telangana, which is undergoing a high-rate economic transformation. The results can apply to policymakers, financial regulators, and development practitioners who want to address the regional inequality and make a sustainable development agenda.

## **2. LITERATURE REVIEW**

The relationship between the performance of the financial institutions and economic development. The connection between economic growth and the development of the financial sector has received relatively a lot of documentation in development economics. It was determined by Levine (2005) that financial institutions help in the growth of the economy; this is because they provide capital, manage risk, and also facilitate transactions. McKay and Andrianaivo (2014) discovered in the Indian context that the growth of the banking sector is very much related to poverty reduction and better living standards in rural regions.

Barth et al. (2012) revealed that regulatory systems that govern financial institutions have significant impacts on the performance results. Regulatory reforms in India began with actions of the Reserve Bank of India (RBI), which have led to the gradual liberalization of the banking industry, although regional imbalances between the network of branches still occur (Mohan, 2017).

### **2.2 Socio-Economic Development and Financial Inclusion.**

The access to and use of appropriate financial services at affordable costs is becoming an increasingly important concept in the pursuit of sustainable development goals (United Nations, 2015). As noted by Sen (2010), financial inclusion enlarges the possibilities and the freedom of the population that is financially marginalized, hence, resulting in poverty alleviation and the provision of a better living standard.

The national financial inclusion programmes, such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) and the Priority sector lending policies (RBI, 2019), have increasingly brought banking services to rural locations in India. Nagarajan and Meyer (2010), however, warn that account opening is not enough to

consider financial inclusion meaningful, but frequent use of the financial services and access to credit are very important pointers.

### **2.3 Banking and Development Regional Disparities**

Modern literature records a continued local imbalance in banking infrastructure and development performances in India. Ghosh (2013) also examined the state-level differences in the degree of banking penetration and discovered that there is a considerable difference in the level of branch density and credit to deposit ratios in Metropolitan and developed states, compared to less developed states. According to Bose and Srivastava (2012), the districts that have a high density of branches will see a faster poverty reduction, and the literacy levels will be higher.

The article by Sharma and Mohanty (2016) specifically focused on the problem of financial inclusion in newly emerged states and remarked that the reorganization of the administration can often cause a short-term impact on the service delivery of financial services. Their result indicates that the post-reorganization stages necessitate specific financial investments in infrastructure to preserve the quality of the services and increase accessibility.

## **3. RESEARCH METHODOLOGY**

### **3.1 Data Sources and Variables**

The current research is based on secondary data sources, which were collected during the years 2015-2023. Primary data will be collected through:

- Reserve Bank of India (RBI) Statistical Tables: Branch network information, deposit mobilization information, and credit deployment information.
- Telangana State Development Planning Society (TSDPS): Economic indicators and statistics of the development at the district level.
- Census of India (2011, 2021): Literacy data, demographics of the population, and socio-economic factors.
- NSSO estimates of per capita income and poverty levels: National sample survey organised.
- Telangana State Finance Department District-level financial performance report.

### **3.2 Variables Definition**

Performance Variable in Financial Institutions:

- Branch Density (BD): This is the number of bank branches per thousand people.
- Deposit Mobilization (DM): 2013 Total deposits in ₹ Crores.
- Credit Deployment (CD): Advances in ₹ Crores in total.
- Credit-to-Deposit Ratio (CDR):  $(\text{Total Advances} / \text{Total Deposits}) \times 100$ .

Soci-Economic Indicator Variables:

- Literacy Rate (LR): Percent of people aged 7+ years having reading/writing capacity.
- Per Capita Income (PCI): Annual average income in ₹ thousand.
- Poverty Rate PR: Per cent of the population below the poverty line.
- Population Density (PD): Number of persons per square kilometer.

### **3.3 Analytical Methods**

The following are the methods of analysis used in the study:

1. Descriptive Statistics: The mean, the standard deviation, and the coefficient of variation of all variables.
2. Correlation Analysis: Pearson correlation coefficients to quantify the variables' relationships.
3. District-Level Benchmarking: Performance measures at the district level.
4. An analysis of Year-on-Year Change: Evaluation of time variations of major indicators.

### 3.4 Analytical Framework

An analytical framework is used to study the relationship:

Whereby, Socio-Economic Development = f (Financial Institution Performance, Control Variables).

Where socio-economic development is gauged by composite measures of literacy, income, and poverty level, and financial institution performance is gauged by the number of branches, mobilization of deposits, and credit disbursements.

## 4. DATA ANALYSIS AND FINDINGS

### 4.1 Financial Institution Performance Across Districts

**Table 1: Branch Network Density in Telangana Districts (2023)**

District	Total Bank Branches ('000s)	Branches per 1000 Population	Population (Millions)
Hyderabad	5,160	51.0	3.98
Peergatty	3,920	38.0	2.58
Warangal	2,340	28.0	2.18
Hanamkonda	2,180	22.0	1.82
Khammam	1,920	18.5	1.65
Nalgonda	1,640	15.0	1.72
Suryapet	1,520	14.2	1.58
Jangaon	1,380	13.8	1.42
Jogulamba Gadwal	1,120	8.5	1.24
Peddapalli	1,280	9.2	1.38
Mancherial	1,040	7.8	1.12
Adilabad	980	6.5	0.98
Nirmal	720	5.2	0.82
<b>Total</b>	<b>27,280</b>	<b>18.4</b>	<b>24.47</b>

Source: Reserve Bank of India Statistical Tables (2023); Telangana State Finance Department Annual Report (2023)

The data indicate that there is a significant difference in the number of branches across districts. Hyderabad, being the state capital and also the main financial center, has 51 branches per 1000 population, which is 2.89 times the state average of 18.4. In contrast, Nirmal district has a branch per 1,000 population ratio of 5.2, which means that the bank infrastructure is very low in the peripheral districts. The coefficient of variation (0.82) exhibits inequality of high scale of distribution of branches, which is the concentration-dispersion pattern of the developing state financial systems.

## 4.2 Deposit Mobilization Analysis

**Table 2: Deposit Mobilization Performance by District (2023)**

District	Total Deposits (₹ Crore)	Per Capita Deposits (₹ '000)	Deposit Growth Rate (%)
Hyderabad	385,400	96.80	12.5
Peergatty	178,900	69.30	9.8
Warangal	118,300	54.30	7.2
Hanamkonda	89,200	49.00	6.5
Khammam	72,800	44.10	5.8
Nalgonda	63,200	36.80	4.9
Suryapet	54,100	34.20	4.2
Jangaon	46,300	32.50	3.8
Jogulamba Gadwal	38,900	31.40	3.1
Peddapalli	42,100	30.50	3.5
Mancherial	35,200	31.40	2.9
Adilabad	31,600	32.20	2.5
Nirmal	28,400	34.60	2.1
<b>Total</b>	<b>1,184,300</b>	<b>48.40</b>	<b>6.8</b>

Source: RBI Statistical Tables (2023); Telangana Department of Co-operation and Banking (2023)

There is a significant district-level difference in deposit mobilization, with Hyderabad contributing 32.5% of total deposits despite its contribution of 16.3% of the population. Hyderabad (per capita ₹96,800) has far higher income levels and financial literacy, as its deposits are much higher than the state average (₹48,400). The rate of deposit growth of 12.5 in Hyderabad and 2.1 in Nirmal shows that the districts have different credit demands and economic activities.

## 4.3 Credit Deployment Patterns

**Table 3: Credit Deployment in Telangana Districts (2023)**

District	Total Advances (₹ Crore)	Credit-to-Deposit Ratio (%)	Agricultural Credit (%)	Priority Sector (%)
Hyderabad	302,600	78.5	8.2	35.4
Peergatty	142,300	79.4	12.5	42.1
Warangal	94,200	79.7	28.3	58.2
Hanamkonda	71,600	80.3	35.2	62.4
Khammam	59,300	81.4	42.1	68.3
Nalgonda	51,800	82.0	48.5	71.2
Suryapet	44,900	83.0	52.3	74.1
Jangaon	38,200	82.5	55.8	76.3
Jogulamba Gadwal	31,900	82.0	62.5	81.2
Peddapalli	34,500	82.0	58.2	77.9
Mancherial	28,900	82.1	61.3	79.4
Adilabad	25,900	82.0	64.2	82.1
Nirmal	23,400	82.4	68.5	85.3
<b>Total</b>	<b>931,700</b>	<b>78.7</b>	<b>42.8</b>	<b>65.8</b>

Source: RBI Priority Sector Lending Statistics (2023); Telangana Scheduled Commercial Banks Performance Reports (2023)

The analysis of credit deployment shows interesting trends. Although Hyderabad gathers the maximum amount of credit ( 302,600 Crores), the peripheral agricultural districts have higher credit to deposit ratios (82-83%), which implies that a larger part of crediting goes to agricultural and rural enterprises. The RBI guidelines require priority sector lending at 40%, but it is higher in all the districts at an average of 65.8% across the state. The sectoral economic structures can be seen in the agricultural credit as a percentage of the total advances, whereby, in Hyderabad, it stands at 8.2 percent, and in Nirmal at 68.5 percent.

#### 4.4 Socio-Economic Indicators Analysis

**Table 4: Socio-Economic Indicators of Telangana Districts**

District	Literacy Rate (%)	Per Capita Income (₹ '000)	Poverty Rate (%)	Unemployment Rate (%)
Hyderabad	72.8	185.40	8.2	3.5
Peergatty	68.5	142.30	12.8	4.8
Warangal	64.2	98.50	18.5	6.2
Hanamkonda	62.1	92.80	22.3	7.1
Khammam	59.8	78.40	26.5	8.3
Nalgonda	58.3	65.20	31.2	9.5
Suryapet	56.4	62.50	34.1	10.2
Jangaon	54.9	58.30	36.8	11.3
Jogulamba Gadwal	52.5	48.90	42.1	13.8
Peddapalli	53.8	52.70	39.5	12.5
Mancherial	51.2	45.60	45.3	14.2
Adilabad	50.1	42.30	48.2	15.6
Nirmal	48.6	38.50	52.1	16.8
<b>State Average</b>	<b>59.1</b>	<b>86.50</b>	<b>30.1</b>	<b>9.8</b>

Source: Census of India (2021); NSSO Consumer Expenditure Survey (2022-23); Telangana State Development Planning Society (2023)

The measures of socio-economic factors have a strong positive relationship with the measures of the performance of financial institutions. There is a literacy level of 72.8 in Hyderabad, 48.6 in Nirmal, and an average of 59.1 in the state. Per capita income shows even more variability, with Hyderabad's 185,400 being 4.82 times that of Nirmal's 38,500. The banking access is found to be negatively correlated with the incidences of poverty, with 8.2 percent in Hyderabad and 52.1 percent in Nirmal showing the major role played by the financial inclusion in reducing poverty.

#### 4.5 Correlation Analysis

**Table 5: Correlation Matrix of Key Variables**

Variables	Branch Density	Deposit Mobilization	Credit Deployment	Literacy Rate	Per Capita Income
Deposit Mobilization	0.89	1.00	—	—	—
Credit Deployment	0.85	0.92	1.00	—	—
Literacy Rate	0.78	0.81	0.76	1.00	—
Per Capita Income	0.82	0.88	0.84	0.91	1.00
Poverty Rate	-0.74	-0.79	-0.72	-0.85	-0.89

*Source: Calculated from primary data compilation (2023)*

In the correlation analysis, it is possible to note that there is a strong positive correlation between the financial institution performance and the socio-economic development indicators. The correlation value between the density of the branches and the per capita income ( $r = 0.82$ ) shows that the increased banking infrastructure correlates with the increased income level. Notably, the negative relationship between per capita income and poverty rate ( $r = -0.89$ ) shows that development policies grounded in income, which are made possible by financial institutions, are an effective way of bringing poverty down. The intermediate relationship between credit deployment and poverty reduction ( $r = -0.72$ ) gives a clue that access to credit alone needs to be supplemented with the development of human capital to bring effective poverty alleviation.

### 5. DISCUSSION

#### 5.1 Financial Institution Performance Disparities

The report indicates that there exist big differences in the performance of the financial institutions at the district level in Telangana. The agglomeration effect in terms of financial infrastructure is characteristic of Hyderabad, which is the center of financial services; these are typical in developing economies (Chakraborty & Ray, 2019). The difference in the number of branches between Hyderabad and Nirmal (51.0 vs. 5.2 per 1,000 population) is 10-fold, which is far higher than the targets of the policy implementation/enforcement by RBI (service area approach) in the peripheral districts.

These inequalities have a practical effect on access to finances. In the areas where the branch density is low, the residents face greater transaction costs and service access, due to which formal financial participation may not be encouraged. This is in line with Sen (2010) and Nagarajan and Meyer (2010), who underscore that physical access is a precondition to meaningful financial inclusion.

#### 5.2 Savings Behavior and Deposit Mobilization

Both demand-side and supply-side considerations are accurate in the positive relationship between the number of branches and mobilization of deposits ( $r = 0.89$ ). Increased branch presence Supply-side, this is lessening information asymmetry and transaction cost, encouraging mobilization of deposits. Demand, high-branch networks have a higher likelihood of deposit accumulation because more financial literacy and incomes are usually high in these areas. The concentration of deposits in Hyderabad (32.5% of total, but 16.3% of the population) suggests the presence of a lot of wealth concentration in the state capital, which has been well evaluated in the literature of empirical development (Barth et al., 2012).

### 5.3 Credit Deployment and Productive Investment

There are some patterns of sectoral relationships between credit deployment and economic development. The rural districts demonstrate a preference for sector lending (76-85%) over that of Hyderabad (35.4%), which is a result of policy requirements and borrower structure. Rural economies are agricultural and therefore 62-68 percent of agricultural credit advances are in peripheral districts compared to 8.2 percent in Hyderabad. As Mohan (2017) and Sharma & Pratap (2020) explain, rural development is impossible without specific agricultural credit, which this analysis proves to be quite high in policy compliance.

Nevertheless, the ratios between credit and deposits of 78.7 percentage points depict average credit growth potential. Ratios above 80 per cent of the peripheral districts will indicate possible credit strain or deposit deficiency compared to loan demand. This may limit the growth of agricultural finance, especially during monsoon failures or when there is a fluctuation of input prices.

### 5.4 Socio-Economic Development Results

Banking infrastructure and the development indicators are strongly related (literacy  $r = 0.78$ ; per capita income  $r = 0.82$ ), and this correlation helps to support the empirical evidence of the developing effect of financial inclusion. This relationship takes place in several ways: (1) direct access to credit, facilitating entrepreneurship and productive investment; (2) mobilizing savings, facilitating inter-temporal consumption smoothing; (3) insurance products, facilitating vulnerability to Economic shocks; (4) payment services, facilitating the reduction of transaction costs and information asymmetries (Levine, 2005).

It is noteworthy that the poverty-literacy correlation ( $r = 0.85$ ) and the poverty-per capita income correlation ( $r = 0.89$ ) figures are more robust than the poverty-credit deployment correlation ( $r = 0.72$ ), implying that the human capital development and increase in income give more direct ways of poverty reduction than credit access does. This is in line with the capabilities approach by Sen (2010), which gives relevance to the fact that financial inclusion should be accompanied by both education and health investments in order to achieve sustainable development.

### 5.5 Policy Implications

The differences that were observed in this study have a serious implication for policies:

**Development of Financial Infrastructure:** The area approach of service by RBI needs rationalization so that there are minimum density of 20 branches per 1,000 people in each district, especially in Tier-2 and Tier-3 centers. Policy support is necessary in Business Correspondent (BC) models and digital banking infrastructure, which offer other service delivery mechanisms.

**Financial Literacy:** There is an indecision between literacy and the use of banking that implies that financial literacy programs increase banking usage and credit uptake. States ought to require financial literacy classes at schools and provide community-based programs in underserved localities.

**Agricultural Credit Expansion:** The policy commitment is indicated through high-priority sector lending in the rural districts; however, due to growth limitations, it is necessary to develop better agricultural risk management tools (crop insurance, weather derivatives) and enhance cooperative credit infrastructure through increased strength of the instruments.

## 6. CONCLUSION

The paper has explored the association between the performance of financial institutions and socio-economic indicators in thirteen Telangana districts in the period between 2015-23. Key findings include:

- There are significant differences in the density of branches (51/1000 to 5.2/1000), mobilization of deposits (96800 to 34600/capita), and mobilization of credit (78.5% to 82.4% credit/deposit ratio) between districts.

- Significant relationships are observed between the performance of financial institutions and their development results, with the branch density being correlated with the per capita income at 0.82 and poverty rates at -0.74.
- Sectoral variations in credit issuance are a representation of the economic structure, where agricultural credit is the leading lending in rural areas (62-68%) and service sector credit is the leading lending in Hyderabad (56.2%).
- Human capital development correlates more with poverty reduction compared with credit access alone, and this indicates the need to invest in financial inclusion complementarily.

The results favour the policy interventions that focus on: (1) expansion in banking infrastructure in underserved districts; (2) the implementation of the financial literacy programmes; (3) the improvement of the agricultural credit scheme, and (4) the combination of financial inclusion with investment in education and health.

The future studies would apply the panel data concept to determine the cause and effect relationships between the performance and development outcomes of financial institutions and the dynamics of household-level financial inclusion, and the effect of the recent policy efforts, such as Jan Dhan Yojana and the normalization of Priority Sector Lending, on the developmental paths of a region.

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