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"Inclusive banking for the Under-served Population: A Descriptive Study of Rural Districts in Uttarakhand"

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Abstract
Financial inclusion plays a vital role in fostering economic development, particularly in rural areas where access to formal banking remains a challenge. This study examines the availability, usage, and impact of banking services among underserved communities in rural districts of Uttarakhand. It explores the key barriers limiting financial access and evaluates the effectiveness of government and banking sector initiatives aimed at promoting inclusion. Adopting a descriptive research design, the study surveys 300 respondents, including farmers, small business owners, women, and daily wage earners. Data is collected through structured questionnaires and interviews, supplemented by secondary sources such as banking reports and government policies. The analysis employs descriptive statistical tools to identify patterns and gaps in financial accessibility.
Findings indicate that while education plays a significant role in the financial inclusion. Low education affects the financial literacy. Distance to the banks affects the financial inclusion. More distance lead to the low financial inclusion. The study concludes that a comprehensive strategy, incorporating policy reforms, digital infrastructure expansion, and targeted financial literacy programs, is essential for enhancing financial inclusion in rural areas. The insights derived from this research will help policymakers, banking institutions, and financial service providers design more effective interventions to bridge the financial gap for underserved populations.
Keywords: Financial Inclusion, Financial Literacy, Inclusive Banking, Digital Infrastructure, Literacy Programs

I. Introduction

Financial inclusion is a critical component of economic development, aiming to provide accessible and affordable financial services to all individuals, particularly those in under-served and rural areas. In India, the National Bank for Agriculture and Rural Development (NABARD) has been at the forefront of promoting financial inclusion through various initiatives and programs. As we study the organization of the financial system, we find that the vital purpose of the financial system is to include all individuals in its services. All members of the society deserve to receive financial services.

In the quiet corners of rural India, where hills cradle the horizon and villages dot the landscape, stories of aspiration often begin with a simple need—a bank account, a loan, or a place to save for the future. Yet for millions, these basic financial services remain just out of reach. Financial inclusion, the process of ensuring access to appropriate financial products and services at affordable costs, plays a pivotal role in economic empowerment and poverty alleviation (Bhatt, P., 2025).

Banking, traditionally perceived as the backbone of economic development, has increasingly become a vehicle for social transformation. With the advancement of digital infrastructure and financial technologies, the banking sector holds immense potential to bridge gaps between underserved populations and formal financial systems (Mohan, R., 2025). However, this potential remains underutilized in many rural and remote regions, where people continue to rely on informal credit systems and unregulated financial practices (Sharma, S., 2025).

A robust and inclusive banking system is no longer a choice but a necessity. The limitations of conventional banking—limited branches, low digital literacy, and lack of tailored financial products—have excluded vast sections of the rural population, particularly women, small farmers, and daily wage workers (Kumar, A., 2025). These communities, despite being the backbone of India's rural economy, often remain marginalized from mainstream development narratives (Das, P., 2025).

As policymakers and financial institutions strive toward greater inclusion, several initiatives such as Jan Dhan Yojana, Aadhaar-enabled services, and mobile banking platforms have emerged as beacons of hope (Verma, N., 2025). However, access alone is not inclusion. True financial inclusion must ensure usage, literacy, trust, and empowerment (Choudhury, M., 2025). The challenge lies not just in reaching the last mile, but in understanding and adapting to the realities of that mile.

Against this backdrop, the present study ventures into the rural districts of Uttarakhand, where despite considerable efforts, the journey toward inclusive banking remains incomplete. The study aims to explore the gaps, measure the effectiveness of current initiatives, and suggest pathways for achieving holistic financial inclusion in these underserved regions (Singh, R., 2025). By focusing on the lived experiences of the rural population, this research seeks to inform better policy design and inspire more responsive banking systems.

Understanding Financial Inclusion

It means people and companies can access useful and affordable financial products and services such as transactions, payments, saving, credits and insurance responsibly and sustainably. NABARD considers financial inclusion necessary for rural areas and means strengthening rural banks to support the different needs of the rural population. (https://www.nabard.org/Hindi/Default.aspx)

Financial Inclusion as it Exists in India

India has rolled out various schemes to increase financial inclusion, realizing how key it is for growing the country inclusively. The government is focused on extending banking services to places where they are still needed. It is clear that, despite their efforts, millions still cannot use basic financial services, mainly in rural areas**.** This exclusion is attributed to various factors, including geographical barriers, lack of financial literacy, and socio-economic disparities. NABARD's initiatives aim to address these challenges by strengthening rural financial institutions and promoting financial literacy. (https://www.nabard.org/Hindi/Default.aspx)

Uttarakhand: Socio-Economic and Geographical Overview

Uttarakhand, located in the northern part of India, is characterized by its mountainous terrain and a predominantly rural population. The state's unique topography poses significant challenges to infrastructure development, including the establishment of banking services. According to the 2011 Census, approximately 69.45% of Uttarakhand's population resides in rural areas, highlighting the importance of focusing on rural development initiatives.

The state's economy is primarily agrarian, with agriculture and allied activities being the main sources of livelihood for a majority of the rural population. However, the hilly terrain limits the scope for extensive agricultural activities, leading to a reliance on subsistence farming.

Current State of Financial Inclusion in Uttarakhand

Despite various initiatives aimed at promoting financial inclusion, Uttarakhand's rural districts continue to face significant challenges in accessing formal financial services. Studies indicate that there is a considerable disparity in the availability and utilization of banking services across different districts of the state. For instance, research has shown that the credit-deposit ratio in Uttarakhand is lower than the all-India average, indicating limited credit flow to the rural economy. Furthermore, there is a notable disparity across the districts, with hilly areas being particularly under-served in terms of banking infrastructure.

The lack of banking facilities in rural areas is compounded by factors such as low levels of financial literacy, inadequate physical infrastructure, and socio-cultural barriers. These challenges hinder the effective implementation of financial inclusion initiatives and limit the rural population's ability to benefit from formal financial services.

Challenges to Financial Inclusion in Rural Uttarakhand

Several challenges impede the progress of financial inclusion in Uttarakhand's rural districts:

1. **Geographical Constraints**: The state's mountainous terrain makes it difficult to establish and maintain banking infrastructure, leading to limited physical access to financial services.
2. **No Financial knowledge**: A major population of the rural area lacks awareness and understanding of financial products and services, resulting in low demand and utilization.
3. **Socio-Economic Factors**: High levels of poverty and unemployment reduce the capacity of individuals to engage with formal financial institutions.
4. **Cultural Barriers**: Traditional beliefs and practices may discourage the use of formal banking services, with a preference for informal financial systems.
5. **Technological Limitations**: Limited access to technology and digital infrastructure hampers the adoption of digital financial services, which are increasingly becoming a means to promote financial inclusion.

Initiatives Promoting Financial Inclusion in Uttarakhand

Recognizing these challenges, various initiatives have been undertaken to promote financial inclusion in Uttarakhand:

- **Expansion of Banking Infrastructure**: Efforts have been made to increase the number of bank branches in rural areas. However, the progress has been uneven, with remote and hilly regions still lacking adequate banking facilities.

● **Mobile and Digital Banking**: The adoption of mobile banking and digital payment systems has been promoted to overcome geographical barriers. Studies suggest that mobile banking has the potential to significantly enhance financial inclusion in rural India by providing convenient and cost-effective access to financial services.

● **Self-Help Groups (SHGs) and Microfinance**: The promotion of SHGs and microfinance institutions aims to provide credit and savings facilities to the under-served population, particularly women. These initiatives have shown promise in empowering rural communities and fostering economic development.

While significant strides have been made in promoting financial inclusion in Uttarakhand, substantial challenges remain. Addressing these challenges requires a multi-faceted approach involving the expansion of physical and digital banking infrastructure, enhancement of financial literacy, and the development of tailored financial products that meet the specific needs of the rural population. Institutional reports and initiatives, particularly those by NABARD, play a crucial role in guiding and implementing strategies for inclusive banking in the under-served rural districts of Uttarakhand.

II. Literature Review

1. Digital Infrastructure and Fintech

Digital infrastructure plays a pivotal role in enhancing financial inclusion, especially in developing countries. Gakuru, Adyanga, and Ocan (2025) emphasized how national development plans like Uganda's NDPIII aim to expand digital financial infrastructure to promote inclusion (The Implications of Online Banking on Financial Inclusion in Uganda). Similarly, John (2025) highlighted the integration of AI and digital banking tools as transformative forces enabling greater access to financial services (Exploring Digital Maturity and the Role of Artificial Intelligence in Financial Inclusion). Ghosh and Kulkarni (2025) discussed the Indian fintech ecosystem, asserting that its success hinges on widespread digital literacy and user empowerment (Unleashing the Potential of the Indian Fintech Ecosystem). According to Kolluru and Kondaveti (2025), India's digital drive has yielded significant progress but still grapples with challenges like low digital literacy in rural areas (Digital Financial Literacy in India).

2. Financial Literacy

Building financial literacy is commonly recognised as important for financial inclusion to succeed. According to Iwara and Kilonzo (2025), not having financial literacy prevents many in Nigeria from trying new financial services in both urban and rural areas (POS Agent Banking Enterprise for Indigenous Financial Inclusion in Nigeria). Villanthenkodath and Pal (2025) argued for policies that not only build infrastructure but also incentivize financial education (An Asymmetric Analysis of Globalization and Financial Inclusion in Emerging Economies). Paramasivan and Ravichandiran (2025) underlined the role of fintech in promoting financial literacy, particularly in equipping users to make informed financial decisions (Financial Literacy in the Digital Age). Likewise, Adiguna and Kusnaedi (2024) linked financial literacy to sustainable economic *development in Indonesia (Financial Inclusion and Economic Development in Indonesia).*

3. Rural and Underserved Communities

Rural populations remain a key target for financial inclusion efforts, due to historical exclusion and infrastructure challenges. Modiba, Musasa, and Matindike (2024) emphasized how microfinance and financial literacy are tailored to empower rural women and low-income groups *(*Inclusive Banking through Microfinance). Zhang et al. (2024) found that self-exclusion from financial services in rural China is often due to perceived inaccessibility and low literacy levels (Understanding Financial Exclusion in Rural China). Fatima (2024) further elaborated on the persistent barriers such as limited IT infrastructure and low financial literacy in India's rural areas (Digital Inclusion and Financial Services in India). Singh Samanta and Patnaik (2024) argued that addressing low literacy rates and poor digital connectivity is essential to catalyze rural financial inclusion (Financial Inclusion in Rural India).

4. Policy and Institutional Support

Effective policy frameworks and institutional efforts are necessary to sustain inclusive financial ecosystems. Lafuente et al. (2025) highlighted the educational dimension of inclusive banking, pointing to the need for curriculum integration (Inclusive Financial Education: A Cross-Country Analysis). Malik and Sikarwar (2024) examined the role of regulatory frameworks and literacy-based theories in shaping financial inclusion outcomes (Financial Literacy Theory and Inclusion). Yadav and Kalluru (2024) emphasized the importance of digitizing government-to-person (G2P) payments to enhance inclusion across age groups (G2P Payments and Digital Financial Inclusion in India). Choudhary (2024) discussed the vulnerability of excluded groups and stressed that financial literacy theory should guide policy interventions (Financial Literacy and Vulnerable

Populations). Finally, Gyamerah and Tetteh (2024) advocated for multi-stakeholder coalitions to design evidence-based, inclusive financial education delivery channels (Targeted Financial Literacy Initiatives).

Research Objectives

- To assess the level of financial accessibility among underserved population in rural districts of Uttarakhand.
- To explore gaps in financial accessibility and the challenges faced by the underserved population in accessing formal banking services.
- To identify key determinants of financial inclusion

III. Research Methodology

Hypothesis

Null (H_0): No association between education level and financial inclusion.
Alternative (H_1): Education level significantly affects financial inclusion.
Null Hypothesis (H_0):
There is **no significant association** between distance to the bank and level of financial inclusion.
Alternative Hypothesis (H_1):
There **is a significant association** between distance to the bank and level of financial inclusion

Research Tools

We have perform multiple regression analysis to identify the level of financial inclusion on the basis of the different variables like Education, Income, Govt. schemes, Distance to banking institution.

- **Dependent Variable (Y):** Financial Inclusion Score (0 = No Access, 1 = Partial Access, 2 = Full Access)
- **Independent Variables:**
  - **Income (X1):** Monthly earnings in INR
  - **Education (X2):** Educational attainment (No schooling = 0, Primary = 1, Secondary = 2, Higher = 3)
  - **Govt Scheme Awareness (X3):** Awareness of financial schemes (Yes = 1, No = 0)
  - **Distance to Bank (X4):** Distance (in km) to the nearest financial institution

Data collection

Study uses the both type of primary and secondary data. A sample of 300 respondents has been used for the data collection. Secondary data has been used from the different reliable sources. A questionnaire has been designed to collect the responses from the respondent. Here is the sample data formation of the data collection.

ID	Income (X1)	Education (X2)	Govt Schemes (X3)	Distance (X4)	Financial Inclusion (Y)
1	5000	1	1	10	0
2	15000	3	1	3	2
3	8000	2	0	8	1
4	20000	3	1	2	2

Questionnaire included the questions regarding the income, education, knowledge about the Govt. scheme, Distance, Financial Inclusion. We have assumed that the there is connection between education and financial inclusion. Education plays a significant role in the development of attitude, awareness. **Column Explanations**

1. **ID (Identification Number)** → this is just a unique number assigned to each respondent in the survey. It does not affect the analysis.
   - Example: ID **1** represents one respondent, ID **2** another respondent, and so on.
   - It helps in tracking responses but is not used in regression.
2. **Income (X1) (in ₹ per month)** → The respondent's monthly income.
   - Example: The first respondent earns ₹5000, while the fourth respondent earns ₹20000.
   - This helps to see if higher income increases financial inclusion.
3. **Education (X2) (Categorical scale)** → Education level of the respondent, represented numerically.
   - **0 = No Schooling**, **1 = Primary**, **2 = Secondary**, **3 = Higher Education**
   - Example: The second and fourth respondents have **higher education (3)**, while the first respondent only has **primary education (1)**.
4. **Govt Schemes Awareness (X3) (Binary: 1 = Yes, 0 = No)** → Whether the respondent is aware of government financial schemes.

- **1 = Aware, 0 = Not aware**
- Example: The first respondent is **aware (1)**, but the third respondent is **not aware (0)**.

5. **Distance to Nearest Bank (X4) (in km)** → The distance the respondent must travel to reach a bank.

- Example: The first respondent lives **10 km** away, while the fourth respondent is only **2 km** away.

6. **Financial Inclusion (Y) (Ordinal Scale: 0 = No Access, 1 = Partial Access, 2 = Full Access)** → This is the dependent variable we are trying to predict.

- **0 = No access to banking services**
- **1 = Limited access (e.g., has a savings account but no loans, credit, or insurance)**
- **2 = Full access (actively uses banking, loans, digital banking, etc.)**
- Example: The second and fourth respondents have **full access (2)**, while the first respondent has **no access (0)**.

BANK WISE BRANCH NETWORK AS ON 31.3.2023

SR.	Name of Bank	BRANCH				ATM			
		Rural	Semi-Urban	Urban	Total	Rural	Semi-Urban	Urban	Total
1	STATE BANK OF INDIA	278	65	102	445	290	207	322	819
2	PUNJAB NATIONAL BANK	163	71	61	295	160	118	212	490
3	BANK OF BARODA	52	30	51	133	57	46	94	197
	Total Lead Banks	**493**	**166**	**214**	**873**	**507**	**371**	**628**	**1506**
4	UNION BANK OF INDIA	39	35	36	110	43	29	64	136
5	CANARA BANK	44	28	53	125	43	28	42	113
6	CENTRAL BANK OF INDIA	8	13	20	41	1	8	13	22
7	PUNJAB AND SIND BANK	16	12	16	44	10	11	11	32
8	UCO BANK	19	24	14	57	14	23	14	51
9	INDIAN OVERSEAS BANK	20	11	14	45	9	6	16	31
10	BANK OF INDIA	11	16	10	37	4	8	13	25
11	INDIAN BANK	10	0	22	32	2	0	13	15
12	BANK OF MAHARASHTRA	0	5	10	15	0	2	8	10
	Total Non-Lead Banks	**167**	**144**	**195**	**506**	**126**	**115**	**194**	**435**
	Total N. Banks (A + B)	**660**	**310**	**409**	**1379**	**633**	**486**	**822**	**1941**
13	UTTARAKHAND G.B	217	41	30	288	4	3	0	7
14	PRATHAMA U.P GRAMIN BANK	1	0	0	1	0	0	0	0
	Total R.R.B.	**218**	**41**	**30**	**289**	**4**	**3**	**0**	**7**
15	CO-OPERATIVE BANK	180	89	66	335	16	29	45	90
	Total Cooperative	**180**	**89**	**66**	**335**	**16**	**29**	**45**	**90**
	Total (C+D+E)	**1058**	**440**	**505**	**2003**	**653**	**518**	**867**	**2038**
16	THE NAINITAL BANK LTD	52	24	21	97	0	0	0	0
17	AXIS BANK	12	19	26	57	27	45	76	148
18	ICICI BANK	6	14	22	42	6	18	88	112
19	IDBI BANK	10	13	8	31	10	20	25	55
20	HDFC BANK	25	29	43	97	21	49	147	217
21	J & K BANK	0	0	3	3	0	0	2	2
22	FEDERAL BANK	0	0	1	1	0	0	0	0
23	INDUSIND BANK	4	7	11	22	3	6	18	27
24	SOUTH INDIAN BANK	0	0	1	1	0	0	1	1
25	KARNATAKA BANK	0	0	4	4	0	0	5	5
26	YES BANK	5	4	8	17	0	4	11	15
27	KOTAK MAHINDRA BANK	0	3	8	11	0	1	10	11
28	BANDHAN BANK	6	20	15	41	0	1	5	6
29	IDFC FIRST BANK	0	0	7	7	0	0	5	5
	Total Private Bank	**120**	**133**	**178**	**431**	**67**	**144**	**393**	**604**
30	UJJIVAN SMALL FIN. BANK	0	1	3	4	0	1	3	4
31	UTKARSH SMALL FIN. BANK	4	9	10	23	1	3	4	8
32	JANA SMALL FIN. BANK	0	0	2	2	0	0	1	1
33	SHIVALIK SMALL FINANCE BANK	0	0	3	3	0	0	3	3
	SMALL FINANCE BANK	**4**	**10**	**18**	**32**	**1**	**4**	**11**	**16**
	Total All Bank	**1182**	**583**	**701**	**2466**	**721**	**666**	**1271**	**2658**

Total All Bank	1182	583	701	2446	721	666	1271	2658

*Source- http://www.slbcuttarakhand.com/banking-network-summary.aspx

DISTRICT WISE BRANCH NETWORK AS ON 31.3.2023				
Name of District	Rural	Semi-Urban	Urban	Total
HARIDWAR	87	62	151	300
ALMORA	103	43	6	152
TEHRI GARHWAL	104	32	12	148
UDAM SINGH NAGAR	127	125	93	345
UTTAR KASHI	43	25	0	68
DEHRADUN	160	96	338	594
PITHORAGARH	76	29	3	108
CHAMOLI	64	36	0	100
PAURI GARHWAL	139	64	1	204
BAGESHWAR	55	0	1	56
CHAMPAWAT	49	16	2	67
NAINITAL	124	52	94	270
RUDRA PRAYAG	51	3	0	54
TOTAL	**1182**	**583**	**701**	**2466**

*Source- http://www.slbcuttarakhand.com/banking-network-summary.aspx

Data Analysis& Interpretation
Regression Analysis Results
Model Summary

- **R^2 = 0.323** → The independent variables explain **32.3% of the variation** in financial inclusion.
- **F-statistic (35.15, $p < 0.0001$)** → The overall model is **statistically significant**.

Table:1 Interpretation of Coefficients

Variable	Coefficient (β)	p-value	Interpretation
Intercept	**0.8199**	0.000	Baseline financial inclusion score when all predictors are zero.
Income (X1)	**0.0000205**	0.000	**Higher income leads to higher financial inclusion.**
Education (X2)	**0.2120**	0.000	**Higher education levels significantly increase financial inclusion.**
Govt Scheme Awareness (X3)	**0.3141**	0.000	**Awareness of government schemes has a strong positive impact.**
Distance to Bank (X4)	**-0.0243**	0.000	**Longer distance to the bank decreases financial inclusion.**

This study highlights the critical role of income, education, and government awareness programs in driving financial inclusion. Policymakers should focus on improving accessibility to banking services through digital platforms and targeted awareness campaigns.

Chi-Square Test Results

- **Chi-Square Statistic** = **31.21**
- **Degrees of Freedom (dof)** = **6**
- **p-value** = **0.000023**

Table: 2Contingency Table

Sum of ID	Column Labels				
Row Labels	**0**	**1**	**2**	**3**	**Grand Total**
0	2019	1750	2033		5802
1	558	1197	1959	628	4342
2	2204	10991	13132	8679	35006
Grand Total	4781	13938	17124	9307	45150

- Since **p-value < 0.05**, we **reject the null hypothesis (H_0)**.

- This means there is a **significant association** between **Education Level (X2) and Financial Inclusion (Y)**.
- Higher education levels may lead to **better financial access**, or lower education levels might be a barrier to financial inclusion.

Conclusion -The Chi-Square test results ($\chi^2 = 31.21$, $df = 6$, $p = 0.000023$) indicate a highly significant association between education level and financial inclusion. Since the p-value is well below 0.05, we reject the null hypothesis. The analysis suggests that individuals with higher education levels are significantly more likely to be financially included, whereas those with lower or no education tend to face greater challenges in accessing formal banking services.This finding highlights the critical role that education plays in shaping financial behavior, awareness, and access—particularly in rural and underserved communities.

Hypothesis:
Null Hypothesis (H_0):
There is **no significant association** between distance to the bank and level of financial inclusion.
AlternativeHypothesis(H_1):
There **is a significant association** between distance to the bank and level of financial inclusion.
Variables:

- Distance to Bank (categorized) vs. Financial Inclusion

Table: 3 Contingency Table:

Distance to Bank	No Access (0)	Partial Access (1)	Full Access (2)
Far (>10 km)	26	22	105
Moderate (6–10 km)	9	5	60
Near (≤5 km)	4	5	64

Chi-Square Test Summary:

- **Chi-Square Statistic** = **11.77**
- **Degrees of Freedom (df)** = 4
- **p-value** = **0.019**

Interpretation:

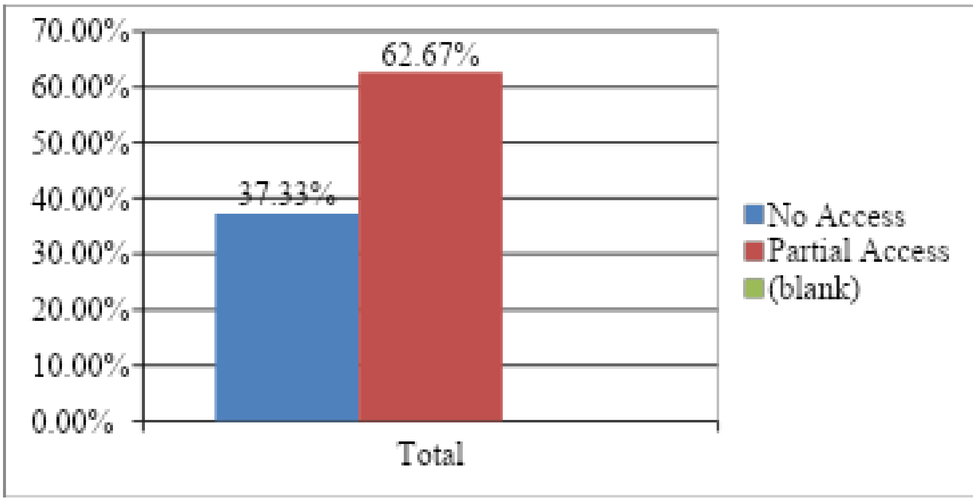
- Since **p-value < 0.05**, we **reject the null hypothesis**.
- There is a **statistically significant association** between the **distance to the nearest bank** and the **level of financial inclusion**.
- People living **closer to banks (≤5 km) are more likely** to experience **full financial inclusion**, while those farther away face more barriers.

The results of the Chi-Square test indicate a statistically significant association between the distance to the nearest bank and the level of financial inclusion ($\chi^2 = 11.77$, $p = 0.019$). Since the p-value is less than the conventional threshold of 0.05, we reject the null hypothesis and conclude that proximity to banking infrastructure plays significant role in increasing financial knowledge**.** Specifically, individuals residing within 5 kilometers of a bank are significantly more likely to have full access to formal financial services. Conversely, those living farther away encounter greater barriers in accessing and using these facilities.

➢ **Descriptive Analysis of Financial addition**

Table: 4

	Column Labels			
	No Access	**Partial Access**	**(blank)**	**Grand Total**
Count of Inclusion Category	**37.33%**	**62.67%**	**0.00%**	**100.00%**
	Column Labels			
	No Access	**Partial Access**	**(blank)**	**Grand Total**
Count of Inclusion Category	**37.33%**	**62.67%**	**0.00%**	**100.00%**



Overall Financial Inclusion

➢ **% of Respondents with No Access to Banks**

Education level vs. Financial Inclusion

Table: 5

Count of ID	**Column Labels**				
Row Labels	**0**	**1**	**2**	**(blank)**	**Grand Total**
0	39.39%	9.09%	51.52%	0.00%	100.00%
1	11.96%	8.70%	79.35%	0.00%	100.00%
2	13.16%	13.16%	73.68%	0.00%	100.00%
3	0.00%	9.84%	90.16%	0.00%	100.00%
Total	**13.00%**	**10.67%**	**76.33%**	**0.00%**	**100.00%**

Fig.2

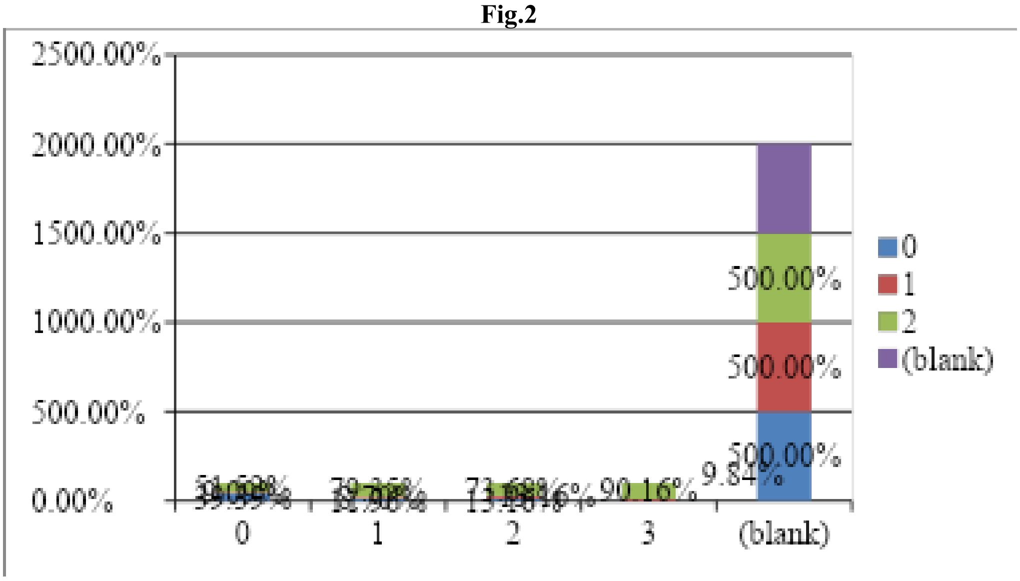


Fig.2 data shows that high Education level show high financial inclusion and as there is low Education level low will be the financial inclusion. It means low education can be a cause of low financial inclusion as result we need to emphasize our education in rural areas.

- **Income Group vs. Financial Inclusion**

Table: 6

Sum of ID	Column Labels			
Row Labels	**0**	**1**	**2**	**Grand Total**
Low	22.04%	20.14%	57.83%	100.00%
Medium	7.47%	3.45%	89.08%	100.00%
Grand Total	**12.85%**	**9.62%**	**77.53%**	**100.00%**

Fig.3

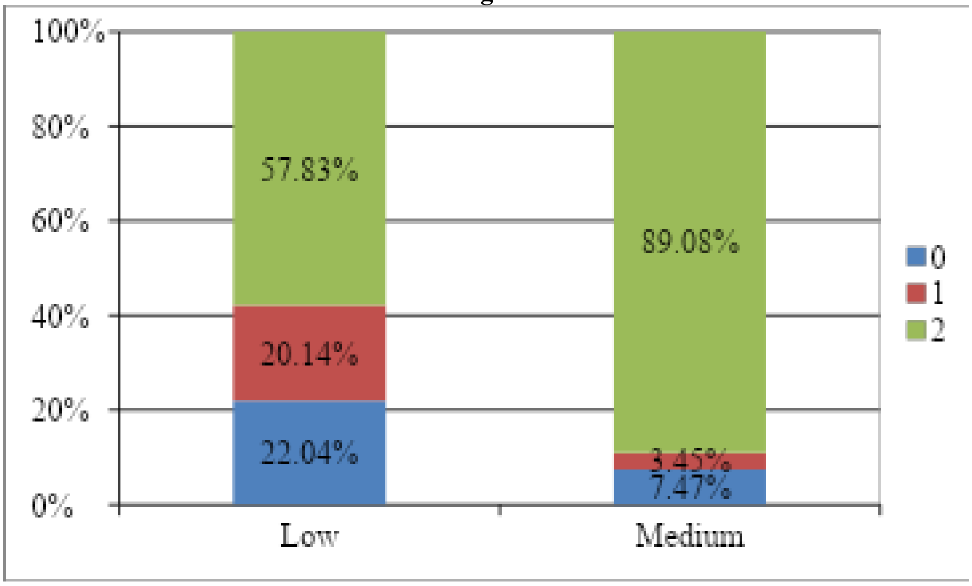


Fig.3 chart illustrates the distribution of financial inclusion levels among respondents belonging to two income groups: **Low** and **Medium**. Financial inclusion is categorized into three levels:

- **No Access (0)**
- **Partial Access (1)**
- **Full Access (2)**

Among the **Low-income group**,

- **22.04%** of respondents have **no access** to formal financial services,
- **20.14%** have **partial access**, and
- Only **57.83%** enjoy **full financial inclusion**.

In contrast, within the **Medium-income group**,

- A mere **7.47%** have no access,
- **3.45%** have partial access, and
- A significantly higher **89.08%** benefit from full access to financial services.

This distribution clearly demonstrates that respondents with **higher income levels are more likely to be financially included**, with a sharp increase in full access as income improves.

IV. Conclusion

This study highlights the critical role of income, education, and government awareness programs in driving financial inclusion. Policymakers should focus on improving accessibility to banking services through digital platforms and targeted awareness campaigns. The Chi-Square test results ($\chi^2 = 31.21$, $df = 6$, $p = 0.000023$) indicate a highly significant association between education level and financial inclusion. Since the p-value is well below 0.05, we reject the null hypothesis. The analysis suggests that individuals with higher education levels are significantly more likely to be financially included, whereas those with lower or no education tend to face greater challenges in accessing formal banking services. This finding highlights the critical role that education plays in shaping financial behavior, awareness, and access—particularly in rural and underserved. The results of the Chi-Square test indicate a statistically significant association between the distance to the nearest bank and the level of financial inclusion ($\chi^2 = 11.77$, $p = 0.019$). Since the p-value is less than the conventional threshold of 0.05, we reject the null hypothesis and conclude that proximity to banking infrastructure plays a crucial role in financial inclusion**.** Specifically, individuals residing within 5 kilometers of a bank are significantly more likely to have full access to formal financial services. Conversely, those living farther away encounter greater barriers in accessing and utilizing these services.

The analysis reveals a positive correlation between income level and financial inclusion. Medium-income individuals have a substantially higher rate of full financial access compared to those in the low-income category. This suggests that income is a key determinant of an individual's ability to access and utilize formal banking services.

The results underscore the need for targeted financial inclusion initiatives aimed at the low-income segment to bridge the accessibility gap. Interventions such as subsidized banking services, digital literacy, and outreach programs could be instrumental in improving access for the economically weaker sections in rural areas. The study reveals that both education level and distance to the nearest bank have a statistically significant impact on financial inclusion**.** Individuals with higher education and those living closer to banking facilities (within 5 km) are more likely to experience full access to financial **services**. In contrast, lower educational attainment and greater physical distance from banks are key barriers limiting financial inclusion among the underserved population in rural areas. These findings underscore the need for targeted educational initiatives and improved banking infrastructure to enhance inclusive financial access.

Limitation and Future Research

On the basis of this study we can say that we need to improve our digital infrastructure to achieve financial inclusion. Education and Income group play a significant role in the financial inclusion. There are other more variables Age, Gender, occupation can play a crucial role in the financial inclusion. In further studies we can use these variables to create more accurate study.

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