

A Study on Financial Inclusion among Tea Garden Workers at Darjeeling District, West Bengal

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Financial Inclusion serves as a crucial catalyst for inclusive growth and socio-economic empowerment yet financial inclusion continues to be a significant challenge for most countries worldwide. The study focuses on financial inclusion among the small tea gardens in Darjeeling district. It further investigates the structural and socio-economic barriers that hinder inclusion. The paper evaluates the effectiveness of government schemes and initiatives and what is the state of financial inclusion in the selected tea garden. Furthermore the authors conclude by proposing target policy implementation and community based strategy aimed at strengthening financial inclusion of tea garden workers.

Keywords: financial inclusion, darjeeling tea industry, government initiatives, financial literacy

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1. Introduction

India's majority of population is predominantly in the rural areas therefore financial inclusion is a crucial step for reducing poverty, income inequality and improving living standard. It is necessary to drive the whole nation towards development at a steady pace and let every citizen enjoy the benefit of the economic growth and development. Financial inclusion empowers individuals to take control of their financial well-being, by enabling access to banking services. Technological advancement, particularly in mobile banking and digital payment systems also have significantly advanced financial inclusion, especially in rural areas. The government also plays a pivotal role in driving financial inclusion by creating policies and framework that ensures equal access to financial services for all citizens, especially marginalized populations. Tea garden is one of the largest industries of our country, despite being an industry of economic importance, tea garden workers are among the most marginalized groups in India particularly in Assam and West Bengal. The workers are deprived in most socio-economic aspects since the colonial era, they have faced low wages, poor living conditions, limited access to education, geographic isolation, limited healthcare facilities and lack of formal financial inclusion. Financial inclusion provides a path to enhance inclusiveness in economic growth by enabling the unbanked population to access the means for saving, investment and insurance.

2. Literature Review

Saikia(2016): The study conducted in the small tea sector in Dibrugarh and Tinsukia district reveals that small tea cultivators are profitable ventures and have the capacity to change the very face of rural Assam in days ahead if practiced in right earnest. Foregoing discussion it is evident that financial inclusion in the small tea industrial sector assumes great prosperity of this venture. It was suggested that financial inclusion and financial literacy is the need of the hour.

Dutta and Goswami(2018): The study extends financial inclusion among tea garden workers through primary surveys. The study reveals that financial inclusion among the workers has deepened considerably but not in all dimensions. The study suggests more expeditious and comprehensive, specific initiatives towards delivering government-sponsored schemes are needed.

Chettri and Mahapatra(2018): The study focuses on financial literacy among the tea garden labourers of Darjeeling district, West Bengal. The research reached an overall conclusion that the labourers were neither skilled nor knowledgeable in financial matters and that this would impact negatively on their future lives as they are incompetent to make financial management.

Bhuyan(2019): The study focuses on the role of financial inclusion of tea garden workers in Dibrugarh district, Assam, where the socio-economic condition of these workers is quite deplorable. Inability to access financial services is one of the major reasons behind it. Based on the review done during the study, financial inclusion is progressing but at a slow pace.

Dutta et al(2023): The authors conducted the study on financial inclusion among backward communities, tea garden workers of Assam. The paper reveals that financial inclusion among the tea garden workers has deepened considerably but not in all dimensions. It was found that education is an important determinant of financial inclusion among the workers. The authors suggest making the process of financial inclusion more expeditious and comprehensive, specific initiatives towards delivering government sponsored schemes are needed.

Soujanya and Krishna(2025): The study explores the role of responsible tourism in empowering women entrepreneurs. Data was collected from 345 women entrepreneurs. The study concludes that responsible tourism offers a transformative platform for promoting gender equality, economic self reliance and environmental stewardship.

3. Objectives

- To examine the level of financial inclusion among the workers of a small tea garden.
- To examine the usage pattern of financial products.

4. Data Source and Methodology

For the purpose of the study primary data has been collected through field survey, well structured questioners and interviews with the workers and the management of small tea gardens of Darjeeling district and for the purpose of the study the authors

choose Gangaram Tea Estate, ORD Tea Estate and Belgachi Tea Estate. And for the purpose of this study, websites, reports, newspapers and journals have been the source of secondary data.

5. Methodology

The analysis of the present study is done using various statistical tools. Data was collected and responses were coded in SPSS. Descriptive analysis was used to summarize demographic profile, Correlation analysis was conducted to find relationships between variables. Additionally reliability analysis was performed to test the internal consistency of the questioner items and Chi Square test of independence was performed to determine if there is a significant association between two categorical variables.

Table 1: Trend in Financial Inclusion and Financial Literacy of Pradhan Mantri Jhan Dhan Yojana

Fig. in crores

Particulars	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
PMJDY Accounts	21.43	28.17	31.44	35.27	38.33	42.20	45.06	48.65	51.95	55.16
Deposits	35672	62972	78494	96107	118434	145551	166459	198844	232502	267756
Total RuPay Card Issued	17.75	21.99	23.65	27.91	29.30	30.90	31.62	32.94	35.35	37.85

Source: Authors calculation based on Press information Bureau, 2024

Pradhan Mantri Mudra Yojna (PMMY):

It was launched on 8th April,2015. It promotes self-employment by providing loans to small businesses.

Table 2: Achievement Under Pradhan Mantri Mudra Yojana (PMMY) Since Inception

Fig. in crore

Particulars	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
No. Of loan Sanctioned	34880924	39701047	48130593	59870318	62247606	50735046	53795526	62310598	66777013	54661648
Amount Sanctioned	137449.27	180528.54	253677.10	321722.79	337495.53	321759.25	339110.35	456537.98	541012.86	552801.78
Amount Disbursed	132954.73	175312.13	246437.40	311811.38	329715.03	311754.47	331402.20	450423.66	532358.35	541802.58

Source: Authors calculation based on Mudra.org.in

Pradhan Mantri Suraksha Bima Yojna (PMSBY): It was launched on 9th May, 2015.It aims to provide accidental death and disability insurance up to Rs 2 lakh for Rs 20 annual premium.

Table 3: Cumulative Enrolment in Pradhan Mantri Suraksha Bima Yojna from 2016-2025

Fig. in lakhs

Particulars	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Cumulative Enrolments in PMSBY	940.73	995.12	1348.32	1547.17	1854.16	2326.34	2818.68	3377.77	4380.73	5078.08

Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY): It was launched on 9th May, 2015 It provides affordable life insurance to rural population , offering Rs 2 lakh cover on death for any reason. It protects families of the insured from financial ruins.

6. Government Initiatives on Financial Inclusion

Following are the government initiatives launched specially for financial inclusion and financial literacy in India.

Pradhan Mantri Jan Dhan Yojana (PMJDY): It was launched on 28th August, 2014. It is a zero balance account which acts as a foundation of financial inclusion. The Pradhan Mantri Jhan Dhan Yojana from 2016-2025 shows an increasing trend in the table below.

Table 4: Cumulative Enrolment in Pradhan Mantri Jeevan Jyoti Bima Yojna from 2016-2025

Fig. in crore

Particulars	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Cumulative Enrolment in PMJJBY	295.53	310.24	532.94	591.69	695.76	1027.39	1265.99	1599.77	1990.69	2346.79

Source: Authors calculation based on Press Information Bureau report, 2025

Atal Pension Yojna (APY): It was launched on 9th May, 2015. It is a social security scheme for workers in the unorganized sector, providing pension of Rs 1,000 to Rs 5000 on attaining the age of 60 years.

Table 5: Cumulative Enrolment in Atal Pension Yojna from 2016-2025

Fig. in crore

Particulars	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Cumulative Enrolment	25	49	97	154	223	302	401	521	644	761

Source: Authors calculation based on Press Information Bureau report, 2025

Stand Up India: It was launched on 5th April, 2016. It provides loans between Rs 10 lakh and Rs 1 crore for setting up Greenfield enterprises, provided the borrower should be SC/ST/Women entrepreneur.

Table 6: Year wise beneficiaries of Stand Up India

Fig. in crore

Date	SC		ST		Women (General)		Total	
	No of A/Cs	Sanctioned Amt	No of A/Cs	Sanctioned A/Cs	No of A/Cs	Sanctioned Amt	No of A/Cs	Sanctioned A/Cs
10.01.2018	7086	1344.7	2162	427.79	41639	9214.47	50887	10986.96
31.03.2019	10451	2096.25	3103	646.1	59429	13342.72	72983	16085.07
08.01.2021	14880	3049.70	4397	934.87	85955	19594.27	105232	23578.84
28.11.2022	23554	4928.03	7718	1661.22	127165	29297.69	158437	35886.94
31.03.2024	37433	7908.24	12578	2702.49	175530	40251.02	225541	50861.75
20.01.2025	48548	10246.37	15824	3377.84	194152	44768.04	258524	58392.25

Source: Authors calculation based on Press Information Bureau report, 2025

7. Data Analysis

Demographic Analysis

Table 7: Distribution of the Sample Respondent's Demographic Profile

Demographic Profile	Frequency	Percent	
Age	18-30	11	9.2
	31-45	68	56.7
	46-60	41	34.2
	Total	120	100
Gender	Female	95	79.2
	Male	25	20.8
	Others	0	0
	Total	120	100
Marital Status	Married	87	72.5
	Unmarried	17	14.2
	Widow/Widower	16	13.3
	Total	120	100
Education Level	Illiterate	23	19.2
	Less than 8	68	56.7
	10th pass	22	18.3
	12th pass	7	5.8
	Total	120	100
Occupation	Permanent	120	100
	Temporary	0	0
	Total	120	100
Monthly Income	Below ₹5000	27	22.5
	₹5001-₹10000	75	62.5
	₹10001 Above	18	15
	Total	120	100
Bank Account Availability		120	100
	Total	120	100
Type of Bank Account	Saving Account	48	40
	Jan Dhan Account	72	60
	Others	0	0
	Total	120	100
Bank Distance	Less Than 2 km	59	49.2
	2-5 km	32	26.7
	More than 5 km	29	24.2
	Total	120	100
ATM Card availability	Available	98	81.7
	Not Available	22	18.3
	Total	120	100
Mobile Banking	Available	7	5.8
	Not Available	113	94.2
	Total	120	100

Source: Authors calculation based on primary survey.

The demographic profile of 120 respondents provides an overview of their socio-economic diversity within the study population, which is essential for understanding and analyzing financial inclusion. The sample comprises individuals from different age groups, the majority of the respondents, 56.7% is in the age category 31-45, 34.2% are in the age group 46-60 and lastly 9.2% are in the age group 18-30. The female respondents for the study are 79.2% and male respondents are 20.8%. The majority of respondents, 72.5% are married, 14.2% are unmarried, 14.2% are unmarried and 13.3% are widow/widower. The education level of 56.7% is less than class 8, 19.2% respondents are illiterate, 18.3% are class 10 pass and lastly 5.8% are class 12 pass. All the respondents interviewed are permanent workers of the tea gardens. The monthly income of the majority, 62.5% of respondents range between ₹5001-₹10000, 22.5% respondents earn below ₹5000 and 15% respondents earn above ₹10001 above. 100% of respondents have a bank account. The majority of respondents, 60% had opened a bank account through Jan Dhan Yojna and 40% of the respondents have a savings account. The distance for reaching bank for 49.2% respondents is less than 2 km, for 26.7% the distance for reaching bank is 2-5 km and for 24.2% the distance for reaching bank is more than 5 km. 81.7% of the respondents have ATM card and 18.3% respondents do not have ATM card. 94.2% do not use mobile banking facility and only 5.8% respondent use mobile banking.

Cronbach's Alpha Value Reliability Statistics

The authors tested the reliability of the scale by performing Cronbach's Alpha reliability statistics on barriers to financial inclusion. The value of Cronbach's Alpha is .728 which is higher than acceptable level indicating acceptable consistency.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.728	.743	4

Source: Output from SPSS

The authors tested the reliability of the scale by performing Cronbach's Alpha reliability statistics on impact of financial inclusion. The value of Cronbach's Alpha is .741 which is higher than acceptable level indicating acceptable consistency

Cronbach's Alpha	N of Items
.741	3

Source: Output from SPSS

Correlation

1. Correlation between Monthly Income and Loan Repayment

The variables used for the study are monthly income and loan repayment. The monthly income of the majority, 62.5% of respondents range between ₹5001-₹10000, 22.5% respondents earn below ₹5000 and 15% respondents earn above ₹10001 above. 43.3% have taken SHG loans and 38.3% always repay the loan on time and 5% cannot repay the loan in time.

Table 10: Correlation between Monthly Income and Loan Repayment

		Monthly Income	Loan repayment on time
Monthly Income	Pearson Correlation	1	.101
	Sig. (2-tailed)		.273
	N	120	120
Loan repayment on time	Pearson Correlation	.101	1
	Sig. (2-tailed)	.273	
	N	120	120

Source: Output from SPSS
The table above shows Pearson's correlation between monthly income and loan repayment on time is 0.101 which is a very weak positive correlation and significance (p-value) 0.273 which is statistically insignificant, so we can conclude that there is no correlation between income and loan repayment.

2. Correlation between Loan Repayment on Time and SHG Members for How Many Years

The variables used for the study are loan repayment on time and SHG members for how many years. Out of 120 respondents, 43.3% have taken SHG loans and 38.3% always repay the loan on time and 5% cannot repay the loan in time. In the study out of 120 respondents 43.3% are members of SHG, 2.5% are members for less than 1 year, 4.2% are members for 1-3 years, 13.3% are members for 3-5 years and 23.3% are members for more than 5 years.

Table 11: Correlation between Loan Repayment on Time and SHG Members for How Many Years

		Loan repayment on time	SHG Member for how many year
Loan repayment on time	Pearson Correlation	1	.835**
	Sig. (2-tailed)		.000
	N	120	120
SHG Member for how many year	Pearson Correlation	.835**	1
	Sig. (2-tailed)	.000	
	N	120	120

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Output from SPSS

The table above, shows the Pearson's correlation between loan repayment on time and SHG member for how many years is 0.835 which is a positive correlation and significance (p-value) (2-tailed) is 0.000 which is statistically significant, so we can conclude that there is correlation between loan repayment on time and SHG member for how many years.

3. Correlation between Education and Awareness of Government Financial Schemes

The variables used for the study are education and awareness of government financial schemes. Out of 120 respondents the education level of 56.7% is less than class 8, 19.2% respondents are illiterate, 18.3% are class 10 pass and lastly 5.8% are class 12 pass. 89.2% were aware of the government financial scheme and 10.8% were unaware of the government scheme

Table 12: Correlation between Education and Awareness of Government Financial Schemes

		Education	Awareness of Government financial schemes
Education	Pearson Correlation	1	.188*
	Sig. (2-tailed)		.040
	N	120	120
Awareness of Government financial schemes	Pearson Correlation	.188*	1
	Sig. (2-tailed)	.040	
	N	120	120

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Output from SPSS

The table above, shows the Pearson’s correlation between education and awareness of government financial scheme is 0.188 which is a weak positive correlation and significance (p-value) (2-tailed) is 0.040 which is statistically significant, so we can conclude that their is correlation between education and awareness of government financial scheme

Chi Square Test

1. Association between Education Level and Mobile Banking

Hypothesis of the Study

H₀₁: There is no significant association between education level and usage of mobile banking

H₁₁: There is a significant association between education level and usage of mobile banking

Out of 120 respondents the education level of 56.7% is less than class 8, 19.2% respondents are illiterate, 18.3% are class 10 pass and lastly 5.8% are class 12 pass. 94.2% do not use mobile banking facilities and only 5.8% respondent use mobile banking.

Table 13: Chi square Test of Independence between Education Level and Mobile Banking

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	120.000 ^a	3	.000
Likelihood Ratio	53.366	3	.000
Linear-by-Linear Association	44.216	1	.000
N of Valid Cases	120		
a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .41.			

Source: Output from SPSS

The Pearson’s chi-square test statistics is 120.000 with 3 degrees of freedom, and the asymptotic significance (p-value) is 0.000, which is below threshold of 0.05, this suggests that there is a significant relationship between education level and mobile banking, we can reject the null hypothesis.

2. Association between Awareness of Government Financial Schemes and Access to Financial Services

Hypothesis of the Study

H₀₂: There is no significant association between awareness of government financial schemes and access to financial services.

H₁₁: There is a significant association between awareness of government financial schemes and access to financial services.

Out of 120 respondents 89.2% were aware of the government financial scheme and 10.8% were unaware of the government scheme. For financial services improved security responses were collected on 5 point Likert scale- ‘Strongly Agree’, ‘Agree’, ‘Neutral’, ‘Disagree’, ‘Strongly Disagree’. 10% choose strongly agree, 54.2% choose Agree and 35.8% choose Neutral regarding financial services improved security.

Table 14: Chi square test of Independence between Awareness of Government Financial Schemes and Access to Financial Services

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.624 ^a	2	.732
Likelihood Ratio	.578	2	.749
Linear-by-Linear Association	.028	1	.867
N of Valid Cases	120		
a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.30.			

Source: Output from SPSS

The Pearson’s chi-square value is 0.624, the degree of freedom is 2 and the asymptotic significance (p-value) is 0.732, since the p-value is greater than 0.05, we fail to reject the null hypothesis, suggesting there is no significant association between the variables.

3. Association between Marital Status and Financial Decision Making

Hypothesis of the Study

H₀₃: There is no significant association between marital status and financial decision making.

H₁₃: There is a significant association between marital status and financial decision making.

Out of 120 respondents the majority of respondents 72.5% are married, 14.2% are unmarried and 13.3% are widow/widower. Regarding the financial decision making 58.3% female members make financial decisions, 37.5% both male and female make joint decisions and 4.2% male members make financial decisions.

Table 15: Chi Square Test of Independence between Marital Status and Financial Decision Making

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.340 ^a	4	.023
Likelihood Ratio	13.005	4	.011
Linear-by-Linear Association	6.835	1	.009
N of Valid Cases	120		
a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .67.			

Source: Output from SPSS

The Pearson’s chi-square value is 11.340, the degree of freedom is 4 and the asymptotic significance (p-value) is 0.023, which is below threshold of 0.05, this suggests that there is a significant relationship between marital status and financial decision making, we can reject the null hypothesis.

8. Findings

The findings of the study underscores the pivotal role of financial inclusion in promoting savings, economic well-being and social security. The demographic profile indicates factors like limited awareness, reason to impede basic financial inclusion, and the predominance of low income and limited education among the respondents which are significant constraints on adoption of advanced financial tools. The study also revealed possession of ATM cards to be 81.7%, it was observed that in most cases the cards were primarily used by their children rather than account holders themselves, indicating limited engagement with the banking services. Furthermore only 5.8% respondents have access to mobile banking, indicating extremely low digital financial inclusion.

The study observed that traditional housing dynamics plays a key role in financial decision making, restricting the use of modern financial services, while significant progress has been made in achieving basic financial inclusion among the respondents, substantial gaps still remain in terms of effective usage and digital access to financial services.

9. Conclusion and Suggestion

Banks and financial institutions should prioritize awareness programs, to improve understanding and usage of banking services like ATM usage, mobile banking and awareness of government schemes, simplify procedures and provide assistance in local language. Community based strategy aimed at strengthening financial literacy should be implemented, ensuring sustainable and financial integration of the workers.

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