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# A Comparative Study of Access to Financial Services in Purba Medinipur and Paschim Medinipur Districts of West Bengal (India): Evidence from the Unorganized Sector

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#### Abstract

The study attempts to look into the status of access to financial services in the unorganized sector of Purba Medinipur and Paschim Medinipur districts of West Bengal (India). The focus is to identify any relationship and impact between the different demographic and socio-economic factors, level of financial literacy with access to financial services. Based on our sampling design, the final sample size is 800, divided equally between Purba Medinipur and Paschim Medinipur districts with the help of a structured questionnaire. The study determines the financial literacy score and access to financial services score by using data-driven weight in factor analysis. Binary logistic regression analysis reveals Access to financial services is significantly impacted by Gender, Occupation and Financial Literacy in the Purba Medinipur district and Domicile, Income and Financial Literacy in the Paschim Medinipur district. It is seen that residents of the urban areas have greater access. Moreover, interesting point is that higher levels of financial literacy can result in raising the probability of access to financial services in both the districts. Lastly, conclude that the research discloses a significant difference between Purba Medinipur and Paschim Medinipur district on

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this parameter access to financial services and Purba Medinipur is the one which has an elevated score.

**Keywords:** Access to Financial Services, Financial Literacy, Unorganized Sector, Factor Analysis, Binary Logistic Model.

#### 1. Introduction

In the Census 2011 report, about 70 percent of the Indian population lives in villages. The country occupies only 2.4 percent of the world's land area but supports over one-sixth of the world's population. There exists a wide disparity in terms of development and income /wealth distribution and more astonishingly there are reports of the widening gap during the post-liberalization period. A noticeable change in the economy that is observed after the economic liberalization of 1991 is the rapid increase in the competition across all industries including financial services and one of the policy priorities that is the call for inclusive growth which will help in the all-round development of the country. This inclusiveness includes the component of financial inclusiveness that is an area of interest in the present research. Financial inclusion has emerged as a strategy to bring the so-called excluded people into the mainstream. It is the delivery of banking services at an affordable cost to the vast sections of disadvantaged and low-income groups and rightly so as it is felt that this service is in the nature of public good and therefore, it is essential to ensure its availability to the entire population without discrimination. Access to financial services is one end of the broader term, a financial inclusion which tends to empower the vulnerable groups in order to achieve inclusive growth of the economy thereby reaching the excluded classes. The financially excluded people belong to classes like marginal farmers, landless labourers, self-employed, unorganized sector enterprises, urban slumd wellers, migrants, ethnic minorities, socially excluded groups, senior citizens, and women. However, it is necessary to mention that financial inclusion covers not only the banking and credit but also financial services like savings, insurance, payments and remittance facilities. Among the recent measures taken during the last decade, RBI the permitted the opening of so-called no-frills account (later named as Basic Savings Bank Deposit Account), initiated that in every state, one public sector bank should take the responsibility to ensure that every household has a bank account, gave banking license to a few corporate/organizations, allowed the opening of payment banks and small finance bank etc. In spite of all such efforts to bring about inclusive growth,

banking penetration is still very low and there is a long way to go. Even today, almost half of the population does not have a bank account which is a basic necessity in order to be a part of the formal financial system. Hence, on the one hand, the country is among the emerging economies of the world while on the other, such a huge percentage of people remains excluded from the formal system. This non-inclusion is considered to be a key cause of poverty and inability to get social benefits. As a result, in today's governance, the governments are aiming to bring about maximum inclusiveness through several measures. Financial inclusion works in a simple way as shown below in the cycle below.

Since and series		districts						
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		Salboni	188653	22.77	22.87	23.55	51.76	4.51

 Table – 1: Engagement of unorganized workers in selected blocks of the two

 districts

Source: Census, 2011

Financial literacy ? Opening a bank account ? Providing financial services

It is well known that in India, 82.7 percent of the workforce is engaged in the unorganized sector that lacks social security and it exposes the labour force to vulnerabilities (NSSO Report, 2011-12). Due to this, any research that focuses on this sector makes it an important document/piece of knowledge. Any such study that investigates into the social and/or economic impact of a policy decision makes it even more pertinent. In the following table, a highlight is given about the employment scenario across different categories of the unorganized sector in different blocks of the two selected districts of West Bengal.

#### 2. Literature Review

Some relevant studies that have covered this field are mentioned here.

Kuri and Laha (2011) examine the extent of interstate variation in the level of financial inclusion in India using a composite index and to explore the interdistrict variation in the level of financial inclusion in West Bengal. They reveal that among the states of India, West Bengal lies among the lower category states in the process of financial inclusion. In the district wise variation, most of all districts belong to low financial inclusion category. Bagli and Dutta (2012) study the relative importance of indicators of financial inclusion and a composite index of financial inclusion for each state in India. They conclude that financial literacy and awareness among the marginalized sections of people are absolutely necessary to achieve financial inclusion. Chakrabarti(2012) explains the aspect of financial inclusion in particularly for developing countries like India. The study revealed that commercial bank, co-operative bank, and RRBs provide service to rural poor people like rural artisans, petty shopkeepers, small traders, village entrepreneur, physically handicapped persons and widows as well. Khaki and Sangmi (2012) find out the progress and current status of financial inclusion in the state of Jammu and Kashmir and what are the initiatives taken by the banking sector in this state. They find that significant progress has been made in financial inclusion by introducing no-frills account, self-help group, and different government scheme. Singh and Tandon (2012) find out the present status of financial inclusion in India. They also revealed that financial literacy program will remove the poverty and bank needs to simplify their strategy to increase financial inclusion over the low-income groups. Chauhan (2013) represents India's position among 9 selected countries (India, Australia, Brazil, France, Mexico, UK, US, Korea and the Philippines) by adopting different strategies made by RBI for financial inclusion. The researcher finds out by

analyzing AXIS bank report that India is at moderate level regarding financial inclusion as compared to other countries and said that banking sector plays a vital role in the expansion of financial inclusion. Dangi and Kumar (2013) find out the present situation of financial inclusion in India. They conclude that a large number of rural peoples in India do not access banking and other financial services. To provide this services for financial inclusion E-banking and mobile banking training and education programmes should be conducted. Dixit and Ghosh (2013) tried to find out how financial inclusion is done for inclusive growth in Indian states. The study reveals that financial literacy and awareness made by different stakeholders like regulators, banks, governments, civil societies, NGOs, etc. helped to achieve the financial inclusion. Rao (2013) examine the banking service to sixteen thousand villages through different financial products like savings, credit, and remittance for promoting financial inclusion. Researcher reveals that all the stakeholders need to cooperate and different techniques need to be used for providing financial service and for achieving great financial inclusion. Shankar (2013) analyze whether microfinance institutions break down barriers to financial service access in India. The study revealed that microfinance penetration in the country is not uniform. Southern and western regions were characterized by the widespread availability of MFI & banking services, while the central region had low availability of both kinds of services. Singla (2013) inspect formal banking system in the rural and urban area for saving of rural people of unorganized moneylenders. Researcher revealed that by different strategies like advanced technology, opening new branches in the rural area, the introduction of a new saving scheme for a low-income group of people for financial inclusion. Garg and Agarwal (2014) observe the effects of financial exclusion and the necessities of financial inclusion. In the study period, the researchers found that by leveraging ICT, the inclusion of NBFCs, MFI and SHG and mobile banking services to the people for financial inclusion. The government introduction of Aadhar card will resolve the KYC norms. Kamboj (2014) scrutinized the relationship between the financial inclusion and growth in India. Also, the impact of financial inclusion on the growth of Indian economy was also studied. The researcher reveals that strong positive correlation between financial inclusion and growth in India. The researcher concluded that government should increase the bank branches as well as ATMs in the country so that people have quick access to the financial services in the remote areas for balanced development of the economy. Kaur and Tanghi (2014) find that financial inclusion act as an instrument for inclusive growth in selected six developing countries and ascertains the position of India. The study reveals that only developed countries are affected by this program but low income and disadvantaged people are not getting the financial service including banking service in the world. Mustafi and Chakraborty (2014) find out the effectiveness

of RBI initiative in rural and urban areas for achieving financial inclusion. They also revealed that the private sector banks are technologically more advanced than public sector banks but in this context, it is not satisfactory. Nahar and Bhatia (2014) inspect the magnitude of financial inclusion and evaluate the position of India from other countries with respect to some of the parameters of financial inclusion. Finally, the researchers reveal that the rural sector shall not be neglected for branch expansion and modern way of transactions such as ATM, credit card, mobile banking, e-banking needed to be considered to promote this mechanism. Raihanath and Pavithran (2014) look at the role of commercial banks in the financial inclusion programme. The researchers reveals that the commercial banks have to perform a vital role in promoting financial inclusion. Rahaman (2014) examine the current status of financial inclusion in the country. Researcher concludes that if govt, and all political parties will heartily extend their hands for the economic development of the country then that would lead to the success of financial inclusion and inclusive growth together with the economic development. Shahulhameedu (2014) examine the measurement and analysis of financial inclusion. Microfinance institutions and local communities help in achieving financial inclusion. Also, in banking the traditional accounting model must be changed into customer-centric model that will be very helpful for measuring financial inclusion.

#### 3. Research Gap

On the basis of literature reviewed, it is observed that most of the studies are on the status of financial inclusion and also a limited few are looking into its determining factors. There are also some empirical evidences on access to financial services that identify the determining factors. There is no specific study found related to access to financial services in Purba Medinipur and Paschim Medinipur districts together considering the fact that it is not considered in the same frame. In addition to this, any similar study with focus on the unorganized sector may be rarely observed.

# 4. Objectives of the Study

The empirical study is made to meet the following objectives:

- i) To determine the level of access to financial services in the two selected districts.
- ii) To look into the relationship between demographic and socio-economic factors, financial literacy and make a comparative analysis.

iii) To suggest policy prescriptions in respect of financial literacy.

# 5. Hypotheses of the Study

The following hypotheses are tested -

- H<sub>01a</sub>:There is no relationship between demographic and socio-economic factors, financial literacy with access to financial services.
- $\rm H_{_{01b}}\!\!:$  There is no difference in the level of access to financial services in the two districts.

# 6. Research design

Research design means a way to systematically solve the research problem. It comprises a series of steps that are taken together to provide a roadmap for carrying out a research project.

**6.1 Data Source:** The research work is based on primary data which is collected through a structured questionnaire.

**6.2 Sampling Frame:** The sampling frame for this study includes the people employed in the unorganized sector of Purba Medinipur and Paschim Medinipur districts of West Bengal.

**6.3 Sampling Method:** Multi-stage random sampling method is applied. First, eight blocks of the district have been chosen, following which five villages have been chosen from each of them. Then, ten respondents from each village are interviewed with the help of a questionnaire. The blocks chosen from Purba Medinipur district are Bhagwanpur-I, Chandipur, Contai-I, Egra-II, Haldia, Panskura, Patashpur-II and Ramnagar-II and that from Paschim Medinipur district are Narayangarh, Sabang, Pingla, Chandrakona-II, Daspur-II, Mohanpur, Keshiary,andSalboni.

**6.4 Sample size:** Based on our sampling design, the final sample size is 800, divided equally between Purba Medinipur and Paschim Medinipur districts.

**6.5 Research methods applied:** Based on the objectives of the study, the researcher applied the factor analysis to compute financial literacy and

access to financial services scores, binary logistic regression analysis, independent mean test etc.

# 7. Analysis and Findings

# 7.1 General findings

The table below shows a profile of the respondents in respect of gender, domicile, age, marital status, family type and educational qualification.

Demographic And Socio-Economic Factors		Purba Medinipur	Paschim Medinipur
Gender	Male	74	72
Genuer	Female	26	28
Domicile	Rural	90	90
Domicie	Non-Rural	10	10
Marital Status	Married	89	82
Marital Status	Unmarried	11	18
	16-25	13	15
	26-35	20	20
Aco Dondo	36-45	25	25
Age Bands	46-55	23	21
	56-65	14	13
	Above 65	5	6
	Low Profile	39	42
Occupation	Intermediate Profile	40	44
	Others	21	14
	Less than 5000	32	42
Monthly Income	5000-7500	33	31
Monthly Income	7501-10000	18	13
( in Rupees)	10001-12500	10	8
	Above 12500	7	6
Fomily Type	Nuclear	80	84
Family Type	Joint	20	16
Educational	Up To V	27	28
Educational	VI-X	44	53
Qualification	Beyond X	29	19

Table - 2: Demographic and Socio-economic Profile of Respondents of Purba
Medinipur and Paschim Medinipur (in Percentages)

Source: Primary Data

# 7.2 Reliability Test

A pilot study was conducted to test the efficacy, sufficiency, and validity of the questionnaire before going for the full-fledged data collection using the questionnaire method. For this purpose, initially five blocks were selected and from every block, one village was chosen following which 10 respondents were chosen from each of the villages. So the sample size of the pilot study was 50. After the data was gathered, the reliability of the questionnaire was tested by computing Cronbach's alpha.

**Table – 3: Reliability Statistics** 

Cronbach's Alpha	No. of Items
0.833	18

Source: Computed by researcher

The value of alpha in this study is 0.833 which exceeds the accepted cut-off score of 0.70. Therefore, the questionnaire is acceptable and reliable for data collection.

#### 7.3 Measurement of Financial Literacy Score of Purba Medinipur and Paschim Medinipur Districts

The data is collected using a questionnaire which has several questions. In order to make the findings more conclusive and concrete, the investigators put them into eight sub-categories viz.  $FL_1$ ,  $FL_2$ ,  $FL_3$ ,  $FL_4$ ,  $FL_5$ ,  $FL_6$ ,  $FL_7$  and  $FL_8$ .

whereFL<sub>1</sub>: Basic awareness about different banking products,

FL<sub>2</sub>: Knowledge about banking products,

- FL<sub>3</sub>: Knowledge about regulatory bodies,
- $\mathrm{FL}_4:$  Awareness about risk and return on investment and decision making ability,
- FL<sub>5</sub>: Awareness of basic financial management concept,

FL<sub>6</sub>: Securing family security,

 $FL_7$ : Planning for basic financial necessities, and

FL<sub>8</sub>: Concern for future security.

Factor analysis is run to test the sampling adequacy and to determine a weight for the sub-categories that are ultimately used to compute the weighted score.

The table below gives the details.

		Purba	Paschim
Kaiser-Meyer-Olkin Measure	of Sampling Adequacy.	<b>Medinipur</b> 0.776	<b>Medinipur</b> 0.767
Bartlett's Test of Sphericity	Approx. Chi-Square	497.626	660.320
	Df	28	28
	Sig.	0.000	0.000

Table – 4: KMO at	nd Bartlett's Test	of Sphericityfor	Financial Literacy
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Source: Computed by researcher

According to the criterion suggested by Kaiser (1974), a value of less than or equal to 0.50 is unacceptable. In other words, if the KMO value exceeds 0.50, factor analysis can be applied. In this case, the KMO measure is 0.776 and 0.767 two districts viz. Purba Medinipur and Paschim Medinipur respectively which shows adequate sample size. Thus, factor analysis is applied and used for calculating the data-driven weights.

	Purba N	ſedinipur	Paschim I	Medinipur
Variables	Initial	Extraction	Initial	Extractio n
$FL_1$	1.000	0.645	1.000	0.732
$FL_2$	1.000	0.554	1.000	0.564
$FL_3$	1.000	0.683	1.000	0.749
$FL_4$	1.000	0.557	1.000	0.701
$FL_5$	1.000	0.604	1.000	0.532
$FL_6$	1.000	0.843	1.000	0.671
$FL_7$	1.000	0.571	1.000	0.528
FL <sub>8</sub>	1.000	0.628	1.000	0.598

**Table -5: Communalities for Financial Literacy** 

Source: Computed by researcher

Extraction Method: Principal Component Analysis.

The table above has been used to arrive at the weights for computing the weighted score of financial literacy.

 $FLS_{i} = W_{1} \cdot FL_{1i} + W_{2} \cdot FL_{2i} + W_{3} \cdot FL_{3i} + W_{4} \cdot FL_{4i} + W_{5} \cdot FL_{5i} + W_{6} \cdot FL_{6i} + W_{7} \cdot FL_{7i} + W_{8} \cdot FL_{8i}$ 

where FLS<sub>i</sub> is the financial literacy score of the ith respondent.

 $W_1$  is the data-driven weight for category 1,  $W_2$  for category 2 and likewise.  $FL_{1i}$  is the score of the ith respondent in sub-category 1 under financial literacy and likewise for the remaining seven sub-categories.

# 7.4 Measurement of Access to Financial Services Score

The data is collected using a questionnaire which has several questions. In order to make the findings more conclusive and concrete, the investigators put them into five sub-categories. Under the variable AFS, the questionnaire is designed to have five sub-categories (AFS<sub>1</sub> to AFS<sub>5</sub>).

where  $AFS_1$  is Access to basic banking,

 $AFS_{2}$  is Access to other financial services,  $AFS_{3}$  is Access to KCC/ATM card,  $AFS_{4}$  is Usage of Services, and  $AFS_{5}$  is Easy access to Bank/ATM.

Factor analysis is again run to look into the sample adequacy and arrive at weights for determining the weighted score. The table below shows the details.

Table - 6: KMO and Bartlett's Test of Sphericity for Access to Financial Services

		Purba	Paschim
		Medinipur	Medinipur
Kaiser-Meyer-Olkin Measure o	f Sampling Adequacy.	0.631	0.622
Bartlett's Test of Sphericity	Approx. Chi-Square	170.492	143.381
	Df	10	10
	Sig.	0.000	0.000

Source: Computed by researcher

The table above is used to arrive at the data-driven weights for computing the weighted score of access to financial services computed using the following equation:

$$AFS_{1} = Z_{1}.AFS_{11} + Z_{2}.AFS_{21} + Z_{3}.AFS_{31} + Z_{4}.AFS_{41} + Z_{5}.AFS_{51},$$

	Purba N	Medinipur Paschim M		Medinipur	
Variables	Initial	Extraction	Initial	Extraction	
AFS <sub>1</sub>	1.000	0.548	1.000	0.571	
AFS <sub>2</sub>	1.000	0.609	1.000	0.578	
AFS <sub>3</sub>	1.000	0.534	1.000	0.545	
AFS <sub>4</sub>	1.000	0.606	1.000	0.569	
AFS <sub>5</sub>	1.000	0.593	1.000	0.667	

Table - 7: Communalities for Access to Financial Services

Source: Computed by researcher

Extraction Method: Principal Component Analysis.

where, AFS<sub>i</sub> is the access to financial services score of the ith respondent,

 $Z_1$  is the data-driven weight for sub-category 1,

 $\mathbf{Z}_{2}$  is the data-driven weight for sub-category 2 and likewise,

 $AFS_{1i}$  is the score of the ith respondent in sub-category 1 and likewise for the remaining four sub-categories.

# 7.5 Results of Regression Analysis relating to Purba Medinipur District

# **Dependent Variable: Access to Financial Services**

The regression analysis is conducted to measure the variation in Access to financial services being the dependent variable, based on variation in different demographic and socio-economic factors and level of financial literacy. To test the hypothesis representing the relationship between Access to financial services with demographic and socio-economic factors and Financial Literacy, binary logistic regression is applied, the dependent variable is a dichotomous variable with a value of either 0 or 1. The result is elaborated below.

Step	Chi-square	Df	Sig.
1	66.898	7	0.000

Table - 8: Omnibus	Tests	of Model	Coefficients
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Source: Computed by researcher

Based on the Omnibus tests of model coefficients, the Chi-square value is 66.898 which is significant at 1% level. Hence, the binary logistic regression model with Access to financial services being the dependent variable and Gender, Domicile, Age, Occupation, Income, Educational Qualification and Financial Literacy being the independent variables fits properly.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	480.307	0.154	0.207

Table - 9: Model Summary

Source: Computed by researcher

It is evident from the Cox & Snell R Square value that the independent variables together explain up to 15.4% of the variation in AFS. Nagelkerke R Square value of 20.7% indicates a moderate relationship between the explained and explanatory variables.

								95% (	C.I.for
								EXF	P(B)
Step	Variables	В	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
1	Gender	0.483	0.259	3.476	1	0.062	0.617	0.371	1.025
	Domicile	-0.462	0.515	0.804	1	0.370	0.630	0.230	1.728
	Age	0.002	0.083	0.001	1	0.978	1.002	0.852	1.179
	Occupation	0.319	0.122	6.855	1	0.009	1.376	1.084	1.747
	Income	0.033	0.103	0.102	1	0.749	1.034	0.844	1.265
	Educational Qualification	-0.002	0.055	0.001	1	0.972	0.998	0.896	1.112
	Financial Literacy	1.362	0.254	28.808	1	0.000	3.905	2.374	6.422
	Constant	-1.271	0.426	8.886	1	0.003	0.280		

**Table -10: Regression Coefficients** 

Source: Computed by researcher

Dependent Variable: Access to Financial Services

From the above table, observed that the key explanatory variable is 'Financial Literacy' with a positive coefficient of 1.362 (Wald = 28.808, p = 0.000) which is significant at 1% level. 'Occupation' with a coefficient of 0.319 (Wald = 6.855, p = 0.009) also has a significant impact at 1% level. 'Gender' has a coefficient value of 0.483 (Wald = 3.476, p = 0.062) that is also significant but at 10%

level. The use of the expected value of coefficient helps to make a further interpretation. Of the significant variables, it is observed that with an increase in the 'Financial Literacy' score by one unit, the odds in favor of Access to Financial Services increase by 290.5%. For 'Occupation', with movement to the next category, there is an increase in the odds ratio by 37.6%. Similarly, for age, another categorical variable, there is an increase in the probability of getting included in the 'access to financial services' category.

The above results imply that when an individual is engaged in a qualitatively better occupation among the various types of unorganized work, s/he has a higher chance to access financial services. This has an effect on increasing the wealth which improves income which in turn increases the access thereby helping to make an investment in banking products. Moreover, as the financial literacy improves, it has a positive impact on access. This is because an individual can then understand how much he can gain in terms of interest income on banking products over a period of time. Moreover, s/he can get an idea of the interest difference on loans between organized and unorganized lenders that will act as an incentive to go to banks. Similarly, it is observed that males have a better record in accessing services compared to females.

# 7.6 Results of Regression Analysis relating to Paschim Medinipur District

# **Dependent Variable: Access to Financial Services**

This regression analysis is conducted to measure the variation in the level of Access to Financial Services due to changes in demographic and socio-economic factors and level of financial literacy. The results of binary logistic regression are elaborated below.

Step	Chi-square	df	Sig.
1	69.605	7	0.000

Table - 11:	Omnibus	Tests	of Model	Coefficients
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Source: Computed by researcher

Table – 11 shows that the chi-square value is 69.605which is significant at 1% level, thereby supporting the fitness of the model with AFS as the dependent variable and Gender, Domicile, Age, Occupation, Income, Educational Qualification and Financial Literacy as the independent variables.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	475.878	0.160	0.215

Table - 12:Model Summary

Source: Computed by researcher

From the above table, the value of Cox & Snell R Square says that the independent variables together explain up to 16% of the variation in Access to Financial Services and the Nagelkerke R Square value points to a moderate relationship between the predictors and predicted.

								95% C.I.for	
								EXI	P(B)
Step	Variables	В	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
1	Gender	-0.113	0.253	0.201	1	0.654	0.893	0.544	1.465
	Domicile	0.754	0.420	3.217	1	0.073	2.125	0.932	4.843
	Age	0.032	0.082	0.151	1	0.697	1.032	0.879	1.213
	Occupation	0.029	0.156	0.035	1	0.852	1.029	0.758	1.397
	Income	0.326	0.101	10.403	1	0.001	1.385	1.136	1.688
	Educational Qualification	-0.057	0.086	0.434	1	0.510	0.945	0.797	1.119
	Financial Literacy	1.344	0.248	29.270	1	0.000	3.834	2.356	6.239
	Constant	-1.538	0.505	9.274	1	0.002	0.215		

Table - 13: Regression Coefficients

Source: Computed by researcher

Dependent Variable: Access to Financial Services

As a simple way of explanation, it is seen that variables like 'Domicile', 'Age', 'Occupation', 'Income' and 'Financial Literacy' are found to have a positive effect on Access to Financial Services. Of these, the effect of 'Income' and 'Financial Literacy' is significant at 1% level and 'Domicile' has held significance at 10% level. The demographic variables like 'Gender' and 'Educational Qualification' have an insignificant effect on the explained variable. A noticeable finding is that financial literacy has a significantly positive effect on access to financial service. For further analysis, interpretation of odds ratio is important. Of the two positively significant factors, Financial Literacy is the most dominating one

as an increase in financial literacy score by one, increases the odds ratio in favour of access by 283.4%. The result relating to income shows that the move of income to the immediately next higher category increases the odds by 38.5%, thereby having a strong impact on financial access. Though domicile is significant at 10% level, it shows that moving from the rural to urban areas increases the odds in favour of 112.5%. The above statistical inferences help to point out that an individual residing in an urban area having higher income and more knowledge of basic finance is likely to access financial services to a larger extent.

# 7.7 Result of test for equality of means of Access to Financial Services combined data

	Districts	Ν	Mean	Std. Deviation	Std. Error Mean
AFS	Purba Medinipur	400	3.690	1.995	0.099
	Paschim Medinipur	400	3.428	1.667	0.083

Table - 14: Group Statistics for Access to Financial Services

Source: Computed by researcher

The group statistics report clearly shows a higher average for Purba Medinipur, the relative more developed district. The mean score of AFS for the two districts is 3.690 and 3.428 respectively. In order to further test the statistical difference between the two districts, the researcher performs the independent sample t-test. The hypothesis is:

 $\rm H_{_0}\!\!:$  There is no difference in the mean score for Access to financial services between the two districts.

	1									
				t-te	est for Equali	ty of Means				
		t	df	Sig. (2-	Mean Difference	Std. Error Difference	95% Confidenc Interval of the Difference			
			tailed)				Lower	Upper		
AFS	Equal variances assumed	2.017	798	0.044	0.262	0.130	0.007	0.517		

Table - 15: Independent Samples Test for Access to Financial Services

Source: Computed by researcher

 $H_1$ : There is a significant difference in the mean score for Access to financial services between the two districts.

The mean difference test result shows the p-value to be 0.044, thereby rejecting the null hypothesis at 5% level. Hence, the research finds a significant difference between Purba and Paschim Medinipur district on this parameter also and Purba Medinipur is the one which has a higher score.

# 8. Conclusion

The study reveals that majority of the rural people has low awareness about different banking and social security schemes having launched by the government from time to time. Thus, it is felt that even though initiatives are being rightly taken by the policymakers and the banks, problems at the root level have to be seriously analyzed in order to reap the benefits of the financial inclusion drive being given in the country. Binary logistic regression analysis reveals Access to financial services is significantly impacted by Gender, Occupation and Financial Literacy in the Purba Medinipur district. So that it can be pointed that male respondents have more access than female respondents. Whereas, Paschim district Access to financial services is significantly impacted by Domicile, Income, and Financial Literacy. It is seen that residents of the urban areas have greater access. Moreover, interesting point is that higher levels of financial literacy can result in raising the probability of access to financial services in both the districts. Lastly, conclude that the research discloses a significant difference between Purba Medinipur and Paschim Medinipur district on this parameter access to financial services and Purba Medinipur is the one which has an elevated score.

# References

- Bagli,S. and Dutta, P. (2012), "A Study of Financial Inclusion in India", A Journal of Radix International Educational and Research Consortium, 1(8), 1-18.
- Chakrabarti, M. (2012), "The role of Regional Rural Banks in Financial Inclusion: An empirical study on West Bengal state in India", *National Monthly Refereed Journal of Research in Commerce and Management*, 2(8), 51-62.
- Chauhan, A. A. (2013), "A Study on Overview of Financial Inclusion in India", *Indian Journal of Applied Research*, 3(12), 351-353.
- Dangi, N. and Kumar, P. (2013), "Current Situation of Financial Inclusion in India and Its Future Visions", *International Journal of Management and Social Sciences Research*, 2(8), 155-166.

- Dixit, R. and Ghosh, M. (2013), "Financial Inclusion for Inclusive Growth of India A Study of Indian States", *International Journal of Business Management & Research*, 3(1), 147-156.
- Garg, S. and Agarwal, P. (2014), "Financial Inclusion in India a Review of Initiatives and Achievements", *IOSR Journal of Business and Management*, 16(6), 52-61.
- Kamboj, S. (2014), "Financial Inclusion and Growth of Indian Economy: An Empirical Analysis", *International Journal Of Business & Management*, 2(9), 176-179.
- Kaur, H., Tanghi, B.S. (2014), "Financial Inclusion: A way to sustainable growth", *GyanJyoti*, 4(1), 11-20.
- Khaki, A.R. and Sangmi, M.D. (2012), "Financial Inclusion in Jammu & Kashmir: A study on Bankers Initiatives", *International Refereed Research Journal*, III, 4(2), 115-123.
- Kuri, P.K., and Laha, A. (2011), "Determinants of Financial Inclusion: A study of Some Selected Districts of West Bengal, India", *Indian Journal of Finance*, 5(8), 29-36.
- Mustafi, S.D. and Chakraborty, J. (2014), "Role of Private Sector Banks in Financial Inclusion: A Case Study on West-Bengal", *International Journal of Research in Engineering and Science*, 2(3), 38-45.
- Nahar, A.S. and Bhatia, B. S. (2014), "A Comparative Analysis of Financial Inclusion with Special Reference to India", *Indian Streams Research Journal*, 4(8),1-8.
- Rahaman, M. (2014), "Role of Financial Inclusion and Inclusive Growth on the EconomicDevelopment of the Country", *Business Spectrum*, 4(1), 63-70.
- Raihanath, M. P., and Pavithran, K. B. (2014), "Role of Commercial Banks in the Financial Inclusion Programme", *Journal of Business Management & Social Sciences Research*, 3(5), 75-81.
- Rao, C.S.D.N. (2013), "Financial Inclusion and Indian Banking System The way ahead", International Journal of Innovative Research and Practices, 1, 7(1), 19-28.
- Shahulhameedu, M. (2014), "Financial Inclusion-Issues in Measurement and Analysis", International Journal of Current Research and Academic Review. 2(2), 116-124.
- Shankar, Savita (2013). Financial inclusion in India: do microfinance institutions address access barriers? *ACRN Journal of Entrepreneurship Perspectives*, 2(1), 60-74.
- Singh, A.B. and Tandon, P. (2012), "Financial Inclusion in India: An Analysis", *International Journal of Marketing, Financial Services and Management Research* 1(6), 41-54.
- Singla, V. (2013), "Financial Inclusion-Financial Services for Everyone", International Journal of Reviews, Surveys, and Research, 212(M 6),1-10.