

## Factors Responsible for Financial Literacy with Reference to Jagatsinghpur Municipality of Odisha (India): A Logistic Regression Approach

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### Keywords

Financial literacy, Financial ignorance, Logistic regression model, Marginal effect

### JEL Classification

G40, G41, G53

**Abstract:** The present paper attempts to study the factors which are responsible for financial behaviour-cum-literacy by considering demographic, socio-economic and financial factors. The current study uses primary data collected from the educated citizens of Jagatsinghpur Municipality in Odisha using a structured questionnaire survey. The sample consists of 125 individuals. Using Binary Logistic regression model and employing the marginal effect techniques, the study produces four major findings. First, factors like age, occupation, education and working profile are the variables which are responsible for financial literacy. Second, financial variable like monthly income of the respondent is also found to be significant in the model. All of these variables have positive marginal effects that are statistically significant at conventional levels, except for gender, which is not statistically significant. Third, from the descriptive analysis the study synthesizes that, respondents are poor in numeracy that means they are unable to calculate the financial portfolio properly. Fourth, majority of respondents have not any strategic future plan. It indicates their financial ignorance which leads them towards financial insecurity. Thus, results of the study are reliable for measuring financial literacy, and they support the need for quick action to reduce the problem of financial illiteracy. Hence, the study promotes certain policy recommendations, such that the state planning should identify the most vulnerable groups and should endeavour to raise their level of financial literacy. Major efforts should be taken into consideration through formal education, higher income, their working profile and future orientation of people can ameliorate the Indian financial literacy rate.

## 1. Introduction

In this cut-throat competitive world “Financial ignorance” is a great evil to manage personal finance. We can say financial illiteracy is a social evil that causes a financial crisis globally (Dinwoodie, 2011). Many people are ill-equipped to be in charge of their crucial personal and family financial matters. In other words, people lack in adequate knowledge and skills required to make sound financial decisions, which is stated as financial ignorance. In the 21st Century, financial ignorance is one of the dominant challenges that lead people to be the victims of financial abuse. The inadequate financial knowledge and absence of proper financial education create an imbalance between the consumption and savings patterns of an individual. Moreover, ignorance about the risk-return trade-off leads to the misallocation of funds into unprofitable investments (d’Ambrosio, 2003). People lacking knowledge regarding basic financial concepts and terms makes them vulnerable to solving financial issues (Alves et. al, 2012). Financial illiteracy is widespread among the general population

and they are ignorant about basic financial concepts (Lusardi, 2008). To make people financially aware, financial literacy is inevitable. Nowadays quality life requires making wise portfolio decisions and wealth accumulation which have a positive correlation with financial literacy (Jappelli & Padula, 2013). The rudimentary concept for devising prudent savings patterns, managing mortgages, planning for retirement, and undertaking other financial decisions is financial literacy (Lusardi and Mitchell, 2007).

## 2. Review of Literature

Socioeconomic characteristics like age, marital status, occupation, education, and gender have a big impact on financial literacy levels, according to recent studies. Gender-based disparities in confidence in financial decision-making are highlighted by Lind et al. (2020) and Tinghög et al., (2021). According to Tzora (2025) and Böhm et al., (2023), education and early financial exposure are essential for developing financial aptitude. Due to restricted access to financial education, youth and rural people continue to be at risk (Ben Belgacem et al., 2024). All things considered, these results highlight the necessity of focused, demographically aware financial literacy initiatives to encourage wise financial practices.

Financial illiteracy is influenced by a variety of elements, including socio-demographic factors, psychological traits, and other individual-specific conditions (Chen & Volpe, 2002). One of the primary factors that affects a person's financial decision-making is gender disparity. Research has shown that women are more likely to be financially illiterate (Al-Tamimi and Kalli, 2009), primarily because they tend to be less enthusiastic and confident about learning personal finance (Chen and Volpe, 2002). As a result, in many households, financial decision-making is predominantly carried out by the male members of the family. This disparity is further reinforced by the fact that women are generally more risk-averse and tend to prefer safe and low-risk investment options (Singh and Kumar, 2025), which is often cited as an example of financial illiteracy.

In addition to gender, age also plays a significant role, as several studies have indicated that financial literacy is particularly low among the younger population, which raises serious concerns. This deficiency can be attributed to various factors such as their socio-economic background, demographic profile, the financial sophistication of their families, and their limited exposure to personal financial dealings (Chen & Volpe, 1998; Agarwalla et al., 2012; Garg and Singh, 2018). The lack of financial knowledge can have adverse effects on individuals' daily lives, as their inability to make sound financial decisions often leads to the misallocation of funds, thereby increasing their vulnerability to financial exploitation (Nicolini et al., 2017).

A key component in mitigating this issue is numeracy, which plays a critical role in helping individuals manage their personal finances effectively. However, low numeracy levels are prevalent among certain demographic groups, particularly the elderly, women, and those with limited education, leading to poor financial decision-making (Lusardi, 2012; Kadoya and Khan, 2020). Consequently, inadequate financial planning among these groups hampers their ability to secure a stable post-retirement life (Lusardi, 2008).

People who are experienced and have an interest in acquiring personal financial knowledge from several sources, and people with higher academic attainment, are more aware of personal financial management (Hogarth and Hilgert, 2002). Since experience and education play a vital role, the training for the future should start from early childhood; so, to make a person financially literate and able to make wise financial decisions, his education matters. Thus, financial literacy must be emphasized as a continuous learning process and incorporated into school curricula (United States Financial Literacy and Education Commission, 2007), which lays the foundation for financial awareness. In this context, the personal finance management course in school positively affects their subsequent financial behaviour (Bamforth et al., 2018), showing that early exposure has long-term benefits. Reinforcing this, (Chen and Volpe, 2002) advocated that personal finance knowledge and college education are key factors in determining people's interest in personal finance concerns.

However, Chen and Volpe (1998), by surveying 924 college students from several institutes, found that college students lack adequate personal financial literacy as they are not availing the personal financial education in their curriculum. Hence, educational background is a key element in possessing financial literacy, and it increases with the level of education (Agrawal et al. 2010).

Married, male, high earners, non-minority, and middle-aged people are financially knowledgeable (Taft et al., 2013). However, Khuc et al. (2022) advocated that demographic elements such as income, age, and educational background have a significant impact on the level of financial literacy among the people. Furthermore, Sangeeta et al. (2022) have explored that as compared to other socio-demographic factors, work experience, education, and being techno-savvy are more closely associated with financial literacy. Another factor for Financial Literacy is high income and higher education (Fernandes et al, 2014). Some studies found people having high income are highly financially literate (Al-Tamimi and Kalli, 2009) and this is high among the people who are employed in banking, finance, or investment fields. Apart from that, the impact of personal finance management courses on school student's subsequent financial behaviour is quite positive. Bamforth et al. (2018), investigated the response of teenagers to social, economic, and psychological determinants of money management behaviour (Wagner, 2015).

In a nutshell, it can be summarized that financial literacy can be determined by various demographic and socio-economic factors, such as age, gender, marital status, income, occupation, knowledge of basic financial and economic terms and concepts, confusion over investing and saving, educational level, job nature, work culture (Al-Tamimi and Kalli 2009; Xiao and Chatterjee 2014; Potrich et al. 2015; Kadoya and Khan 2020). Hence, there is an interdependency between people's financial literacy level and various demographic and socio-economic variables (Malhotra and Vijay, 2024). The concern over stock market fraud and scandals is an intriguing addition to this list. Many respondents acknowledged their inability to fully comprehend the financial crisis but acknowledged that it has negatively impacted their efforts to comprehend the financial market (Letamendia et al., 2017). Financial literacy has a positive influence on people's active participation in the financial market (Yoong 2010, Klapper et al. 2013, Mate and Dam 2017). Epaphra and Kiwia (2021), by applying a logistic regression model found that the degree of financial literacy and financial understanding creates a platform for financial market participation despite the level of educational qualification. Consequently, financially literate persons can deal with financial matters more cautiously and make wise financial investments (Bayar et al., 2020).

After a thorough analysis of previous literature, we found that numerous socioeconomic and demographic variables have an impact on people's financial literacy, but no such studies have been undertaken in the Odisha context, especially in a district with having high literacy rate. Thus, the present study attempts to examine the socio-economic determinants influencing financial literacy among residents of Jagatsinghpur Municipality in Odisha.

### **3. Theoretical Underpinning**

Financial literacy has emerged to empower people, to make marginalized individuals able to manage their finances, mobilize their savings habits, and inculcate the attitude among people to invest money in proper avenues. Before the emergence of financial literacy, in schematic finance poor were always addressed from the supply side, but in today's era, the focus is on understanding the demand side, i.e., the financial status of the poor through financial inclusion. Thus, in a broader spectrum, it can be said that to make a proper hold on financial management, financial literacy is inevitable. The prime focus is to develop the financial literacy level and skills among individuals having limited financial resources, to deal with the complexity of finance.

Financial literacy is a crucial factor in building confidence among people to have control over their present and future financial matters. So, we can say financial intelligence is necessary for everyone. Ironically, financial literacy has nothing to do with one's level of formal education. There are questions about the long-term efficacy of teaching financial literacy in high school since the course

seems not to have influenced students who took the personal financial management course (Mandell and Klein, 2009). Women have a high rate of financial ignorance, which hurts their investment choices (Al-Tamimi and Kalli, 2009). Financially ignorant individuals cannot make wise decisions regarding their finances, which negatively affects economic development. Thus, financial literacy is the path to prosperity. As per the recent study by the National Financial Educators Council (NFEC) although America is a developed country, 28.8 percent of those aged 65 or older said they lack knowledge about personal finance, which caused them to lose \$30,000 or more in their lifetimes. According to the 2011 census report, out of 74.04 percent of literate, only a few are financially literate. Only 24% of Indian youths are financially literate, as per the report from the Global Financial Literacy Excellence Centre, which shows a low literacy rate as compared to other major growing economies. This is because of a lack of awareness and formal instruction.

#### **4. Data and Methodology**

The effect of socioeconomic and demographic factors on people's financial literacy levels was examined by using the data collected from the educated mass of Jagatsinghpur municipality of Odisha, India via Google Form. The impact of the independent variables has been analysed with the help of the Regression Logistic Model. Despite some limitations in sampling to generalize the population, this study attempts to show the interactions among the variables.

##### **4.1 Data**

The COVID-19 outbreak has disrupted normal operations everywhere. To avoid contamination, physical contact was strictly restricted and it was not feasible to visit the field to collect primary data. Given the constraints of the pandemic outbreak, resources, and accessibility, we adopted a snowball sampling method. It is considered a non-probabilistic sampling method where existing study participants pass the information to future participants from their social network, family friends and relatives by creating a chain-like structure. It is useful to reach the population where it is hard to access the population during the pandemic situation. Initially, some known people were contacted and discussed the purpose of the research. Then urged them to provide their known person contact numbers and further requested with them for other people's mobile numbers. By realizing the noteworthiness of our study, they have provided many people's contact details. Through this process, around 150 questionnaires were circulated, and out of these, only 125 were returned. The questionnaire was framed after extensive analysis of previous literature by Vyas (2021) and Gupta (2017), national and international toolkits to measure financial literacy, like OECD and NCFE reports. The segregation of questions into different parts is made as per the Global standard, i.e., financial knowledge, financial attitude, and financial behaviour (Potrich et. al, 2015).

The survey has been undertaken among the educated masses of two municipalities in Jagatsinghpur district, (i.e., Jagatsinghpur Municipality and Paradeep Municipality). Jagatsinghpur is considered as one of the highest literacy rates in the state of Odisha, as well as it ranks better than the national average in literacy and at the top of the list for the highest male literacy and second for female literacy. These two municipalities have been selected with consideration for accessibility, lodging, and the presence of some local contacts that supported us with the provision of crucial information about the sample area. Jagatsinghpur municipality consists of 21 wards of which 2 wards were chosen, i.e., ward-8 (Ohal) and ward-19 (Purohitpur), as most of the dwellers are educated in these 2 wards. These wards were selected carefully to represent diverse socio-economic backgrounds within the municipality, ensuring a reasonable degree of variation in the sample. From the entire 4,664 population of these two wards, 125 (2.68% approx.) representative samples have been collected. The male response rate is 56.80%, whereas the female response rate is 43.20%. The financial literacy of respondents has been measured by evaluating their basic financial knowledge regarding some financial concepts, day-to-day financial dealings, computational ability, stock market knowledge, and retirement planning. The data have been collected through a 5-point Likert scale and binary scaling techniques. The positive responses were coded as 1 and negative ones as 0, where questions, as per a 5-point Likert scale, are coded as 5 for highest weight and 1 for the lowest weight. The variables taken in the study have been explained in the table 7.

## 4.2 Methodology

### Binary Logistic Regression Models

A binary logistic regression model is the statistical model used to predict the relationship between independent variables and dependent variables, where the dependent variable is binary. The present study employs a logistic regression model (Agresti, 1996) to examine the socioeconomic factors that are responsible for the financial literacy of Jagatsinghpur municipality of Odisha. Given the binary nature of the dependent variable, logistic regression is an appropriate methodological choice, as it allows for the estimation of the probability of a particular event occurring as a function of several explanatory variables (Long & Freese, 2006). This model effectively captures the relationship between the regressors and the binary outcome variable, accommodating various types of predictors, including categorical, continuous, and dummy variables. Prior studies have demonstrated the suitability of the logit model in analyzing dichotomous outcomes within social and behavioural research (Long & Freese, 2006). Thus, the logit model is particularly well-suited to the present study's objectives and the structure of the data.

#### Assumptions of Logistic Regression Model:

- The logistic regression model is used to model binary or categorical dependent variables. It has several key assumptions which vary from the linear regression model because of the nature of dependent variables. These assumptions are outlined below:
- **The dependent variable is Binary in Nature:** The dependent variable of the logistic regression model must be binary or dichotomous i.e. it captures the '0' and '1'. If  $Y=1$ , it indicates the occurrence of the event and if  $Y=0$  indicates its non-occurrence
- **Linearity of the Logit model:** The model assumes that the relationship between the logit and the independent variables is linear. That is the logit value changes linearly with changes in the independent variables.
- **No perfect multicollinearity:** The independent variables must not be perfectly correlated. To avoid it we have run a correlation analysis and the coefficient of all variables indicates that there is no perfect multicollinearity among the independent variables. We have run a correlation to check multicollinearity in the model in Table 9 of the manuscript; all coefficients are below 0.5 which indicates there is no multicollinearity among independent variables.
- **Independent of Observations:** The observations should be independent of each other; there should be no repeated measurements or clustering unless accounted for.
- **Homoscedasticity is not assumed:** Logistic regression does not assume homoscedasticity, unlike Ordinary Least Squares (OLS) regression. Logistic regression is designed to handle situations where the variance of the error terms is not constant across all levels of the independent variables.

Considering the binary characteristics of “financial knowledge”, the present paper has attempted to estimate a binary logistic regression model.

$$\text{logit } p = \ln \left( \frac{P_i}{1-P_i} \right) = Z_i = \beta_1 + \beta_2 X_i, 0 < P < 1$$

Where,

$P_i$  = Probability of having financial knowledge

$1 - P_i$  = Probability of not having financial k knowledge

$\frac{P_i}{1-P_i}$  = The odds ratio in favour of having financial k knowledge Or the ratio of the probability that the respondent will have financial knowledge or literacy to the probability that he will not have financial knowledge or literacy. The logistic regression model assumes that the financial knowledge and literacy depend upon one or more explanatory variables such as gender, age, monthly income of the respondent, occupation, educational qualification, source of income (SOI), and work profile (WP).

Based on the above theoretical framework, we have developed the following models, which will be estimated to realize the objectives.



$$CA_i = \beta_1 + \beta_2 GENDER_{it} + \beta_3 AGE + \beta_4 MIR + \beta_5 OCCU + \beta_6 EDR + \beta_7 WP + \gamma_t \quad (1)$$

$$EPLAT_i = \beta_1 + \beta_2 GENDER_{it} + \beta_3 AGE + \beta_4 MIR + \beta_5 OCCU + \beta_6 EDR + \beta_7 WP + \gamma_t \quad (2)$$

$$SMK_i = \beta_1 + \beta_2 GENDER_{it} + \beta_3 AGE + \beta_4 MIR + \beta_5 OCCU + \beta_6 EDR + \beta_7 SOI + \beta_8 WP + \gamma_t \quad (3)$$

## 5. Results and Discussion

### Demographic Profile

Demographic information of respondents includes both quantitative and qualitative aspects of the sample. Quantitative aspects include age, gender, and income, and qualitative aspects include factors like educational qualification, work profile, occupation, and sources of income.

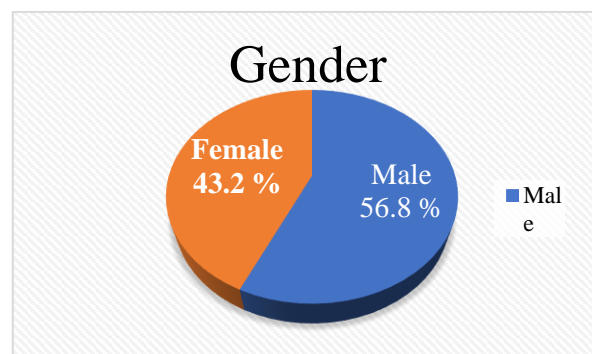
#### 5.1 Gender

As in the 21st Century, there is no gender disparity in any sector, still, the research revealed the existence of dissimilarity in financial decision-making patterns based on gender, which is a consequence of financial literacy. Gender differences are the key factor influencing personal finance literacy (Chen and Volpe, 2002). Study says that males are more risk-seekers and comparatively financially knowledgeable and aware than females (Taft et. al, 2013). Compared to young women, young males are more risk-averse, action-oriented, and interested in reading to increase their financial literacy. However, young women are more concerned with managing their finances and making sensible financial decisions (Cera and Tuzi, 2019). So, gender is an important variable in the present study.

**Table 1: Gender**

Gender	Frequency	Percentage
Male	71	56.80%
Female	54	43.20%

**Note:** Author's computation from primary data; N=125



**Figure 1: Percentage of the respondents' Gender**

The above pie chart shows the gender of respondents taken into consideration. It demonstrates that out of 125 respondents, 43.2% were female i.e. 54 females have given their responses, whereas the number of male respondents is 71 which is 56.8%. Thus, there is majority of male respondents.

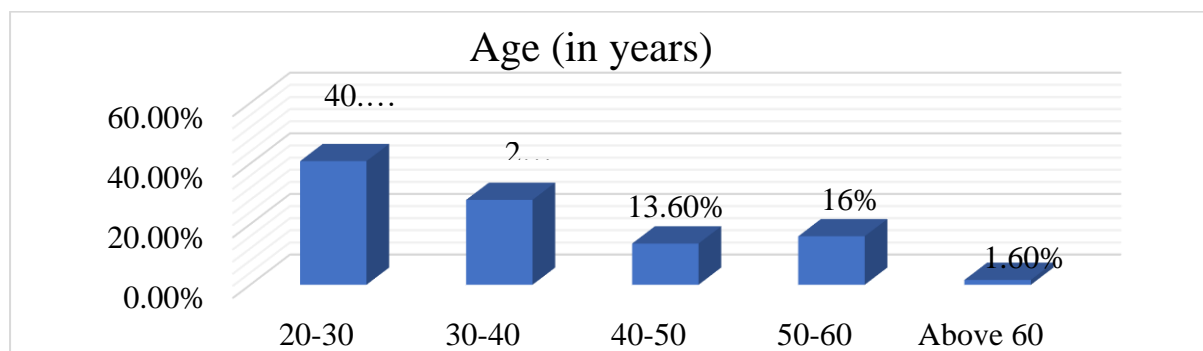
#### 5.2 Age

Age is a major factor in financial literacy determination. As with age, experience, and exposure to financial matters increases. However, in the US and other countries, financial illiteracy is pervasive among both young and old individuals (Lusardi and Mitchell, 2007). Finke et. al (2017), as financial responsibility is limited for young adults, the financial literacy level is less, whereas, it declines in old age.

**Table 2: Age**

Age	Frequency	Percentage
20-30	51	40.80%
30-40	35	28%
40-50	17	13.60%
50-60	20	16%
Above 60	2	1.6%

**Note:** Author's computation from Primary data; N=125



**Figure 2: Percentage of respondents' age**

**Note:** Author's computation from Primary data; N=125

The above bar graph demonstrates the percentage of the age of the respondents. It has been analysed that, the maximum number of respondents i.e. 40.8% are from the 20-30 age group, followed by the 30-40 age group with 28% and the 50-60 age group with 16% of total responses, whereas there are the least number of people of above 60 age group have been given their responses which is only 1.6 % of total responses and 40-50 age group followed with 13.6%. So, it shows that youngsters are more concerned about financial matters and are financially aware.

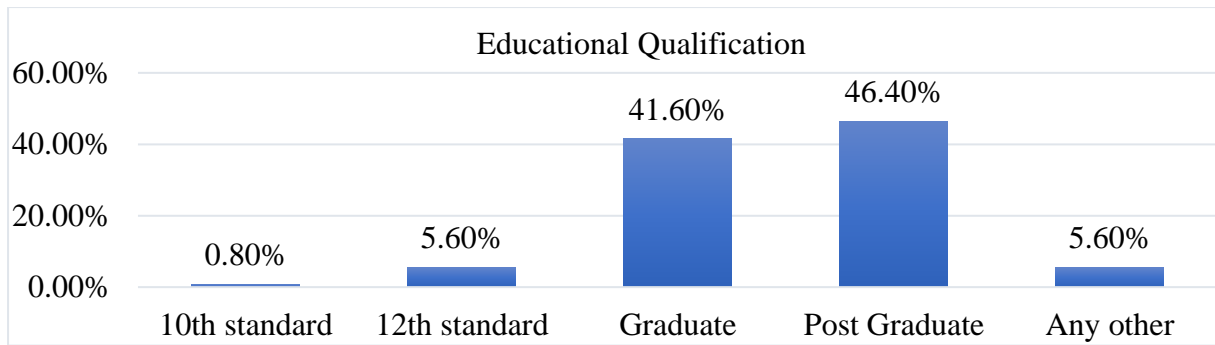
### 5.3 Educational Qualification:

The educational qualification of an individual plays a crucial role in being financially literate. Financial literacy and schooling attainment have a strong positive impact on household wealth accumulation (Behrman et. al, 2010). The level of education helps a person to make decisions wisely, which provides a shield to avoid exploitation.

**Table 3: Educational Qualification**

Qualification	Frequency	Percentage
10 <sup>th</sup> Standard	1	0.80%
12 <sup>th</sup> Standard	7	5.60%
Graduate	52	41.60%
Post-Graduate	58	46.40%
Any Other	7	5.60%

**Note:** Author's computation from Primary data; N=125



**Figure 3: Percentage of respondents' Educational Qualification**

**Note:** Author's computation from primary data; N=125

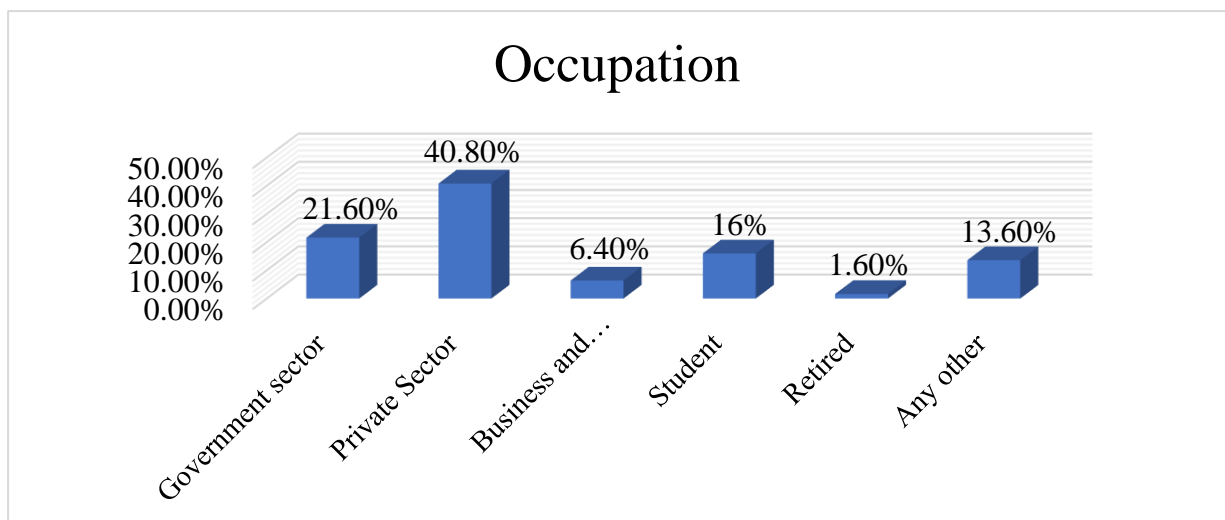
The diagram reveals the educational qualifications of the respondents. The majority of respondents are post-graduates, which is 46.40% of total respondents, i.e., 58 people, and 52 people out of 125 samples are graduates, i.e., 41.60%. However, a negligible portion of the sample size is below graduation, i.e., having educational qualifications of 10th and 12th standard, which are 0.80% and 5.6% respectively. Also, a small portion of respondents, i.e., 5.6% of total respondents, have other degrees or post-graduate degrees above. It evaluates that the maximum number of respondents are highly educated.

#### 5.4 Occupation

The occupation of an individual is the principal work or job for earning his livelihood. Since students' and retirees' levels of financial knowledge differ, financial literacy is dependent on the occupation of a person.

**Table 4: Occupation**

Occupation	Frequency	Percentage
Government Sector	27	21.60%
Private Sector	51	40.80%
Business and Profession	8	6.40%
Student	20	16%
Retired	2	1.60%
Any Other	17	13.60%



**Figure 4: Percentage of respondents' Occupation**



The above chart shows the occupation of the respondents, which demonstrates that the majority of respondents are private sector employees, i.e., 40.80% (51 respondents). The next highest number of respondents, i.e., 27 (21.60%) working in the Government sector. Whereas only 2 retired persons have given their responses, and 8 business people have responded. While 20 students have opined about their financial literacy, which is 16% of total responses, 13.60% of total responses were collected from people of different occupations.

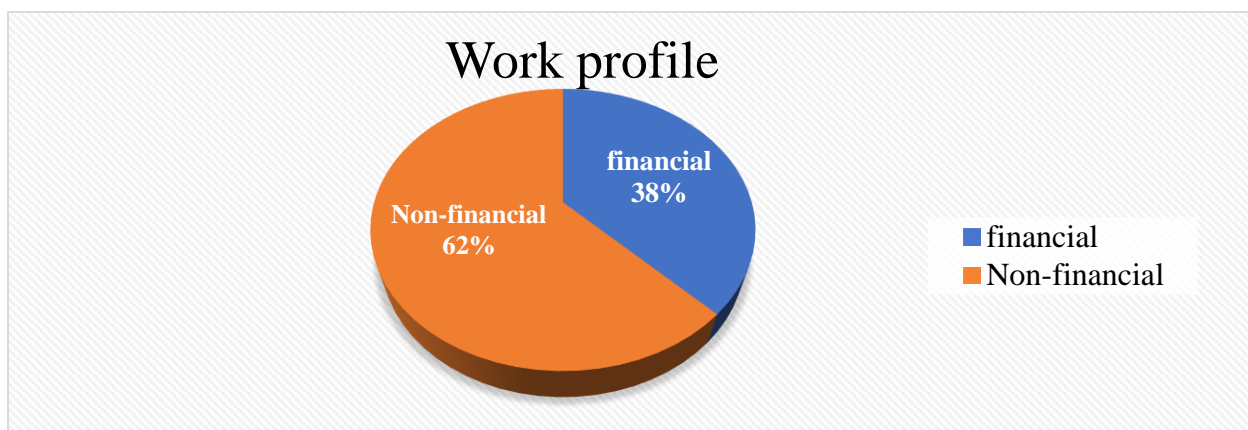
### 5.5 Work Profile

Work Profile plays a vital role in making an individual financially literate. An individual working in the financial sector has greater exposure to deal with various financial instruments which helps him gain more financial knowledge as compared to an individual working in the non-financial sector. Financial sector employees are comparatively more able to understand and efficiently use financial knowledge including personal financial management. Thus, the work profile of respondents has significance in this current study.

**Table 5: Work Profile**

Work Profile	Frequency	Percentage
Financial	47	38%
Non-Financial	78	62%

**Note:** Author's computation from Primary data; N=125



**Figure 5: Percentage of respondents' Work Profile**

**Note:** Author's computation from primary data; N=125

From the above chart, it is clear that the maximum number of respondents have a non-financial work profile, i.e., 78 respondents, which is 62% of the total responses. However, only 47 respondents belong to the financial sector, which is 38% of the total responses.

### 5.6 Monthly Income:

Monthly income plays a pivotal role in determining financial literacy. Because, as per income, an individual plans his amount of expenditure, savings pattern, and makes plans. The person who earns more has a different pattern of savings and investment than a person who earns a little just to manage his livelihood. So, personal financial management has an association with the quantum of earnings. Thus, the monthly income variable is significant for the present study.

**Table 6: Monthly Income**

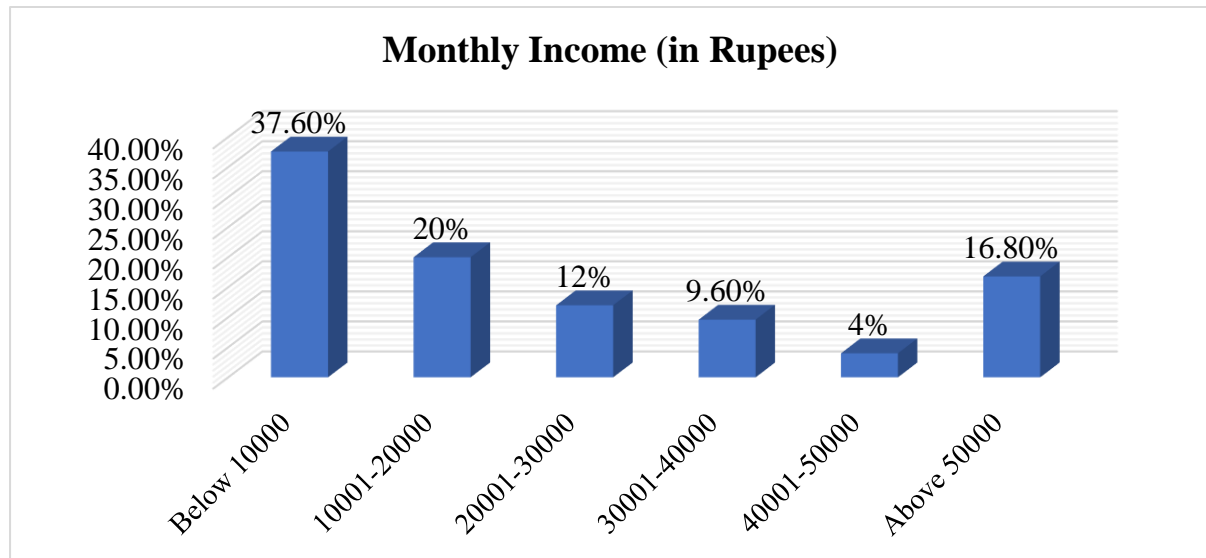
Monthly Income (in rupees)	Frequency	Percentage
Below 10000	47	37.60%
10001-20000	25	20%
20001-30000	15	12%
30001-40000	12	9.60%

40001-50000  
Above 50000

5  
21

4%  
16.80%

**Note:** Author's computation from Primary data; N=125



**Figure 6: Percentage of income of the respondents**

**Note:** Author's computation from primary data; N=125

Figure 6 demonstrates the income of the respondents and the maximum number of people belonging to the below Rs. 10000 categories, which is 37.60% of total responses. Then, 25 people having an income of Rs. 10001-20000 category and 21 people, i.e., 16.80% of the total sample, who are earning above Rs. 50000, have given their responses. Whereas, the least number of respondents, i.e., 4%, are falling under the Rs. 40001-50000 category, and 12 respondents have earnings of Rs. 30001-40000.

## 6. Discussion of the Econometric Results

**Table 7: Socio-economic variable-cum-variable matrix of the study**

Sl. No	Domain	Variables	Definition	Expected Impacts	Expected Sign
Dependent Variables					
1.	Financial Knowledge	E-PLAT	Use of internet banking/E-platform by the respondent	The use of the E-platform depends upon the following controlled variables	NA
		CA	Computational Ability and Numeracy	The ability to do financial numeracy and computation leads to financial literacy.	NA
		SMK	Stock Market Knowledge	Stock market knowledge depends on the following independent variables.	NA
		Independent or Controlled Variables			
2.	Demographic	GENDER	Gender of the respondent	Gender plays a vital role in financial literacy	+
		AGE	Age of the respondent	Age is an important factor in financial literacy	+

3.	Economic	MIR	Monthly Income of the respondent	As income rises, there is an expected positive impact on financial literacy-cum-knowledge	+
4.	Occupational	OCCU	Occupation of the respondent	Better occupation leads to better financial understanding	+
		WP	Working profile of the respondent, whether Financial or non-financial	If the working profile of the respondent is financial, then it is expected to have a positive impact	+
5.	Educational	EDR	Education of the respondent	If the respondents' level of education is high, then there is a positive relationship with financial knowledge-cum-literacy	+

Note: Author's compilation from primary data; N=125

**Table 8: Matrix of Basic Statistics of the selected variables**

Variables	Minimum	Maximum	Mean	Std. Deviation
SMK	0	1	.61	.49
CA	0	1	.48	.50
GENDER	0	1	.43	.49
AGE	1	3	1.61	.52
MIR	1	3	1.83	.74
OCCU	1	4	2.47	1.14
EDR	1	3	1.58	.59
WP	0	1	.38	.48

Note: Author's estimation from primary data.

**Note:** Std. Dev, Standard Deviation; Min, Minimum; Max, Maximum, N=125

Table 8 is a clear picture of the matrix of basic statistics of the selected variable considered for the study. On average 0.61 percent population has stock market knowledge (SMK), while an average of 0.48 percent population possesses the computational ability to process financial data. The mean age of the respondents is 1.61 and the average educational qualification percentage is 1.58.

**Table 9: Correlation Table**

Sl. No.	Variables	1	2	3	4	5	6
1.	GENDER						
2.	AGE	-.119					
3.	MIR	-.258**	.284**				
4.	OCCU	.177*	-.173	-.442**			
5.	EDR	.105	-.149	.038	-.023		
6.	WP	.090	.077	.197*	-.480**	-.002	-.114

\*\* . P< 0.01 (2-tailed); \* P< 0.05; N=125

Note: Author's estimation from primary data; N=125

Table 9 demonstrates the correlation among the variables. The one-tailed test determines the difference between variables in a specific direction. A two-tailed correlation shows the possibility of positive and negative differences. The sign (two-tailed) p-value explains whether the correlation is significant or not at a chosen alpha level. If the p-value is less than 0.01, then the relationship is highly significant, and the negative sign indicates the inverse relationship between variables. If the p-value is less than 0.05, then there is a weak but significant relationship exists.

**Table 10: Binary Logistic Regression**

Variables	B	S.E.	Wald	df	Sig.	Interpretation
GENDER	-.297	.425	.490	1	.484	Not Significant
AGE	.904	.412	4.815	1	.028	Significant
MIR	.437	.311	1.976	1	.160	Not Significant
OCCU	.465	.242	3.692	1	.055	Significant
EDR	.609	.340	3.204	1	.073	Significant
WP	1.514	.487	9.641	1	.002	Significant
Constant	-5.353	1.548	11.951	1	.001	Significant

**Note:** Author's estimation from primary data; N=125

**Dep. Variable**=Computational Ability (CA)

Table 10 shows the impact of various independent variables such as age, gender, monthly income of respondents (MIR), occupation (OCCU), educational qualification of respondents (EDR), and work profile of respondents (WP) on the dependent variable i.e. Computational Ability (CA) which is the proxy variable for financial literacy. After regressing the dependent variable (CA) with the controlled variables, we found that the variables age and work profile of respondents (WP) are significant at the 5% level of significance and positive in the model. It indicates that as with the coming of age, the experience and exposure to financial dealings increase, so the financial literacy and financial knowledge also increase. Likewise, a better WP gives a handsome income, which is subject to more financial activities and ultimately better financial knowledge and computational ability. Furthermore, variables like occupation (OCCU) and educational qualification of the respondents (EDR) are significant to determine the computational ability at a 10% level of significance. As an occupation that provides exposure to dealing with financial matters, it improves the computational ability of the respondents. Similarly, computational ability improves with the level of education. Except for these variables, other variables are showing their expected signs but are non-significant.

**Table 11: Binary Logistic Regression**

Variables	B	S.E.	Wald	df	Sig.	Interpretation
GENDER	-1.567	.591	7.026	1	.008	Significant
AGE	-2.124	.613	11.990	1	.001	Significant
MIR	.794	.399	3.958	1	.047	Significant
OCCU	.107	.315	.116	1	.733	Not Significant
EDR	1.097	.502	4.768	1	.029	Significant
WP	1.129	.692	2.658	1	.103	Not Significant
Constant	1.115	1.823	.374	1	.541	Not Significant

**Note:** Authors' estimation from primary data; N=125

**Dep. Variable** (E-platform/Internet Banking/ATM)

Table 11 exhibits the significance of various explanatory variables on the dependent variable, viz., use of E-Platform/Internet Banking/ATM, which means the use of online banking services like transacting through UPI, BHIM, use of ATM cards, and other mobile banking portals by the respondents. The use of the e-platform asserts the level of financial knowledge of the respondents. By regressing the dependent variable (use of E-Platform) with the independent variables such as gender, age, monthly income of respondents (MIR), occupation (OCCU), educational qualification (EDR), work profile (WP) of the respondents, we found that GENDER, AGE, monthly income of the respondents (MIR) and educational qualification (EDR) are significant at 5% level of significance. Gender plays a vital role in the use of Internet banking. A study says males are more inclined to online banking as compared to females. While the use of e-payment portals also varies with age, because,

comparatively, youngsters are more apt to use them than older people. Likewise, high-earners are relatively more financially aware and undertake online transactions. Lastly, since educated people have better financial understanding, they use e-platforms more. But taking e-platform as the dependent variable, controlled variables such as occupation (OCCU), and work profile (WP) are found to be non-significant in this model.

**Table 12: Binary Logistic Regression**

Variables	B	S.E.	Wald	df	Sig.	Interpretation
GENDER	-.916	.431	4.520	1	.034	Significant
AGE	-.935	.418	5.014	1	.025	Significant
MIR	.505	.320	2.495	1	.114	Not Significant
OCCU	.637	.263	5.854	1	.016	Significant
EDR	.346	.349	.982	1	.322	Not Significant
WP	.843	.481	3.068	1	.080	Significant
Constant	.557	1.417	.154	1	.694	Not Significant

Note: Author's estimation from primary data; N=125

Dep. Variable = Stock Market Knowledge (SMK)

Stock market knowledge (SMK) is the proxy variable to evaluate respondents' financial literacy, while gender, age, monthly income of respondents (MIR), occupation (OCCU), educational qualification (EDR), sources of income (SOI), and work profile of the respondents (WP) are independent variables. By regressing the dependent variable (SMK) with independent variables, we found that gender, age, and occupation (OCCU) are significant at a 5% level of significance. However, the work profile of the respondents (WP) is significant at a 10% level of significance. Since a person who belongs to the financial work profile has a better understanding of financial concepts as well as knowledge about the stock market, this signifies a level of financial literacy. (See Table 12)

## 7. Interpretation of Average Marginal Effect (AME)

Especially empirical economists usually pay attention to marginal effects rather than the parameters, as it measures a change of one unit in the explanatory variables, resulting in an average change in the dependent variable. The result of the average marginal effect (AME) is presented in Table 13. The AME explains the degree of elasticity of a one-unit change in the explanatory variable, the average change in the dependent variable.

**Table 13: Marginal Effects of the entire Controlled variable**

Variables	dy/dx	Std. Err.	Z	P>z	[95% Conf. Interval]
GENDER	-0.06	0.09	-0.7	0.48	-0.23 0.11
AGE	0.19***	0.08	2.36	0.02	0.03 0.35
MIR	0.09	0.06	1.45	0.15	-0.03 0.21
OCCU	0.10***	0.05	2.03	0.04	0.00 0.19
EDR	0.13*	0.07	1.88	0.06	-0.01 0.26
WP	0.32***	0.09	3.66	0.00	0.15 0.49

\* & \*\*\* denote significant at 10% & 1% level.

**Source:** Estimated from primary data by authors using STATA.

It is evident from Table 13 that the coefficient of the marginal effect of age (AGE) is positive and significant, which means there is a positive relationship between age and financial knowledge. That is, as the respondent's age increases, financial literacy also increases with age. In the same line, the coefficient of education of the respondent (EDR) is also positive and significant in the model. Better working profile (WP) and better occupation (OCCU) reduce financial ignorance, which in turn enhances financial literacy.

## 8. Findings

The present paper attempts to study the socio-economic and demographic factors that are responsible for financial literacy in the targeted group of Jagatsinghpur municipality of Odisha state. The study is based on the primary data set collected from the district. There is a plethora of empirical research papers that attempt to explain the determinants that induce financial literacy, but there is a dearth of studies that focus on cross-sectional level data sets in the context of a district-level empirical case study to find out the major factors for financial literacy. This study contributes to the financial inclusion and financial literacy literature in great ways. By considering three dependent variables, such as computational ability, use of E-payment platforms, and stock market knowledge as the proxy for financial literacy, we have developed three models. Using a binary logistic regression model, the study produces three major findings.

Firstly, considering the computational ability (CA) as the proxy variable for financial literacy, and regressing the same with the controlled variable, the study concludes that variables such as age, working profile of the respondent, occupation, and educational qualification of the respondent are the factors which enhance the financial literacy among the targeted group. It indicates that with increasing age, experience, and exposure to financial literacy increase. Likewise, when the respondent has a better working profile, he/she is financially more literate. Even the occupation and level of education play a vital role in enhancing financial literacy among the targeted group. (Lusardi, 2012; Klapper et. al, 2013), Stated that numeracy is one of the rudimentary skills that people should possess to make wise financial decisions, because computational ability plays a vital role in debt management asset building, and coping with manifold economic conditions as well. But it is low among women, old-aged people, and people having low educational qualifications. However, Klapper et. al (2013) revealed that people from a financial working profile have better financial skills as they have more financial dealings.

Secondly, by considering the E-platform i.e. the online banking service like transacting through UPI, BHIM, mobile banking, and other portals for financial transactions as the response variable and regressing the E-Platform with the independent variables such as gender, age, monthly income of respondents, occupation, educational qualification and work profile of the respondent, the study finds that gender, age, monthly income of the respondents and educational qualification are significant and are the factors which are responsible for use of more e-platform. Manifold socio-economic and demographic factors promote the use of digital banking services (Choudhury and Bhattacharjee, 2015). Andreou and Anyfantaki (2020) found that the financially knowledgeable mass uses Internet banking more frequently than the financially illiterate masses, as the latter group does not possess enough trust, self-confidence, and digital proficiency. Thus, financial literacy has a positive correlation with the use of e-banking. Furthermore, Teka and Sharma (2017), by surveying 600 people from Ethiopia, found that the involvement of women in e-banking practices is less, so digital literacy should be created among females.

Thirdly, regressing the stock market knowledge with the same controlled variables, we have found that the gender, age, occupation, and work profile of the respondent are significant and are the factors that are responsible for financial literacy. (Dwyer et. al, 2002; Almenberg and Dreber, 2015) Advocated that the gender gap plays a crucial role in the line of stock market participation, as women have less risk appetite, which their participation being minimal in stock investment. Nevertheless, investors' knowledge also has an impact to a greater extent. Van Rooji et. al (2011) stated that a lack of grasp on financial concepts led people to deviate from stock holding. However, (Vaarmets et. al, 2019) cognitive ability has a considerable significance for stock market participation, which is poor in the case of women, and financial education also helps to boost participation, along with occupation, socioeconomic status, economic pursuit, and religious aspect are other influencing factors.

Finally, we can conclude that various demographic and socio-economic factors like age, gender, education, income, occupation, and work profile are responsible for the level of financial literacy (Chen and Volpe, 2002; Al-Tamimi, 2009; Taft et. al, 2013). A better work profile and occupation lead



to a better financial understanding and a higher educational qualification a better financial knowledge-cum-financial literacy. Furthermore, (Taft et. al, 2013) revealed that a high level of financial literacy contributes to better financial well-being and fewer financial concerns. With the increased level of income, more financial activities give better financial knowledge, and (Klapper, 2013) a high level of financial literacy helps to endure macroeconomic shocks as well as to make a finer savings, investment, and debt management strategy. Moreover, financial literacy aids in better savings, investment, and debt management strategies.

## 9. Contribution of the Study

We have clearly stated that this study contributes to the existing literature by:

- Providing empirical evidence on the determinants of financial literacy using binary logistic regression analysis in the context of a semi-urban municipality in Odisha.
- Identifying socio-economic and variables such as age, gender, education, income level, work profile, and occupation that significantly influence financial literacy.
- Offering policy-level insights that may guide government and local institutions in designing targeted financial literacy programs.

## 10. Conclusion with Policy Suggestion

The current study sought to assess the financial literacy of residents of Jagatsinghpur district. Financial literacy is essential for everyone's well-being, and financial knowledge is its fundamental component. But people are ignorant about it, which are exposing for financial exploitation. This ignorance is getting acute due to inadequate awareness, for which the government should plan for rigorous policy formulation. And in rural areas, this ignorance is widespread. So, there is a need to make society financially literate, not only educationally qualified. However, various regulatory authorities are conducting many programs to make people financially aware, but they should also expedite it to reach each household. However, (Chen and Volpe, 2002; Lusardi and Mitchell, 2008; Singh and Kumar, 2025) administered that financial literacy is low among women, hence the policy formulators should throw light on gender differences and as women have longer life expectancy than men, so more emphasis should be given on women to make them financially aware as well as induce them to make an earlier retirement planning. If everyone is financially aware, they will make proper financial decisions, so that their financial condition will also be better, and ultimately, the country will grow.

Thus, after all the discussions, it concludes that while designing programs that promote financial literacy, they should take into account a variety of socioeconomic and demographic aspects. The present study discovered that people are aware and literate enough in some areas, but poor in some specific areas. So, those areas should be emphasized during policy formulation and must be addressed through different awareness programs and campaigns as well. A high level of educational qualification brings better financial knowledge-cum-literacy, which has a positive association with financial decision-making. Thus, financial literacy empowers people to make wise financial decisions that significantly affect an individual's financial literacy, financial outlook, and financial conduct. That indicates financial knowledge, financial attitude, and financial behaviour change with the level of financial literacy.

## 11. Practical Implications of the Study

The findings of the study carry significant implications for policymakers, educators, financial institutions, and community development professionals, especially in the semi-urban and rural areas context. Firstly, the study highlights the key socio-economic and demographic determinants influencing an individual's financial literacy, which can be used as a guiding tool for formulating more focused and effective financial literacy initiatives. Policymakers and educational institutions can leverage this evidence to design awareness campaigns and training programs and include it in the teaching curriculum. Secondly, financial institutions and NGOs can customize their outreach and

financial education strategies in terms of providing a mobile-based learning system with simplified digital tools and conducting community workshops. Thirdly, the application of the logistic regression model can help government agencies and development planners to use such a model as a diagnostic model. In summary, the study's findings offer a data-driven basis for policy formulation and community-level action, contributing toward the broader goal of financial inclusion and empowerment in underserved areas.

## **12. Limitations of the Study**

The scope of this study is limited to the Jagatsinghpur municipality only. Only two wards, having most of the educated dwellers of the municipality, have been chosen for the study, which also limits the generalizability of the study. Due to the COVID outbreak, as no physical contact was possible, so number of samples was limited to just 125. However, these wards were selected carefully to represent diverse socio-economic backgrounds within the municipality, ensuring a reasonable degree of variation in the sample. Moreover, the primary objective of the study was to conduct an in-depth exploratory analysis rather than to make broad generalizations.

Another key limitation is the use of cross-sectional data, which limits the ability to establish a relationship between the variables and financial literacy. The logistic regression approach does not permit the construction of causal linkages, even though it finds statistically significant correlations between financial literacy and several socioeconomic and demographic characteristics.

The study relies upon the self-reported survey data, which may be subject to biases. Respondents may overstate or understate their financial knowledge and financial behaviour. There may be a situation where participants are unable to accurately recall their past financial decisions. These biases can affect the reliability and validity of the data, which leads to overestimation or underestimation of the financial literacy level.

## **13. Future Scope of the Study**

Based on the above limitations, the present study recommends some valuable insights for future researchers:

- For a better understanding of regional differences in financial literacy, future research could include comparative analyses across several districts or states, particularly between rural, semi-urban, and urban populations.
- It is advised that future studies may use experimental or longitudinal approaches to more thoroughly examine causal pathways. Monitoring people over time would make it easier to determine how shifts in income, education, work profile, and digital access affect the results of financial literacy.
- Future studies could include the psychological and behavioural aspects, such as risk appetite, financial confidence, and decision-making capabilities of individuals.
- By considering both quantitative and qualitative methods, a combined form of research could be undertaken.
- To measure real-world effects, future research might use experimental or quasi-experimental methodologies to evaluate the efficacy of various financial literacy initiatives or government interventions (such as the PM Jan Dhan Yojana or financial inclusion campaigns).

By addressing these areas, future research can build a more holistic and dynamic understanding of financial literacy in the Indian context.

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