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The Impact of Demographic Factors on Financial Literacy among Farmers: Insights from Rural Tamil Nadu

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Abstract

Financial literacy is becoming more widely acknowledged as an essential skill for navigating the intricacies of the financial world. Governments globally are proactively working to improve financial literacy among their populations, understanding that a lack of proficiency in this domain can result in persistent difficulties that greatly affect a person's financial health. In our country, the convergence of limited literacy and restricted access to financial services poses a barrier for smallholders in acquiring these essential skills. Given the diverse needs within different demographic groups, tailored financial education becomes imperative. This research, focusing on the specific demographic of "farmers", serves as valuable insight for the government to customize financial literacy content. The study employs the Chi-square test to analyze the association between literacy levels and demographic variables, offering a comprehensive understanding of the dynamics at play.

Keywords: Farmers, Financial Education, Financial Literacy, Government, Rural

Introduction

Financial literacy encompasses a confident grasp of concepts such as savings, investments, and debt, leading to a sense of financial well-being and overall confidence. This area of knowledge emphasizes an individual's capacity to manage their finances effectively and make informed decisions. The significance of financial literacy is evident in its ability to empower individuals to plan for their future and mitigate financial challenges. In today's evolving financial landscape, it is imperative for individuals to assess their income and ensure they do not overspend. Financial education, in essence, promotes stability and growth, influencing socioeconomic levels in the process.

The advancement of agriculture is crucial for overall economic growth, and access to finance plays a key role in enabling this growth. The Reserve Bank of India is actively engaged in developing policies aimed at improving the flow of credit to the farming community.

(Reserve Bank of India, 2019). RBI raises awareness and distributes targeted content in the form of financial literacy posters and flyers to the farming community. Banks are also notified to display hoardings and content at local bank branches, financial education centers, ATMs, etc. NABARD has advised banks in India to draw up state-wise quarterly plans towards financial and digital literacy camps by their branches. These plans should cover various target groups including farmers (RBI, 2021).

Importance of Financial literacy of Farmers

Everyone learns to manage money, but not everyone is good at managing money. Many live and focus only on daily living. The farmers must ensure that they can buy inputs and meet expenses other than their income besides supporting their family. Learning how to effectively manage money is a crucial skill. Limited literacy combined with inadequate access to financial services can pose challenges for smallholder farmers in acquiring these skills, yet they are immensely valuable. Financial literacy is thus a critical factor for farmers to enhance productivity, increase income and profitability, and ultimately improve livelihoods. Understanding finance and debt management is essential for helping farmers comprehend how financial services offered by banks operate, and for teaching them effective strategies to manage and market their products.

Financial education equips farmers with the knowledge, awareness and skills needed to effectively manage their finances, including budgeting, cash management, and investment decisions. According to a study by Alam et al. (2019), financial education significantly improves farmers' financial management practices, leading to better financial outcomes. Farmers are exposed to various financial risks, including market fluctuations, weather-related risks, and input cost volatility. Financial education helps farmers understand these risks and implement strategies to mitigate them. Research by Cole et al. (2019) highlights the positive impact of financial education on farmers' risk management practices. By understanding credit requirements, loan terms, and repayment options, farmers can effectively utilize credit to invest in their farms and improve productivity. Studies by Khan et al. (2020) demonstrate that financial education increases farmers' access to credit and enhances their ability to leverage financial resources. Research by Kumar and Winters (2019) suggests that financial literacy positively influences farmers' agricultural productivity by promoting efficient resource allocation and adoption of modern farming practices. Financial education plays a vital role in empowering farmers to make informed financial decisions, manage risks effectively, access financial services, and ultimately improve their livelihoods and agricultural sustainability.

Statement of the Problem

Financial illiteracy is the lack of financial knowledge and awareness. The implementation of the Financial Literacy Campaign takes place at the meso-level and macro-level, and its benefits are realized by educated and privileged citizens. However, this is not the case for underprivileged groups such as farmers and uneducated people. It is necessary to approach them at a micro-level, which is a definite hardship. Taking this issue into account, the current study analyses farmers' level of financial knowledge.

Literature Review

Several academic researchers have emphasized the significance of financial literacy for individual financial well-being and economic resilience (Aggarwal et al., 2014). In a study conducted in Punjab, India, it was found that farmers exhibited sound to fair levels of financial literacy, particularly regarding the time value of money and basic financial principles. However, the study noted a tendency towards mediocrity in financial literacy among a larger number of farmers. Financial literacy is now widely recognized as a fundamental skill essential for consumers navigating complex financial environments. Simultaneously, there is growing concern in many countries about the overall level of consumer financial capability (Tsai Jason, 2014). Microfinance service is one of the effective solutions to reduce that gap between the poor and the rich. It contributes to the development of the agricultural economy and the reduction of poverty in rural communities. (Iderawumi, 2016) Rural farmers often lack access to formal sources of financial information. Therefore, it is imperative to intensify our efforts to revitalize the economy and continually seek practical approaches to address farmers' challenges. (Santoso et al., 2020) study shows that farmers' understanding is enough in principle to know how to calculate bank interest rates, time value of money, general rules of banking, definition of inflation, risk and return receive. They don't understand how important it is to manage their finances, but the perception of having money in the bank doesn't match up with feelings of anxiety because wealth is being managed by other people or institutions. (Wafula. I. W, 2017) Financial literacy is indicative of a broader understanding encompassing global economics, technology, consumer rights, attention to detail, and organizational skills. (Widhiyanto et al., 2018) Financial institutions, together or individually, should intensify their efforts to enhance financial education through learning, training and socialization in finance and banking. These efforts aim to improve the financial literacy of the community. A complete financial literacy will lead to better public finance behaviour so that they can access the products and services of financial institutions for the public good and encourage the improvement of the national economy. through the financial sector.

Research Questions

The study addresses the following inquiries:

a. What is the level of financial literacy among farmers in rural Tamil Nadu?
b. Are farmers adequately prepared to make sound financial decisions?
c. What is the relationship between demographic variables and the financial literacy level of farmers?

Conceptual Framework

Drawn from the literature review concerning financial literacy and its relevance to farmers, this study develops the following conceptual framework.

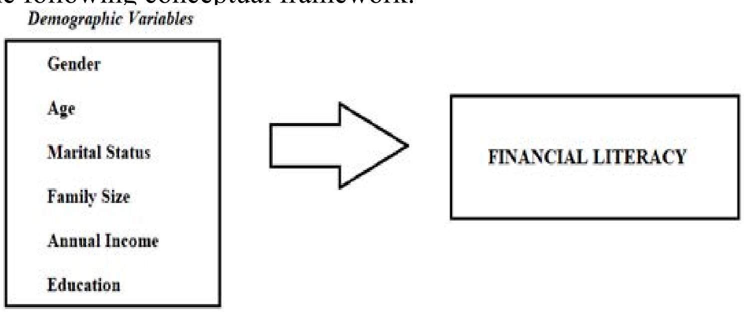

Figure 1 Conceptual Framework

Research Hypothesis

For the objectives, the following hypothesis is framed,

a. Ho1: There is no association between Gender and Financial Literacy
b. Ho2: There is no association between Age and Financial Literacy
c. Ho3: There is no association between Marital Status and Financial Literacy
d. Ho4: There is no association between Family size and Financial Literacy

e. Ho5: There is no association between Annual Income and Financial Literacy
f. Ho6: There is no association between Education and Financial Literacy

Research Objectives

The objective of the study is to analyse the effect of demographic variables (such as Age, Married Status, Family size, Annual Income, Education) on the financial literacy level of Farmers in Rural Tamilnadu.

Research Methodology

Numerous studies have been conducted worldwide on financial literacy, exploring various factors contributing to the enhancement of financial knowledge. The current study specifically examines how demographic variables impact the financial literacy level of farmers. Convenience sampling was employed for data collection in this study, which utilized both primary and secondary sources including questionnaires, publications from the Reserve Bank of India (RBI), research projects, and journal articles. Primary data was gathered through a questionnaire administered in Kodaikanal, located in the Dindigul district of Tamil Nadu, India. The questionnaires were distributed to small-scale farmers by the researcher through personal administration, ensuring clarity and interpretation of the questionnaire items. A total of 186 respondents were initially sampled, with 153 respondents included after discarding incomplete questionnaires. The Cronbach's alpha coefficient for the Financial Literacy scale was calculated to be 0.718, indicating acceptable internal consistency reliability.

Limitations of the Study

Limitations of the study include the relatively small sample size of 153 respondents, which may restrict the generalizability of the results to the broader population. Additionally, the study period (December 2023 - January 2024) and the specific geographical focus on Kodaikanal limit the temporal and spatial applicability of the findings. Furthermore, the majority of respondents being uneducated posed challenges in explaining and clarifying questionnaire items, potentially leading to misinterpretation.

Data Analysis and Interpretation

The table.1 reveals insights into the demographic composition of the surveyed population, comprising farmers, which is essential for understanding their financial literacy needs and designing targeted interventions.

Table 1 Demographic Analysis

Basis	Category	Frequency	Percent
Gender	Male	100	65.4
	Female	53	34.6
	Total	153	100.0
Age	18-29	15	9.8
	30-39	81	52.9
	40-49	28	18.3
	Above 50	29	19.0
	Total	153	100.0

Marital Status	Unmarried	12	7.8
	Married	141	92.2
	Total	153	100.0
Family Size	Upto 3	24	15.7
	3-5	96	62.7
	More than 5	33	21.6
	Total	153	100.0
Annual Income	Upto 160000	124	81.0
	160001-300000	29	19.0
	300001 - 500000	0	0.0
	Above 500000	0	0.0
	Total	153	100.0
Education	Schooling	130	85.0
	Graduation	23	15.0
	Post Graduation	0	0
		153	100.0

The majority of respondents are male, accounting for 65.4% of the sample. This underscores the importance of addressing gender-specific barriers to financial literacy access and education. Regarding age distribution, the highest proportion falls within the 30-39 age bracket, indicating that this group may represent a critical demographic for financial literacy interventions, given their potentially significant roles in agricultural decision-making and economic activities. Additionally, the overwhelming majority of married respondents (92.2%) underscores the importance of considering family dynamics and responsibilities when designing financial literacy programs. The distribution of family sizes reveals a diverse range, with most families comprising 3-5 members, suggesting the need for financial education that addresses budgeting and planning for households of varying sizes. Income distribution reflects a majority earning up to 160,000 annually, indicating the predominance of low to moderate-income households among the surveyed farmers. Lastly, the educational attainment of respondents is predominantly at the schooling level (85.0%), highlighting the importance of designing financial literacy materials that are accessible and comprehensible to individuals with varying levels of education. Overall, these demographic insights serve as a foundation for policymakers and organizations to tailor financial literacy initiatives that address the diverse needs and circumstances of farmers, thereby promoting economic resilience and sustainability within rural communities.

Descriptive statistics were utilized to examine the relationship between variables in this investigation.

Descriptive Statistics

Table 2 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Time Value of Money	153	1	5	3.90	.801
Interest Rate Basic Borrowings	153	1	5	3.64	.950
Principle	153	1	5	3.63	.952
Spending Budget	153	1	5	3.62	1.058
Inflation	153	1	5	3.80	.939
Valid N (listwise)	153				

Components of Financial literacy was measured using a 5-point Likert scale with 5 = strongly agree and 1 = strongly disagree. The mean value for the Time Value of Money is 3.90, indicating that respondents possess a moderate understanding of the importance of time in financial decisions. Similarly, the mean value for Interest Rate is 3.64, suggesting a reasonable grasp of interest concepts among respondents. Rural farmers also demonstrate significant comprehension of inflation, with a mean value of 3.80. Furthermore, the mean value of 3.62 for Personal Spending Budget signifies farmers' awareness and proficiency in managing their expenses. However, the mean value for the Basic Borrowings Principle is 3.63, suggesting that farmers may not fully understand the necessity of considering their income before obtaining a loan. These insights highlight areas where further education or interventions may be beneficial in enhancing farmers' financial literacy and decision-making abilities.

The results of Chi-square test for independence of different categories of demographic variables and the level of financial literacy are shown in the below Table 3.

Table 3 Association between Demographic Variable and Financial Literacy

Demographic variables	Category	Financial Literacy			Pearson's Chi-square	P-Value
		Poor	Good	Fair		
Gender	Male	26 (26%)	51 (51%)	23 (23%)	1.48	0.477
	Female	12 (23%)	24 (45%)	17 (32%)		
Age	18 - 29	1 (7%)	10 (67%)	4 (27%)	6.799	0.342
	30 - 40	22 (27%)	38 (47%)	21 (26%)		
	41 - 50	8 (29%)	10 (36%)	10 (36%)		
	Above 51	7 (24%)	17 (59%)	5 (17%)		

Marital Status	Unmarried	4 (33%)	5 (42%)	3 (25%)	0.529	0.768
	Married	34 (24%)	70 (50%)	37 (26%)		
Family size	Up to 3	4 (17%)	14 (58%)	6 (25%)	2.389	0.665
	3 to 5	24 (25%)	48 (50%)	24 (25%)		
	More than 5	10 (30%)	13 (39%)	10 (30%)		
Annual Income	Up to 160000	33 (27%)	61 (49%)	30 (24%)	1.787	0.409
	160001-300000	5 (17%)	14 (48%)	10 (34%)		
Education	School level	35 (27%)	60 (46%)	35 (27%)	3.166	0.205
	Graduation	3 (13%)	15 (65%)	5 (22%)		

Note : ** denotes significant at 5% level

These percentile scores offer valuable insights into the spread of financial literacy among farmers. It reveals that 50% of farmers possess a commendable level of financial literacy, whereas 25% exhibit a poorer understanding, and 75% demonstrate a moderate level of financial literacy. This analysis highlights potential areas for financial literacy interventions aimed at enhancing farmers' capabilities in making informed financial decisions. The analysis examined the relationship between farmers' financial literacy and various demographic factors. Results indicate that age does not show a significant association with financial literacy levels among farmers. Similarly, marital status does not seem to have a notable impact on farmers' financial literacy. Gender does not reveal a significant difference in financial literacy between male and female farmers in the dataset. Additionally, income levels do not exhibit a significant relationship with financial literacy. Family size also does not appear to be significantly linked to financial literacy among farmers. Moreover, the level of education attained by farmers does not seem to significantly influence their financial literacy. In the study, the acceptance of the null hypothesis across all tested variables—including age, marital status, gender, income, family size, and education—in their association with financial literacy among farmers, suggests a uniform distribution of financial literacy levels across diverse demographic and socioeconomic groups within the sample. This implies that, within the study population, factors such as age, marital status, gender, income, family size, and education level do not significantly differentiate the level of financial literacy among farmers. These findings underscore a potential equality in financial literacy attainment across various demographic and socioeconomic backgrounds within the surveyed agricultural community.

Conclusion

Measuring the level of financial literacy is widely recognized as a priority, as financial education requires evidence of the current level of financial literacy. The findings underscore the need for targeted interventions to enhance farmers' financial decision-making abilities. Governments and policymakers should consider implementing comprehensive financial education programs tailored to the specific needs of agricultural communities. These programs could focus on improving knowledge of financial management, access to financial resources, and understanding of market dynamics. Additionally, initiatives aimed at promoting digital financial services and enhancing access to credit facilities could further empower farmers in managing their finances effectively. By addressing these gaps in financial literacy, policymakers can foster economic resilience and sustainability within the agricultural sector, ultimately contributing to overall socio-economic development.

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