

## International Journal of Agriculture Extension and Social Development

Volume 8; Issue 2; February 2025; Page No. 156-160

Received: 02-11-2024  
Accepted: 10-12-2024

Indexed Journal  
Peer Reviewed Journal

### The impact of socio-economic factors on credit access of farmers in Nagpur district

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DOI: <https://doi.org/10.33545/26180723.2025.v8.i2c.1627>

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#### Abstract

The study investigates the socio-economic characteristics and borrowing patterns of farmers in Nagpur district, India, focusing on the role of credit in agricultural development. A multi-stage random sampling method was employed to collect data from 80 farmers in two tehsils, categorizing them as beneficiaries and non-beneficiaries of credit. The study found that middle-aged, minimally educated farmers with small family sizes were more likely to access credit. Institutional sources were the primary choice for borrowing due to reasonable interest rates and easy accessibility. However, farmers also relied on non-institutional sources to meet emergency needs. The research highlights the importance of credit in enabling small and medium farmers to acquire necessary inputs, increase productivity, and finance value-adding activities. The findings suggest that improving access to affordable credit is crucial for enhancing agricultural productivity, reducing poverty, and promoting equitable growth in rural areas. The study emphasizes the need for policies and interventions that facilitate the timely availability of credit to small-scale producers, enabling them to establish sustainable and profitable farming systems. Further research is needed to explore the impact of credit on agricultural output and the specific challenges faced by farmers in accessing financial services.

**Keywords:** Beneficiaries, socio-economic characteristics, borrowing credit, sources

#### Introduction

The successful development of agriculture hinges on the prompt and sufficient provision of crucial farm resources. Unfortunately, most Indian farmers lack the financial means to invest in modern agricultural inputs like high-quality seeds, recommended fertilizer quantities, and expensive machinery rentals due to their economic constraints. With the advent of technological advancements in agriculture, there is an increased need for small farmers to access credit, coupled with a lower effective accessibility to formal lending institutions.

Nagpur is an emerging metropolis of India and the fastest growing millionaire city also. Nagpur has been the main center of commerce in the Vidarbha region since early days and is an important trading location. The city is important for the banking sector as it hosts the regional office of Reserve Bank of India, which was opened on 10 September 1956. The Reserve Bank of India has two branches in Nagpur in which one of it houses India's entire gold assets. Credit plays a crucial role in agricultural advancement. An effective approach to reduce poverty involves promoting the

productive use of farm inputs. Narayanan (2016) <sup>[6]</sup> reports that a 10 per cent increase in nominal credit flow results in a 1.70 per cent rise in fertilizer use, a 5.10 per cent increase in pesticide consumption, and a 10.8 per cent growth in tractor purchases. This can be accomplished by creating opportunities for small and marginal farmers to enhance their agricultural productivity. The availability and accessibility of adequate, timely, and affordable credit from institutional sources are particularly important for small and marginal farmers. The majority of farmers are small-scale producers engaged in agricultural activities across areas with diverse potential.

Credit is especially relevant for boosting rural economic productivity, particularly in agriculture, within a growing economic environment. It can also facilitate a more rapid and equitable distribution of growth benefits through the informal sector. Hence, there is a need to study the credit needs of the farmers in the study area to ensure the credit availability and access of credit by the farmers. In this line, the present study was carried out to find the influence of socio-economic characteristics and source wise borrowings

of the selected farmers in Nagpur district.

**Objectives**

1. To study the socio-economic characteristics of beneficiaries of Nagpur district.
2. To assess the source wise borrowing of credit by beneficiaries.

**Research Methodology**

For this research, Nagpur district was purposively selected based on its abundance of banks and agricultural loan distribution. The study employed a random selection process for tehsils, villages, and farmers. Two tehsils, Kamptee and Savner, were chosen from Nagpur district, with two villages (Wadoda, Gumthala, Bodegaon, and Kodegaon) randomly selected from each. A multi-stage random sampling method was utilized to collect data from respondents. Village selection criteria included a minimum of 100 farmers in the population. Farmers were categorized as either beneficiaries or non-beneficiaries of credit. From each village, ten farmers per category were randomly chosen, resulting in twenty beneficiaries and twenty non-

beneficiaries of credit per tehsil. The total sample size comprised 80 units from two tehsils. Using pre-tested schedules, primary data for 2020-2021 was collected from 80 farmers, focusing on their socio-economic attributes and borrowing sources for beneficiaries.

Simple tabular analysis was employed, incorporating percentages and averages in the present study, the socio-economic characteristics and source wise borrowing of the beneficiaries.

**Results and Discussion**

**Socio economic characters of selected beneficiary and non-beneficiary farmers**

Study on some of the socio-economic characteristics such as age, education, size of family and type of family was studied to know the economic condition of the selected farmers.

**Age of selected beneficiary and non-beneficiary farmers**

Age is an important characteristic, which determines the role of farmers in adoption of improved practices. The distribution of the respondents according to age was determined and has been presented in Table 1.1.

**Table 1.1:** Age of selected beneficiary and non-beneficiary farmers according to age group (N=80)

Sr. No.	Particulars	Beneficiaries		Non-Beneficiaries		Overall
		Small	Medium	Small	Medium	
1	Younger age (20-35 years)	5 (25.00)	2 (10.00)	5 (25.00)	4 (20.00)	16 (20.00)
2	Middle age (36-50 years)	12 (60.00)	15 (75.00)	12 (60.00)	13 (65.00)	54 (67.50)
3	Old age (> 50 years)	3 (15.00)	3 (15.00)	3 (15.00)	3 (15.00)	10 (12.50)
4	Total	20 (100)	20 (100)	20 (100)	20 (100)	80 (100)

(Figures in parentheses indicate percentage to the total)

In Nagpur district, beneficiaries of small and medium size group had with 60.00 per cent and 75.00 per cent of middle-aged category, while 25.00 per cent beneficiaries of small and 10.00 per cent beneficiaries of medium size group belonged to younger age category. Nagpur district consisted of beneficiaries of 15.00 per cent of small and 15.00 per cent beneficiaries of medium size group of old age category. From the non- beneficiaries category Nagpur district had 60.00 per cent of small, 65.00 per cent non- beneficiaries of medium size group of middle age, 25.00 per cent non-beneficiaries of small and 20.00 per cent non-beneficiaries of medium size group of younger age while non-beneficiaries of 15.00 per cent of small and 15.00 per cent non-beneficiaries of medium size group of old age category. It was revealed from the Table 1.1 that at overall Nagpur district had 67.50 per cent farmers of middle age, 20.00 per cent farmers of younger age and only 12.50 per cent farmers

of old age categories.

It was concluded that, a significant proportion of beneficiaries and non-beneficiaries belonged to middle age category indicating their active involvement in agricultural activities and working ability had accessed the credit relatively more than the younger and the old age category. The least credit was accessed by the old age category, might be due to the risk averse behaviour.

**Educational status of selected beneficiary and non-beneficiary farmers**

Education is an important variable in determining the educational status of the selected beneficiary and non-beneficiary farmers, which influences the standard of living. The educational status of selected beneficiary and non-beneficiary farmers is presented in Table 1.2.

**Table 1.2:** Educational status of selected beneficiary and non-beneficiary farmers (N=80)

Sr. No.	Particulars	Beneficiaries		Non-Beneficiaries		Overall
		Small	Medium	Small	Medium	
1	Illiterate	1 (5.00)	0 (0.00)	2 (10.00)	3 (15.00)	6 (7.50)
2	Primary school	5 (25.00)	5 (25.00)	2 (10.00)	2 (10.00)	14 (17.50)
3	Middle school	3 (15.00)	4 (20.00)	9 (45.00)	6 (30.00)	22 (27.50)
4	High school	4 (20.00)	6 (30.00)	3 (15.00)	3 (15.00)	16 (20.00)
5	Higher secondary school	4 (20.00)	4 (20.00)	2 (10.00)	5 (25.00)	15 (18.75)
6	College and above	3 (15.00)	1 (5.00)	2 (10.00)	1 (5.00)	7 (8.75)
	Total	20 (100)	20 (100)	20 (100)	20 (100)	80 (100)

(Figures in parentheses indicate percentage to the total)

It is revealed from the Table 1.2 that educational status of beneficiaries of small and medium size group in Nagpur district was found the highest in high school with 20.00 per cent and 30.00 per cent, followed by primary school level with 25.00 per cent beneficiaries of small and 25.00 per cent beneficiaries of medium group. The educational status at higher secondary school level for beneficiaries of small group was 20.00 per cent and 20.00 per cent beneficiaries of medium group while in middle school level with 15.00 per cent beneficiaries of small and 20.00 per cent beneficiaries of medium group. It was observed that the educational status for college and above was found with 15.00 per cent beneficiaries of small and 5.00 per cent beneficiaries of medium group while the least was found in illiterate level with 5.00 per cent beneficiaries of small group. At overall, educational status of Nagpur district was found the highest in middle school level with 27.50 per cent selected farmers followed by high school level with 20.00 per cent farmers, higher secondary school level with 18.75 per cent farmers, primary school level with 17.50 per cent farmers and illiterate level with 7.50 per cent farmers. The findings from this study revealed that, the educational

status of small and medium group beneficiaries was higher than the non-beneficiaries in all the districts. In Nagpur, the educational status of the selected farmers was found highest in middle school followed by primary school level and the farmers with illiteracy was found lowest in both beneficiaries and non-beneficiaries categories. The results revealed that, middle and primary school level educated farmers had accessed more credit than other education level farmers.

**Average size of family of beneficiary and non-beneficiary farmers**

Family size and its components are basically the functions of economic and social characteristics, customs and religious belief of society. The family size of selected beneficiaries and non-beneficiaries plays important role in managing the credit for different requirements. The study of family size will help us to get an idea about labour force available for farm operation from the family. The details of family size of selected beneficiaries and non-beneficiaries are presented in Table 1.3.

**Table 1.3:** Average size of family of beneficiary and non-beneficiary farmers (N=80)

Sr. No.	Particulars	Beneficiaries		Non-Beneficiaries		Overall
		Small	Medium	Small	Medium	
1	Small Family (Up to 4)	14 (70.00)	11 (55.00)	15 (75.00)	13 (65.00)	53 (66.25)
2	Medium Family (5-8)	5 (25.00)	9 (45.00)	5 (25.00)	6 (30.00)	25 (31.25)
3	Large Family (> 8)	1 (5.00)	0 (0.00)	0 (0.00)	1 (5.00)	2 (10.00)
	Total	20 (100)	20 (100)	20 (100)	20 (100)	80 (100)

(Figures in parentheses indicate percentage to the total)

It was observed that the average family size for beneficiaries of small and medium group in Nagpur district had 70.00 per cent and 55.00 per cent of small family, 25.00 per cent beneficiaries of small and 45.00 per cent beneficiaries of medium group had medium family and 5.00 per cent beneficiaries of small group had large family size while beneficiaries of medium group had same family size. It also shows that Nagpur district had non-beneficiaries small and medium with 75.00 per cent and 65.00 per cent of small family, 25.00 per cent non-beneficiaries of small and 30.00 per cent non-beneficiaries of medium group had medium family and 5.00 per cent non-beneficiaries of small and 10.00 per cent non-beneficiaries of medium group had large family size. At overall Nagpur had 66.25 per cent selected farmers of small family, 31.25 per cent farmers of medium

family and 10.00 per cent farmers of large family size. The findings from the table 1.3 revealed, that the majority of the small and medium group beneficiaries had small family size in comparison to non-beneficiaries and least had the large family size. The conclusion drawn from the findings was that, majority of the beneficiaries with small family size had borrowed credit from the sources than the medium and large family size group.

**Type of family of beneficiary and non-beneficiary farmers**

As per the credit categories their family members were accounted for the well-known about their family type, viz., nuclear or joint are presented in the Table 1.4.

**Table 1.4:** Type of family of beneficiary and non-beneficiary farmers (N=80)

Sr. No.	Particulars	Beneficiaries		Non-Beneficiaries		Overall
		Small	Medium	Small	Medium	
1	Nuclear	17 (85.00)	19 (95.00)	16 (80.00)	13 (65.00)	65 (81.25)
2	Joint	3 (15.00)	1 (5.00)	4 (20.00)	7 (35.00)	15 (18.75)
	Total	20 (100)	20 (100)	20 (100)	20 (100)	80 (100)

(Figures in parentheses indicate percentage to the total)

In Nagpur district it was found that 85.00 per cent beneficiaries in small and 95.00 per cent beneficiaries in medium group had nuclear family while 15.00 per cent beneficiaries in small and 5.00 per cent beneficiaries in medium group had joint family. It was also observed that 80.00 per cent non-beneficiaries in small and 65.00 per cent

non-beneficiaries in medium group had nuclear family while 20.00 per cent non-beneficiaries in small and 35.00 per cent non-beneficiaries in medium group had joint family. It was observed that at the overall, Nagpur district 81.25 per cent selected farmers had nuclear family type and 18.75 per cent farmers had joint family. It was concluded that the credit

need for household expenditure might be less in the nuclear family as the dependents are less and they cannot use family members as labour force.

**Source wise borrowing of credit by selected beneficiaries**

There are institutional and non-institutional sources of credit to borrow at the time of need. Beneficiaries in the study area were obtaining the credit from the available sources to meet their credit requirements. Source wise borrowing of the selected beneficiaries is given in Table 2.1.

It was observed from the Table 2.1 that the share of cooperative credit society has the highest in the district i.e., 40.00 per cent. The borrowing from banks was next to cooperative society i.e., 20.00 per cent.

It was also observed from the table that borrowing from non-institutional sources also contributed major position. The non-institutional source of family/ friends/ relatives contributed to borrowing of 15.00 per cent. Another informal source is money lender and its contribution was 17.50 per cent and from Kisan Credit Cards 5.00 per cent while other sources contributed the least i.e., 2.50 per cent, respectively. It was concluded that, beneficiaries choose institutional sources majorly to access the credit.

**Table 2.1:** Source wise borrowing of credit by selected beneficiaries (N=40)

Sr. No.	Sources	Nagpur
<b>Institutional</b>		
1	Cooperative society	16 (40.00)
2	Banks	8 (20.00)
3	Kisan Credit Card	2 (5.00)
<b>Non- institutional</b>		
4	Family/ friends/ relatives	6 (15.00)
5	Money lender	7 (17.50)
6	Other	1 (2.50)
	Total	40 (100.00)

(Figures in parentheses indicate percentage to the total)

Table 2.2 revealed that the beneficiaries borrowed the credit from multiple sources i.e., more than one institutional source or non-institutional sources or from both institutional and non-institutional sources to meet the immediate needs.

In Nagpur district, 10.00 per cent beneficiaries obtained the credit from bank and money lender, 7.50 per cent beneficiaries borrowed from bank and family/ friends/relatives. It was found that 7.50 per cent beneficiaries obtained credit from cooperative society and family/ friends/relatives, while 5.00 per cent beneficiaries borrowed from cooperative society and bank, 5.00 per cent beneficiaries from bank and other, 2.50 per cent obtained from cooperative society and money lender, 2.50 per cent from cooperative society and other.

At overall, 40.00 per cent beneficiaries in Nagpur district obtained credit from multiple sources at the same period instead of borrowing from the single source. It was concluded that farmers borrowed from the both institutional and non-institutional sources. Non-institutional sources were chosen by the farmers due to the easy and timely access to meet their emergency needs. The findings are agreed with Ijioma and Osondu (2015) [3], argued that there is little or no insistence of collateral security and also agreed with the findings of Ajah and Igiri (2017) [1], argued that

borrowing from multiple sources could be due to easily found and accessed in the rural areas and also non-availability and cumbersome nature of formal loan procedures.

**Table 2.2:** Source wise borrowing by the selected beneficiaries from multiple sources (N=80)

Sr. No.	Sources	Nagpur
1.	Cooperative society + Bank	2 (5.00)
2.	Cooperative society + Family/ friends/relatives	3 (7.50)
3.	Cooperative society + Money lender	1 (2.50)
4.	Cooperative society + Other	1 (2.50)
5.	Bank + Family/ friends/relatives	3 (7.50)
6.	Bank + Money lender	4 (10.00)
7.	Bank + Other	2 (5.00)
8.	Bank	6 (15.00)
9.	Cooperative society	8 (20.00)
10.	Family/ friends/relatives	4 (10.00)
11.	Money lender	4 (10.00)
12.	Kisan Credit Card	2 (5.00)
13.	Other	0 (0.00)
	Total	40 (100)

(Figures in parentheses indicate percentage to the total)

**Conclusion**

The study area was dominated by middle age group people, who are energetic enough to withstand the stress involved in farm operations indicating their active involvement in agricultural activities and working ability had accessed the credit relatively more than the younger and the old age category.

The middle and primary school level educated farmers had accessed more credit than other education level farmers, it may be that minimum level of educated farmers have low level of ability to understand and follow credit attainment process, adopt new technology and gain economic efficiency.

The credit access by the small family size group may be due to low-income requirements and livelihood expenditures as compared to medium and large family size group.

Farmers with small family type accessed the credit. It might be because small dependence group can meet their financial requirements of their family from agricultural income and increase their productivity with the borrowed credit by utilizing it to farm purposes.

The beneficiaries had chosen institutional sources majorly to access the credit and this may be due to reasonable interest rates for the credit and easy accessibility procedure of credit.

It was concluded that farmers borrowed from the both institutional and non-institutional sources may due to the easy and timely access to meet their emergency needs.

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