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Socio-economic Impact of Agricultural Loan in Rupandehi District, Nepal

Chiranjivi Devkota
chiranjibi.devkota@bumc.tu.edu.np
ORCID ID: https://orcid.org/0009-0005-4201-6144

Abstract

The socioeconomic implications of agricultural loans on smallholder farmers in Nepal's Rupandehi District are examined in this study. It examines the main economic, institutional, and demographic factors influencing credit availability and use. utilizing information from 120 participants, comprising both borrowers and non-borrowers. The study assesses livelihood outcomes, shifts in income levels, and loan usage trends. Findings show that the household head's gender, educational attainment, and involvement in agriculture all have a substantial impact on borrowing behavior. Higher educated farmers had easier access to formal agricultural credit because they were more financially literate and familiar with lending processes; yet, demand for farm loans decreased when diversification into non-agricultural occupations was made easier by such education. Additionally, households headed by women had greater access to credit, which is indicative of the effects of gender-inclusive rural finance policy and targeted lending programs. In order to boost income and accumulate assets, the majority of loans came from savings and credit cooperatives and were mostly used for infrastructure development and poultry farming. Despite these advantages, borrowers faced a number of difficulties, including as strict collateral requirements, restricted insurance coverage, and bureaucratic holdups. According to the study's findings, agricultural credit is an essential tool for raising rural livelihoods; nevertheless, institutional changes are needed to improve credit delivery mechanisms, lower access barriers, and guarantee that agricultural finance promotes sustainable and equitable rural development.

Keywords : Agricultural finance, Rural development, Credit access, Smallholder farmers, Socio-economic impact

Introduction

With more than 65 percent of the workforce employed and an estimated 26.2 percent of the country's GDP in FY 2022–2023 coming from agriculture, the sector continues to be a cornerstone of Nepal's economy (Central Bureau of Statistics [CBS], 2023). Small and dispersed landholdings, low mechanization, poor irrigation, and limited access to institutional credit are some of the structural issues the industry still faces despite its economic significance (FAO, 2022; NRB, 2023). For rural households, these limitations have resulted in limited income growth and stagnant productivity. One of the key factors facilitating agricultural transformation is the availability of formal credit. It enables farmers to make investments in farm infrastructure, mechanized equipment, and high-yielding inputs, boosting output and revenue (World Bank, 2021). By facilitating prompt operations and controlling output risks, agricultural finance also improves resilience.

Theodore W. Schultz's idea well captures the significance of credit in changing traditional agriculture. According to Schultz (1964), farmers in traditional economies face significant obstacles, chiefly a lack of finance and access to contemporary technologies, but they are not irrational. Thus, lending can boost rural economic growth and uncover latent productivity. While a number of government-led programs in Nepal seek to give farmers priority sector and concessional loans, problems with accessibility, the complexity of the application process, and insufficient spread still exist (NRB, 2023). Although commercial banks, which control the majority of Nepal's formal financial system, play a vital role in agricultural financing, little is known about how their credit payments actually affect farm productivity and the country's total agricultural output. With an emphasis on Rupandehi District, the purpose of this study is to evaluate critically the degree to which financial institution-provided agricultural financing influences Nepal's agricultural output. The results will inform efforts to enhance the involvement of institutional finance in sustainable agricultural development and credit delivery.

Statement of the Problem

In Nepal, one of the primary obstacles to inclusive rural development is still agricultural finance. Even though more than 60 percent of people are employed in the agriculture sector, which also accounts for 24 percent of the national GDP, institutional credit availability is still extremely low especially in rural areas. Ten years ago, 22 percent of farmers obtained legal agricultural loans; by 2021–2022, that number had dropped to 12 percent (The HRM Nepal, 2023). Smallholder farmers encounter several institutional and structural barriers when trying to obtain agricultural loans in districts with high levels of productivity, such as Rupandehi. Collateral security is one of these, which many people are unable to provide since they do not possess land or the necessary paperwork.

Farmers are more dependent on informal lenders with exploitative terms due to their inability to manage conventional credit institutions, which is intensified by low levels of education and financial literacy (ITC, 2022). Although banks are required by the Nepal Rastra Bank to devote 15 percent of their portfolios to agriculture, the actual payout is still much lower, ranging from 8 percent to 10 percent (NRB, 2023). Because of bureaucratic inefficiencies and a lack of transparency, even subsidized loan initiatives have difficulty being implemented (Nepali Times, 2024). Many small-scale farmers are consequently unable to make investments in better agricultural technologies or inputs, which worsens cycles of poor productivity, rural debt, and economic disparity. A growing disparity between rising credit flows and stagnant agricultural output is symbolic of structural inefficiencies in the allocation and use of loans. (Nepal Economic Forum, 2024).

Objectives

This study's main objective is to evaluate the socioeconomic effects of agricultural loans on Rupandehi District farming communities. The study specifically seeks to assess the effects of agricultural credit availability on farm production, revenue generation, and the general standard of living for both borrowers and non-borrowers.

- To examine the socio-economic and demographic characteristics of agricultural loan borrowers and non-borrowers in Rupandehi District.
- To identify the key factors influencing farmers' access to agricultural credit and analyze their impact on farm income.
- To assess the relationship between the amount of agricultural loan received and improvements in household livelihood indicators such as productivity, income, and living standards.

Delimitations of the Study

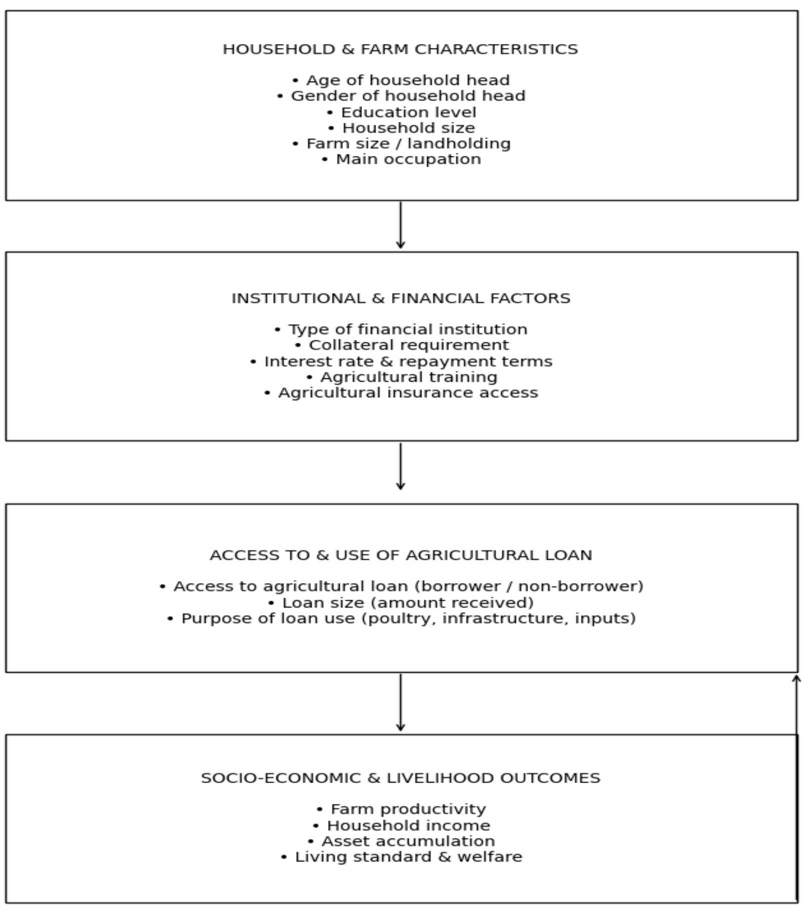
It is important to recognize the various limitations of this study. Initially, a mixed-methods approach was used to gather data, which included Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and structured questionnaires. Second, the study's geographic scope is limited to the Rupandehi district, which could have an impact on how broadly applicable the results are. Finally, the study narrows the context and application of the research findings by concentrating only on agricultural loan households that use loans for a variety of agriculture-related activities.

Review of Literature

In order to improve rural livelihoods, input use, technology endorsement, and overall productivity, access to agricultural loans is essential. Its importance in assisting smallholder farmers, especially in developing nations, is supported by recent studies. FAO (2021) and IFAD (2019) assert that finance promotes agricultural efficiency by facilitating profitable investment and reducing liquidity restrictions. The beneficial effects of credit availability on agricultural productivity and technical efficiency are demonstrated by empirical data. According to Islam et al. (2020), Bangladeshi farmers' income and crop diversification were greatly increased by institutional financing. Similarly, loan access increased total factor productivity in Nepal's Terai area, including Rupandehi, according to Khanal and Mishra (2017), who used NLSS data. Studies by Ibrahim and Bauer (2013) and Ahmad et al. (2019) highlight the significance of prompt loan distribution, pointing out its impact on profitability and input efficiency. However, bureaucratic processes, strict collateral requirements, and a lack of outreach in rural areas frequently pose challenges for conventional lending institutions (ADB, 2020; World Bank, 2021).

Access to credit is also influenced by socioeconomic and demographic characteristics. Education, land ownership, and gender were found to be important variables by Mehmood et al. (2022), whereas Shrestha and Baskota (2018) documented that marginalized people in Nepal continued to be excluded despite targeted loan schemes. According to NRB (2023), the majority of Nepalese smallholder farmers rely on informal channels, with fewer than 40 percent obtaining formal financing. Critiques of traditional rural financing models emphasize the necessity of inclusive and locally flexible processes. In order to better meet the risk profiles and cash flow patterns of rural areas, Coetzee et al. (2018) support integrated financial systems like cooperatives and self-help groups. In conclusion, socioeconomic inequalities and structural obstacles still restrict equitable access, even though agricultural lending is still essential to rural change. The current study, which examines credit utilization trends among agricultural households in Rupandehi area, is conceptually based on these ideas.

Conceptual Framework: Socio-economic Impact of Agricultural Loan



Procedures and Methods

Research Domain

Lumbini Province's Rupandehi District is home to 1,121,957 people, with an average household size of 4.9 (National Census, 2021). With 71,188 hectares of land under cultivation and an average landholding of 0.68 hectares per household, nearly half of the population (558,372) is employed in agriculture, indicating a primarily smallholder agrarian economy. With more than 58 percent of the population residing in urban areas, the district is rapidly becoming more urbanized. With many people speaking Nepali, Bhojpuri, and Awadhi. Agricultural lending is supported by a strong network of financial institutions, including microfinance organizations, cooperatives, and commercial banks. There is still lack of empirical study on the socio-economic effects of agricultural loans in spite of these frameworks. By investigating loan availability and its effects on smallholder livelihoods, this study fills that knowledge gap.

Sampling and Research Design

To evaluate the disparities between two groups agricultural loan borrowers and non-borrowers across important socio-economic indicators, a comparative cross-sectional design was used. 60 borrowers and 60 non-borrowers made up the 120 households that were chosen. Purposive (judgmental) sampling was used to identify borrowers from institutional customer lists, while non-borrowers were chosen at random from the same neighborhoods to ensure comparability. In accordance with Casley and Kumar (1988), sample size was determined by considerations of time, resource, and geographic representation.

Methods of Data Collection and Analysis

Structured questionnaires were used to collect household-level data on socioeconomic status, agricultural practices, credit availability, and institutional ties. The instrument was developed in English, translated into Nepali, and tested on 5 percent of the sample in Suddodhan Rural Municipality. Between April and May of 2025, data was gathered through in-person interviews following informed permission. To improve the quantitative data, Key Informant Interviews (KIIs) were conducted with municipal representatives, bank managers, and cooperative leaders. Focus Group Discussions (FGDs) were held with farmers, microfinance participants, and community leaders to validate survey results and talk about contextual credit-related issues.

Valid secondary data were gathered from regional agricultural databases, government papers, institutional reports, and Nepal Rastra Bank publications in order to triangulate and contextualize the findings. Quantitative data was coded and analyzed using SPSS and Microsoft Excel. Key variables were presented using descriptive statistics (frequencies, averages, percentages, and standard deviations). To look into the correlations between categorical data, chi-square tests were employed. The qualitative data was thematically analyzed to identify recurring themes, which provided context and depth to the statistical findings.

Results and Discussion

Socio-economic and demographic characteristics

Household characteristics

Gender, education level, marital status, ethnicity, and primary occupation are among the important household sociodemographic characters that are examined in this study for both agricultural loan borrowers and non-borrowers. awareness the social structure and household economic behavior requires an understanding of these factors.

Table 1: Description of socio-demographic characteristics

Variables	Total	Loan		Chi-square value	p-value
		Borrower (n=60)	Non-borrower (n=60)		
Gender of Household head					
Male	87 (72.5)	40 (66.7)	47 (78.3)	2.048	0.152
Female	33 (27.5)	20 (33.3)	13 (21.7)		
Ethnicity					
Brahmin/ Chhetri	92 (76.7)	44 (73.3)	48 (80.0)	2.174	0.537
Janjati/ Indigenous	18 (15.0)	9 (15.0)	9 (15.0)		
Dalit	1 (0.8)	1 (1.7)	0 (0.0)		
Others	9 (7.5)	6 (10.0)	3 (5.0)		
Education status of HHH					
Literate	103 (85.8)	52 (86.7)	51 (85.0)	0.069	0.793
Illiterate	17 (14.2)	8 (13.3)	9 (15.0)		
Primary occupation of HHH					
Agriculture	115 (95.8)	59 (98.3)	56 (93.3)	1.878	0.171
Non-agriculture	5 (4.2)	1 (1.7)	4 (6.7)		

Marital status					
Unmarried	2 (1.7)	2 (3.3)	0 (0.0)	4.034	0.258
Married	116 (96.7)	57 (95.0)	59 (98.3)		
Widow	1 (0.8)	1 (1.7)	0 (0.0)		
Divorced	1 (0.8)	0 (0.0)	1 (1.7)		

Source; Field Survey 2025

In order to identify structural determinants affecting loan availability, this study looks at households' socio demographic information including gender, education, marital status, ethnicity, and principal occupation. Both the borrower (66.7 percent) and non-borrower (78.3 percent) categories are dominated by male headed households, as indicated in Table 1, but the gender difference is not statistically significant (p = 0.152). The ethnic composition is similarly distributed, with the majority (76.7 percent) being Brahmin/Chhetri. Both groups have high literacy rates (85.8 percent), which suggests that they are able to embrace agricultural advancements. While non-agricultural activities were more common among non-borrowers, agriculture remained the most common occupation (95.8 percent), especially among borrowers (98.3%). The distribution of marital status indicates a group that is socially stable. Overall, a homogeneous research population is suggested by the lack of statistically significant differences.

Total income from agricultural products

Agricultural income, which represents the monetary gains from both crop production and livestock farming, is a crucial indicator of livelihood development in this study. A comparison of total agricultural revenue between loan borrowers and non-borrowers is shown in Table 2.

Table 2 Total revenue from agricultural goods.

Variables	**Total**	**Loan**		**Mean difference**	**t-value**
		Borrower	**Non-borrower**		
Income	27457 (19152)	28550(26267)	26365(12038)	2185	0.586

Source; Field Survey 2025

Improvement of livelihood is proxied by agricultural income. Although the difference is statistically small (p = 0.586), Table 2 reveals that the mean agricultural income of borrowers was NPR 28,550, which was marginally greater than that of non-borrowers (NPR 26,365). Crop and livestock incomes are included in income, suggesting that although loan availability may help generate income, its direct impact on income inequality is minimal.

Credit information and performance

To boost farm output and sustain rural lifestyles, timely and dependable agricultural lending is essential. Gaining knowledge about how farmers get credit, the organizations that supply it, and how well loans are delivered can help one understand how rural financial systems operate. Important aspects of borrowers' access to and use of credit in the research area are described in Table 3.

Table 3: Credit Access and Utilization Among Borrowers (n=60)

Particulars	**Frequency**	**Percentage**
Banks where respondents took agriculture loan		
Saving and Credit Co-operatives	32	56.67
Development Banks	2	3.33
Commercial Banks	24	40
Number of time respondents obtained credit		
Once	31	51.6
Twice	20	33.3
Thrice	10	10
More than thrice	3	5
Time taken to receive loan from the time of process started		
Less than 5 days	9	15
5 to 10 days	12	20
11 to 15 days	19	31.70
More than 15 days	20	33.30
Source of Information about agriculture loan		
Newspaper/ Media	3	5
Friends/ Relatives	2	3.3
Bank Staffs	55	91.7

Source; Field Survey 2025

The effectiveness of procedures and institutional channels influence credit availability. Table 3 indicates that the majority of respondents took out loans from commercial banks (40 percent) and cooperatives (56.7 percent). 33.3 percent accessed credit twice, while more than half did so once. 33.3 percent of borrowers waited more than 15 days, indicating that loan disbursement delays were frequent. Bank employees were the primary source of information (91.7 percent), suggesting that informal channels were not heavily relied upon.

Collateral Requirements

Access to formal credit is heavily influenced by collateral, particularly in rural areas where financial institutions demand physical guarantees. Examining the sorts of assets promised by borrowers reveals patterns of asset ownership and creditworthiness. The types of collateral provided by agricultural loan beneficiaries in the research region are listed in Table 4.

Table: 4Collateral Requirements

Security offered while offering loan	**Frequency**	**Percentage**
Land	45	75
House	2	3.33
Others	13	21.6

Source; Field Survey 2025

Land was the most common type of collateral (75 percent), as Table 4 demonstrates, highlighting its importance as the primary asset for loan security. Smallholder farmers' limited usage of alternative assets is a reflection of their lack of collateral diversification.

Purpose of Loan Borrowing

An understanding of farmers' investment priorities and possible effects on improving livelihoods can be gained by looking at how agricultural loans are used. The economic activities that borrowers believe to be most viable are reflected in the distribution of loan purposes. The primary regions in which respondents distributed loan amounts are shown in Table 5.

Table:5Purpose of Loan Borrowing

Purpose	Frequency	Percent
Subsistence farming of crops	7	11.67
commercial farming of crops	1	1.67
Poultry farming	24	40.00
Goat farming	4	6.67
Dairy farming	6	10.00

Others	18	30.00

Source; Field Survey 2025

The use of loans varies depending on the type of farming (Table 5). The most popular use was for poultry farming (40 percent) and then crop and dairy farming. This distribution shows a bias for businesses like poultry that have fewer capital needs and faster returns.

Loan Amount and Borrower Insights

Farmers' ability to engage in agricultural endeavors and boost production is significantly influenced by loan size, frequency, and interest rates. Analyzing these financial factors sheds light on the availability and cost of financing as well as how it affects asset accumulation and agricultural expansion. Descriptive statistics on loan amounts, borrowing trends, and stated outcomes pertaining to increases in agricultural output and livelihood are shown in Table 6.

Table;6 Loan Amount and Borrower Insights

Particulars	Minimum	Maximum	Mean	Std. Deviation
Loan (NRs.)	50000	10000000	868250	1547732.301

Source; Field Survey 2025

Loan Amount and Impact With a range of NPR 50,000 to NPR 10 million, the average loan amount was NPR 868,250 (Table 6). The benefits that were recorded included increased productivity, expanded cultivated area, and asset accumulation, highlighting the developmental significance of finance in rural agriculture.

Participation in Agricultural Training Among Loan Borrowers

To give farmers the abilities and information required to maximize output and efficiently use loan resources, agricultural training is crucial. The degree of involvement in these training courses can have a big influence on farm performance and loan results. Data on loan beneficiaries' attendance at training is included in Table 7, which also highlights the main obstacles to full participation.

Table**: 7** Loan Borrowers' Engagement in Agricultural Training

Training received	Frequency	Percent
Yes	34	56.67
No	26	43.33

Source; Field Survey 2025

As seen in Table 7, 56.7 percent of borrowers had agricultural training. But 43.3 percent didn't, mostly because they were unaware (42.3 percent) and had limited time (50 percent) by then. This implies that increased outreach and adaptable scheduling might enhance involvement and effect.

Borrowers' Perception of Financial Institutions

Borrowers' propensity to get and make use of credit services is significantly influenced by how they view financial institutions. Information about borrower satisfaction with local financial service providers is shown in Table 8.

Table:8 Borrowers' Perception of Financial Institutions

Perception	Frequency	Percent
Satisfactory	30	50.00
Indifferent	9	15.00
Unsatisfactory	21	35.00

Source; Field Survey 2025

According to Table 8, 35 percent of borrowers expressed dissatisfaction with financial services, 15 percent expressed indifference, and 50 percent expressed satisfaction. Although access has improved, the comparatively high dissatisfaction percentage indicates that lack of customization, procedural delays, and service quality are still major issues.

Challenges Faced in Loan Acquisition

In addition to restricting farmers' access to timely finance, loan acquisition barriers also make it more difficult for them to use loans effectively. The main difficulties borrowers face when submitting loan applications are highlighted in Table 9.

Table:9 Challenges Faced in Loan Acquisition

Difficulties	Frequency	Percent
Complex process	33	55.00
Demand of high collateral	24	40.00
Disagreement within the group	3	5.00

Source; Field Survey 2025

Difficulties in Obtaining a Loan High collateral needs (40 percent) and complicated procedures (55 percent) were highlighted by borrowers as the main challenges (Table 9). These are a reflection of institutional conservatism, which limits the timely provision of loans for marginalized farmers by placing a higher priority on risk aversion than inclusive access.

Farmers' Suggestions for Improving Loan Accessibility

It is crucial to comprehend how borrowers see expanding loan accessibility in order to improve the efficiency and inclusivity of rural credit systems. Designing responsive financial services benefits greatly from the experiences and recommendations of farmers. Borrowers' main suggestions for removing current obstacles to obtaining agricultural loans are shown in Table 10.

Table:10 Farmers' Suggestions for Improving Loan Accessibility

Suggestions	Frequency	Percent
Loan processing should be faster	27	45.00
Loan provision to those with no collaterals	15	25.00
Proper coordination among members of groups	2	3.33
Terms and condition should be flexible	12	20.00
Installment period should be longer	4	6.67

Source; Field Survey 2025

Ideas to Make Access Better Faster processing (45 percent), collateral-free financing (25 percent), and flexible terms (20 percent) were suggested by borrowers (Table 10). To improve rural financial inclusion, these insights highlight the necessity of digitization, creative lending arrangements, and procedural reform.

Decision-Making Roles in Loan Utilization

Examining how households make decisions is essential to comprehending the administration and use of agricultural loans. The effectiveness and results of loan use can be directly impacted by the allocation of financial authority within households. Information about the household members having decision-making authority over the usage of agricultural finance is shown in Table 11.

Table:11 Decision-Making Roles in Loan Utilization

Particular	**Frequency**	**Percent**
Female	4	6.67
Male	9	15.00
Both	29	48.33
Family members	18	30.00

Source; Field Survey 2025

Table 11 demonstrates that the majority of loan decisions were made jointly (48.3 percent) or with family members (30 percent), with male-only (15 percent) and female-only (6.7 percent) decision-making being less prevalent. An approach to household financial governance that is participatory is shown in this pattern.

Status of Agricultural Insurance Among Loan Borrowers

Agricultural insurance is essential for protecting farmers from losses to their crops and livestock, particularly for those who depend on loans for production. Gaining knowledge about how borrowers embrace it might help one better understand how risk management is practiced in rural finance. The level of agricultural insurance coverage among loan receivers in the research region is shown in Table 12.

Table:12 Loan Borrowers' Agricultural Insurance Situation

Particulars	Frequency	Percent
Yes	41	68.33
No	19	31.67

Source; Field Survey 2025

Protection from Agricultural Insurance Growing risk awareness was shown by the comparatively high (68.3 percent) uptake of agricultural insurance among borrowers (Table 12). For farm investments, particularly those financed by credit, insurance was seen as an essential instrument.

Accessibility of Agricultural Insurance Among Loan Borrowers

For households who depend on credit in particular, agricultural insurance is crucial for reducing the risks involved in farming. Adoption rates, however, are strongly impacted by how simple it is to use such services. In the research area, borrower perceptions of the availability of crop insurance are shown in Table 13.

Table:13 Accessibility of Agricultural Insurance Among Loan Borrowers

Particulars	Frequency	Percent
Easy	23	38.33
Difficult	37	61.67

Source; Field Survey 2025

Availability of insurance 61.7 percent of borrowers reported that it was difficult to obtain agricultural insurance, despite having good coverage (Table 13), blaming convoluted processes and ineffective bureaucracy. This necessitates expedited procedures to improve the usefulness of insurance in risk management in rural areas.

Conclusion

The effect of agricultural credit on smallholder farmers' lives in Rupandehi District was evaluated in this study. With an average age of 44.67 years, the results show that the majority of respondents were financially engaged and matured. These farmers are able to actively engage in agricultural production due to their physical and experiential capabilities. The gendered division of labor, in which women are more involved in agricultural operations, may be the reason why families headed by males were 30 percent less likely to borrow than those headed by women. Furthermore, the likelihood of borrowing rose by 4 percent for every extra year of education completed by the family head, indicating that education raises awareness of the advantages of subsidized loans and encourages agricultural investment. On the other hand, households with more educated members were 24 percent less likely to borrow, most likely because they preferred non-agricultural revenue streams like the business or service sectors. The majority of borrowers worked mostly in agriculture, while non-borrowers held a wider range of jobs. The majority of borrowers were landowners, and secondary occupations included a significant unemployment rate. Savings and credit cooperatives were the most popular source of financing since they were easier to get into than development or commercial banks. Due to its rapid returns and advantages for food security, poultry farming became the most popular reason for borrowing money. Borrowers often made investments in asset development and construction. After using credit, almost all reported an increase in income and an improvement in their standard of living, highlighting the beneficial effects of agricultural loans on financial stability.

Recommendation

The agricultural sector in Nepal is still hampered by low productivity, restricted access to formal credit, and inadequate support services, despite its potential. Policies must place a high priority on increasing access to formal agricultural credit in order to overcome these limitations, especially for small and marginal farmers. Credit programs should be tailored to farmers' preferences and seasonal input requirements, and interest rates should be lowered to encourage borrowing. Credit programs should incorporate capacity training for farmers and financial institutions to improve fund utilization, repayment efficiency, and credit literacy. To increase loan effectiveness and production, it is crucial to encourage the adoption of contemporary farming technologies through consistent training and agricultural extension services. Additionally, it is crucial to make sure that loans are paid on time in order to buy seasonal inputs. Increasing financing for livestock development in particular could increase earnings and lower poverty in rural areas. The developmental impact of agricultural financing would be maximized and more farmers would be able to take use of the existing credit facilities if these institutional mechanisms were strengthened.

References

Aigner, D. C., A. K. Lovell and P. Schmidt (1977). Formulation and Estimation of Stochastic Frontier Production Function Models. Journal of Econometrics. Vol. 6(1), pp. 21-37.

Agricultural Development within the Framework of Balanced Growth". Journal of Economic Development, Vol. 15(1), pp.121-139

Akram, W., Z. Hussain, N. Ahmad and I. Hussain (2013). Does Agriculture Credit Affect Production Efficiency? Frontier Production Function Approach" Pakistan Economic and Social Review. Vol.51. No. 2. pp.179-190.

Ayegba, O and D.I. Ikani (2013). An Impact Assessment of Agricultural Credit on Rural Farmers in Nigeria. Research Journal of Finance and Accounting. Vol.4, No.18.

Anumurthy, K.V. (2002). Arguing a Case for the Cobb-Douglas Production Function". Review of Commerce Studies, pp. 75-91. New Delhi.

Calvo, G. and J. Frenkel (1991). Credit Markets, Credibility and Economic Transformation", Journal of Economic Perspectives, Number 4.

Carter, M. (1989). The Impact of Credit on Peasant Productivity and Differentiation in Nicaragua. Journal of Development Economics. Vol. 103: 13-36

Casley, D.J.& Kumar, K. (1988). The collection, analysis and use of monitoring and evaluation data. The World Bank. The Hohns Hopkins University Press.

Dong F., Jing Lu and A.M. Featherstone (2010). Effects of Credit Constraints on Productivity and Rural Household Income in China." A working paper presented at Center for Agricultural and Rural Development (CARD), Iowa State University.

Farrell, M. J. (1957). The Measurement of Productive Efficiency. Journal of the Royal Statistical Society. Vol. 120(3), pp. 253-290

Finch, H., & Lewis, J. (2003). Focus groups. Qualitative research practice: A guide for social science students and researchers, 170-198

Johan F. M. Swinnen and Hamish R. Gow (1997). Agriculture Credit Problems and Policies During the Transition to a Market Economy in Central and Eastern Europe, Policy Research Group Working Paper No. 6 1997

Meeusen, W. and Van Den Broeck (1977). Efficiency Estimation from Cobb-Douglas Production Functions with Composed Error." International Economic Review. Vol.18. pp.435-444.

Meyer R. L. (1990). "Analyzing the Farm-Level Impact of the Agricultural Credit Decisions." American Agricultural Economics Association. pp.158-159.

NRB,2014,"Agricultural Credit and Its Impact of Farm Productivity", A Case Study of Kailali District, Number 4

Scheaffer, R. (1979). Elementary Survey Sampling. Massachusetts. USA. Duxbury Press

Sharma N.R. (2014). "Agricultural Credit flow of Commercial Banks and Impact on Agricultural Production in Nepal." Scholars Journal of Arts, Humanities and Social Sciences. Vol. 2(2C). pp.372 376.

Shrestha M.B. (2014). "Status of Credit Flow to Agriculture Sector and Prevalent Challenges." ArthikMimansa, FIEUN, NRB.

Thorbecke E. (1970). The Role of Agriculture in Economic Development available at www:nber.org.books/thor70-1.