



IMPACT OF AGRICULTURAL FINANCE IN INDIA'S RURAL DEVELOPMENT-WITH REFERENCE TO SELECT REGIONS IN TELANGANA STATE

Ms. K. Laya, Dr. R.S. Ch Murthy Chodisetty²

¹MBA Student (24881E0033), Department of Management Studies,
Vardhaman College of Engineering, Shamshabad, Hyderabad. Telangana

²Associate Professor, Department of Management Studies,
Vardhaman College of Engineering, Shamshabad, Hyderabad. Telangana

ABSTRACT

Agricultural finance is important for strengthening the economies of rural areas by facilitating farmers' and enterprises' access to productivity-enhancing resources for resilience and sustainable development. The article reviews how financial services, namely credit, savings, crop insurance, and investment support, can help achieve sustainable rural development by enhancing agricultural productivity and reducing rural poverty while encouraging environmentally responsible practices. The study identifies the role played by an inclusive financial system, technological innovation in rural financing, and institutional support for creating long-term sustainability. It also looks at some of the challenges that beset effective financial inclusion, such as credit gaps, high transaction costs, and a general lack of financial literacy. Overall, the paper emphasizes that an efficient, accessible, and well-structured agricultural finance system is tantamount to transforming lives and realizing the Sustainable Development Goals.

KEYWORDS

- Sustainable Agriculture Practices
- Agriculture
- Digital India, Digital Technology
- Agricultural Finance
- Rural Development

JEL Classification Codes:

Q14:Agricultural Finance

O18:Economic Development: Rural Development.

G21:Banks • Depository Institutions • Micro Finance Institutions • Mortgages

Q18:Agricultural Policy; Food Policy

Research Paper: Empirical Investigation.

INTRODUCTION

The majority of rural economies still rely heavily on agriculture, which gives a sizable section of the rural populace jobs, food security, and income. However, the industry is typically plagued by issues with low production, poor infrastructure, climate sensitivity, and a lack of contemporary technologies. In this situation, agricultural finance plays a crucial role in helping farmers and rural businesses get the funding they require for risk management, investment, and innovation. Digital lending platforms, banks, cooperatives, and other microfinance organisations are crucial in bridging the gap between rural communities' needs and available resources.

Sustainable rural development includes economic growth, social inclusion, and environmental protection. Agricultural finance helps to achieve these goals by facilitating climate-smart farming adaptation, increasing rural livelihood diversification, and strengthening rural infrastructure. Despite this critical function, many rural communities face substantial challenges, such as restricted credit availability, excessive lending rates, insufficient collateral, and inadequate institutional support. Understanding agricultural finance's role in tackling these difficulties is crucial for politicians, development agencies, and financial institutions seeking to promote long-term rural sustainability. This article examines agricultural finance's various contributions and suggests methods to strengthen its role in attaining long-term rural development.



REVIEW OF LITERATURE

- Banu Prakash K A (2018):** This study investigates NABARD's role in promoting sustainable agriculture practices. The National Bank for Agriculture and Rural Development (NABARD) plays an important role in expanding sustainable agriculture techniques in India, promoting both environmental sustainability and rural development. NABARD was founded to help agricultural and rural growth by combining financial aid, capacity training, research, policy advocacy, and environmental management to promote sustainable farming. NABARD provides critical financial support in the form of loans, grants, and subsidies to encourage the adoption of sustainable farming methods. This includes support for programs to improve soil health, install efficient water management systems, and move to organic farming. NABARD promotes environmental measures by eliminating financial hurdles for farmers. Training and capacity building are key components of NABARD's approach. The agency holds intensive workshops and training programs to teach farmers about current and sustainable agriculture techniques. This empowerment enables farmers to successfully apply measures such as integrated pest management and resource-efficient farming systems. NABARD's operations also include extensive research and development work. NABARD encourages innovation in sustainable farming technologies and practices by funding and supporting agricultural research, which addresses issues like as soil degradation and water scarcity. NABARD's policy advocacy ensures that enabling structures and incentives are in place to promote sustainable agriculture. Working with policymakers, NABARD impacts the development of policies that promote environmentally responsible farming practices. Furthermore, NABARD works on watershed management projects and promotes microfinance efforts to improve rural financial inclusion and environmental stewardship. NABARD conducts environmental impact studies to ensure that agricultural projects are in line with sustainability goals while reducing negative environmental effects. Through these multifarious activities, NABARD greatly contributes to promoting sustainable agriculture, strengthening rural livelihoods, and supporting India's broader environmental and development goals.
- Montaz Ali Ahmed (2014):** This essay emphasises the role of agriculture in achieving sustainable development goals, with a focus on environmental sustainability, food security, and poverty alleviation. It emphasises social responsibility, land and resource conservation, and long-term management of human and natural resources. Crop rotation, organic farming, and agroforestry are examples of sustainable agriculture practices that enhance soil health and biodiversity. The article also covers topics such as population growth, resource depletion, and climate change.
- Purushottam Kashinath Pawar¹ and S. D. Talekar (2023):** Agriculture has long been the backbone of India's economy, adopting many innovative solutions such as precision farming and the use of renewable energy sources. Population and contribute significantly to the nation's GDP. Rural development, therefore, is dependent on the expansion and sustainability of the agricultural sector. Access to finance is a vital feature of agricultural growth, since it allows farmers to invest in new farming technologies, increase production, and improve their general standard of life. This study seeks to investigate the complex relationship between agricultural finance and rural development in India. It examines the many financial instruments and procedures accessible to farmers, including mainstream banking channels, government-sponsored initiatives, and microfinance institutions. The study examines the obstacles and limits that hinder the successful use of agricultural finance in rural areas. The research takes a mixed-methods approach, combining quantitative analysis of financial data with qualitative assessment via interviews and surveys with farmers, financial institutions, and government officials.
- Rajेशha. B, Dr Harisha N (2025):** Agricultural finance is critical to the sustainability and modernisation of Indian agriculture, as well as maintaining food security and improving rural living conditions. With about 42% of India's workforce employed in agriculture and the sector generating approximately 18% of GDP, access to adequate and timely loans is critical. Institutional loan to agriculture reached a record high of ₹25.10 lakh crore in FY 2023-24. This article examines the evolution, institutional framework, trends, difficulties, and policy actions affecting agricultural finance in India. The report uses data from the Reserve Bank of India (RBI), the National Bank for Agriculture and Rural Development (NABARD), and the Ministry of Agriculture to provide a comprehensive knowledge of the credit landscape and policy recommendations for equitable and efficient rural financial inclusion.
- Prof. Prasada H K (2018):** The majority of financial needs are related to production operations. These operations are related to inputs, output sales, land improvements such as well digging, and so on. For these purposes, various purchases must be made, necessitating numerous payments. For these reasons, agricultural finance is crucial. Farmers' agricultural needs are categorized into two categories: time-based and purpose-based.
- M.Krishnappa, (2016):** This study examines the role of NABARD in promoting rural development in India. The National Bank for Agriculture and Rural Development (NABARD) is an important player in advancing



rural development in India with a multidimensional approach that includes financial assistance, infrastructure development, capacity building, and policy advocacy. NABARD, established in 1982, is the premier development financing institution dedicated to promoting agricultural and rural development. Its key tasks include providing refinance support to rural banking institutions, allowing them to lend credit for agricultural activities and rural businesses. This financial support is critical for increasing agricultural output and assisting small enterprises in rural areas. NABARD is a vital actor in rural infrastructure development, overseeing the Rural Infrastructure Development Fund (RIDF) to finance projects such as irrigation, roads, healthcare, and education. These projects are crucial to raising living conditions and promoting economic growth in rural areas. Furthermore, NABARD focuses on capacity building by supporting institutions such as self-help groups (SHGs) and farmer producer organizations (FPOs), which are critical for empowering rural communities and fostering collective economic activity. The institution's function extends to policy creation and advocacy, where it provides essential insights and recommendations to help design effective rural development programs. NABARD's assistance for microfinance ventures encourages financial inclusion by connecting SHGs to banks and providing financial literacy training. NABARD supports climate-resilient agricultural practices and projects through the Green Climate Fund (GCF). NABARD's holistic strategy greatly contributes to improving rural livelihoods, fostering sustainable development, and bridging the urban-rural gap, thereby playing an important part in India's rural transformation.

7. **Farman Ullah Khan, Muhammad Nouman, Lucia Negrut, Junaid Abban, Laura Mariana Cismas & Muhammad Fahad Siddiqi (2024):** Agricultural finance is critical for modernising and commercialising farming processes, as well as strengthening global food security. However, providing sustainable financial services in remote regions is a huge difficulty in emerging and impoverished countries. As a result of a variety of obstacles, farmers frequently struggle to get formal finance and key productive assets. Although various studies have examined restrictions to agricultural finance, the literature is fragmented, and a comprehensive framework of constraints to agricultural finance is lacking. This study uses a systematic review approach to identify constraints to agriculture finance in 31 developing and underdeveloped countries. It then synthesises a comprehensive framework using the Qualitative Evidence Synthesis (QES) method, which can be used for policy formation. Furthermore, it illustrates the interplay and mutual reinforcement of the difficulties faced by various stakeholders in order to explain how they influence one another in complicated ways. Furthermore, this study proposes a collaborative and multifaceted approach to overcoming agricultural financing constraints, as well as highlighting the limitations and unintended effects of agricultural lending and its implications for agricultural sustainability.
8. **SUMA. S (2018):** This research aims to investigate the role of subsidies in agricultural development. Agricultural subsidies are critical measures used by governments to assist agriculture, increase productivity, and maintain food security. These financial aids take several forms, including input subsidies, price supports, and insurance programs, each geared to address distinct difficulties in the sector. Subsidies are critical in maintaining farmers' incomes, encouraging the use of modern technologies, and promoting sustainable agricultural practices. Subsidies significantly affect agricultural development. They help to reduce the risks associated with market volatility, climate change, and natural disasters, providing a consistent food supply and affordable costs for customers. Subsidies encourage increased output by lowering the cost of inputs such as seeds, fertilisers, and machinery, allowing farmers to invest in high-yield and climate-resistant crops. Furthermore, subsidies can promote rural development by strengthening lives and infrastructure in agricultural areas. However, subsidies have also been criticised. If not handled properly, they can cause market imbalances, overproduction, and environmental destruction. High fiscal expenses, as well as potential misuse or inefficiencies in distribution, hamper subsidy program efficacy. Subsidies have a considerable impact on agricultural development. They help to mitigate the risks associated with market volatility, climate change, and natural disasters by ensuring a stable food supply and affordable prices for clients. Subsidies promote greater output by cutting the cost of inputs such as seeds, fertilisers, and machinery, allowing farmers to invest in high-yielding and climate-resistant crops. Furthermore, subsidies can help to boost rural development by improving lives and infrastructure in agricultural communities. However, subsidies have also faced criticism. If not handled appropriately, they can lead to market imbalances, overproduction, and environmental catastrophe. High fiscal costs, as well as potential misuse or distribution inefficiencies, limit the effectiveness of subsidy programs.
9. **Sharma K R S, Vidyashree, Dr Prakash B Yaragol (2023):** Fintech plays an important role in financial inclusion, which aids in the creation of a green economy and accelerates green finance in the agricultural sector through numerous inclusion programs introduced by the Indian government and new financial services provided by fintech. Payments made through digital apps, mobile banking, Aadhar-based systems, and other means will help to boost the green economy. Various financial inclusion programs, as well as digital platforms, have been created, particularly in the agriculture sector, to market agricultural products at fair prices. Because



of digitalisation, accessibility, availability, and profitability in agriculture have improved as a result of increasing financial literacy, particularly in rural areas. Promoting green economic growth through card and mobile payment systems, eCommerce platforms that connect agricultural value chains with financial institutions, and green business finance. This article examines the different financial inclusion plans that reach rural communities through fintech services, thereby reducing environmental pollution and boosting the country's green economy.

- 10. Shen Yap, Hui Shan Lee & Ping Xin Liew (2023):** Financial inclusion is crucial to achieving the Sustainable Development Goals (SDGs). As there are few studies tying financial inclusion to the SDGs, the current study used a panel regression model to assess the individual and combined effects of financial inclusion on the SDGs in chosen countries from 2017 to 2020. Most existing research has only studied single SDGs individually; this is the first to look at the relationship between financial inclusion and finance-related Sustainable Development Goals (SDGs). The data show that financial inclusion correlates positively with the second, fifth, and eighth SDGs, but not significantly with the first, third, ninth, and tenth SDGs. A favourable link was found between financial inclusion and overall sustainable development (finance-related SDG indicator). As financial inclusion may not have a direct impact on all SDGs, the current study is unusual in that it covers seven finance-related aspects of SDGs as specified by the World Bank. The findings may motivate policymakers to step up efforts to improve financial inclusion in order to achieve the finance-related SDGs.
- 11. Rachana Gupta and Dr Raj Bihari Lal Srivastava (2023):** Farmers are particularly concerned with financial inclusion because agriculture is the nation's economic backbone. This entails offering easy access to financial services such as savings, credit, and payments, particularly to small and marginalised groups. However, farmers encounter various hurdles in gaining access to traditional financial institutions. Cooperative banks assist farmers in addressing these specific difficulties by providing them with the necessary access to manage their finances, mitigate risks, and invest in farm activities. Cooperative banks in India offer the. Ensured farmers have access to affordable agricultural loans. This research conducted a comprehensive evaluation of cooperative banks and agricultural lending as they relate to farmer financial inclusion in India. Several studies have shown the importance of cooperative banks in providing farmers with the agricultural finance they demand. Cooperative banks facilitate farmers' access to financial services and agricultural financing, promoting financial inclusion in India. However, there is still a lot of room for research on the subject in India due to a lack of primary evidence and fieldwork.
- 12. Dr. D.R. Bajwa:** Since India's independence, the primary goal of development planning has been "growth with social justice." Since the inception of planned development, the government has made great progress in rural India through Five Year Plans. The National Bank for Agriculture and Rural Development (NABARD) was established in July 1982. It became the apex entity for policy planning, refinancing rural financial institutions, and boosting their resource base. The report examines the role and function of NABARD in rural development. In 2007-08, funds were disbursed under Investment Credit and RIDF for specific purposes. It also sheds insight on NABARD's historical and current performance, as well as its main achievements in 2007-08.
- 13. Dr. Neetu Sharma (2022) :** Credit is required for all sectors of the economy to expand. It offers more oxygen to breathe, which benefits the economy. Schumpeter referred to 'Credit' as a development phenomena, and he saw the banking system, as well as entrepreneurship, as critical inputs in the development process. The author concisely emphasizes the relevance of credit as an input in development. Though credit is essential in all sectors of the economy, it plays an especially important role in agriculture. Agricultural financing has significantly increased agricultural production and improved the standard of living for rural populations. In other terms, agricultural credit can be described as the quantity of investible cash made accessible to farm businesses. In fact, it is a unique source since it allows you to use additional inputs and capital goods today while paying for them with future returns.
- 14. Kanwal Iqbal Khan, MuhammadSheeraz, and Shoaib Aslam (2025):** Sustainable agricultural finance (SAF) has evolved significantly, indicating the growing relevance of sustainable farming methods and the need for financial structures to support these projects. Since its start, a full literature evaluation has been missing, impeding the development of an in-depth understanding of the topic, including theoretical developments, existing trends, and identifying unexplored areas for future research. As a result, the current study used bibliometric analysis to give an organized overview of SAF, outlining its intellectual structure and thematic progression. Data were taken from the Scopus database between 1994 and 2023. The study distinguishes three key developmental stages: an early fragmented period, a consolidation phase, and more recent movements toward multidisciplinary and climate-resilient finance. The analysis identifies repeating themes, such as microfinance, green financing, stakeholder engagement, and risk mitigation. It also uncovers previously unexplored fields, such as Islamic green financing, climate risk tools, and sustainability

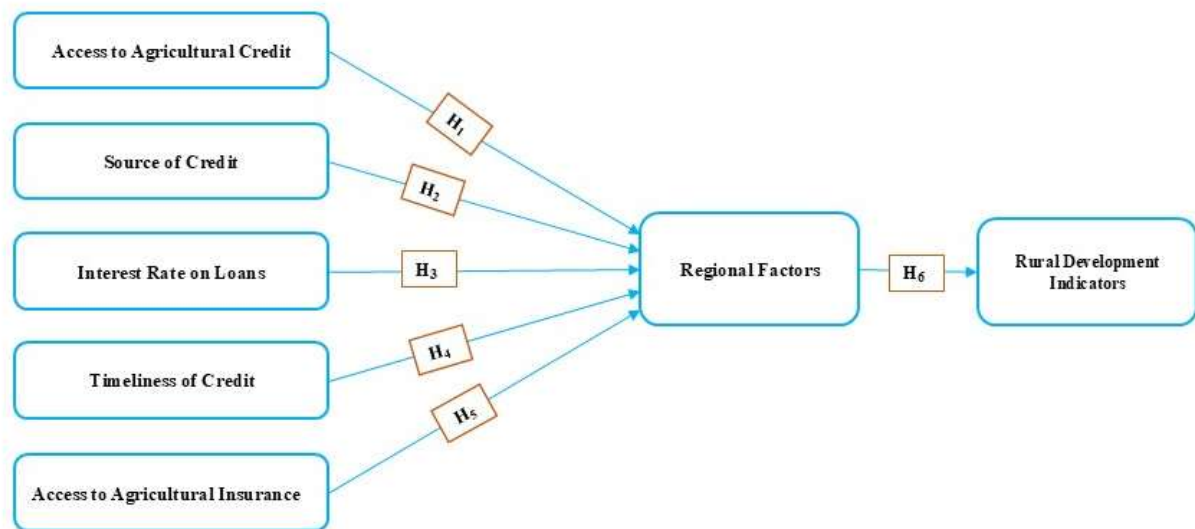


- performance indicators. The study builds a structured understanding of the SAF knowledge base by combining theoretical frameworks such as institutional theory, finance theory, and stakeholder theory. It adds to future research planning and informs the creation of financial systems designed for sustainable agriculture.
15. **The Role of Agricultural Finance in Sustainable Rural Development: Sources, Structure, and Challenges in India (2022):** Credit is required for all sectors of the economy to expand. It offers more oxygen to breathe, which benefits the economy. Schumpeter referred to 'Credit' as a development phenomena, and he saw the banking system, as well as entrepreneurship, as critical inputs in the development process. The author concisely emphasizes the relevance of credit as an input in development. Though credit is indispensable in every sector of the economy, it plays a critical function in agriculture. Credit is necessary for all sectors of the economy to grow. It provides more oxygen to breathe, benefiting the economy. Schumpeter referred to 'Credit' as a development phenomenon, and he considered the banking system and entrepreneurship as key components of the development process. The author succinctly underlines the importance of credit as an input in development. Credit is vital in every area of the economy, but it plays a critical role in agriculture.
 16. **Dr. R. Vijayalakshmi (2014):** Microfinance is not a financial system, but rather a vehicle for eradicating poverty and bringing about social change, particularly in the status of women in our country, allowing them to achieve self-reliance. Today, India has 82 large microfinance institutions that provide small loans to help individuals get out of poverty. This study discusses the conceptual underpinning of microfinance institutions in India. The researcher attempted to determine the role of microfinance on the development of the rural era. It is an effort to provide light on the role of microfinance in rural development by researching microfinance schemes. The study concludes that the weaker sectors of the Indian economy require money lending strategies to gain credit. As a result, microfinance initiatives should play an essential role in focusing on the needs of the poor and improving their standard of living, hence driving economic growth.
 17. **Dr Swati Sharma (2018):** Indian economy is portrayed by low rate of development, predominance of rural population, overwhelming dependency on horticulture, unfavourable land mass proportion, exceptionally skewed income distribution and wealth besides, high frequency of destitution and joblessness. The last two variables poverty and joblessness posture real difficulties to the development and success of the nation. To conquer this issue, some recently created parts like micro finance are assuming an essential part. Microfinance has been viewed as a capable tool to battle poverty through the arrangement of essential financial services including reserve funds, protection, credit and transfer of funds. Microfinance has evolved from an experimental alternative to formal or informal sources of credit to a model for lending projects to the impoverished in developing countries. Microfinance has made it possible to provide loans to poor people who were previously denied credit by banking institutions due to a lack of collateralizable assets. The goal of microfinance institutions is to serve needy people by empowering them to obtain credit and fight poverty. Against such upgrades, the current inquiry has been conducted to investigate a review of literature in the microfinance sector with the goal of examining the development of small-scale funds in India throughout time.
 18. **Rajasha. B1, Dr. Harisha N2(2025):** agricultural finance plays a crucial role in sustaining and modernizing Indian agriculture, ensuring food security, and enhancing rural livelihoods. With nearly 42% of India's workforce engaged in agriculture and the sector contributing around 18% to the GDP, access to adequate and timely credit remains vital. Over the years, institutional credit to agriculture has witnessed substantial growth, reaching an all-time high of ₹25.10 lakh crore in FY 2023–24. This paper analyses the evolution, institutional framework, trends, challenges, and policy measures related to agricultural finance in India. The study uses data from the Reserve Bank of India (RBI), National Bank for Agriculture and Rural Development (NABARD), and Ministry of Agriculture, presenting a holistic understanding of the credit landscape and offering policy suggestions for equitable and efficient rural financial inclusion.
 19. **Mukesh Chaha (2024):** Sustainable development is a critical notion in the defining ideas of society. Sustainable development is a process that aims to meet the demands of the present generation while also meeting the needs of future generations. It is a notion for completing present-day objectives without compromising future requirements. Several government programs are in place to achieve economic, agricultural, and forestry sustainability, as well as income, health, gender equality, and other goals. MGNREGA is the primary initiative for achieving these aims. MGNREGA is not a program, but an act against unemployment. It serves as a catalyst for the long-term development of the agricultural economy and the empowerment of the rural poor, particularly women. This study discusses the significance of MGNREGA, the rural development initiative, in accomplishing sustainable development goals. The report demonstrates that MGNREGA is effective in employing rural people and eradicating rural poverty. In addition, the initiative has helped rural populations and eradicated rural poverty. In addition, the scheme has helped to promote gender equality.

20. **Ujwala Kambali 1 & Niyaz 2(2021):** The study's goal is to evaluate the development of agricultural credit in India, investigate agricultural development, and examine the various policies enacted by the Indian government. The study focuses on the evolution of agricultural finance, new approaches, techniques, and technology, and how they contribute to increased agricultural growth and wider financial inclusion. The study's goal is to evaluate the development of agricultural credit in India, investigate agricultural development, and examine the various policies enacted by the Indian government. The study focuses on the evolution of agricultural finance, new approaches, techniques, and technology, and how they contribute to increased agricultural growth and wider financial inclusion.

RESEARCH METHODOLOGY

• Conceptual Model



- **Statement of the Problem:** The fundamental issue is that rural development is not always correlated with agricultural loans. Many rural communities still face poverty and low production despite the availability of numerous funding initiatives. This is frequently the result of ignoring the "quality" of the financing. For instance, if a farmer receives a loan, it becomes a debt trap rather than a development tool if the interest rate is excessively high (H3) or the funds arrive after the planting season (H4). Determining whether a particular financial bottleneck—access, source, cost, time, or risk/insurance—is the main obstacle keeping money from enhancing Rural Development Indicators is the challenge.
- **Research Gap:** Current research typically concentrates on the availability of credit, but it is unable to explain why capital injections frequently fall short of improving rural livelihoods. Understanding how the quality of financing, more especially, the interaction between timeliness, interest rates, and risk insurance acts as the crucial link between obtaining a loan and realising rural development is severely lacking.

Objectives of the Study

- To study the impact of agricultural finance on rural development in select regions of Telangana State.
- To assess the impact of agricultural finance on farm productivity, income levels, and employment generation in rural areas.
- To examine the sources and accessibility of agricultural finance available to farmers in the selected regions of Telangana.
- To identify the problems and constraints faced by farmers in accessing agricultural finance.

Hypothesis of the Study

H1: Access to Agricultural Credit.

H2: Source of Credit.

H3: Interest Rate on Loans.

H4: Timeliness of Credit.



H5: Access to Agricultural Insurance.

RELIABILITY ANALYSIS

Variables	No. of Items	Cronbach's Alpha
Access to Agricultural Credit.	5	0.942
Source of Credit.	5	0.918
Interest Rate on Loans.	5	0.918
Timeliness of Credit.	5	0.906
Access to Agricultural Insurance.	5	0.935
Regional factors.	5	0.957
Rural development indicators	5	0.958

Cronbach's Alpha was used to examine the internal consistency of the items measuring each construct in order to determine the measurement scales' reliability. Five items were used to measure each variable in the study.

According to the findings, every variable has an exceptional level of internal consistency, with Cronbach's Alpha values more than 0.90. The items used to measure credit-related features are very dependable, as seen by Access to Agricultural Credit ($\alpha = 0.942$), Source of Credit ($\alpha = 0.918$), Interest Rate on Loans ($\alpha = 0.918$), and Timeliness of Credit ($\alpha = 0.906$). Rural Development Indicators ($\alpha = 0.958$), Regional Factors ($\alpha = 0.957$), and Access to Agricultural Insurance ($\alpha = 0.935$) all show very high reliability, indicating that the items within these scales reliably measure their respective constructs. The internal consistency of the items assessing each construct was evaluated using Cronbach's Alpha to determine the measurement scales' reliability. Five items were used to measure each study variable. According to the results, every variable has an exceptional level of internal consistency, with Cronbach's Alpha values more than 0.90. The items used to measure elements linked to credit are very dependable, as seen by Access to Agricultural Credit ($\alpha = 0.942$), Source of Credit ($\alpha = 0.918$), Interest Rate on Loans ($\alpha = 0.918$), and Timeliness of Credit ($\alpha = 0.906$). Rural Development Indicators ($\alpha = 0.958$), Regional Factors ($\alpha = 0.957$), and Access to Agricultural Insurance ($\alpha = 0.935$) all show extremely good reliability, indicating that the items in these scales reliably measure their respective constructs.

Overall, the results show that the scales are appropriate for additional statistical analysis and that the study's questionnaire is quite dependable. Although scores around or over 0.95 may reflect some degree of item overlap, the high alpha values indicate remarkable consistency among the items. However, the study's use of these variables is supported by the appropriate reliability levels.

REGRESSION ANALYSIS

Hypothesis	Variables	Beta Coefficient	R ² Value	P-Value
H1	Access to Agricultural Credit on Regional factors.	0.342	0.735	0.000
H2	Source of Credit on Regional factors.	0.195		
H3	Interest Rate on Loans on Regional factors.	0.133		
H4	Timeliness of Credit on Regional factors.	0.191		
H5	Access to Agricultural Insurance on Regional factors.	0.095		

Regional factors are highly influenced by access to agricultural finance, according to the regression results. The total model has a significant explanatory power, explaining 73.5% of the variation in regional characteristics ($R^2 = 0.735$). With $p = 0.000$, the model is statistically significant.

The most significant positive influence on regional characteristics among the predictors is Access to Agricultural Credit ($\beta = 0.342$), which is followed by Source of Credit ($\beta = 0.195$) and Timeliness of Credit ($\beta = 0.191$). Although they are somewhat weaker, the interest rate on loans ($\beta = 0.133$) and access to agricultural insurance ($\beta = 0.095$) also exhibit favourable effects.

In general, every element has a favourable impact on regional characteristics; nevertheless, the most significant effect is the availability of agricultural finance.



Hypothesis	Variables	Beta Coefficient	R ² Value	P-Value
H6	Regional factors on Rural development indicators.	0.780	0.608	0.000

The results indicate that regional factors have a strong and significant positive effect on rural development indicators ($\beta = 0.780$). The model explains 60.8% of the variation in rural development indicators ($R^2 = 0.608$), showing good explanatory power. The relationship is statistically significant ($p = 0.000$), thereby supporting Hypothesis H6.

RESULT & DISCUSSION

Rural development indicators, regional characteristics, and agricultural financing variables are strongly correlated, according to the empirical investigation. The model explains 73.5% of the variation in regional factors ($R^2 = 0.735$, $p = 0.000$), indicating that access to agricultural finance has a considerable impact on regional factors. The most significant factor among the independent variables was Access to Agricultural Credit ($\beta = 0.342$), which was followed by Source of Credit ($\beta = 0.195$) and Timeliness of Credit ($\beta = 0.191$). Access to Agricultural Insurance ($\beta = 0.095$) and Interest Rate on Loans ($\beta = 0.133$) also demonstrated favourable but relatively smaller effects. Subsequent investigation reveals that rural development indicators are strongly and statistically significantly impacted by regional characteristics ($\beta = 0.780$, $p = 0.000$). The model confirms the critical role of regional factors in rural development outcomes by explaining 60.8% of the variation in rural development indicators ($R^2 = 0.608$).

CONCLUSION

According to the study's findings, agricultural financing has a major role in rural development, mostly by influencing regional characteristics. The most important factor affecting regional development circumstances is the availability of timely, reasonably priced, and trustworthy agricultural finance. Moreover, improved regional factors significantly improve the results of rural development.

The results indicate that policy initiatives should concentrate on enhancing credit quality, delivery systems, and risk management instruments like insurance, in addition to expanding credit availability. In Telangana and comparable areas, sustainable rural development can be accelerated by fortifying institutional credit infrastructures and guaranteeing prompt payment.

FURTHER RESEARCH:

Telangana's agricultural finance should concentrate on the long-term viability of high-subsidy loan models like Rythu Bandhu as well as the socioeconomic effects of state-specific digital interventions. Researchers might look into how new fintech technologies, such as mobile banking and satellite-based credit risk assessment, can lower transaction costs and close the financial literacy gap for small and marginal farmers. Furthermore, it is imperative to investigate the relationship between climate-resilient agriculture and finance, particularly how "green finance" may encourage sustainable practices like organic farming and water-efficient irrigation. In order to ensure that the financial ecosystem supports a more inclusive and resilient agricultural value chain, future research should assess the role of Farmer-Producer Organisations (FPOs) and public-private partnerships in improving market linkages and price realisation for rural households, in addition to direct farm credit.

REFERENCES

- Kumar, P., & Singh, R. (2023). *The Impact of NABARD's Policy Initiatives on Rural Development and Sustainable Agriculture. Development Policy Review*, 41(2), 287-304.
- L. Zhang, J. Pang, X. Chen, Z. Lu, *Carbon emissions, energy consumption and economic growth: Evidence from the agricultural sector of China's main grain producing areas. Science of the Total Environment*, 665, 1017-1025 (2019)
- Purushottam Kashinath Pawar and S. D. Talekar, 2023. *A study on agricultural finance and its role in rural development in India. JES Bulletin*, 1(1):37-41.
- Bhatt, M. S., & Bhat, S. A. (2019). *Role of institutional credit in boosting agricultural productivity in India. International Journal of Agricultural Economics*, 4(2), 45-53. Reddy, A. A., & Syamasundar, K. V. (2020). *Regional disparities in agricultural credit flow in India. Agricultural Economics Research Review*, 33(1), 13-24. Report of Food and Agriculture Organization. (2024). *India at a glance. FAO*.
- Kumar, V., & Singh, P. (2015). *Impact of NABARD's rural infrastructure development fund on rural India. Indian Journal of Agricultural Economics*, 74(1), 90-105.
- Abdullah, D. Z., Khan, S. A., Jebran, K., & Ali, A. (2015). *Agricultural credit in Pakistan: Past trends and future prospects. Journal of Applied Environmental and Biological Sciences*, 5(12), 178-188.
- Ghosh, S., & Bhattacharya, M. (2017). *Agricultural subsidies and rural development: Analysing the impact on productivity and sustainability. Journal of Rural Studies*, 73, 32-42.



8. Arner, D. W., Buckley, R. P., Zetzsche, D. A., & Veidt, R. (2020). Sustainability, FinTech and financial inclusion. *European Business Organisation Law Review*, 21(1), 7-35.
9. Achugamonu, U. B., Adetiloye, K. A., Adegbite, E. O., Babajide, A. A., & Akintola, F. A. (2020). Financial exclusion of bankable adults: Implication on financial inclusive growth among twenty-seven SSA countries. *Cogent Social Sciences*, 6(1), 1730046. <https://doi.org/10.1080/23311886.2020.1730046> Allard, G., & Williams, C. (2020). National-level innovation in Africa. *Research Policy*, 49(7), 104074.
10. Devi RU, Govt SRK. The role of credit co-operatives in the agricultural development of Andhra Pradesh, India. *Int. J Cooperative Stud.* 2012;1(2):55-64. <https://doi.org/10.11634/216826311706235>
11. NAFSCOB (Analytical and graphical presentations are made by CSID, NABARD)
12. Bidani, S.N. (2012), "Management of Purchase of Agricultural Equipments", ABC Publication, New Delhi. 2. Gopalakrishnan, T.V. (2014), "Assisting Farmers through Intermediaries", Northern Book Centre, New Delhi.
13. Adeel, M., Mahmood, S., Khan, K. I., & Saleem, S. (2022). Green HR practices and environmental performance: The mediating mechanism of employee outcomes and moderating role of environmental values. *Frontiers in Environmental Science*. Advance online publication. <https://doi.org/10.3389/fenvs.2022.1001100> Ali, J. (2023).
14. Yunus, M (2007) creating a world without poverty. *Social business and the feature of capitalism public Affairs*.
15. E-Journal Legal Service India – Role of Microfinance in India. <https://thingsinindia.in/microfinance-companies-in-India/> Microfinance-Current Status and Growing Concerns in India / Avant-garde(iitk.ac.in) Role of Microfinance Institutions in Rural Development /finDev Gateway.
16. Armendariz de Aghion, B. (1999), *On the Design of a Credit Agreement with Peer Monitoring*, *Journal of Development Economics*, 60(1): 79- 104. 2. Beatriz Armendariz and Jonathan Morduch (2010), *the economics of microfinance*, second edition.
17. Reddy, A. A., & Syamasundar, K. V. (2020). Regional disparities in agricultural credit flow in India. *Agricultural Economics Research Review*, 33(1), 13-24. Report of the Food and Agriculture Organisation. (2024). *India at a glance*. FAO. Report of the Ministry of Finance, Government of India. (2024). *Economic Survey 2023-24*. Government of India. Report of NABARD. (2018). *Annual report 2017-18*. National Bank for Agriculture and Rural Development 2025.
18. Adeyemi, J. K. (2022). Workplace Conflict On Productivity and Emotional Stability of Employees. *International Journal of Management and Business Applied*, 1(2), Article 2. <https://doi.org/10.54099/ijmba.v1i2.216> Adula, M., & Kant, S. (2022).
19. Misra, R., Chavan, P., & Verma, R. (2016). Agricultural credit in India in the 2000s: Growth, distribution and linkages with productivity. *Margin: The Journal of Applied Economic Research*, 10(2), 169-197. Google Scholar