



ISSN: 2230-9926

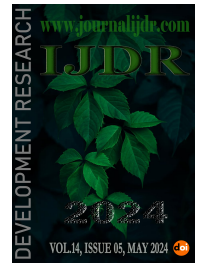
Available online at <http://www.journalijdr.com>

# IJDR

International Journal of Development Research

Vol. 14, Issue, 05, pp. 65751-65754, May, 2024

<https://doi.org/10.37118/ijdr.28342.05.2024>



RESEARCH ARTICLE

OPEN ACCESS

## IMPACT OF AGRICULTURAL CREDIT ON YIELD AND INCOME OF PADDY IN ANDHRA PRADESH

<sup>1</sup>Rajendra, M. and <sup>2</sup>Gangaiah, C.

<sup>1</sup>Research Scholar (PT), Department of Economics, Sri Venkateswara University, TIRUPATI, Andhra Pradesh

<sup>2</sup>Professor of Economics, Department of Economics, Sri Venkateswara University, TIRUPATI, Andhra Pradesh

### ARTICLE INFO

#### Article History:

Received 06<sup>th</sup> February, 2024

Received in revised form

11<sup>th</sup> March, 2024

Accepted 21<sup>st</sup> April, 2024

Published online 30<sup>th</sup> May, 2024

#### Key Words:

Cloud computing, virtualization, green computing, workload requirements, server utilization, Virtual Machine (VM) technology, resource allocation, job response times, task execution, VM live migration, cloud resources, workload balancing, system slowdown prevention, VM consolidation technique, co-location strategy, self-destruction strategy, real-time resource allocation, online prediction model, partition sizes, reducer allocation.

\*Corresponding author: Balaji, C.

### ABSTRACT

An attempt has been made to assess the impact of agricultural credit on yield and income of paddy in Chittoor district of Andhra Pradesh. Andhra Pradesh is basically an agrarian economy and by producing one-tenth of India total output of food grains. Initially the agriculturists depend more on non-institutional sources for their credit requirements which used to squeeze the blood of the poor peasants by charging high rates of interest. Cooperatives are considered as the agencies for mobilization and development of rural resources in a planned and cost effective manner besides providing inputs, services and marketing facilities to the rural economy. The Cooperative Credit Societies Act 1904 permitted only to form PACS, which laid more emphasis on the promotion of agricultural credit. The Cooperative Credit Societies Act of 1912 removed the defects of 1904 Act and was made applicable to both credit and non-credit cooperative societies. The study shows the major contributor of input to the total cost was human labour, fertilizer & manure and irrigation charges for both borrower and non-borrower farmers in Chittoor district of Andhra Pradesh. The findings also showed that the cost of cultivation as well as the yield was higher in the case of borrower category compared to non-borrower category. It also confirmed that agricultural credit had positive impact on the crop production in the study area. Based on the results, appropriate policies were suggested to improve the lending system in the study area.

Copyright©2024, Balaji et al., This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Balaji, 2024. "Adaptive Virtual Instance Consolidation for Enhanced load Balancing in Cloud Data Centers". International Journal of Development Research, 14, (05), 65751-65754

## INTRODUCTION

Agriculture remains a dominant sector of the Indian economy. It has undergone structural changes during the period between 1970 and 2023. The GDP share of agriculture has fallen from 43 per cent to 14 per cent during the above period. Though there is no reduction in Agricultural GDP in absolute terms, the contribution in terms of percentage to total GDP has declined due to rapid growth in other sectors like the service sector and industries sector. As for employment, 55 per cent of the total workforce is engaged in Agriculture as per the 2011 census. The food grain production has touched a level of 329.68 million tonnes during the year 2022-23 as per the Annual Report of Ministry of Agriculture, Government of India. Further agricultural exports constituted a fifth of the total exports of the country. Institutional credit for agriculture has played a major role in registering such a phenomenal achievement. The flow agricultural credit has increased from Rs 32,355 crores in 2000-2001 to Rs.18.5 lakh crores in 2022-2023. With the enhanced flow of credit, food production has increased significantly. However, the profitability of farming enterprise has not increased proportionately in

general and small and marginal farmers in particular. The agricultural sector still faces challenges such as lack of capital formation, regional disparity, dependence on non-institutional sources with a high rate of interest especially by small and marginal farmers, tenant farmers/sharecroppers, etc. Not with standing various financial sector reforms, the non-availability of adequate and timely credit from Institutional credit agencies said to be one of the major constraints encountered by the marginalized farmers. Both farmers and banks are comfortable with short term loans without recognizing the need for investment credit for enhancing profitability. Farmers tend to use short term resources for long term purposes making the investment infructuous. Agriculture is the main important sector in Indian economy and can also largely stand for the prosperity of the Indian economy. According to Census 2011, about 68.8 per cent people lives in rural area. Their livelihood depends on agriculture directly or indirectly. The share of agriculture and its allied sectors in the gross domestic product (GDP) has come down to 14 per cent in 2011-12 (at 2004-05 prices). The sector has got potential to achieve higher growth rates, so that growth in other sectors and overall growth rate of the economy can be achieved. Agriculture is a dominant sector of our economy and credit plays an important role in increasing agriculture

production. Availability and access to sufficient, timely and low cost credit from institutional sources is of importance especially to small and marginal farmers. Along with other inputs, credit is essential for establishing profitable farming systems. Most of the farmers are small producers busy in agricultural activities in areas of widely unstable potential. Experience has shown that easy access to financial services at affordable cost positively affects the productivity, asset formation, income and food security of the rural poor. The major interest of the Government is therefore to bring all the farmer households within the banking promote complete financial inclusion. The co-operative movement in India has taken deep roots in various sectors. It has also been making a momentous contribution towards economic development of the people. The Co-operatives have mainly concerned with agricultural credit, marketing of agricultural produce and distribution of fertilizers and pesticides and other essential commodities. The Co-operative Banking Structure has an exclusive position in the Rural Credit Delivery System of India. They have made significant strides in the field of rural credit. Over the years, they have remained the prime institutional agency with their vast network, wide coverage, and outreach extending to the remote parts of the country. At present, there are 5.49 lakhs cooperative societies functioning with the membership of 22.95 crores. The co-operative banking system is an integrated one. The short-term Cooperative Banking Structure is a three tier structure, which consists of State Cooperative Banks (SCBs) at the State level, District Central Cooperative Banks (DCCBs) at the District level, and PACS at the village level. The All India Federation of SCBs, which is functioning at Mumbai, is an advisory body. The structure is not uniform across the country. Credit is an important input which ensures adequate working capital as well as infrastructural development. Adequate and timely credit provision significantly increases agricultural output which leads to an increase in the economic development of the cultivators and people attached to cultivation. Moreover, agricultural credit serves as an instrument for stimulating increase in output, income and employment.

**Emergence of PACS:** Based on the recommendations of a committee appointed by the Government under the chairmanship of Edward Law, the Cooperative Credit Societies Act took its birth on 25th March 1904 in response to eliminate the exploitation of moneylenders. "The laudable measure was hailed as a turning point in economic and social history. It holds the promise of helping to solve a host of problems in rural masses, raising moral as well as economic status and laying down the foundation to a new social order." The cooperatives solely.

**Role of PACS in Agricultural Credit:** The Cooperative Credit Societies Act 1904 permitted only to form PACS, which laid more emphasis on the promotion of agricultural credit. The Cooperative Credit Societies Act of 1912 removed the defects of 1904 Act and was made applicable to both credit and non-credit cooperative societies. The distinction between rural and urban societies was abolished and provision was made for societies with limited or unlimited liability. In this way, the 1912 Act paved the way to widen the Cooperative Credit Structure. With the introduction of Reforms Act of 1919, the transfer of Cooperation to Provincial Governments was the primary step. Henceforth, the Provincial Governments were empowered to have their own Cooperative Societies Act to make the path of credit movement smooth and sound." As a result, some Provinces passed their own 'Cooperative Societies Acts. The Agricultural Finance sub-committee observed that "debt was incurred because of social expenditure, consumer needs and distress circumstances, while debt for capital expenditure was stated to be insignificant. Thus, the main causes for borrowing in the pre-independence period were associated with physical resources and socio-cultural environment. After independence, with the beginning of the planning era in 1950-51, the movement got a new phase of development. Under the Five Year plans, cooperatives were envisaged as "kingpin of development planning." The loans advanced by the PACS increased to Rs.550 crores during 1969-70 i.e., at the end of fourth five year plan as against Rs.22.9 crores during 1950-51, at the initial stage of five year plans.

## Objectives

- To cater to the credit need, mostly, farm credit and income generation activities of farmers, artisans and other members;
- To extend selected banking services to members;
- To implement Kissan Credit Card Scheme for providing timely and adequate farm credit to members;
- To take up marketing of agricultural produce of member farmers;
- To cater to the consumer needs, mostly, essential commodities of members;
- To create awareness among farmers to adopt improved farming practices., and
- To reach up to the unprivileged section of the community through SHGs, JLGs and TFGs.

## Functions

- The Andhra Pradesh Co-operative Bank (APCOB) through the District Central Co-operative Banks and Primary Agricultural Co-operative Societies provides refinance support for agricultural production credit for seasonal agricultural operations (crop loans), investment credit for investment in agriculture for Minor Irrigation, Farm Mechanization, Land Development, Horticulture, Dairy and other diversified investments and allied activities;
- In times of natural calamities, the bank provides credit stabilization arrangements by way of conversion, replacement, postponement and rescheduling of agricultural loans;
- The bank extends its helping hand to ameliorate the sufferings of the weaker sections of the society and to bring them above the poverty line;
- The bank is advancing more than 60 per cent of the total term loans to the small farmers;
- Loans to Employee Credit Societies are also extended to provide timely financial support to employees of various organizations through the District Central Co-operative Banks;
- The bank finances Industrial Co-operatives and Agro-processing industries;
- To promote rural development, it provides assistance for programmes under Swarna Jayanti Gram Swarajgar Yojana, non-farm sector finance for self-employment, micro credit through Self Help Groups (SHGs) etc.;
- The APCOB is also implementing Intensive Credit Development Programme (ICDP) schemes in all districts with a view to achieve sustainable development of Co-operative institutions from grass root level; and
- It offers all types of banking services like any other Nationalized Bank.

**Agricultural Credit Policy:** The Government of India has initiated several policy measures to improve the accessibility of farmers to the institutional sources of credit. The emphasis of these policies has been on progressive institutionalization for providing timely and adequate credit support to all farmers with particular focus on small and marginal farmers and weaker sections of society to enable them to adopt modern technology and improved agricultural practices for increasing agricultural production and productivity. The Policy lays emphasis on augmenting credit flow at the ground level through credit planning, adoption of region specific strategies and rationalization of lending Policies and Procedures. These policy measures have resulted in the increase in the share of institutional credit of the rural households. The population growing per annum, the need is to provide them a balance diet and limitation on expansion of cropped area, the national commission on agriculture has recognized for considerable expansion in the pace of agricultural production. Recent revaluating in agriculture has made it capital intensive but majority of our small farmers are not in position to practice agriculture on modern lines due to lack of capital. The agriculture growth depends very much on improvement of infrastructural

facilities, supply of enhanced irrigation water, land reclamation, transpiration, mechanical power and other critical form inputs like seeds, pesticides and fertilizers etc. Agricultural credit assumes even a central position in the whole strategy of agricultural development of a country like India for a number of reasons. In view of the reasons stated above, it has been attempted to study the impact of Primary Agricultural Credit Societies (PACS) on the yield and income of small and marginal farmers. Besides an analysis of assessment of the credit gap and problems involved in availing credit were made to evolve suitable remedial measures in the study area. Chittoor district of Tamil Nadu was purposively selected for this study taking into account the area under production and productivity of the crop. The district ranks first in productivity among various districts of Andhra Pradesh with an average production of 126 tonnes per hectare during the year 2022-23. Though the district occupies 5.08 per cent of the total area under the crop, it contributes 6.16 per cent of the total production of the state. Similarly, in the case of paddy cultivation, the Chittoor district contributes a significant share in area and production. Hence the district was selected for the study. A multistage random sampling technique was adopted for the selection of Mandal, villages and sample respondents in the villages. The Primary data were collected for 100 samples for each crop (50 borrowers and 50 non-borrowers) through the personal interview method with the help of the Interview schedule.

**Impact of PACS on Cost of Cultivation of Borrower and Non-Borrower Farms of the Paddy:** A comparative analysis of cost and returns based on cost concepts of paddy crops in the study area were made to study the impact of credit on income. To compare the net income between borrower-and non-borrower, cost and returns were calculated. Thereafter, the percentage difference between above mentioned categories was worked out. It is evident from Table-1. From the Table-1 observed that, the percentage share of A1 to revised C2 was 59.72 per cent. Similarly, the percentage share of A2, B1, B2, C1 and C2 are 59.93 per cent, 65.18 per cent, 86.18 per cent, 74.70 per cent and 95.71 per cent ; In the case non-borrowers observed that, the percentage share of A1 to revised C2 was 57.36 per cent. Similarly, percentage share of A2, B1, B2, C1 and C2 are 57.60 per cent, 63.54 per cent, 87.35 per cent, 74.12 per cent and 97.92 per cent respectively. Hence it can be inferred from the above Table shows that the cost and income of borrower farmers were higher in the crops compared to the non-borrower category. Hence it can be concluded that crop loan amount may be a vital reason for the higher cost of cultivation and higher income of borrower category.

**Impact of PACS on Cost of Production of Borrower and Non-Borrower Farms of the Paddy:** The impacts of PACS on cost of production of borrower and non-borrower farms of the paddy are presented in Tabel-2. From the Table-2 observed that, the Paddy, C3 production cost was ₹1619.18. The percentage share of A1 to C3 was 52.15 per cent. Similarly, percentage share of A2, B1, B2, C1, C2 and C3 are 52.37 per cent, 57.77 per cent, 79.41 per cent, 67.38 per cent, 89.02 per cent and 90.91 per cent; and in the non-borrowers side observed that, the Paddy, C3 production cost was ₹1750.91. The percentage share of A1 to C3 was 54.19 per cent. Similarly, percentage share of A2, B1, B2, C1, C2 and C3 are 54.37 per cent, 59.27 per cent, 78.33 per cent, 67.95 per cent, 87.01 per cent and 90.91 per cent respectively. The comparative analysis of per quintal production cost between the borrower and non-borrower category indicates that per quintal production cost is higher for the non-borrower category. Though the cost of cultivation is higher for the borrower category it has a relatively lesser production cost. This high cultivation cost and lesser production cost of borrower category confirms that the borrower category yields more output compared to the non-borrower category.

**Reasons for Not Availing PACS Credit:** Usually PACS credit helps the farmers to purchase quality inputs in adequate quantities which lead to increase in yield as well as the income of the farmer. Hence it is necessary to study the reasons or constraints in availing PACS agricultural credit. The need for submitting many documents and lengthy procedure was ranked as the first constraint by the non-borrowers which prevented them from accessing PACS credit. Secondly delay in sanctioning the loan and untimely disbursement restrains them from approaching PACS credit. Thirdly, rigid repayment norms and stringent recovery measures do not facilitate PACS credit. High cost of credit and additional security followed by easy accessibility of credit from other sources and lack of awareness about availability of interest subsidy are the other reasons for not availing credit from the PACS. The reasons for not availing PACS credit by non-borrowers sample households are presented Table-3.

**Suggestions for Improvement in PACS Lending System:** Many farmers suggested reduction in rate of interest, simplification of procedure, instant sanction of loan, flexible repayment period, assessment of crop loss and settlement of insurance claims on individual basis, increase in scale of finance, relaxation of security norms etc would facilitate them to approach Institutional financing agencies.

**Table 1. Cost of Cultivation of Borrower and Non- Borrower Farms (Paddy) in Chittoor District of Andhra Pradesh**

Particulars	Cost	Borrower		Non-Borrower	
Cost of cultivation	A1	47107.75	59.72	39930.12	57.36
	A2	47276.36	59.93	40098.75	57.61
	B1	51410.00	65.18	44232.38	62.54
	B2	67980.16	86.18	60802.55	87.35
	C1	58922.46	74.71	51594.58	74.12
	C2	75492.62	95.71	68164.75	97.92
	C2 Revised	78879.52	100.00	69609.84	100.00
Yield( Per Hectare)		47.29		42.82	
Income (Rupees Per Hectare)		85122		77069.46	

Source: Field Data

**Table 2. Cost of Production of Borrower and Non- Borrower Farms (Paddy) in Chittoor District of Andhra Pradesh**

Particulars	Cost	Borrower		Non-Borrower	
Cost of Production	A1	844.37	52.15	948.86	54.19
	A2	847.93	52.37	951.95	54.37
	B1	935.34	57.77	1037.83	59.27
	B2	1285.74	79.41	1371.54	78.33
	C1	1091.02	67.38	1189.83	67.95
	C2	1441.42	89.02	1523.54	87.01
	C2 Revised	1471.98	90.91	1591.74	90.91
	C3	1619.18	100.00	1750.91	100.00

Source: Field Data

**Table 3. Reasons for Not Availing PACS Credit by Non-Borrowers Sample Households in Chittoor district of Andhra Pradesh**

S.No	Reasons	Respondents	Rank
1	Lack of awareness about interest subsidy	38	VI
2	Loan from other sources was easily accessible.	45	V
3	Requirement of many documents & lengthy procedure.	82	I
4	Delay in sanctioning loan and untimely disbursement	76	II
5	Repayment schedule was not flexible	64	III
6	High cost of credit and requirement of security	52	IV

Source: Field Data

**Table 3. Suggestions for Improvement in PACS Lending System in Chittoor district of Andhra Pradesh**

S.No	Reasons	Respondents	Rank
1	Reduction in the rate of interest for crop loans	79	I
2	Simplification of procedure to cover tenant and share croppers	56	III
3	Timely disbursement of Loan amount	62	II
4	Flexibility in repayment	50	IV
5	Increase in scale of finance	34	VI
6	Assessment of crop loss and settlement of claim on individual basis.	30	VII
7	Relaxation of security norms	47	V

Source: Field Data

Thus, it revealed the existence of the gap in the demand and supply of credit. Reduction in the rate of interest applicable for crop loans, simplification of banking formalities for availing loans, settlement of insurance claims to all farmers suffering crop loss were the other suggestion given by sample farmers. Further, timely disbursement of loan was another important factor responsible for proper and timely usage of agricultural inputs which would enhance the crop output.

## CONCLUSION

PACS are considered as shield for the farming community. They have been not only functioning as purveyor of rural credit but also empower the farming community by providing them on farm and off farm services. After the number of measures adopted based on the suggestions of various committees and commissions, still the problem of over dues is too serious and mounting year by year. Cooperative Banks are playing essential role in the realization of the agriculture and in local development. They serve both rural and urban population and main bank in India supporting development of agriculture and rural areas. Much of the weakness of the upper tiers is because of poor financial health and deficiencies of PACS in the way they are organized and managed. So Government should have the primary responsibility to open new cooperative banks branches and to ensure that its citizens have easy access to co-operative credit. Borrower category farmers have high cultivation costs and yield compared to the non-borrower category. Increase in the yield has resulted in increase in income for borrower farmers. The finding of the study has confirmed positive impact of agricultural credit in the study area. The gap between the scale of finance and required working capital for efficient production was high in the study area. Therefore, banks may address the issue of under financing to the farmers and ensure all the needs of the farmers are met to reduce their dependency on the non-institutional sources. Complicated procedure in getting loans is a major reason ranked by the non-borrower category for not availing the loan.

Hence simplification of documents required is necessitated in such a way that the borrowers make a limited number of visits to the revenue offices and to the banks and thereby the transaction cost could be reduced.

## REFERENCES

- Anjaneyulu, Economics of Paddy Cultivation: A Study in Andhra Pradesh, *International Journal of Scientific Research*, 2015.
- Barah, B.C. and Pandey, S., Rain Fed Rice Production Systems in Eastern India: An on Farm Diagnosis and Policy Alternatives, *Indian Journal of Agricultural Economics*, 2005.
- Kumar, R., Constraints facing Indian agriculture: Need for Policy Intervention, *Indian Journal of Agricultural Economics*, 2005.
- Memoria Saksena CB. Cooperation in India, Quoted by Umesh C. Patnaik, Introduction to Cooperative Movement, Kalyani Publishers, New Delhi, 1996,
- NCUI Basic Data on Cooperatives in India, New Delhi, 2006,
- Pranab Kumar Charkravarty, Problems of Co-operative Development in India, S. Chand & Co. Ltd., New Delhi, 1983,
- Ravichandran K. Crop Loan System and overdue, Spell bound Publications, Rohtak, 2000,
- Sinha SK. Rural Credit and Co-operatives in India, Suneja Publishers, New Delhi, 1998,
- Srinivasan.R, Rice Production in India. Kisan World, 2009.
- Srivastava, Strengthening of Primary Agricultural Co-operative societies, The Co-operator, 2004.
- Sushil K, Ghasi.R., Economic Analysis of Production and Profitability in Rice Production in India, Agricultural Situation in India, 1992.
- Venu, B. N., Umesh, K. B., Kiran, R., & Reddy, V. V., Impact of Agricultural Credit on Income, Employment Input usage of Borrower and Non-borrower Farm House-holds in Chickballapur District of Karnataka, *International Journal of Farm Sciences*, 2014.

\*\*\*\*\*