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Relationship Between Agricultural Credit Policy, Credit Disbursements and Crop Productivity: A Study in Karnataka

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I

INTRODUCTION

The state of Karnataka has diverse agro-climatic conditions and varying natural resource endowments. Crop cultivation in the state is undertaken in the areas spanning from low rainfall eastern region to high rainfall Western ghats and coastal regions. High variability in rainfall affects the crop productivity and the decisions that farmers make on cropping pattern, marketing and storage (Nadkarni and Deshpande, 1982). About two-third of the cultivated area is drought prone and the incidence of drought is very frequent (Deshpande, 2004). Despite several initiatives taken by the state government over time, the gross irrigated area to gross cropped area increased to only 31.9 per cent, which is quite low as compared to the national average of 45.3 per cent in 2008-09 (Government of India, 2010a).

The growth performance of Karnataka's agriculture has not been impressive during recent years. The average annual growth in agriculture and allied sector was meagre at 0.5 per cent during 1999-2000 to 2008-09. One of the reasons attributed to the poor performance of agriculture was the decline in public investment during 1980s and 1990s (Government of Karnataka, 1993; Bhalla and Singh, 2009). This is evident from the fact that growth in public investment was 11.8 per cent during the 1970s but declined to -13.7 per cent and -4.2 per cent in 1980s and 1990s, respectively. However, there was a turnaround in public investment during 2000s with the compound annual growth rate of about 17.0 per cent, the impact of which on agricultural productivity may be realised with a time lag (Kannan and Shah, 2010). Higher public spending on agricultural infrastructure has potential to induce private investment, increase credit flow, adopt new technologies and realise better income by the farmers (Fan *et al.*, 1999; Chand, 2000; Fan and Hazell, 2000; Gulati and Ganguly, 2010).

Historically, India's agricultural policies have underlined the importance of credit in accelerating agricultural productivity. Both the central and state governments have often intervened to ensure that adequate amount of credit flows to farming community. However, since the late 1990s, different regions of the country including those in Karnataka have witnessed increased agrarian crisis and spate of farmers'

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suicides. According to NSSO (2005), about 48.6 per cent of farmer households are indebted in India. The farmer households indebted in Karnataka stand very high at 61.6 per cent. An independent assessment by different research scholars (Vasavi, 1999; Deshpande, 2002; Vyas, 2004; Reddy and Mishra, 2009) underlined the credit burden as one of the reasons for agrarian distress. These evidences have further reinforced the critical role of credit in sustaining agricultural production and hence led to launching of various policy initiatives by the government keeping agricultural credit at the central focus. These policy initiatives included doubling of credit flow to agriculture sector, revival of co-operative credit structure, loan waiver scheme and special package to regions prone to farmers' suicide.

In 2004, the central government had declared a 'New Deal' for rural India through stimulating rural based economic activities. The recognition at that point of time was that agricultural sector required massive investment, which must be made through credit induced private investment and the enhanced public investment should be supportive of it. Therefore, an agricultural credit policy was unveiled in June 2004 with the objective of doubling of credit flow to the sector in three years. The response from the institutional agencies comprising commercial banks, regional rural banks and co-operatives was so impressive that the credit target was achieved by 119 per cent of Rs. 1,41,000 crore set for 2005-06. Similarly, the target set for subsequent years was also achieved comfortably and thus it was claimed that the objective of doubling of agricultural credit was fulfilled (Mohan, 2006; Golait, 2007; Government of India, 2008a). However, to enable the farmers to avail credit at low interest rate an interest subvention scheme to banks was announced in the Union Budget 2006-07. A similar policy of providing subsidised credit to the agricultural sector has been continued in the subsequent years also.

Meanwhile, encouraged by developments at the central government level and alarmed by unabated farmers' suicides in the state, the Government of Karnataka announced the concessional interest on crop loan to enable farmers to access cheap credit in 2004-05. In fact, Karnataka was one of the states to early provide agricultural loans at subsidised interest rate for the short term, medium term and long term loan advanced by co-operative credit structures. This seems to have received wide response from the farmer groups. In order to widen the coverage of interest subsidy and increase accessibility to institutional loan, the state government has modified the structure and operation of the subsidy scheme at different points of time. However, it needs to be studied whether the policy of supplying loan at concessional rate of interest has helped to increase the credit flow to agriculture and whether the increase in credit flow will lead to higher crop productivity.

Against the above background, the present study analyses the pattern of credit subsidy, issues related to credit delivery and financial implications of credit subsidy on state exchequer. The study also attempts to analyse the link between agricultural credit and crop productivity in Karnataka. The paper is organised in six sections. Section Two provides data sources, while the third section discusses the pattern of

credit subsidy. The role of interest subsidy in improving agricultural credit disbursements is discussed in the fourth section. The fifth section analyses the relation between crop productivity and agricultural credit and the final section provides concluding remarks.

II

DATA SOURCES

The study uses secondary data compiled from various published sources. The ground level information on the operation of the credit subsidy scheme collected through stakeholder consultations for a research study¹ undertaken in Karnataka have also been used to supplement the secondary data analysis. Details on the administration of agricultural credit subsidy were compiled from the Department of Co-operation, Government of Karnataka. The data on ground level credit disbursements and credit subsidy were collected from NABARD State Focus Paper and State Budget Documents, respectively. Data on value of crop output were compiled from Central Statistical Organisation. Further, information related to net cropped area, fertiliser consumption, net irrigated area, rainfall and tractor were compiled from various issues of *Statistical Abstract of Karnataka* and *Karnataka At a Glance*.

III

THE PATTERN OF CREDIT SUBSIDY IN KARNATAKA

This section traces the complex pattern of the credit subsidy regimes implemented in Karnataka during different points of time. Before April 2004, co-operative credit societies had provided short term/medium term agricultural loans at the interest rate of around 12.5 per cent and long term loans at 13.5 per cent. The higher interest rate was attributed to high transaction cost, poor loan recovery, high credit risks and low capital base of co-operative credit structure (Government of India, 2004; Reserve Bank of India, 2004). The interest rate charged by public sector commercial banks was not low either and it was linked with prime lending rate which ranged between 9.00 and 12.25 per cent (RBI, 2004)². Thus, to provide relief to the farmers from high interest burden particularly from institutional sources and to enable them to make investments on high pay-off inputs, the Government of Karnataka had announced for the first time in the state budget 2004-05 a scheme of interest subsidy on crop loan. Under this scheme, short term, medium term and long term loans were made available at 6 per cent rate of interest to farmers through Primary Agricultural Credit Societies (PACS) and Primary Co-operative Agricultural and Rural Development (PCARD) bank. To operationalise the scheme, the state government had provided interest subsidy of 5.5 per cent to the District Central Co-operative

Bank (DCCB) and Karnataka State Co-operative Agricultural and Rural Development (KASCARD) bank. DCCB and KASCARD bank had in turn provided loans to PACS at 4.0 per cent and PCARD bank at 3.5 per cent, respectively. PACS and PCARD bank had fixed a respective margin of 2.0 per cent and 2.5 per cent over and above the rate of interest charged on the amount borrowed and finally loans were given to the farmers at 6.0 per cent interest. The process of subsidy disbursement involves the submission of claim bill every quarter to the government by DCCB on loans advanced including loans provided out of own funds of PACS or PCARD bank at the ground level.

However, the pattern of interest subsidy was changed periodically to provide crop loans at the lowest interest rate possible. Consequently, rate of interest on crop loan was reduced to 4.0 per cent in 2006-07 and then to 3.0 per cent in 2008-09. To make loans available at these rates, the state government has been providing interest subsidy of 7.5 per cent to DCCB and KASCARD bank. But, interest margin fixed on loans advanced by the district central banks to lower co-operative credit structure was reduced substantially. Under the 4.0 per cent interest regime, DCCB had provided loans to PACS at the reduced rate of 2.0 per cent interest and KASCARD bank advanced loan at 1.5 per cent to PCARD bank. PACS and PCARD bank had in turn fixed margin of 2.0 per cent and 2.5 per cent interest, respectively and advanced loans to farmers at 4.0 per cent rate of interest. But, it was discontinued in 2008-09 and a new regime of advancing loan at 3.0 per cent rate of interest began. Under this, DCCB provided loans to PACS at a further reduced rate of 1.0 per cent interest and KASCARD bank to provide loans at its own rate of interest. Since the cost of funds (which includes deposit rates, establishment costs, building cost, etc.) of DCCBs in Karnataka is estimated to be 3.85 to 7.0 per cent, a margin of one per cent interest charged on loans provided by DCCB is considered to be inadequate to meet the operational expenses (Kannan and Bhat, 2011).

However, some important changes were effected during 3.0 per cent interest regime. The credit subsidy scheme was extended to scheduled commercial banks and Regional Rural Banks (RRBs) on loans up to Rs.50,000 per borrower. Though policy decision on this came late, but it was important to realise that commercial banks and RRBs taken together have accounted for about three-fourth of ground level disbursement of agricultural loans, which will be discussed in the subsequent sections. This modified scheme was also extended to non-agricultural sectors like weaving and fishing activities. Further, the quarterly claim bills are to be submitted based on the recovery of loans advanced rather than the earlier norm of repayment period. By introducing these changes, availability and accessibility of crop loans to farmers seem to have increased.

Meanwhile, in the much acclaimed State Budget on Agriculture presented for the first time in 2011-12, the Government of Karnataka announced provision of farm loans at 1.0 per cent rate of interest. This concessional rate of interest is applicable only to short term crop loans provided by the institutional sources and is to be

implemented from 2011-12. Under the present scheme, while DCCBs are to advance loans to PACS at free of interest rate, the PACS will provide loans to farmers at 1.0 per cent rate of interest. But, the interest subsidy to be passed to DCCB to compensate loss of margin has not been revised. Further, the rising cost of funds due to periodic revision of interest rates by the Reserve Bank of India is likely to put the co-operative credit structure in Karnataka under great financial stress.

However, it is argued that the migration from high interest to low interest subsidy regimes was to take advantage of the benefits available under the interest subvention scheme implemented by the central government and cheap financial resources made available at different levels of credit structure in the country. In 2006-07, when the government of India announced provision of loans at 7.0 per cent to farmers, it was attempted through two routes: one was through 2.0 per cent interest subvention to banks that provide loans out of their own funds and another is through increasing refinance support at low interest rate. That is, National Bank for Agriculture and Rural Development (NABARD) was to provide the co-operative credit structure, the refinance facility at concessional rate of 2.5 per cent in 2006-07 with the condition that rate of interest on refinance to increase by 0.5 per cent every year to reach 4.0 per cent during 2009-10. Similarly, refinance to RRBs is made available at 4.5 per cent.

In addition to interest subvention to banks, in 2009-10 the Government of India had announced 1.0 per cent interest subvention as an incentive to farmers who repay loans promptly. But in 2010-11, the interest subvention to farmers was increased to 2.0 per cent and in 2011-12 it was proposed to increase further to 3.0 per cent. Taking these developments into account and utilising the resources available through concessional refinance facility and interest subvention, the state government has meddled with interest subsidy on loans advanced through co-operative banks. Nevertheless, the current agricultural credit policy regime enable prompt repaying farmers to utilise loan up to Rs.3.0 lakh free of interest. Further, it is clear from the above discussion that the state government's policy on interest subsidy has changed almost once in two years since 2004-05 and this has created confusion among lending agencies at different levels of credit structures.

IV

INTEREST SUBSIDY AND CREDIT DISBURSEMENTS

Interest subsidy on crop loans seemed to have impacted positively and hence led to increase in the number of agricultural borrowers (short and medium term) from 6,80,267 in 2004-05 to 13,02,132 in 2009-10. The average lending per farmer has increased considerably from Rs. 19,170 to Rs. 28,461 during the same period (Government of Karnataka, 2010). The ground level disbursement of agricultural credit in Karnataka by institutional sources is given in Table 1. The amount disbursed through co-operative banks increased substantially from Rs. 1,259 crore in 2002-03 to Rs. 3,226 crore in 2009-10. The rate of increase in credit disbursement from co-

operatives was found to be relatively high from the year 2004-05, during which credit subsidy scheme was introduced. However, among institutional sources commercial banks dominate in terms of amount of loan advanced to the agricultural sector. While the share of commercial banks was 56 per cent of the total credit disbursed, the co-operative banks have accounted for about only a quarter of it. The low credit share might be due to small size of loan as compared to that of commercial banks (Government of India, 2008). Despite its low credit share, co-operative banks play a vital role in transforming rural life in different regions of the state because of easy access, cheap credit and high clientele base.

TABLE 1. GROUND LEVEL AGRICULTURAL CREDIT DISBURSEMENTS BY INSTITUTIONAL SOURCES IN KARNATAKA

(Rs. crore)					
Year (1)	Commercial banks (2)	Co-operative banks (3)	RRBs (4)	Others (5)	Total (6)
	2049	1259	726	3	4037
2002-03	(50.8)	(31.2)	(18.0)	(0.1)	(100)
	2456	1229	799	2	4486
2003-04	(54.7)	(27.4)	(17.8)	(0.0)	(100)
	3510	1245	1206	11	5972
2004-05	(58.8)	(20.8)	(20.2)	(0.2)	(100)
	4822	2654	1536	41	9053
2005-06	(53.3)	(29.3)	(17.0)	(0.5)	(100)
	6307	2388	1911	5	10611
2006-07	(59.4)	(22.5)	(18.0)	(0.0)	(100)
	6354	3100	2288	92	11834
2007-08	(53.7)	(26.2)	(19.3)	(0.8)	(100)
	6725	3114	2288	19	12144
2008-09	(55.4)	(25.6)	(18.8)	(0.2)	(100)
	8241	3226	3204	15	14687
2009-10	(56.1)	(22.0)	(21.8)	(0.1)	(100)
Growth Rate (per cent)	22.2	17.9	23.6	37.4	21.3

Source: State Focus Paper 2011-12 Karnataka, NABARD.

Note: Figures in parentheses are percentage to total.

The concessional refinance facility provided by NABARD has partly helped the co-operative credit structure in the state to advance loans at reduced interest rate. However, the state government has also allocated substantial amount in the budget for meeting the interest subsidy requirements. In absolute terms, credit subsidy on crop loans was at Rs. 45 crore in 2004-05 and has increased to Rs. 162.1 crore in 2007-08. Though it has declined in recent years, but it stood at Rs. 120 crore in 2010-11 (Table 2). The share of credit subsidy in total expenditure on agriculture and allied sector was 2.5 per cent and in expenditure on crop husbandry was 8.7 per cent in 2010-11. The state government officials claim that commercial banks do not submit subsidy bill for recovery as loan disbursed per farmer is stated to be more than Rs.50,000. Thus, major proportion of the subsidy amount is claimed by the co-operative banks only.

TABLE 2. CREDIT SUBSIDY IN KARNATAKA

Year (1)	Interest subsidy on crop loan (Rs. crore) (2)	Per cent in total expenditure on agriculture and allied sector (3)	Per cent in total expenditure on crop husbandry (4)
2004-05	45.0	2.2	9.3
2005-06	80.0	2.8	22.7
2006-07	76.5	2.4	13.4
2007-08	162.1	3.5	21.0
2008-09	147.3	4.4	14.8
2009-10*	109.8	2.6	10.2
2010-11#	120.0	2.5	8.7

Source: Government of Karnataka, *Budget Documents* (various issues).

Note: * Revised Estimates. # Budget Estimates.

V

AGRICULTURAL CREDIT AND CROP PRODUCTIVITY

It is well recognised that credit is an important catalyst for increasing agricultural production. It can impact agricultural production both directly- purchase of seeds, fertilisers, labour and indirectly-construction of farm shed, marketing, storage and processing, and thus helping to increase the overall farm profitability. The measurable impact variable could be agricultural productivity. However, assessing the impact of credit on agricultural productivity is not straightforward given the structure of credit flow to the agricultural sector and diversity in cropping pattern, land holding size and agro-ecological conditions. Moreover, institutional credit is only part of the total credit available to the farm sector. The financial flow from non-institutional sources also assumes greater significance in total credit availability.

It is evident from Table 3 that farmers in Karnataka had borrowed 69 per cent of the total loan from institutional sources (co-operatives, banks and government) and the rest from non-institutional sources. The amount of loans purveyed from the latter is substantial and it cannot be ignored while assessing the impact of credit on agricultural productivity. Among the institutional sources, per cent loan borrowed from commercial bank is much higher than the other two sources for all size classes of farmers. Dependence of small and semi-medium farmers on co-operative society for borrowing is found to be relatively high. However, worryingly the marginal and small farmers had borrowed 28 per cent and 30.2 per cent of the total loan, respectively from money lenders. Thus, the challenge is to bring these vulnerable and resource poor farmer groups under the ambit of institutional finance. Similar views have been expressed by the Task Force on Credit Related Issues of Farmers, which specifically looked into problems related to accessibility of credit by different farm size groups in India (Government of India, 2010b).

TABLE 3. DISTRIBUTION OF OUTSTANDING LOANS BY SOURCE OF LOAN BY FARMER HOUSEHOLDS

(per cent)

Land size class (1)	Government (2)	Co-operative society (3)	Bank (4)	Agricultural/ professional money lender (5)	Trader (6)	Relatives and friends (7)	Doctor, lawyer and others (8)	others (9)
Marginal	2.5	14.2	37.3	28	2.4	11.6	0.4	3.5
Small	1.4	22.3	35	30.2	1.4	8.2	0	1.6
Semi-Medium	1.4	22.7	49.3	16.6	3.2	4.1	0.3	2.4
Medium	2.9	14.2	69.9	8.4	0.1	3	1	0.5
Large	0	2.9	94.1	2.1	0.9	0	0	0
All groups-Karnataka	1.9	16.9	50.1	20	1.9	6.8	0.4	2.1
All groups-India	2.5	19.6	35.6	25.7	5.2	8.5	0.9	2.1

Source: NSSO (2005).

Difficulty in assessing the impact of credit on agricultural productivity also stems from the fact that it constitutes only a small percentage of total cost of crop cultivation in Karnataka. Agricultural productivity and farm income are determined by multiple factors. It can be observed from Table 4 that the cost of agricultural loans has accounted for only 1.9 per cent of the total cost of cultivation and 0.9 per cent of the total value of output. Across the farm size classes, its share in total expenses was high at 2.4 per cent for the large farmers followed by the marginal and small farmers.

TABLE 4. SHARE OF LOAN INTEREST IN TOTAL EXPENSES AND TOTAL VALUE OF OUTPUT BY LAND SIZE CLASS

(per cent)

Land size class (1)	Total expenses (2)	Total output value (3)
Marginal	2.2	1.2
Small	2.2	1.0
Semi-medium	2.0	0.9
Medium	0.8	0.4
Large	2.4	1.1
All Groups	1.9	0.9

Source: NSSO (2005).

However, an attempt has been made here to analyse the relationship between crop productivity and agricultural credit. As discussed, the ground level disbursement of agricultural credit from all institutional sources has increased during recent years. Except 2008-09, the annual growth in credit disbursement from co-operative credit sector was impressive since the introduction of credit subsidy (Table 5). It is a welcome sign from the point of view of rising agricultural production given the possible utilisation of concessional credit by farmers for purchase of inputs and meeting other operational costs. But, no association was found between growth in

credit and agricultural gross state domestic product (GSDP). While credit disbursement had registered average annual growth of 15.1 per cent, growth in agricultural GSDP was found to be only 2.7 per cent during 2003-04 to 2009-10.

TABLE 5. ANNUAL GROWTH IN AGRICULTURAL GSDP AND CREDIT DISBURSEMENT IN KARNATAKA

Year (1)	Growth in agricultural GSDP at 1999-2000 prices (2)	(per cent) Growth in credit disbursement in agriculture at 1999-2000 prices (3)
2003-04	-12.8	6.1
2004-05	23.7	22.6
2005-06	4.1	46.1
2006-07	-2.2	12.5
2007-08	7.4	7.6
2008-09	-0.6	-4.9
2009-10	-0.4	15.8
Average	2.7	15.1

Source: Central Statistical Organisation and *State Focus Paper 2011-12 Karnataka*, NABARD.

Further, correlation coefficients were worked out between crop productivity and other important variables including agricultural credit. The crop productivity was measured as the value of output of all crops (at 1999-2000 prices) per hectare of net sown area (NSA). The other variables considered for the analysis include annual rainfall, fertiliser consumption per hectare of NSA, per cent net irrigated area and number of tractors per thousand hectare of NSA. Credit disbursement was deflated by using agricultural GSDP deflator. The correlation between crop productivity and annual rainfall was 0.58 and significant at one per cent level. The fertiliser consumption and irrigation were positively correlated with the crop productivity at 1 and 10 per cent level of significance, respectively. However, the correlation coefficient with respect to agricultural credit was low at 0.35 and it was found to be statistically insignificant. It implies that the increased credit availability through administered pricing in the form of interest subsidy does not have direct impact on crop productivity. In fact, increase in agricultural credit along with increase in investment in other support services will be crucial to have positive impact on productivity (Mohan, 2006; Vaidyanathan, 2006; Sriram, 2007; Das *et al.*, 2009). Thus, increased credit flow in conjunction with rise in investment in agricultural support services like input and output market infrastructures, irrigation and transport will help in increasing agricultural productivity and farm income. Notwithstanding, there are issues with respect to proper administration of credit subsidy and delivery of services to farmers. These issues merit attention as they are likely to affect the financial health of the co-operative credit institutions in the state.

TABLE 6. CORRELATION COEFFICIENT BETWEEN CROP PRODUCTIVITY AND ITS IMPORTANT DETERMINANTS: 1991-92 to 2009-10

Particulars (1)	Crop productivity (2)	Rainfall (3)	Irrigation (4)	Fertiliser (5)	Credit (6)	Tractor (7)
Crop productivity	1.00					
Rainfall	0.58***	1.00				
Irrigation	0.44*	0.47**	1.00			
Fertiliser	0.60***	0.41*	0.71***	1.00		
Credit	0.35	0.46**	0.96***	0.65***	1.00	
Tractor	0.38	0.21	0.87***	0.74***	0.85***	1.00

Note: Two tailed test- ***, ** and * Significant at 1 per cent and 10 per cent, level, respectively.

First, credit subsidy is administered by both the central and state governments. Frequent changes in policy on subsidy (interest) rates create confusion among officials at DCCBs and PACs. Further, these policy changes often result in late submission of claim bills by co-operative banks as there is time lag in communicating these changes to district level banks and then to ground level credit institutions.

Second, in Karnataka it has been observed that the subsidy amount on crop loans is released by the state government to co-operative credit societies with a time lag of two years. Further, allocation of budget outlay under these schemes seems to be arbitrary and is not in congruence with the actual disbursements on the ground. The delay in release of subsidy puts the interest burden on PACS, which unfortunately continue to depend on higher tier credit structure for financial requirements. In fact, the revival package recommended by Vaidyanathan Committee (Government of India, 2004) on Revival of Co-operative Credit Institutions has placed PACS in a relatively better financial condition. However, lack of product diversification to strengthen capital base and financial burden due to implementation of subsidy schemes may affect the financial health of these ground level institutions.

Three, the state government provides subsidy in the form of waiving membership fee to scheduled caste/scheduled tribe persons, and backward community and minority community persons to encourage them enrol as members of all types of co-operatives. This seems to have helped to increase the membership base of primary agricultural co-operative credit societies. But, unfortunately over two-third of members were found to be non-users of services of co-operatives. In that case it can be reasonably argued that only a small proportion of members avail subsidised crop loan. Further, field level evidences show that those who availed loan were mostly medium and large farmers who owned more than 5 acres of land.

Fourth, the process of shifting from one subsidy regime to another has put the district central co-operative banks in a difficult position in meeting the cost of credit. While migrating from one interest subsidy regime to another, the interest margin fixed on loan advanced by DCCBs to PACS has been reduced progressively. Given

the high cost of operating funds the reduced or no margin is likely to put district central banks under financial stress.

Fifth, availability of loans at reduced interest rate must be helpful to farmers for purchase of seeds, fertilisers and other inputs. However, it was difficult for the officials of the co-operative banks to trace the actual use of loans. Field level evidences indicate that loans were taken at low interest rate from co-operatives and lent to other villagers at higher rate, thus indulging in arbitrage.

VI

CONCLUDING REMARKS

Agricultural credit is an important input affecting the major farm decisions made with respect to crop and enterprise mix. Timely availability of credit helps to purchase the improved seeds, fertilisers and hiring of agricultural implements. Lack of adequate credit is considered to be one of the constraints for slow adoption of improved technology and hence rising agricultural productivity. The increased flow of credit to agricultural sector may enable the farmers to adopt improved package of cultivation practices. However, the effect of agricultural credit on crop productivity is insignificant. The correlation coefficient was worked out to be low at 0.35. The increased credit flow along with rise in investment in agricultural support services like input and output market infrastructures, irrigation and transport will help in increasing agricultural productivity and farm income.

Further, the thrust of agricultural credit policy should move beyond just increasing the amount of credit to the sector, but also in bringing more farmers under the fold of institutional sources. Co-operative banks should adopt more focussed approach in assessing the credit requirements of different regions and sectors within agriculture, and advance loans accordingly so as to achieve higher productivity. Agriculture is becoming increasingly diversified and the nature of production is shifting from subsistence to market oriented production. Under this context, lending activities should move beyond crop sector and focus on the sunrise sectors like animal husbandry, dairying, fishery, poultry and mushroom cultivation. Further, special attention should be given to marginal and small farmers while advancing loans as they still depend on non-institutional sources to a large extent to fulfil their credit requirements. Awareness should be created among farmers about subsidy schemes by lending agencies and state department of agriculture so as to enable them to avail credit at low interest rate.

NOTES

1. A study on "Review of Developmental Programmes and Schemes of Departments of Co-operation and Agricultural Marketing, Government of Karnataka". This study was sponsored by the Expenditure Reforms Commission, Government of Karnataka.

2. However, in July 2003 central government requested all public sector commercial banks to reduce interest rate on crop loans up to Rs. 50,000 to a single digit of not more than 9 per cent per annum.

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