

Impact of Government Expenditure on Agriculture Development in Karnataka

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Abstract

The majority of people live in rural area and they depend on agriculture activities for their livelihood. Agriculture sector development is a significant both for poverty reduction and economic development. Developing countries like India, expenditure on agriculture is one of the most important government instruments for encouraging economic growth through development of Agriculture sector for alleviating poverty in rural areas and upliftment of farmers economic conditions. In this context, the present study, focused on to analyse the trends and patterns of agricultural expenditure and its impact in Karnataka. The study used published government documents. This paper also used, appropriate statistical tools for data analysis such as percentage, Annual Growth Rate and ordinary least square method. Study reveals that revenue expenditure is more compare than that of capital expenditure in total expenditure of agriculture and allied activities in Karnataka since 1990-91 to 2021-22BE. Government expenditure plays very significant positive role in economic development as well as agriculture sector development in Karnataka state. Therefore, study suggested that Karnataka state should spend more on capital expenditure of agriculture and allied activities instead of revenue expenditure.

Keywords: *Agriculture, Allied Activities, Government Expenditure, Economic Growth, Revenue Expenditure, Capital Expenditure.*

Introduction

Government expenditure means the expended funds from the fiscal allocation, mostly on yearly basis across the whole sectors of the economy towards achieving growth objectives. While government expenditure on agriculture growth is said to be the total allocative resources set assign from the annual budgetary allocation specifically meant for enhance agricultural output through crop and seedling development, procurement of fertilizer and mechanized tools, agricultural research and development among others, so as to attained objectives of economic growth (Dkhar, Dahun Shisha 2018). Public expenditure in India is highly decentralized and funds flow from the central government to the respective state governments. The central government may spend directly on economic and social services through several programs, agricultural research and development (Bathla, Joshi & Kumar, 2017). It also includes

rural infrastructure, irrigation canal etc. But the state governments also spend a lot for development of agriculture like distribution of subsidized seeds, fertilizer through cooperatives, supports small irrigation machinery, poly house for farmers etc. Further, the responsibility of incurring expenditure on Agriculture and Irrigation and Flood Control lies squarely with the states. Public expenditure on agriculture and allied sector is a part of the economic services and it includes sub- sectors like crop husbandry, soil and water conservation, animal husbandry, dairy development, fisheries, forestry and wild life, agricultural research and education, co-operation, other agricultural programmes, irrigation and flood control. Public expenditure on agriculture takes place in the form of agricultural infrastructure, irrigation, subsidy (seeds, fertilizers, pesticides, agriculture machinery and farm implements), compensation (insurance) and various agriculture schemes. In many developing countries agriculture is thought to be the main source of growth for manufacturing, making its contribution mainly through price policies. These price policies have produced, in general, low growth of agricultural productivity, and because of them, few modern inputs have been in corporate. Besides price policies, governments use expenditure policies. These policies have also affected production, employment, and income distribution.

Objectives

- To analyses the trends and patterns of agricultural expenditure, and
- To Assess the impact of agricultural expenditure on development of agriculture sector in Karnataka.

Empirical Review of Literature

Singh and et al. (2021) assessed the impact of public expenditure on the agricultural growth in Punjab during 1990-91 to 2019-20. The expenditure on crop husbandry, dairy development, and agricultural research & education had a positive and significant impact on the state's agricultural growth, but the expenditure on soil & water conservation and forestry & wildlife did not impact it. A study conducted by Rajesh and et al. (2020), found that out of total expenditure on agricultural inputs and services, crop husbandry has gained significance with a higher expenditure percentage share over the period and observed imbalances in inter-state allocation of public expenditure in agriculture, which needs to be considered in the future to achieve the goal of inclusive growth in Indian agriculture. Dkhar and et al. (2018) analyses the impact of government expenditure on agriculture and allied activities on economic growth (GSDP) in Meghalaya during the period 1984-85 to 2013-14. They find a significant positive impact of agricultural expenditure on crop husbandry on GSDP growth. On the other hand, the impact of public expenditure on forestry, dairy and irrigation is found out to be negative. Study conducted by Mathur and et al. (2007), all-India level and state-wise analyses highlight the role of public investment/government expenditure on agriculture as being the crucial determinant in stepping up the rate of growth of agricultural production.

Methodology

The study is based on Secondary data, collected from the Reserve Bank of India. This paper also used, appropriate statistical tools for data analysis such as percentage, Annual Growth Rate. The study used ordinary least square method for impact assessment of agriculture expenditure by using data from 2004 to 2022(BE).

Results and Discussions

Expenditure on Agriculture & Allied Activities in Karnataka

Expenditure on agriculture and allied activities includes crop husbandry, animal husbandry, dairy development, agricultural research and education, fisheries, co-operation, forestry and wild life, other agricultural programmes, irrigation and flood control. Five years average trend of total expenditure on agriculture and allied activities in Karnataka is depicted in Table 1. The revenue expenditure is much higher than the capital expenditure. It shows that government spends more on unproductive expenditure heads. The revenue expenditure on agriculture and allied activities has increases from 473 lakh rupees (1991-95) to 14267 lakh rupees (2021-22BE). Same trend has been noticed in capital expenditure on agriculture and allied activities. The empirical results reveal that share of revenue expenditure quite more compare to that of capital expenditure, but observed that revenue expenditure share has decreasing trend and capital expenditure share has slightly increased in considered period.

Table 1: Trends of Total Expenditure on Agriculture & Allied Activities in Karnataka

Year	RExp on AAA (Rs. Lakh)	CExp on AA (Rs. Lakh)	RExp AA (%)	CExp on AA (%)
1991-95	473	13	97.4	2.6
1996-2000	930	19	98.0	2.0
2001-05	1350	22	98.4	1.6
2006-10	3624	47	98.7	1.3
2011-15	8170	207	97.5	2.5
2016-20	15924	289	98.2	1.8
2020-21(RE)	16195	646	96.2	3.8
2021-22(BE)	14267	709	95.3	4.7

Note: RE Revised Estimates; BE Budget Estimates; RExp Revenue Expenditure; CExp Capital Expenditure; AAA Agriculture & Allied Activities.

Source: RBI, GOI

Expenditure on Crop Husbandry in Karnataka

Crop husbandry includes a variety of crop management approaches to reduce weed, disease, and pest challenges and maintain maximum yields. The government's spending is particularly important in the growth of industries that are related to the development of the agriculture sector.

Table 2: Total Expenditure on Crop Husbandry in Karnataka

Year	RExp on Crop Husbandry (Rs. Lakh)	CExp on Crop Husbandry (Rs. Lakh)	RExp on Crop Husbandry (%)	CExp on Crop Husbandry (%)
1991-95	115.0	1.1	24.2	9.1
1996-00	182.1	0.4	19.5	2.4
2001-05	302.4	0.1	22.2	0.4
2006-10	742.3	8.0	20.3	12.7
2011-15	2035.1	66.5	25.3	33.1
2016-20	4587.1	90.9	29.6	27.8
2020-21(RE)	6128.0	16.6	37.8	2.6
2021-22(BE)	5796.3	24.6	40.6	3.5

Note: RE Revised Estimates; BE Budget Estimates; RExp Revenue Expenditure; CExp Capital Expenditure;

Source: RBI, GOI

Hence, the government invest more on these activities for the purpose of growth of well-beings of farmers and rural people in India as well in Karnataka. The table 2 depicted that five years' average government expenditure on crop husbandry activity in Karnataka during 1991 to 2022BE. Total Revenue expenditure and capital expenditure on this activity has increasing trend. Increasing revenue expenditure is not good sign for development of agriculture sector due to it is considered as unproductive expenditure because of it doesn't create any assets in economy. Capital expenditure has productive nature but it has increasing trend which was very less compared to that of revenue expenditure. The results reveal that the share of revenue expenditure on crop husbandry is more compare to that of capital expenditure (Table 2).

Expenditure on Animal Husbandry and Fisheries in Karnataka

Preserve animal genetic resources, conserve indigenous breeds, protect, strengthen and improve livestock, create employment opportunities and livelihood support for women and other marginalized groups, increase production, productivity and value addition of livestock, and poultry products is the main mission of the Ministry of Fisheries, Animal Husbandry and Dairying. For this purpose, the government expenditure on animal husbandry and fisheries plays very significant role and it helps in development of rural livelihood also.

Table 3: Total Expenditure on Animal Husbandry and Fisheries in Karnataka

Year	RExp on Animal Husbandry & Fisheries (Rs. Lakh)	CExp on Animal Husbandry & Fisheries (Rs. Lakh)	RExp on Animal Husbandry & Fisheries (%)	CExp on Animal Husbandry & Fisheries (%)
1991-95	58.7	1.9	26.9	21.7
1996-00	111.2	5.6	21.7	31.5
2001-05	155.9	5.4	23.9	29.1
2006-10	307.8	30.3	21.6	34.2
2011-15	656.9	126.0	26.5	55.8
2016-20	1191.2	156.4	31.2	53.3
2020-21(RE)	1380.8	140.0	39.5	10.4
2021-22(BE)	1285.2	136.7	42.2	10.0

Note: RE Revised Estimates; BE Budget Estimates; RExp Revenue Expenditure; CExp Capital Expenditure;

Source: RBI, GOI

Hence, the government invest more on these activities for the purpose of development of rural people in Karnataka. The table 3 represented that five years' average government expenditure on animal husbandry and fisheries in Karnataka from 1991 to 2022BE. Total revenue expenditure and capital expenditure on animal husbandry and fisheries has increasing tendency. Capital expenditure has productive nature which has increasing trend but, it was very less compared to that of revenue expenditure. The results reveal that the share of revenue expenditure on animal husbandry and fisheries are more compare to that of capital expenditure (Table 3).

Expenditure on Food Storage and Warehousing in Karnataka

The table 4 showed that five years' average government expenditure on food storage and warehousing in Karnataka from 1991 to 2022(BE). In order to maintain food security, each food product must be kept in a different cold storage facility. In a similar vein, each city needs a central city storage facility from which food goods may be distributed to fulfil local demand. Total Revenue expenditure and capital expenditure on food storage and warehousing has increasing tendency but capital expenditure experienced decreasing trend. Revenue expenditure recorded 16.4 percent in 2021-22 budget, which is low compared to revised estimates of 2020-21. Budget estimated Capital expenditure amount is zero in 2021-22. The results reveal that the share of revenue expenditure on food storage and warehousing is more compare to that of capital expenditure.

Table 4: Total Expenditure on Food Storage and Warehousing in Karnataka

Year	RExp on Food Storage and Warehousing	CExp on Food Storage and Warehousing (Rs. Lakh)	RExp Food Storage and Warehousing (%)	CExp on Food Storage and Warehousing (%)
1991-95	48.3	0.2	8.6	1.9
1996-00	230.1	0.2	24.8	1.0
2001-05	309.2	0.9	22.0	5.7
2006-10	830.2	0.1	23.3	0.4
2011-15	1705.7	9.6	19.7	4.8
2016-20	2851.1	0.0	17.9	-
2020-21(RE)	3324.9	1.1	20.5	0.2
2021-22(BE)	2336.1	0.0	16.4	0.0

Note: RE Revised Estimates; BE Budget Estimates; RExp Revenue Expenditure; CExp Capital Expenditure;

Source: RBI, GOI

Impact of Government Expenditure on agriculture and allied activities on development of agriculture sector

The study regresses government expenditure of agriculture and allied activities on gross state value added economic activities of agriculture to find out the impact of government expenditure on agriculture sector development in Karnataka. The R² of the first equation is 0.575. The OLS empirical results found that government expenditure on agriculture and allied activities have a significant positive effect on development of agriculture sector in Karnataka at one percent level of statistical significance (Estimated Eq 1). According second equation, study regresses government revenue and capital expenditure of agriculture and allied activities on gross state value added economic activities of agriculture. The R² and adjusted R² of this model are 0.628 and 0.49 respectively. The regression outcomes find that, revenue expenditure has negative effects on gross state value added economic activities of agriculture but it is statistically insignificant. Consequently, capital expenditure has positive effects but it is also statistically insignificant (Estimated Eq 2).

$$\ln GSVEA = f(a + \ln TotExp) \quad (1)$$

$$\ln GSVEA = f(b + \ln RExpAA + \ln CExpAA) \quad (2)$$

Where,

GSVEA: Gross State Value Added Economic Activities from Agriculture

TotExp: Government Expenditure on Agriculture and Allied Activities

RExpAA: Government Revenue Expenditure on Agriculture and Allied Activities

CExpAA: Government Capital Expenditure on Agriculture and Allied Activities

a and b: Constant terms

Ln: Natural Lag

$$\ln GSVEA = 14.070 + 0.155(\ln TotExp)*** \quad (Estimated Eq.1)$$

$$(R^2, 0.575; \quad F Value, 21.70097***)$$

$$\ln GSVEA = + 14.330 - 2.279(\ln RExpAA) + 0.021(\ln CExpAA) + 2.388(\ln Tot) \quad (Estimated Eq.2)$$

$$(R^2, 0.628; \quad Adjusted R^2, 0.549; \quad F Value, 7.903727 ***)$$

Conclusions and Policy Implications

The majority of people live in rural area and they depend on agriculture activities for their livelihood. Agriculture sector development is a significant both for poverty reduction and economic development. In Karnataka state, expenditure on agriculture is one of the most important government instruments for encouraging economic growth through development of Agriculture sector for alleviating poverty in rural areas and upliftment of farmers economic conditions. Study reveals that revenue expenditure is more compare than that of capital expenditure in total expenditure of agriculture and allied activities in Karnataka from 1990-91 to 2021-22(BE). Government expenditure plays very significant positive role in economic development as well as agriculture sector development in Karnataka state. Therefore, study suggested that Karnataka state should spend more on capital expenditure of agriculture and allied activities instead of revenue expenditure.

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