

Public Investment on Agriculture Development in India and Karnataka: An Overview

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ABSTRACT

The paper examines the public investment on the agriculture development in India as well as Karnataka. It is not only very important in agriculture sector especially in developing countries but also in every countries of the world. As such, the Indian government implemented lot of programmes and policies to develop the agriculture sector in order to sustain the agriculture production and productivity. There are some important factors are - transforming the Rural Economy was a major agricultural economy to show the strength of agriculture through investing lot on agriculture by the government in India. These public investments create positive effect on whole economy as regional cooperation and coordination, and fostering innovation and local entrepreneurs as the building blocks for a rural economy. The report sets forth these four-pronged strategies as follows - help rural communities and counties think regionally to compete globally; public investments focus on strengthen the distinct economy which was transformed from the different opportunities. The paper was analysed that the financial performance on agriculture development in inter-state of the country and Karnataka state.

Keywords: Public & Private, Capital Formation, Agriculture, Public Investment,

INTRODUCTION

The public sector investments are in many economic areas such as providing edification, conveyance and service facilities, and specific in such leading-edge borders as telephonic medicine and detachment learning, and noises for consolidation rural labor marketplaces and improve the worker skills of rural labourers. And also, it is capitalizing in wire and conveyance substructure amenities, with a new importance on connecting rural parts to urban interiors. The community speculation theaters a significant role in the procedure of economic growth especially on agriculture sector in different aspects in India. In attitude, the usual difference between wealth and present expenditures would smear, with the previous connecting to some spending whose creative lifetime spreads into the future.

The rule insinuations of this conduct are often argumentative, chiefly when governments pursue to defend copying only for public asset though governments usually classify overall expenditure on community features of schooling and fitness as present spending and therefore not a procedure of community asset. Similarly complicated is whether to comprise expenditure on conservation in the meaning of public asset. Furthermore, the civic sector's part in community investment is not incomplete to its own financial expenditure. A humble emphasis on government expenditures may harvest too thin a image of the level of community investments and more prominently, an overly controlled viewpoint on the possible role played by administrations with respect to the delivery of public substructure.

OBJECTIVES OF THE STUDY

The study is mainly based on the following objectives:

1. To assess the importance of private investment in agriculture sector in India.
2. To analyse the impact of public investment on agriculture development in Karnataka.

METHODOLOGY OF THE STUDY

The paper was mainly based on the secondary data. The secondary source of data is National Accounts Statistics (NAS) published by Central Statistical Organisation (CSO), various issues. Apart from this, other

sources like Economic Survey of India and Karnataka, Various issues, Handbook on Indian Economy by RBI and data from research journals were also used. The growth rates, percentage analysis, averages and compound annual growth rate were used.

THE CURRENT STATUS OF INDIAN AGRICULTURE

Since 1970-71, trend growth in Indian agriculture has been about 3%, overhead that in populace but well underneath that in the whole economy containing of farming, industry and facilities. By implication, while per-capita agricultural production has understood a stable rise, the part of farming in the Gross Domestic Product (GDP) has dropped. Specific sub sectors, most notably crop segment, are subject to occasional severe negative shocks leading to serious distress. The harvest production in the state is conquered by farming of paddy in Kharif and wheat in Rabi seasons. These two yields shelter about 38 per cent of gross collected area in the nation. Mueslis counting rough mueslis occupy more than half of the total land under agriculture.

Table-1: Distribution of Gross Cropped Area across Major Crops

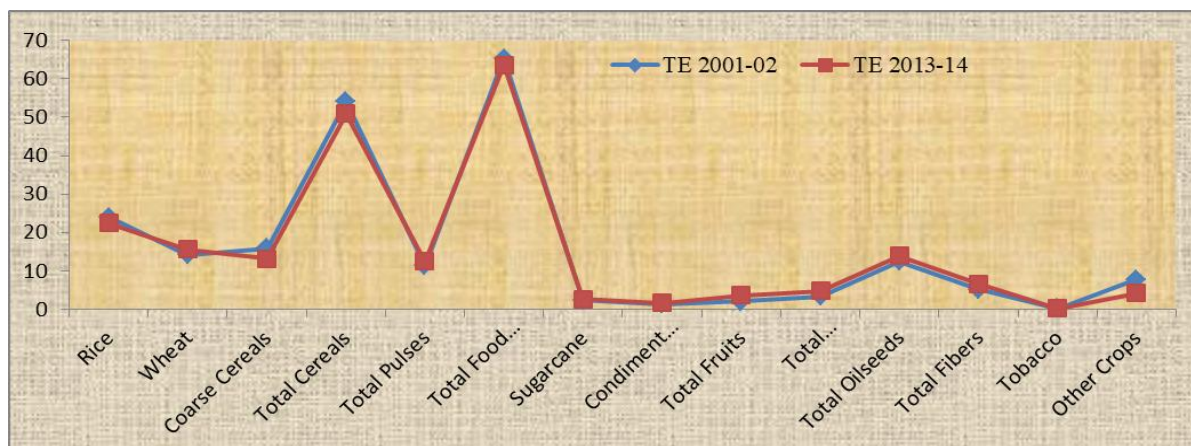
S. No	Major Crop	TE 2001-02	TE 2013-14
1	Rice	24.0	22.4
2	Wheat	14.2	15.6
3	Coarse Cereals	15.9	13.1
4	Total Cereals	54.0	50.9
5	Total Pulses	11.3	12.5
6	Total Food Grains	65.3	63.6
7	Sugarcane	2.3	2.6
8	Condiment and Spices	1.3	1.6
9	Total Fruits	2.1	3.6
10	Total Vegetables	3.3	4.7
11	Total Oilseeds	12.4	13.9
12	Total Fibers	5.2	6.6
13	Tobacco	0.2	0.2
14	Other Crops	7.8	4.2
	GCA	100	100

Source: Economic Survey, Government of India.

Note: TE - Triennium Ending

GCA – Gross Cropped Area

Graph-1 Distribution of Gross Cropped Area across Major Crops



It is seen from table-1 and graph-1 provides the distribution of gross cropped area over important crops and crop groups and changes in crop pattern at the turn of the new Century and currently. The table shows that there has been some shift in area away from cereals during last 12 years. Between triennium ending (TE) 2001-02 and TE 2013-14, area under cereal declined from 54% to 51 per cent while that under pulses rose slightly from 11.3 to 12.5%. Area share of fruits and vegetables witnessed significant increase but it still remains below 10%.

PUBLIC INVESTMENT ON AGRICULTURE IN THE FIVE-YEAR PLANS

Successive Five-Year Plans aimed at improving the infrastructure through irrigation, stepping-up the use of fertilizers improved varieties of seeds implements and machinery and supply of credit. As a result, there has been a significant increase in the use of modern inputs leading to higher productivity and production.

Table-2: Plan Outlay in Agriculture and Allied Sectors and Food grain Production

Plans	Total plan outlay	Agriculture allied sectors	% of agriculture and allied sector share	Total Food grain Production
I Plan (1951-56)	2378	354	14.9	63.2
II Plan (1956-61)	4500	501	11.3	74.0
III Plan (1961-66)	8577	1089	12.7	81.0
Annual Plan (1966-69)	6625	1107	16.7	87.8
IV Plan (1969-74)	15779	2320	14.7	103.0
V Plan (1974-79)	39426	4865	12.3	118.1
Annual Plan (1979-80)	12177	1997	16.4	NA
VI Plan (1980-85)	97500	5695	5.8	138.1
VII Plan (1985-90)	180000	10525	5.9	155.0
Annual Plan (1990-92)	123120	7256	5.9	NA
VIII Plan (1992-97)	434100	22467	5.2	189.0
IX Plan (1997-2002)	859200	42462	4.9	202.9
X Plan (2002-07)	398890	20668	5.2	202.2
XI Plan (2007-12)	1589342	116499	7.33	218.2
XII Plan (2012-17)	3568626	284063	7.96	NA

Source: Economic Survey, Government of India.

Graph-2: Percentage Share of Agriculture and Allied Sector

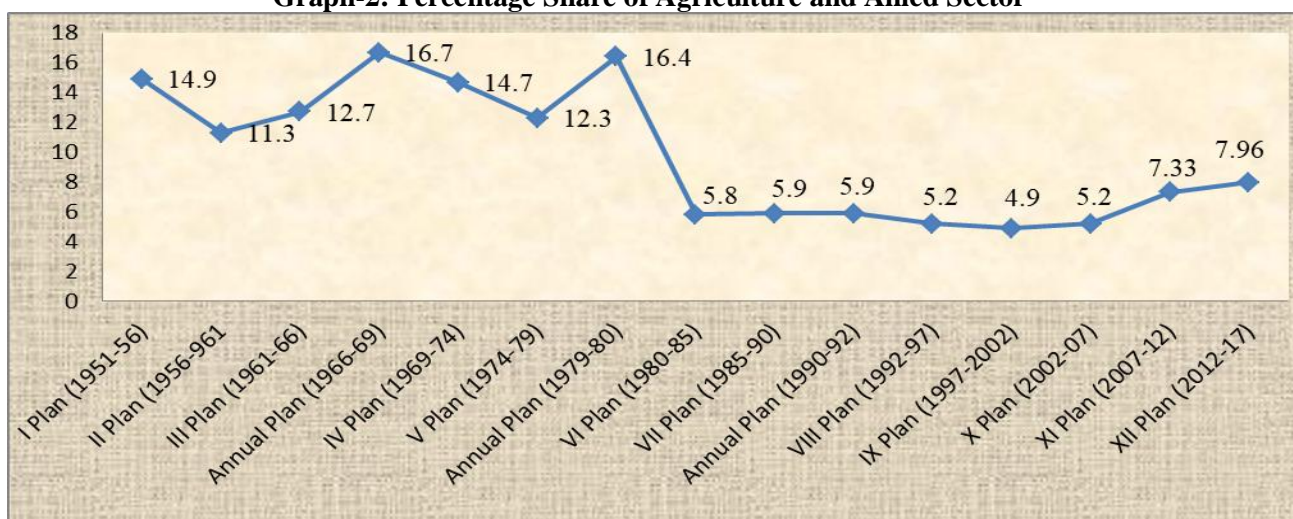


Table-2 and graph- 2 give that the data information of plan outlay in agriculture and allied sectors and food grain production in the country and it is observed that percentage share of agriculture and allied sectors in the country.

Efforts to improve agriculture were spread throughout the country and to involve every village in it through the Community Development Programme. A new land policy was also adopted with a view to eliminating exploitation and extending security of tenure.

Followed by the first five-year plan, all other plans also have been giving importance to the agriculture sector. On the basis the data total outlay of plan period has increased from 2378 crores in the first five year plan to 3568626 crores in twelfth five year plan. The total share to the agriculture during the plan period has also been increased from 354 crores in the first five year plan to 284063 crores in the twelfth five year plan. There were some fluctuations in the share of spending on agriculture during plan period that says decreasing trend of public investment on agriculture during the plan. But the food grain production shows the positive trend since the first five year plan.

PUBLIC AND PRIVATE SECTOR CAPITAL FORMATION IN AGRICULTURE

Agricultural investment has been undertaken by both public as well as by private sectors.

Table-3: Share of Public and Private Sector in Total Capital Formation on Agriculture and Allied Activities

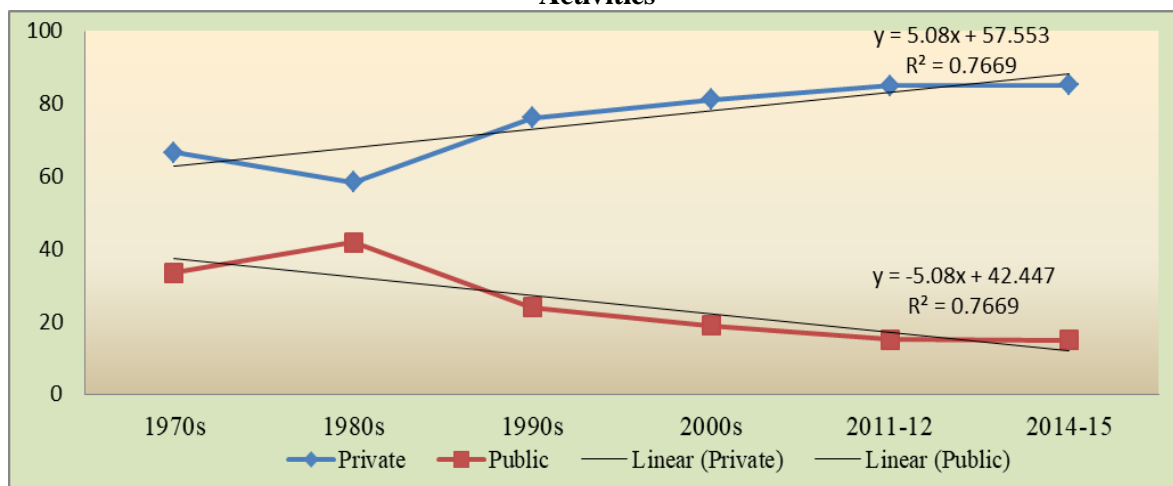
Sector	1970s	1980s	1990s	2000s	2011-12	2014-15
Private	66.5	58.3	76.1	81.1	84.9	85.1
Public	33.5	41.7	23.9	18.9	15.1	14.9

Source: Economic Survey

Note: * National Accounts Statistics (Quoted in Credit and Capital Formation in Agriculture: A growing disconnect,

Pahlavi Chavan, Review of Agrarian Studies, 2014).

Graph-3 Share of Public and Private Sector in Total Capital Formation on Agriculture and Allied Activities



The above table-3 and graph-3 indicated that share of public and private sector capital formation in agriculture sector in India. On the basis of the data private sector plays a vital role in gross capital formation in agriculture, it has been increased to 85.1 percent in 2014-15 from 66.5 percent in 1970s. During 2014-15 the share of private sector was 85 per cent of the total capital formation emanating compare to public sector share of only 15 per cent in the same period in agriculture sector. During the eighties the public sector share was slightly increased around 42 per cent indicating the critical role during post green revolution for the first time in the history of investment in boosting capital formation in agriculture. However, since then there has been a secular decline in the share of the public sector over the decades it was declined from 33.5 per cent to 14.9 per cent in 2014-15. In a scenario where almost 85 per cent of the capital formation comes from the private sector the role of institutional credit in funding agriculture hardly needs to be emphasized.

PUBLIC INVESTMENT DURING PRE-PERIOD OF NEP

Public sector was played an important role during middle of the twentieth century especially in the first five year plan. Its investment was also very high during that same period because the Indian economy is an agrarian economy and also majority of the people were engaging in agriculture. Therefore, its first focus was on the agriculture sector and followed by other sectors like industry and services. Therefore, agriculture played a predominate role in Indian economy.

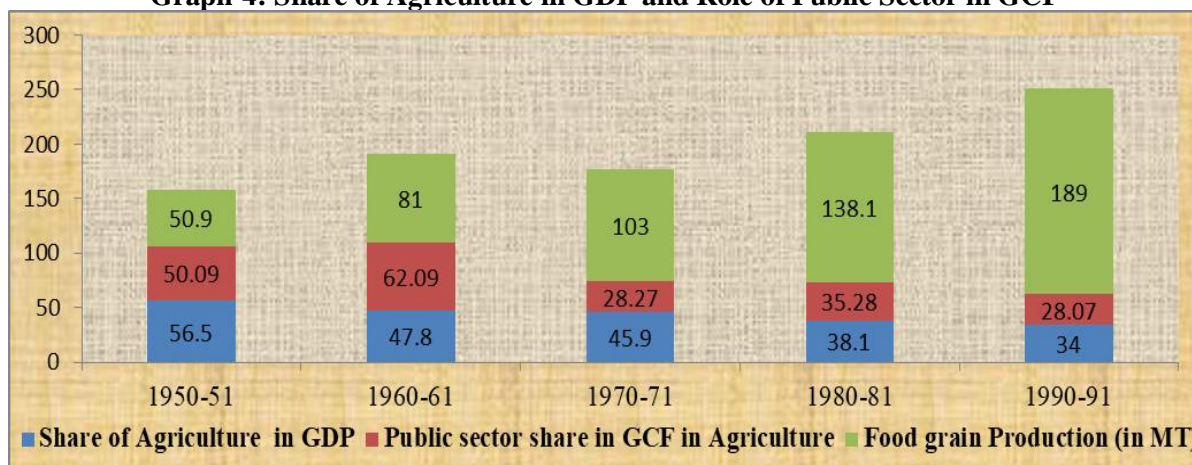
Table-4: Share of Agriculture in GDP and Role of Public Sector in GCF

Year	Share of Agriculture in GDP	Public sector share in GCF in Agriculture	Food grain Production (in MT)
1950-51	56.5	50.09	50.9
1960-61	47.8	62.09	81.0
1970-71	45.9	28.27	103.0
1980-81	38.1	35.28	138.1
1990-91	34.0	28.07	189.0

Sources: Economic survey of India

Note: GCF- Gross Capital Formation

Graph-4: Share of Agriculture in GDP and Role of Public Sector in GCF



The table-4 and graph-4 depicts that, the share of agriculture sector in GDP and public sector investment on agriculture and also food grain production in India before New Economic Policy. As per the table it says that there is a continuous decrease in contribution of agriculture to the Gross Domestic Product due to the reason of decrease in public investment on the agriculture as well as food grain production has been increasing due increase in population. According to the table agriculture share to the GDP was 56.5% in 1950-51 when the public investment was 50.09% on agriculture. Likewise agriculture share has comes down to 38.1% in 1980-81 due to decries is the public Investment. But food production has been increasing from 50.9 MT in 1950-51 to 189 MT in 1990-91.

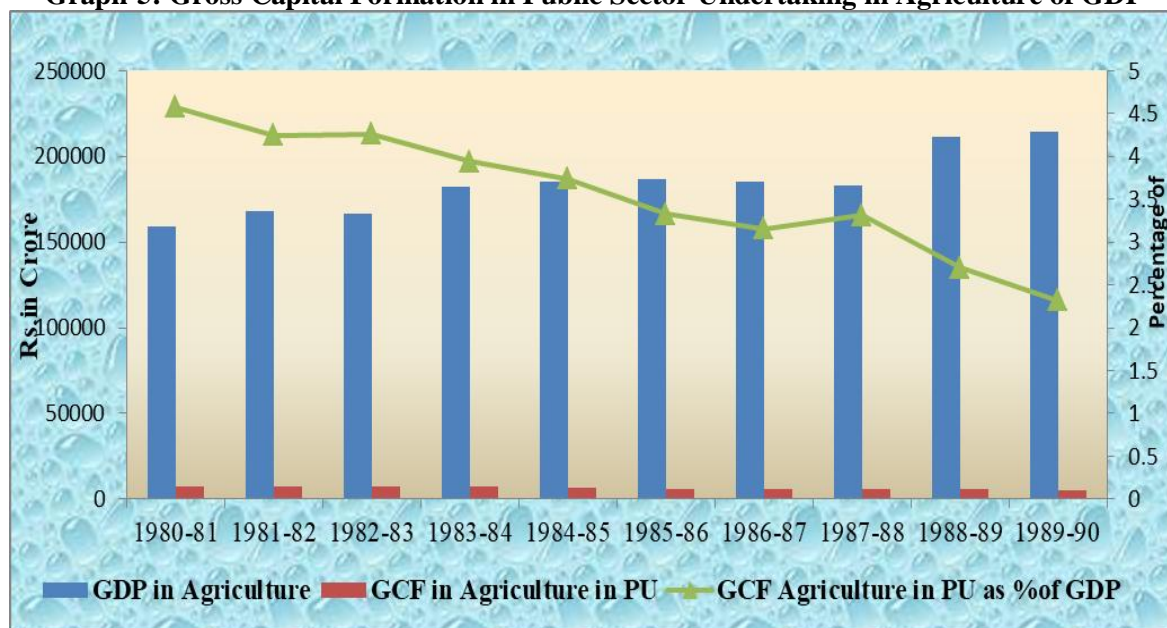
Table-5: Gross Capital Formation in Public Sector Undertaking in Agriculture with related to Gross Domestic Product in Agriculture (At 1993-94 prices) (Rs. Crore)

Years	GDP in Agriculture	AGR	GCF in Agriculture in PU	GCF Agriculture in PU as %of GDP
1980-81	159293	-	7301	4.58
1981-82	167723	5.29	7130	4.25
1982-83	166577	-0.68	7092	4.26
1983-84	182498	9.56	7196	3.94
1984-85	185186	1.47	6921	3.74

1985-86	186570	0.75	6213	3.33
1986-87	185363	-0.65	5864	3.16
1987-88	182899	-1.33	6045	3.31
1988-89	211184	15.46	5699	2.70
1989-90	214315	1.48	4972	2.32
CAGR	2.95			

Sources: Economic survey of India.

Graph-5: Gross Capital Formation in Public Sector Undertaking in Agriculture of GDP



The table-5 and graph-5 information that GDP is agriculture and gross capital formatting in agriculture in public sector investment and GCF in agriculture is PU as percentage of GDP. Here it identifies that on the one hand the GDP in agriculture has been increasing on the other hand GCF in agriculture and the ratio have been decreasing continuously.

PUBLIC INVESTMENTS DURING POST PERIOD OF NEP

Agriculture is one of the major sectors in India due to large numbers of population they are depending on the agriculture. But year after year the role of agriculture preference from the government was coming down. After implementation of NEP in India Public investment has been declining due to more importance to other sectors such as industry and services. Therefore, gradually the agriculture sector will be invisible after some years if the public sector is showing this kind of negligence on agriculture. Some evidences are explained as follows:

Table-6: Public Investments during Post Period of NEP

Year	Share of Agriculture in GDP	Public sector share in GCF in Agriculture	Food grain Production (in MT)
1990-91	34.0	28.07	189.0
2000-01	24.7	24.4	195.9
2010-11	19.2	18.4	244.78
2011-12	18.4	18.3	259.32
2012-13	18.0	15.5	357.13
2013-14	18.0	14.8	264.77
2014-15	17.6	14.7	257.07

Sources: Economic survey

Graph-6: Pubic Investments during Post Period of NEP



The table-6 and graph -6 reveals that, the share of agriculture sector in GDP and public sector investment on agriculture and also food grain production in India after New Economic Policy. As per the table it says there is a continuous decrease in contribution of agriculture to the Gross Domestic Product due to the reason of decrease in public investment on the agriculture. The share of agriculture in GDP was 34.0 percent in 1990-91 when the investment of public sector was 28.07 in the same period but it was declined to 13.9 percent in 2013-14 when the share of public investment was 14.7 in the same period. But food production has been increasing from 198.0 MT in 1950-51 to 264.77 MT in 1990-91.

State-wise Trends in Public and Private Investment in Agriculture

The capital formation plays an importance role at state level in the context of policy making and balanced regional development by economists in the country. The trends in capital expenditure on agriculture and allied heads from public account in major states at constant prices (1993-94 Prices) are presented in Table 2.8. The investment series at 1993-94 prices have been prepared by deflating the current price series by implicit price deflator used by the CSO for capital formation in agriculture sector. For the sake of clarity, the study have classified the entire period into five sub periods coinciding with the phases of agricultural development and declining public expenditure by states.

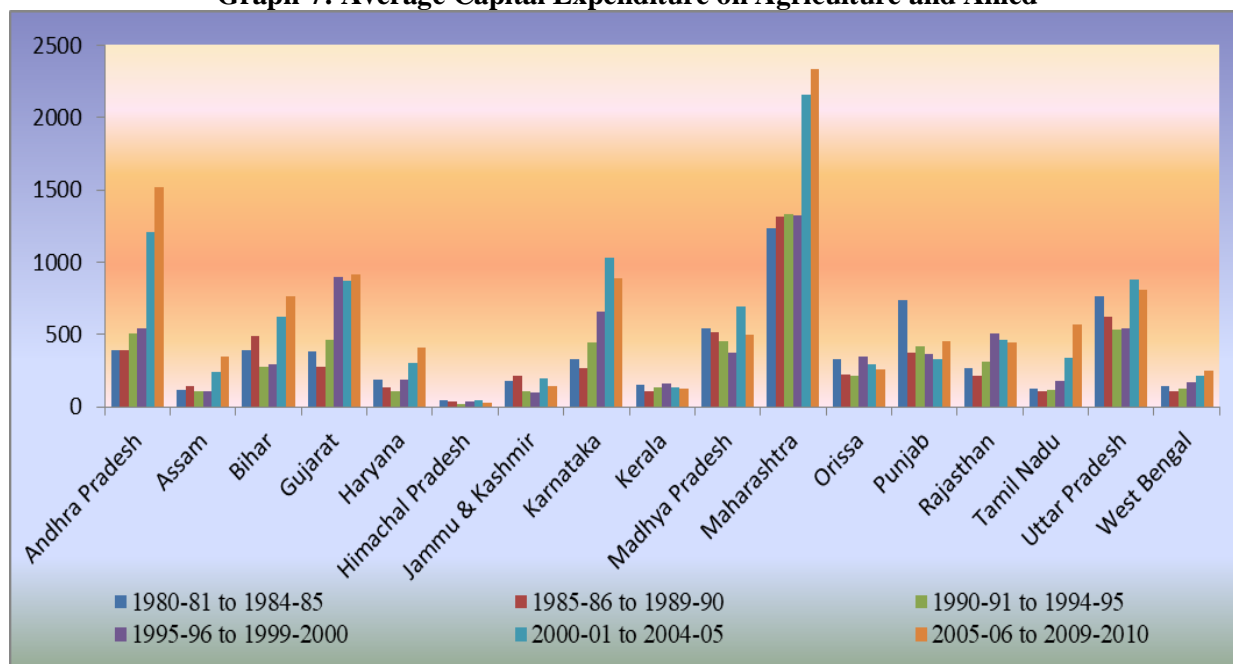
Table-7: Average Capital Expenditure on Agriculture and Allied Head at Constant Prices, (1993- 94 prices) Rs. Crore/year

States	1980-81 to 1984-85	1985-86 to 1989-90	1990-91 to 1994-95	1995-96 to 1999-2000	2000-01to 2004-05	2005-06 to 2009-10
Andhra Pradesh	388	392	509	539	1206	1519
Assam	119	147	105	106	241	344
Bihar	395	491	273	298	624	765
Gujarat	384	272	466	899	866	912
Haryana	189	133	111	184	306	412
Himachal Pradesh	46	35	21	32	45	31
Jammu & Kashmir	176	215	105	98	193	143
Karnataka	328	267	448	654	1031	887
Kerala	152	106	131	162	135	122

Madhya Pradesh	545	518	453	371	689	498
Maharashtra	1233	1314	1330	1326	2156	2334
Orissa	330	225	216	349	294	255
Punjab	738	370	421	365	332	453
Rajasthan	270	217	311	503	463	442
Tamil Nadu	122	110	118	175	337	567
Uttar Pradesh	764	624	532	544	880	812
West Bengal	146	110	127	165	213	245
All India	7033	5678	4845	4815	4474	4322

Source: (calculated) from RBI, Various Issues

Graph-7: Average Capital Expenditure on Agriculture and Allied



The above table-7 and graph-7 depicted that the major state wise Capital expenditure on agriculture sector at constant prices (at 1993-94 prices) in a different scenario. Government capital expenditure in Andhra Pradesh and Maharashtra has continuously increasing in all the sub periods while declining trend can be seen in Haryana, Himachal Pradesh, Orissa, MP and UP till the third period of 1990-91 to 1994-95. The decline was very sharp during second and third period for all states except Andhra Pradesh and Maharashtra. The decline continued during the fourth period in Jammu & Kashmir. Average Capital expenditure on agriculture in Assam, Bihar and Uttar Pradesh remained nearly stagnated during third and fourth periods. Capital expenditure dropped sharply during II period in southern and western states like Kerala, Karnataka, Tamil Nadu, Gujarat, and Rajasthan.

PUBLIC FINANCE IN AGRICULTURE SECTOR IN KARNATAKA

Further, there has also been low public investment on agriculture (including investment on irrigation), and lower crop diversification practices (area under fruits and vegetables) adopted by agriculture farmers.

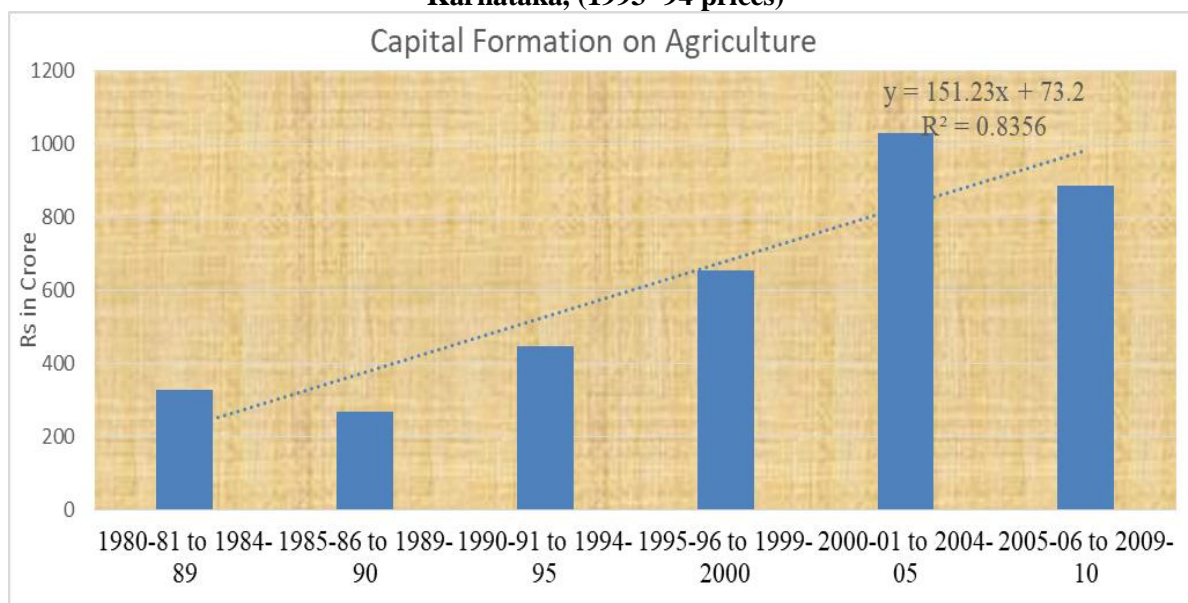
Table-8: Average Capital Expenditure on Farming and Allied Head at Constant Prices in Karnataka, (1993- 94 prices) Rs. Crore/year

Year	Capital Formation on Agriculture
1980-81 to 1984-89	328
1985-86 to 1989-90	267
1990-91 to 1994-95	448

1995-96 to 1999-2000	654
2000-01 to 2004-05	1031
2005-06 to 2009-10	887
CAGR	28.46

Source: (calculated) from RBI, Various Issues

Graph-8: Average Capital Expenditure on Agriculture and Allied Head at Constant Prices in Karnataka, (1993- 94 prices)



Capital formation on agriculture sector in Karnataka during the period from 19980-81 to 2009-10 are presented in Table-8. During the period from 19980-81 to 1984-89, capital formation of Rs.328 crore on agriculture development, which increased to Rs.887 crore during the period from 2005-06 to 2009-10.

Table-9: Fund Allocation of the District Sector State Plan Funds on Agriculture Development in Karnataka (Period: 2010-11 to 2015-16) (Rs. lakh)

Year	Fund Allocation
2010-11	6574
2011-12	6970
2012-13	4090
2013-14	4192
2014-15	4273
2015-16	2967
Total	22492

Source: Government of Karnataka (2018-19), Economic Survey of Karnataka, Planning, Programme Monitoring and Statistics Department.

Table-9 gives the data of year-wise fund allocation of the district sector state plan funds in the agriculture development in Karnataka state during the period between 2010-11 and 2015-16. During the 2010-11, fund allocation on agriculture of Rs.6574 lakhs, which decreased to Rs.2967 lakhs in 2015-16. It is seen from that the above table, fund allocation of the state district plan on agriculture development is gradually slowdown.

CONCLUSION

The role of public investment on agriculture plays an important role since independence in India. Till the end of New Economic Policy of India, the investment of public sector declining very slowly but aftermath it was rapidly coming down in agricultural investment. In this study, the chapter analyzed the whole structure of

public investment on agriculture as well as on another sector. As such it studies the performance of public investment on agriculture and its role in Indian economy. Along with, the agriculture contribution to the GDP and its gross capital formation in total capital accumulation were coming down due to the importance of other sector like industry and other sector during the period of NEP in India. The implementation of NEP shows a vital role in the reduction of wealth formation in agriculture segment in the country.

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