

# TRENDS IN PUBLIC INVESTMENT IN AGRICULTURE

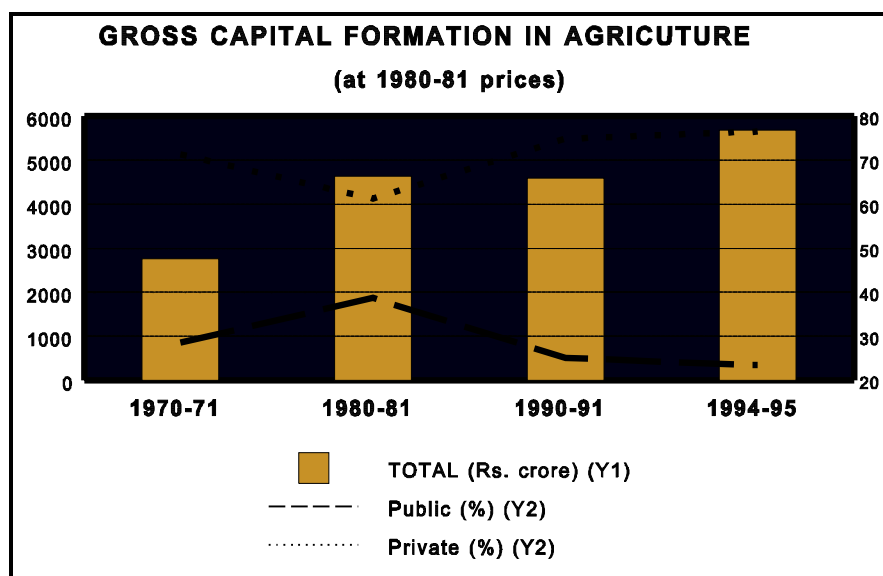
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The planners have come a long way since the launching of the First Five -Year Plan when capital needs of Indian Agriculture sector were deemed to be low. Today the capital needs of Indian agriculture are even more explicit for attaining sustainable growth in order to meet the steadily rising need of food and fibre for the burgeoning population, as also making due contribution in earning foreign exchange through exports.<sup>1</sup>

## Trends in Public Investment

Though nominal public investments in agriculture have tended to rise year after year, the gross capital formation in agriculture as a proportion of the total capital formation in the economy has been declining in both the public and private sector, leading to an overall slump. The total declined from 17.3% on an average during the decade 1970 to 1980, to 11.6% during the next decade and has averaged only 9% during 1990 to 1994.



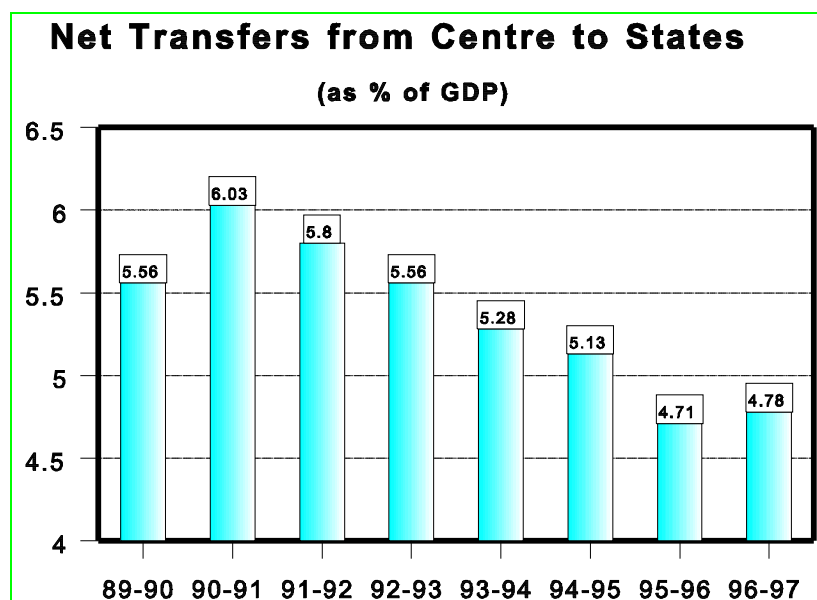
Though nominal public investments in agriculture have tended to rise year after year, in real terms, these have tended to diminish in absolute magnitude since the beginning of 1980s. At 1980-81 constant prices, public investment in agriculture plunged to Rs. 1200 crores in 1991-92 from close to Rs. 1800 crores in 1979-80.

<sup>1</sup> Dhawan BD and SS Yadav, Private Capital Formation in Agriculture, Economic and Political Weekly, Vol. XXX. No. 39, 1995.

More specifically, public capital formation in 1980-81 prices fell at 4.6% annually in the decade of eighties and fell at 7% annually during 1986-87 to 1982-83.<sup>2</sup> According to Mitra's calculation, these investments expanded at the rate of 12.76% per annum between 1960-61 and 1992-93, with marked acceleration witnessed during the 1970s as compared to 1960s. (18.90 % per annum between 1970-71 to 1980-81 as compared to 9.69 % per annum between 1960-61 and 1970-71) but striking deceleration recorded during the 1980s (6.09% per annum).<sup>3</sup>

The Central government has an important role to play through macro-economic policies that affect agriculture by provision of adequate resource transfer to States, and in ensuring that State finances and options are not affected adversely by the macro-economic consequences of decisions taken at the centre. However according to the Economic Survey 1995-96, there is a rising trend in non-development expenditure while development expenditure as a percentage of GDP is declining. Of this the expenditure on agriculture and allied services is declining. The total spending, both plan and non-plan, under the heads agriculture, irrigation and rural development in the Central Budget (including fertiliser subsidy) has been cut from 1.99% of GDP in 1989-90 to 1.46% in 1995-96. In 1996-97 this was placed at 1.45%, but the actual spending under these heads in 1996-97 was only 1.32% of GDP according to the revised figures. For 1997-98 this has been budgeted at only 1.29 percent of GDP.<sup>4</sup>

Public investment in agriculture is the responsibility of the States, but many States have neglected investment in infrastructure for agriculture. There are many rural infrastructure projects, which have started out but are lying incomplete for want of resources. (Government of India 1995:7). The total net transfers (i.e state's shares of central taxes and loans and grants to the states less interest and amortisation of loans) from the Centre to States has also reached a new low. This was over 6 percent of GDP in 1990-91 and had fallen steadily to 4.7 percent in 1995-96. It



<sup>2</sup> Alternative Economic Survey 1996-97.

<sup>3</sup> Dhawan BD and SS Yadav. Public Investment in Indian Agriculture. Economic and Political Weekly, Vol. XXXII, No. 14, 1997.

<sup>4</sup> Sen, Abhijit, The Wages of Neglect, Frontline, April 4, 1997.

slightly increased to 4.8 percent in 1996-97 and is budgeted to decline to only 4.3 percent in 1997-98. Agriculture being a State subject, the overall public expenditure on agriculture is dependent on the resources available to the States and this share has been reduced, not increased.

Several researchers have expressed serious concern regarding declining public sector investments in agriculture during the 1980s (Rath 1989; Gulati and Bhide 1993; Rao 1994; Rao and Gulati 1994).<sup>5</sup> The demand-supply paradigm, the growing land scarcity and lop-sided development are outward manifestation of stagnant capital formation in agriculture. Public investment is a critical factor to capture capital formation in agriculture and sustain private investment. If the declining trend of public sector capital formation is not reversed, prospects of agricultural growth in the country are dim. Given the importance of agriculture in India, the repercussion of a fall in agricultural growth will be felt in all sectors of the economy and, in particular, the incomes and welfare of poor who depend on agriculture will be severely affected.

Some of the reasons for slower growth in public investment in agriculture are - diversion of resources from investments to current expenditures in the form of subsidies, large expenditure incurred on maintenance of existing projects, inordinate delays in completing the projects on hand, relatively lower allocation for irrigation, rural infrastructure and research, lack of effective credit support and credit infrastructure in rural areas, and a belated growth in private investment.

The role of government must evolve so that those activities which it still does are performed with the greatest effectiveness, in terms of meeting the needs of the agricultural sector. Public investment will have a leading role to play, in the form of infrastructure as well as necessary research and development in farm technologies. Spread of infrastructure in power, transport, communication, storage and processing sectors are important. There is an emerging need to step up public investment to implement land reforms and employment prospects of rural labour. The productive base of the farm sector also need to be enlarged through direct public investments in irrigation schemes, soil and water conservation works, land reclamation, construction of regulated market structures for farm produce etc. Public investments need to be stepped up in regions which although relatively backward have a high potential for agricultural growth.

Sen and Ghose, 1993, while documenting the marked employment decline in the early nineties have related it to the question of public expenditure and rural poverty. They have drawn the conclusion that the growth in non-farm employment had taken place in the eighties as a result mainly of larger public expenditure and its multiplier effects on the rural economy and was responsible in considerable measure for the decline in the rural poverty in the second half of the eighties despite drought years like 1987. In the nineties, however, non-farm employment fell owing to expenditure cuts following from the structural adjustment programs starting in 1991 and despite a run of good harvest years, rural poverty started rising - the rise being especially sharp in the period of maximum contraction (Sen and Ghose 1995).<sup>6</sup> There is a recognition that agro-food industry which has a major role in employment generation in agriculture, new investments are not being made into the rural sector in any significant manner.

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<sup>5</sup> Gulati, Ashok and Shashanka Bhide, What do reformers have for agriculture, Economic and Political Weekly, Vol. XXX, Nos. 18-19, 1995.

<sup>6</sup> Alternative Economic Survey, 1996-97.

The large investment made by the government in irrigation works reflecting in the increase of total gross fixed capital formation at the rate of 4.36 percent per annum seems to have helped in raising the value added in agriculture at the rate of 3.30 percent per annum and crop production by 2.88 percent per annum during 1952-53 to 1964-65. The crop output growth was impressive, particularly when viewed in the context of traditional technology and unfavourable terms of trade.

In between 1967-68 to 1977-78, the favourable terms of trade, the increase in total gross capital formation at the rate of 4.79 percent per annum and the public investment by 4.49 percent increased the crop production rate at the rate of 4.25 percent per annum.<sup>7</sup> Growth in irrigated areas triggers investments for extension of high yielding seeds, pesticides and changes in cropping pattern. This public investment in agricultural sector is the pivot to increase the gross area under cultivation, enhancing productivity and bringing about shifts in cropping pattern. Public investment in irrigation development however continues to decline. Of the total public sector investment, the allocation for major and medium sector irrigation project was about 19% in the First Plan and just about 5% in the Eight Plan. In the major States, the percentage of allocation hovers around 15% of the total investment. This is clearly inadequate in the major and medium irrigation sectors. At the same time, government needs to pump in greater investment in developing minor irrigation facilities to provide benefits to larger agrarian community who otherwise are unable to benefit from major and medium irrigation schemes because of equity considerations. Further, the decline in public investment invariably retards the creation of fresh irrigation potential, which has a cascading impact on private investment. Investments in sector important for agriculture such as power has been declining as well and the actual expenditure has been much lower than the planned outlays in the more recent years.

The current trend of liberalisation in agriculture- making it easier for corporations to enter agribusiness and so displacing peasants; transferring responsibility of infrastructure development to the private sector whose interest in the rural areas is virtually nil<sup>8</sup> - unless accompanied by a massive step up in public expenditure on agriculture investment would be extremely counter productive. Agriculture exports would rise but would not be accompanied by any significant increase in agricultural output. Consequently, inflation would increase sharply and there would be an adverse affect on non-agricultural output and employment. In this simulation, outcomes are less adverse if public expenditures can be stepped up.<sup>9</sup>

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<sup>7</sup> Mishra, VN and Peter Hazell, Terms of Trade, Rural Poverty, Technology and Investment, Economic and Political Weekly, Vol. XXXI, No. 13, 1996.

<sup>8</sup> Sen, Abhijit, The Wages of Neglect, Frontline, April 4 1997.

<sup>9</sup> Alternative Economic Survey, 1995-96

The Structural Adjustment Program taken up are essentially concerned with macro-economic contraction (lower public expenditure) and reduction in the developmental role of the State. The theory is that private investment will rise when public investment declines. Even assuming this does happen, the problem is that specific direction that private investment will take will always be motivated by private profitability and will not involve consideration of infrastructure, employment generation or poverty alleviation. The Planning Commission stated that, "The complementarity between public and private investment is most pronounced in agriculture where public investment has stagnated or even declined in recent years. The decline in public investment has also induced a decline in private investment" (Planning Commission 1994). In a similar vein the annual Economic Survey, 1993-94 *inter alia* stated that private investment in agriculture can increase if public investment grows, implicitly affirming complementarity between the two.<sup>10</sup>

There is a pressing need for a more fundamental change in strategy to raise resources and accelerate the pace of capital formation in this sector. Two possibilities are : targeting and downsizing the subsidies on agricultural inputs and food, and ploughing back the resources so generated to agricultural sector as investments in irrigation and other infrastructural activities; selling off the public sector enterprises (owned by the states and the centre) to partially finance the resources for agricultural investments.<sup>11</sup> The government needs to concentrate on rectifying the inefficiencies which may induce more private investments.

According to C.H Hanumantha Rao, "There is no basis for complacency about the role of public investment in agriculture - which is vital in inducing private investment and for deriving the full benefits of economic reforms. To raise such public sector investments in, say, canal irrigation or electrification, subsidies on these critical inputs need to be cut down. This requires major reforms in the pricing and institutional framework for the management of these inputs."<sup>12</sup>

Pressures need to be mobilised by expanding the tax base and by increasing user charges on electricity and irrigation. There has not been much progress at all towards mobilising surpluses for rural investment or increasing user charges for electricity or irrigation water so that the feasibility of any significant step up in public investment is at present severely constrained by fiscal problems.

Critics point out that since the late 80's there has been a strong growth in private sector investment in agriculture. However increase in private investment does not alone can lead to sustained agricultural growth.

There is an emerging need to raise investment in non-price factors such as research and

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<sup>10</sup> Misra SN and Ramesh Chand, Public and Private Capital Formation in Agriculture, Economic and Political Weekly, Vol. XXX, No.25 1995.

<sup>11</sup> Gulati, Ashok and Shashanka Bhide, What do the reformers have for agriculture, Economic and Political Weekly, Vol. XXX, No. 18-19, 1995.

<sup>12</sup> Hanumantha Rao C.H, Raise real public expenditure, Business Line, 15/7/98.

development, technological innovations and infrastructure development including irrigation.

According to Dantwala (1987), in Indian agriculture the price policy plays only a limited role in raising aggregate input. Furthermore as Binswanger (1989) says, the supply response to price takes time to develop fully, sometimes 10- 20 years and depends on public investment in roads, market, irrigation, infrastructure development, education and health. In other words a higher level of irrigation and other public investment created infrastructure raise the impact of prices on output.

The consistent decline in public investments since the 1980s need to be looked into. Public investment in agriculture has a potential to enlarge the potential base of agriculture through the stimulation effect. It results in an increase in the farmers' own investment in farm business as the marginal productivity per unit investment is now higher. The capital stock of agriculture therefore becomes even higher. However there is need to get a deeper insight of the specific areas of public investment which result in a greater stimulation effect.

There is no escape from the fact that public investment in agriculture would have to be focussed on providing food security by expanding domestic production to meet the needs of growing population.

The privatisation process aims to reduce the involvement of the state in the agricultural sector by shifting the divide between public sector and private sector in favour of the latter.

The multi-national companies are starting to emerge as a dominant player in the agricultural sector by taking advantage of the existing policies that promote the enhanced participation of the private sector in technology development and delivery. This has put them in a powerful position for marketing their products in remote corners of the country.

## **The Way Forward**

### **1. Shifting away from non-productive expenditures.**

Removing distorting subsidies would lead to a reduction in environmental damage and an increase in the government resource mobilisation. The proportion of total subsidies to India's GDP has gone up from 0.67% in 1973-74 to 1.17% in 1989-90. State governments bear the brunt of these agricultural subsidies (which have reached financial unsustainable levels) and a large proportion of public expenditure on agriculture in recent years went into current expenditures in the form of increased subsidies for food, fertilisers, electricity, irrigation and other agricultural inputs rather than on creation of assets.

Private investment needs to be encouraged in specific areas of agriculture to reduce the burden on public investment. The government needs to concentrate on rectifying the inefficiencies which may induce more private investments.

2. Institutionalising price reforms.

According to C.H Hanumantha Rao, “ There is no basis for complacency about the role of public investment in agriculture - which is vital in inducing private investment and for deriving full benefits of economic reforms. To raise such public sector investments in, say, canal irrigation or electrification, subsidies on these critical inputs need to be cut down. This requires major reforms in the pricing and institutional framework for the management of these inputs.”

Pressures need to be mobilised by expanding the tax base and by increasing user charges on electricity and irrigation. There has not been much progress at all towards mobilising surpluses for rural investment or increasing user charges for electricity or irrigation water so that the feasibility of any significant step up in public investment is at present severely constrained by fiscal problems.

3. Redeployment of funds.

The budgetary outlays in agriculture has always been lop-sided towards macro-irrigation projects. Since 1950-51 onwards, considerable importance has been given to large-scale irrigation projects namely provision of large dams and canal irrigation. Nevertheless the relative importance of canal irrigation has come down from 40% to 35% whereas area under canal irrigation increased from 8.3 million hectares to 16.9 million hectares between 1950 and 1990. Large - scale irrigation projects suffer from time and cost overruns, and huge maintenance costs which have to be incurred periodically to keep them operational.

There is a need to plough back the resources generated by curbing non-productive expenditures into irrigation and other infrastructural activities; selling off the public sector enterprises (owned by the states and the centre) to partially finance the resources for agricultural investments.

Public investments need to be stepped up in regions which although relatively backward have a high potential for agricultural growth.

**TABLE 1**                      **Gross Capital Formation in Agriculture**  
**(At 1980-81 prices)**

Year	Total	Public	Private	Percent Share	
				Public	Private
1970-71	2758	789	1969	28.6	71.4
1980-81	4636	1796	2840	38.7	61.3
1990-91	4594	1154	3440	25.1	74.9
1991-92	4729	1002	3727	21.2	78.8
1992-93	5372	1061	4311	19.7	80.3
1993-94	5038	1153	3885	22.9	77.1
1994-95	5678	1329	4349	23.4	76.6

Source : Economic Survey of India (1996-97).

**TABLE 2**                      **Recent Downtrends in Agriculture's Share in Total Public Investment**  
**(1980-81 to 1992-93)**

YEAR	Agriculture's Share in Total Public Investments (%)
1980-81	15.3
1981-82	11.5
1982-83	10.5
1983-84	11.0
1984-85	9.9
1985-86	9.0
1986-87	7.9
1987-88	9.2



1988-89	8.0
1989-90	6.6
1990-91	6.1
1991-92	5.7
1992-93	6.0

**Source**      **Public Investment in Indian Agriculture, Trends and Determinants, Dhawan BD, Yadav, SS. Vol. XXXII No. 14 1997.**

**TABLE 3      Annual Rate of Increase / Decline in Fixed Capital Formation in Agriculture.**

	<b>1960s</b>	<b>1970s</b>	<b>1980s</b>
Public Account	2.4	7.3	(-) 3.3
Private Account	8.1	4.2	0.3
Total	6.3	5.2	(-) 0.9

**Source**      **Private Fixed Capital Formation in Agriculture, Some aspects of Indian Farmers' Investment Behaviour. BD Dhawan SS Yadav. EPW Vol. XXX. No. 39 1995**

**TABLE 4      REDUCTION IN PUBLIC INVESTMENT IN IRRIGATION DURING 1980-90**

<b>STATE</b>	<b>Percent Decline per Annum</b>
Harayana	6.3
Gujarat	3.8
Tamil Nadu	3.7
Punjab	3.4
Orissa	3.2
Kerela	3.0

Rajasthan	2.0
Uttar Pradesh	1.7
Karnataka	1.4
Maharashtra	1.1
Andhra Pradesh	0.9
Madhya Pradesh	0.8
Assam	0.7
Bihar	Negligible
All India	1.7

**Source**      **Private Fixed Capital Formation in Agriculture, Some aspects of Indian Farmers' Investment Behaviour. BD Dhawan SS Yadav. EPW Vol. XXX. No. 39 1995**

**Table 5**      **Area Irrigated by Different Sources in India.**

<b>SOURCES OF IRRIGATION</b>	<b>1950-51</b>		<b>1990-91</b>	
	<b>Area (million ha.)</b>	<b>%</b>	<b>Area (million ha.)</b>	<b>%</b>
Canals	8.3	40	16.9	35
Wells	6.0	29	24.1	51
Tanks	3.6	17	3.2	7
Others	3.0	14	3.2	7
<b>TOTAL</b>	<b>20.9</b>		<b>47.4</b>	

**SOURCE :**    CMIE, Basic Statistics relating to the Indian Economy (1994).

## **AGRICULTURE AND CORPORATE SECTOR**

In face of the failure of government policies to address the real problems of agricultural sector, the government policies have changed markedly and the emphasis now appears to be on hastening agricultural growth through liberalisation and corporatisation.

Industry, more so the private corporate industry has not relieved the rural areas of surplus manpower. One can recall that rural areas account for 53% of the total employment in manufacturing, 71% in construction and 45% in trade. This is accounted of largely the informal sector. The current liberalisation regime seems to ignore this reality. There is overemphasis on the large corporate sector which can additionally arrange collaboration of multinationals and transnationals. The direction is towards creating a high-tech dependency and joint ventures to the end. So far this seems to have had little impact in the exports. In fact, it is the small-scale sector that is showing strong, export performance. The small and medium size, new exporters are not receiving the assistance they deserve on the basis of their performance.

The corporatisation of agriculture advocated under pressure from business organisation, agri-business corporations is giving rise to a process of exclusion and marginalisation of rural India. Pressure is mounting to change liberalisation laws and permit agri-business to own large tracts of land and thereby change the face of rural India. Displacement of labour in the rural sector is apparent - fisheries sector is the most outstanding example where concessions to multinational companies have put millions of jobs in jeopardy. Rural cottage and traditional craft industries are facing similar problems.

The problem is further complicated by the demand of large industry for infrastructure at public cost. Private investment in infrastructure is limited at present to power and telecommunications in selected sectors of highly industrialised States. The industry-agriculture balance that helps both on making use of available manpower and in promoting rural sector growth aimed at diversification, industrialisation and export is not part of the current vision of development.

