

Agricultural Subsidies in India Boon or Curse

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Abstract: *A progressive agriculture serves as a powerful engine of economic growth of any country. It helps in initiating and sustaining the development of other sectors of the economy. In view of this, after independence the Government of India adopted a positive approach and specific programmes like new agriculture technology were introduced. Indian farmers being poor were not in a position to buy these expensive inputs. Then the Indian Government started the scheme of subsidies on the purchase of various agriculture inputs to facilitate the farmers. Subsidies are often criticized for their financial burden, on the other hand there is a fear that agriculture production and income of farmers would decline if subsidies are curtailed. The findings indicate that the increasing rate of total subsidies (fertilizers, electricity and irrigation) is higher than gross cropped area (GCA) during pre, first as well as second phase of liberalization periods. There is a lot of variation to find out the relationship between gross cropped area (GCA) and in total subsidies in zones throughout the study period. The present study suggests that Government should keep aside its motive to please voters or strengthen the vote bank, it should frame rational policy in which small size category farmers, who are not actual beneficiaries of subsidies, could get more and subsidies, which they do not want should be withdrawn.*

Keywords:-*agriculture, electricity subsidy, fertilizers subsidies, irrigation subsidy, productivity.*

I. Introduction

The socio - economic structure, which prevailed prior to the British rule in the country, resulted in the organization of self-sufficient villages. It has been maintaining some kind of static equilibrium. The Indian peasant, though not properly educated, has adequate experience of farming systems and he has been dependent on it for the means of living. The Royal commission of Agriculture in India observed that both the methods of cultivation and social organization exhibit that settled order which is characteristic of all countries in which the cultivating peasant has long lived in and closely adapted himself to the conditions of a particular environment.

The Indian agrarian economy on the eve of independence was critical in situation. It could be characterized totally primitive, deteriorative and turbulent. After partition, the country is left with 82 per cent of the total population of undivided India as well as only with 69 per cent of land under rice, 65 per cent under wheat and 75 per cent under all cereals. The deficiency of food grains is quite alarming and aggravating at that time (Chahal, 1999).

In view of this, after independence tremendous efforts are made to boost the economy through agriculture as one of the tools for development. The Government of India adopted a more positive approach and hence a well defined policy of integrated production programmes with defined targets and a proper distribution programme is adopted along with other measures for the overall economic development of the country. Specific programmes like new agriculture technology are introduced to convert agriculture into a successful and prosperous business, to bring more land under cultivation and to raise agriculture production. In India, the adoption of new agricultural technique is costly than that of traditional method of cultivation. In traditional method, inputs are least expensive, on the other hand, inputs in modern technology like high yielding varieties of seeds, fertilizers, farm mechanization and irrigation are very costly and Indian farmers being poor are not in a position to buy these expensive inputs. Then on the recommendations of food grain price committee (Jha Committee), the Government of India started the scheme of subsidies on purchase of various agriculture inputs to facilitate the farmers (Singh, 1994).

Subsidies have occupied agricultural economists for a long time because they are pervasive in agriculture, even though they are often applied in ways that benefit mostly richer farmers, cause inefficiencies, lead to a heavy fiscal burden, distort trade, and have negative environmental effects. Agricultural subsidies can play an important role in early phases of agricultural development by addressing market failures and promoting new technologies (Fan, 2008).

All of these subsidies by reducing the prices of the inputs, served in the initial stages of green revolution, as incentives to the farmers for adopting the newly introduced seed-cum-fertilizer technology. These helped in raising the agricultural output, after some time, the amount paid on these subsidies began to rise. The input subsidies have often been accused of causing most harmful effect in terms of reduced public investment in agriculture on account of the erosion of investible resources, and wasteful use of scarce resources like water and

power. Further, apart from causing unsustainable fiscal deficits, these subsidies by encouraging the intensive use of inputs in limited pockets have led to lowering the productivity of inputs, reducing employment elasticity of output through the substitution of capital for labour and environmental degradation such as lowering of water tables. (Gulati, 2003).

In India, at present centre as well as state governments are providing subsidies on fertilizers, irrigation (canal water), electricity and other subsidies to marginal farmers and farmers' cooperative societies in the form of seeds, development of oil seeds, pulses, cotton, rice, maize and crop insurance schemes and price support schemes etc. Out of these subsidies, the Central Government of India provides indirect subsidies to farmers on the purchase of fertilizers from 1977, whereas state governments are providing subsidies on irrigation as well as on electricity (Government of Punjab, Agriculture Department, Chandigarh).

Review of literature of the past theory and practice is necessary when conducting any research work. Sharma, (1982) examined the impact of agricultural subsidies on national income and agricultural production. For this purpose the author used the time period from 1970-71 to 1981-82 and a general equilibrium model. The study revealed that during this period, agricultural subsidies affected the national income and agriculture production positively. Gupta, (1984) tried to analyse the agricultural subsidies in India from 1970-71 to 1982-83. The author used linear regression model. The study showed that during this period, the use of agricultural subsidies increased at faster rate but there was a large inter-state disparity. Sharma, (1990) revealed in this study that subsidies have become unsustainable. In order to release resources for higher investments in the agricultural sector, large scale price and institutional reforms are needed to relieve the pressure of subsidies on the exchequer. Gulati, (2007) reviewed the trends in government subsidies and investments in and for Indian agriculture. The author suggested that to sustain long-term growth in agricultural production and therefore provide a long-term solution to poverty reduction, the government should cut subsidies of fertilizer, irrigation, Power and credit and increase investments in agricultural research and development, rural, infrastructure and education. Promoting non-farm opportunities are also important.

From the above studies, it may conclude that agriculture subsidies are a worldwide phenomenon. Some studies showed the distribution pattern of agriculture subsidies in different countries and in different states of India. Whereas some studies showed the impact of agriculture subsidies on income of farmers of different states of India, on agriculture production, on gross cropped area, on cropping pattern etc.

Subsidies are often criticized for their financial burden. Some researchers assert to the extent that these should be withdrawn in a phased manner, such a step will reduce the fiscal deficit, improve the efficiency of resources use, funds for public investment in agriculture. On the other hand, there is a fear that agriculture production and income of farmers would decline if subsidies are curtailed. These are very important issues, which need serious investigation. Subsidies are often criticized for their financial burden. The objectives of the present study are to study the growth and distribution of agricultural subsidies in India, to study the impact of agricultural subsidies in India, to suggest ways and means for giving agricultural subsidies to farmers of India.

The present study is related to agricultural subsidies in India from 1980-81 to 2008-09. In this study agriculture subsidies of fertilizers, electricity, irrigation (canal water), seeds, machinery etc. are discussed during pre-liberalisation period (1980-81 to 1985-86), first phase of liberalisation period (1990-91 to 1996-97) as well as during second phase of liberalisation period (2000-01 to 2008-09). For analysing the growth and distribution pattern of agriculture subsidies, five zones i.e. south zone (includes Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Pondicherry, Andaman and Nicobar Islands and Lakshadweep), west zone (includes Gujarat, Madhya Pradesh, Chhattisgarh, Maharashtra, Rajasthan, Goa, Daman and Diu and Dadra Nagar Haveli), east zone (Bihar, Jharkhand, Orissa and West Bengal), north zone (Haryana, Punjab, Uttar Pradesh, Uttaranchal, Himachal Pradesh, Jammu and Kashmir, Delhi and Chandigarh) and north-east zone (Assam, Tripura, Manipur, Meghalaya, Nagaland, Arunachal Pradesh, Mizoram and Sikkim) have been taken.

II. Gross Cropped Area in India

Land is the fundamental basis for the most of the human or natural activities and is one of the major natural resources on earth. Agricultural productivity is entirely dependent on the availability of suitable land (State of Environment Punjab – 2007). In India, there are competing demands of area available for cultivation from increase in rural habitations, forestation, urbanisation and industrialisation. Consequently, gross cropped area in the country has registered a rapid deceleration in its growth over time (Bhalla, 2009). In this section, an attempt is made to analyse the gross cropped area (GCA), total subsidies, fertilizers, electricity and subsidies at India as well as zone levels. The gross cropped area (GCA) in India during 1980-81 to 2006-07 is shown in table 1. This table reveals the west zone got topmost position, followed by north zone, south zone, east zone and north-east zone throughout the study period. In India, GCA has shown variations i.e. it has increased from 1,73,324 thousand hectares in 1980-81 to 1,85,403 thousand hectares in 1990-91 and further increased to 1,88,601 thousand hectares in 1996-97, it has declined to 1,86,565 thousand hectares in 2000-01 and further declined to 1,75,678 thousand hectares in 2006-07. As zone-wise analysis shows that in west zone, the GCA has

increased from 69,882 thousand hectares in 1980-81 to 75,659 thousand hectares in 1990-91 and further increased to 78,097 thousand hectares in 1996-97 and declined to 72,833 thousand hectares in 2006-07.

In north zone, it has increased from 38,806 thousand hectares in 1980-81 to 42,132 thousand hectares in 1996-97 and declined to 39,780 thousand hectares in 2006-07, whereas in south zone, the GCA has increased from 32,363 thousand hectares in 1980-81 to 34,688 thousand hectares in 1990-91 and further increased to 35,333 thousand hectares in 1996-97 and declined to 35,271 thousand hectares in 2000-01 and again increased to 36,368 thousand hectares in 2006-07. In east zone, the GCA has increased from 27,514 thousand hectares in 1980-81 to 28,741 thousand hectares in 1990-91 and declined to 27,416 thousand hectares in 1996-97 and further declined to 20,246 thousand hectares in 2006-07, on the hand the GCA has increased from 4,759 thousand hectares in 1980-81 to 5,163 thousand hectares in 1985-86 and further increased to 6,451 thousand hectares in 2006-07 in north-east zone.

Table 1
Zone-Wise Distribution of Gross Cropped Area in India
during 1980-81 to 2006-07

(In 000 hectares)

Years/ Zones	1980-81	1985-86	1990-91	1996-97	2000-01	2006-07
South	32,363 (18.67)	33,054 (18.62)	34,688 (18.71)	35,333 (18.73)	35,271 (18.91)	36,368 (20.70)
West	69,882 (40.32)	71,628 (40.35)	75,659 (40.81)	78,097 (41.41)	75,231 (40.32)	72,833 (41.46)
North	38,806 (22.39)	39,918 (22.49)	40,969 (22.10)	42,132 (22.34)	43,233 (23.17)	39,780 (22.64)
East	27,514 (15.87)	27,763 (15.64)	28,741 (15.50)	27,416 (14.54)	27,043 (14.50)	20,246 (11.52)
North- East	4,759 (2.75)	5,163 (2.91)	5,346 (2.88)	5,623 (2.98)	5,787 (3.10)	6,451 (3.67)
India	1,73,324 (100)	1,77,526 (100)	1,85,403 (100)	1,88,601 (100)	1,86,565 (100)	1,75,678 (100)

Source: Government of Punjab, Statistical Abstract, Various Years

Note: - Percentages are shown in parentheses.

III. Agricultural Subsidies in India

Subsidies are among the most powerful instruments for manipulation or balancing the growth rate of production and trade in various sectors and regions and for an equitable distribution of income for the protection of weaker sections of society. The support and procurement prices for more agricultural production are some of the important measures, which are done to protect the interests of farmers. During the last decade subsidies provided by government of India have grown at a very rapid rate. The subsidies rose from 1.7 per cent of total budget expenditure in 1970-71 to more than 10 per cent in 1980- 81. Agricultural subsidies and food subsidies constituted above 10 per cent of the total subsidies in country (Halmandage, 2010).

The distribution of total subsidies (fertilizer, electricity and irrigation subsidies) in India during 1980-81 to 2008-09 are shown in table 2. In 1980-81, the total subsidies have increased from Rs.1,228.54 crores to Rs.4,796.16 crores in 1985-86 and further increased to Rs.1,15,952.20 crores in 2008-09. The fertilizers subsidies have increased from Rs.471 crores in 1980-81 to Rs.13,724.05 crores in 2000-01 and further increased to Rs.1,01,180.68 crores in 2008-08, whereas the electricity subsidy has increased from Rs. 357.56 crores in 1980-81 to Rs.4,621 crores in 1990-91 and further increased to Rs.26,904 crores in 2000-01 and declined to Rs.14,771.52 crores in 2008-09. The irrigation subsidy (Canal water) has increased from Rs. 399.10 crores in 1980-81 to Rs.3,917.41 crores in 1990-91 and further increased to Rs.14,711.71 crores in post liberalisation period (2000-01).

The percentage share of fertilizers subsidies in total subsidies has declined from 38.41 in 1980-81 to 35.20 in 1990-91 and further declined to 24.80 in 2000-01 and increased to 87.26 in 2008-09. Whereas the percentage share of electricity subsidy has increased from 29.10 in 1980-81 to 35.07 in 1990-91 and further increased to 48.62 in 2000-01 and declined to 12.74 in 2008-09, on the other hand, the percentage share of irrigation subsidy is 32.49, 34.76 and 26.58 in 1980-81, 1985-86 and 2000-01 respectively.

Table 2
Distribution of Total Subsidies in India during 1980-81 to 2008-09

(In Rs. Crores)

Subsidies/ Years	Fertilizers	Electricity	Irrigation	Total
1980-81	471.88 (38.41)	357.56 (29.10)	399.10 (32.49)	1,228.54 (100.00)
1985-86	1,804.80 (37.63)	1,324.15 (27.61)	1,667.21 (34.76)	4,796.16 (100.00)
1990-91	4,638.56 (35.20)	4,621.00 (35.07)	3,917.41 (29.73)	13,176.97 (100.00)
1996-97	8,148.41 (23.86)	15,594.00 (45.67)	10,404.73 (30.47)	34,147.14 (100.00)
2000-01	13,724.05 (24.80)	26,904.00 (48.62)	14,711.71 (26.58)	55,339.76 (100.00)
2008-09	1,01,180.68 (87.26)	14,771.52 (12.74)	— —	1,15,952.20 (100.00)

Source: (1) Government of India, Fertilizers Association, Fertilizer Statistics, various issues, New Delhi.

(2) Government of India, State Electricity Boards, Annual Reports, Various Years.

Note: Percentages are shown in parentheses

From the above table, it is found that at national level during pre as well as post liberalisation periods, the total subsidies have increased at different increasing rates and in absolute terms. In 2008-09, the total subsidies have increased by 94.38 times than that of 1980-81, whereas fertilizers subsidies twenty nine times, electricity subsidy 75.24 times and irrigation subsidy by 36.86 times in 2000-01 as compared to pre-liberalisation period (1980-81). In pre-liberalisation period (1990-91), fertilizers subsidies have increased by 1.00 times and 1.18 times than that of electricity subsidy and irrigation subsidy respectively. In 2000-01, electricity subsidy has increased by 1.83 times more and 1.96 times than that of irrigation subsidy and fertilizers subsidies.

Zone-wise distribution of total subsidies in India during 1980-81 to 2008-09 is shown in table 3. This table shows that in all the zones of India, total subsidies have increased during pre as well as post liberalisation periods. In south zone, these have increased from Rs.354.61 crores in 1980-81 to Rs.3,397.63 crores in 1990-91 and further increased to Rs.30,300.42 crores in 2008-09, whereas in west zone, these have increased from Rs.311.23 crores in 1980-81 to Rs.4,430.34 crores in 1990-91 and further increased to Rs.32,581.17 crores in 2008-09. In north zone, total subsidies have risen up from Rs.448.29 crores in 1980-81 to Rs.3,985.42 crores in 1990-91 and further risen up to Rs.36,852.04 crores in 2008-09. On the other hand, in east zone, these have increased from Rs.103.58 crores in 1980-81 to Rs.1,261.16 crores in 1990-91 and further increased to Rs.15,174.20 crores in 2008-09 and north-east zone, has got Rs.10.84 crores, Rs.36.57 crores and to Rs.1,044.36 crores in 1980-81, 1985-86 and 2008-09 respectively.

Percentage-wise analysis shows that the north zone has got topmost position by receiving (36.49 per cent in 1980-81 and 32.20 per cent in 1985-86) during pre-liberalisation period, whereas west zone has got first position (33.62 per cent in 1990-91 and 41.47 per cent in 1996-97) during first phase of liberalisation period. West zone is leading among all the other states by getting the maximum percentage share (39.65 per cent) followed by south zone, north zone, east zone, and north-east zone in 2000-01, whereas in 2008-09 north zone is ahead among all the other states by receiving major the percentage share (31.80 per cent), followed by west zone, south zone, east zone and north-east zone.

Table 3
Zone-Wise Distribution of Total Subsidies in India during 1980-81 to 2008-09

(In Rs. Crores)

Years/ Zones	1980-81	1985-86	1990-91	1996-97	2000-01	2008-09
South	354.61 (28.86)	1,292.88 (26.96)	3,397.63 (27.78)	9,691.15 (28.38)	16,693.26 (30.18)	30,300.42 (26.13)
West	311.23 (25.33)	1,413.15 (29.46)	4,430.34 (33.62)	14,162.44 (41.47)	21,931.10 (39.65)	32,581.17 (28.09)
North	448.29 (36.49)	1,544.41 (32.20)	3,985.42 (30.25)	7,634.06 (22.36)	12,200.55 (22.01)	36,852.04 (31.80)

East	103.58 (8.43)	509.14 (10.62)	1,261.16 (9.57)	2,534.88 (7.42)	4,247.28 (7.68)	15,174.20 (13.09)
North-East	10.84 (0.88)	36.57 (0.76)	102.42 (0.78)	124.62 (0.36)	267.58 (0.48)	1,044.36 (0.90)
India	1,228.54 (100)	4,796.16 (100)	13,176.97 (100)	34,147.14 (100)	55,316.13 (100)	1,15,977.84 (100)

Source:(1) Government of India, Fertilizers Association, Fertilizer Statistics, various issues, New Delhi.

(2) Government of India, State Electricity Boards, Annual Reports, Various Years.

Note: (1) Total subsidies are calculated by adding subsidies of electricity, irrigation and fertilizers only given in zone basis

(2) Percentages are shown in parentheses

From the above table, it is concluded that total subsidies at national level as well as zone level have increased in absolute terms during pre and post liberalisation periods. At national level in 2008-09, these have risen up more than nine times as compared to 1990-91. As zone-wise, in east zone these have increased the maximum i.e. twelve times among all the other zones, whereas in west zone these have increased by only seven times.

IV. Agricultural Subsidies and Productivity of Crops in India

Substantial additional growth in agricultural production needed to meet the basic necessities of large and growing population. It is also needed to generate agricultural surplus required for economic development with emphasis on employment equity. The bulk of growth in agricultural production will have to come from continuous increase in the productivity of land, yield based growth cannot sustain without removing soil fertility constraints and promote technological change. Among the various agriculture subsidies, fertilizer subsidy is the next largest food subsidy. Fertilizer subsidy is a development subsidy, which accelerate the fertilizer use and thus promote agricultural production. The central government removed the subsidy of fertilizer in the year 2003. There after agricultural production gradually decreased. The farmers were not able to purchased fertilizer on the higher price. In such a case farmers, fertilizer use for of their agricultural production gradually declined (Halmandage, 2010).

The overall rate of agricultural production is decreasing and production cost is increasing due to removal of agricultural subsidy. The removal of subsidy would affect the agricultural sector and economy. Subsidies are among the most powerful instrument for manipulating or balancing the growth rate of production and trade in various sectors for an equitable distribution of income for protection of weaker sections of the society. The support and procurement prices of major agricultural production are some of the important measures which are done to protect the interest of farmers and weaker sections of consumers. Substantial additional growth in agricultural production is needed to meet basic necessities for a larger growing population. It is also needed to generate agricultural surplus required for economic development with emphasis on employment equity. The agricultural production increased in initial period gradually after than the fertilizer subsidies were reduced. The overall economy effected. The government policy of subsidy is very well for protection of the weaker sections and marginal farmers (Halmandage, 2010).

In this section, an attempt is made to analyse the relationship between total subsidies (including fertilizers, electricity and irrigation) and productivity. Zone-wise distribution of total subsidies and productivity of crops in India during 1980-81 to 2006-07 are shown in table 4. It is observed that at India level, the total subsidies have increased during the pre and post liberalisation periods, whereas productivity increased except in 1996-97. At all India level, the total subsidies per hectare have increased from Rs. 1,362.59 in 1980-81 to Rs.14,134.59 (171.02 per cent) in 1990-91 and further increased to Rs.1,17,595.59 (85.38 per cent as compared to 2001). On the other hand, productivity in kgs per hectare has increased from 4,67,491 in 1980-81 to 17,75,699 (44.63 per cent) in 1990-91 and declined to 14,56,191 (17.99 per cent) in 1996-97 and again increased to 19,53,815 (13.28 per cent) in 2006-07.

The zone wise comparison shows that in south zone, total subsidies have increased from Rs.439.59 in 1980-81 to Rs. 33,825.92 in 2006-07, whereas there is variation in change in the productivity i.e. it has increased from 76,335 kgs in 1980-81 to 4,96,733 kgs. in 1990-91 and declined to 4,06,587 kgs. in 1996-97 and again increased to 5,46,465 kgs. in 2006-07. The total subsidies have increased from Rs.219.34 in 1980-81 to Rs.29,069.85 in 2006-07, whereas the productivity has increased from 1,03,412 kgs. in 1980-81 to 3,76,109 kgs. in 1990-91 and declined to 3,29,723 kgs. in 1996-97 and again increased to 421954 kgs. in 2006-07 in West zone.

North zone has got Rs.489.09 as total subsidies in 1980-81, which has increased to Rs.10,436.22 in 1996-97. This table shows that this zone has got subsidies of Rs.14,200.76 and Rs. 31,536.06 in 2000-01 and 2006-07 respectively. The productivity of this zone has increased from 1,38,069 kgs. in 1980-81 to 3,65,489

kgs. in 1990-91 and declined to 3,17,125 kgs. in 1996-97 and again increased to 4,05,553 kgs. in 2006-07. The total subsidies have increased from Rs.98.89 in 1980-81 to Rs. 13,118.88 (284.05 per cent as compared to 2000-01) in 2006-07 and productivity has increased from 83,199 kgs. in 1980-81 to 2,92,749 kgs. in 2006-07 in north-east zone.

This table further reveals the percentage share of total subsidies in south zone at all India level, has declined from 32.26 in 1980-81 to 26.81 in 1990-91 and increased to 32.92 in 1996-97 and again declined to 28.76 in 2006-07, whereas the percentage share in productivity increased to 16.32 in 1980-81 to 31.18 in 1985-86 and declined to 26.61 in 2000-01 and again increased to 27.97 in 2006-07. The percentage share of west zone in total subsidies, has increased from 16.10 per cent in 1980-81 to 25.99 in 1996-97 and declined to 24.72 in 2006-07 and the percentage share in productivity increased from 22.12 in 1980-81 to 26.01 in 1985-86 and declined to 21.18 in 1990-91 and again increased to 21.60 in 2006-07. North zone has got first position by receiving 35.89 per cent share of total subsidies and 29.53 of productivity at all India level in 1980-81. Whereas it has got the same rank in case of subsidies in 1985-86 and 1990-91 and second in 1996-97, 2006-07 and third in 2000-01, on the other hand, it has got third position in 1985-86, 1990-91, 1996-97 and in 2006-07 in productivity.

East zone is that zone whose percentage share in productivity is more than its percentage share in subsidies during pre as well as post liberalisation periods. A lot of variation is seen in east as well as north-east zones in subsidies and in productivity during pre and post liberalisation periods.

Table 4 (Plz refer the table no 4 in landscape)

Above table reveals that during pre as well as post liberalisation periods, at country level as well as zone level, the total subsidies have increased in absolute terms, whereas at India level as well as in south, west, north, north-east zones, productivity has also increased except in 1996-97 and in east zone productivity has declined during 1996-97 to 2000-01. As compared to post-liberalisation period (2006-07) with pre-liberalisation period (1990-91), it is observed that in India, subsidies have increased 8.32 times, whereas productivity increased by only 1.1 times. While comparing the same time period, as zone level analysis shows that in west zone, subsidies have increased the maximum number of times i.e. 11.95 times, followed by south zone (8.93 times), east zone (7.67 times), north zone (7.49 times) and north-east zone (6.28 times), On the other hand productivity has increased maximum i.e. 1.90 times in south zone, followed by west zone (1.12 times), north zone (1.11 times), east zone (1.1 times) and north-east zone (1.05 times). In 1990-91, south zone has got near about three times of total subsidies and has near about two times of productivity, whereas in 2006-07, it has received 3.37 times of subsidies and has near about two times of productivity as compared to east zone.

V. Fiscal Deficit and Total Subsidies in India

The combined deficit of all the governments of India is shown in table 5. This table indicates that the combined deficit of centre as well as state governments has increased from Rs.12,012 crores in 1980-81 to Rs.1,03,294 crores in 1996-97 and again increased to Rs.4,83,341 crores in 2008-09. The fiscal deficit of centre government has increased from Rs.8,299 crores in 1980-81 to Rs.44,632 crores in 1985-86, Rs.1,18,816 crores in 2000-01 and further increased to Rs.3,36,992 crores in 2008-09, whereas the fiscal deficit of state governments has increased from Rs.3,713 crores in 1980-81 to Rs.18,787 crores in 1990-91, Rs.87,922 crores in 2000-01 and further increased to Rs.1,46,349 crores in 2008-09.

Subsidies given by centre government (fertilizers) have increased from Rs.471.88 crores in 1980-81 to Rs.3,888.60 crores in 1990-91, Rs.16,261.05 crores in 2000-01 and further increased to Rs.1,34,340.68 crores in 2008-09. On the other hand, the agriculture subsidies (electricity and irrigation) given by state governments have increased from Rs.756.66 crores in 1980-81 to Rs.8,538.41 crores in 1990-91 to Rs.41,615.71 crores in 2000-01 and further increased to Rs.44,242.44 crores in 2005-06.

It is found that the percentage share of electricity as well as irrigation subsidies in state government's fiscal deficit is high as compared to fertilizers subsidies in centre government's fiscal deficit during pre as well as post liberalisation periods except in 2008-09. The percentage share of fertilizers subsidies in centre government has increased from 5.69 per cent in 1980-81 to 8.71 per cent in 1990-91, to 39.86 per cent in 2008-09. It is seen that the percentage share of subsidies provided by centre government is increasing in centre's fiscal deficit during 1980-81 to 2008-09, whereas same trend of percentage share in state government's fiscal deficit is also found in case of subsidies provided by state governments except in 2008-09.

TABLE 5 (Plz refer the table no 5 in landscape)

Above table concludes that in the fiscal deficit of centre as well as states government has increased throughout the study period. Subsidies given by centre government have also increased in all this period, whereas subsidies provided by state governments declined in post liberalisation period (2008-09). The percentage share of total subsidies (including centre and state governments) in fiscal deficit has increased except in 2000-01. As post-liberalisation (2008-09) is compared to pre-liberalisation period (1990-91), the centre subsidies have increased by 34.55 times, state subsidies 4.5 times and share of total subsidies in combined fiscal deficit is 1.8 times.

VI. Major Findings

It is observed from the analysis that at national level as well as zone level, there is unequal distribution of total subsidies during the study period. The increasing rate of total subsidies (fertilizers, electricity and irrigation) is higher than gross cropped area (GCA) during pre, first as well as second phase of liberalization periods. In total subsidies during pre-liberalisation period, the percentage share of fertilizers subsidies is maximum (38.41 in 1980-81 and 37.63 in 1985-86), whereas during 1990-91 to 2000-01, the percentage share of electricity subsidies is maximum and again in 2008-09 fertilizers subsidies has got major percentage share 87.26 per cent in total subsidies. There is a lot of variation to find out the relationship between gross cropped area (GCA) and in total subsidies in zones throughout the study period. As zone level, it is observed that there is a negative relationship between GCA and total subsidies, in west zone and in north zone (in 2006-07) and in east zone (1996-97 and in 2006-07). It is seen that there is a direct relationship in GCA and total subsidies i.e. GCA as well as total subsidies have increased at zone level in west and in north (during 1980-81 to 2000-01), in south zone (during 1980-81 to 1996-97) and in north-east zone (during 1980-81 to 2006-07). From the above discussion, it is concluded that in India, the total subsidies of fertilizers, electricity and of irrigation have increased in terms of per hectare during pre, first as well as second liberalisation periods, whereas the increasing rate is higher in 1985-86 among all the other years and lowest rate in 2000-01. Productivity has declined in the year 1996-97 at country as well as zone level.

VII. Policy Implications and Suggestions

Most of the studies either supported distributing subsidies or withdrawal of subsidies. However, the present study reveals that some subsidies should be given and some others can be withdrawn without harming the farmers. Withdrawal of subsidies should be carried out in phased manner. Following are the some suggestions emerging out of the present study:

The centre government should adopt some criteria to give away subsidies to states either on the basis of gross cropped area or productivity.

From the study it has been noted that subsidies which have direct relationship on productivity and income like seeds, fertilizers should be given to farmers, on the other hand, subsidies on electricity can be withdrawn as supply of electricity in Punjab is irregular moreover farmers prefer regular supply of power even if they have to pay for it. If implemented, it will reduce state electricity board's burden and this amount can be used for production of more electricity, reducing the need of purchasing electricity at very high prices, which adds to the deficit of state finance.

Government should formulate farmer friendly agriculture price policy, under which the price of farm produce should be fixed keeping in view the rising costs of farm inputs; this will help in making the farmers financially independent.

In view of drought/deficit rainfall in certain regions (Bihar, Jharkhand, Orissa and West Bengal), it was decided by centre government to implement a diesel subsidy during kharif (in 2010) to save standing crops in the field, same pattern should be followed in states where this problem occurs.

Government should keep aside its motive to please voters or strengthen the vote bank, it should frame rational policy in which small size category farmers, who are not actual beneficiaries of subsidies, could get more and subsidies, which they do not want should be withdrawn.

Subsidies should be given to those who actually need, like small and medium size category farmers. Subsidies, which they do not need should be withdrawn but in a phased manner. On the other hand, instead of subsidies, the government should focus on just three things - electricity generation, infrastructural development and water supply. The accompanying development will take care of the rest. The subsidies should be replaced with constructive schemes that empower people and give them that one push they need to get out of poverty.

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