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Central Government Agricultural Subsidies in India: Public Sector Expenditure, Issues and Policy Implications

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Abstract

The Government of India has shown steady rise in agricultural subsidy over the last four decades, which is also accompanied by substantial rise in production due to higher capacity utilization of existing units or by creation of new capacities. The rise in subsidy outgo for inputs has matched with significant increase in indigenous production of fertilizer and stimulation of fertilizer consumption. Nevertheless, the increased use of fertilizer in India is accompanied by disproportionate use of indigenously produced urea since other fertilizers are mainly imported. This has also led to reduced public investment in agriculture on account of erosion of investable resources and wasteful use of scarce resources like water and power, apart from causing other harmful effects like intensive use of inputs leading to reduced productivity of inputs, reduced employment elasticity of output substitution of capital for labour, and lowering of water table. Although the major beneficiaries of fertilizer subsidy are the large farmers who mainly cultivate water-intensive crops, the issue of concern is the real beneficiary fertilizer subsidy since the benefit goes to both fertilizer industry as well as farmers. Another issue is the delivery of fertilizer subsidy, which should be directly given to the farmers and not through priority allocation of natural gas to fertilizer units. The concept of DBT system in fertilizers introduced by the Government in October 2016 and the formulation of policy relating to implementation of Direct Cash Transfer of fertilizer subsidy to farmers are yet to fully mature. Apart from input, the Government continues to extend large amounts of food subsidy, which is already well known for administrative inefficiency, corruption and wastage. It is found that the outreach of food subsidy in India has been highly inadequate and concentrated more in the relatively developed and less poverty states than vice versa.

Keywords: Agriculture, Subsidy, Policy, India

JEL Classification: C82, E64, H53, O21, Q18

Rationale

Although agricultural subsidy meant government financial support paid to farmers and agribusiness to supplement their income, manage the supply of agricultural commodities and influence the cost and supply of such commodities, too much dependence on these subsidies have threatened the long term sustainability of the agricultural sector and the health of the



country's economy. It is believed that input subsidies are the most expensive aspect of India's food and agricultural policy regime, requiring a steadily larger budget share (Grossman and Carlson, 2011). Input subsidies chiefly encompass subsidies for fertilizer, irrigation water and electricity/ power used for irrigation, and other agricultural purposes.

The course of time has also seen input subsidies to include seeds, herbicides and pesticides, apart from loans on concessional rates of interest provided by commercial banks, cooperative banks and regional rural banks. The Government expenditure on input subsidies has been rapidly increasing over the last few decades. In case of fertilizer, the Government expenditure on subsidy as proportion of GDP has increased from 0.23 per cent in the early 1980s to 0.93 per cent in 1989-90 and further to 1.50 per cent in 2011-12 with their concentration in states like Uttar Pradesh, Andhra Pradesh, Maharashtra, Madhya Pradesh and Punjab (GOI, 2004 and Arora, 2013). These states cultivate heavily subsidized crops like rice, wheat, sugarcane and cotton. The major beneficiaries of fertilizer subsidies are small and marginal farmers. Therefore, any reduction in these subsidies may adversely affect them as they seldom receive any benefit from price support programme (Arora, 2013). However, it has been argued that input subsidies often lead to reduced public investment in agriculture on account of erosion of investable resources and wasteful use of scarce resources like water and power, apart from causing other harmful effects like intensive use of inputs leading to reduced productivity of inputs, reduced employment elasticity of output through the substitution of capital for labour, and lowering of water table (Gulati, 2003).

There are sparse studies that have evaluated positive as well as negative aspects of agricultural subsidies in India. The study conducted by Sharma (1982) showed a positive affect of agricultural subsidies on national income and agricultural production during the period between 1970-71 and 1981-82. Another study carried out by Gupta (1984) showed a faster rate of increase in agricultural subsidies between 1970-71 and 1982-83 with large inter-state disparity. On the other hand, Gulati (2007) favoured reduction in subsidies for fertilizer, irrigation, power and credit, and a rise in investments in agricultural research and development, rural, infrastructure and education, especially with a view to achieve long-term growth in agricultural production. Similarly, Arora (2013) emphasized upon the need to raise subsidies on investment categories, and make the subsidies transparent, targeted, and short-term in nature, especially in view of the fact that only 30 per cent subsidies go to marginal, small, and medium farmers. The studies carried out in the past either favoured agricultural subsidies or were critical about harmful effects of such subsidies. In the light of this background, the present study attempts to address various issues relating to agricultural subsidy in India with focus on their distribution pattern, beneficiaries, pros and cons, and other contentious issues.

Objectives

The major objectives of this study are to: (a) assess the favourable and harmful effects of agricultural subsidies in India, (b) distribution pattern of agricultural subsidies, and (c) identification of beneficiaries and other contentious issues for policy implications.

Methodology

The study is based on time series data collected on various performance indicators related to agricultural subsidies in India with focus on food and input subsidies, distributional pattern of fertilizer subsidy across States of India over time, identifying major beneficiary States, economic costs of major crops, their carrying costs, the changing pattern of India's position in terms of producer support for agriculture sector as against other developed nations. The data and relevant information have been collected from various official records and secondary sources, viz. 'Ministry of Agriculture and Farmers' Welfare, Government of India (GOI)', 'Ministry of Finance, Government of India' 'Ministry of Petroleum and Natural Gas, Government of India', 'Economic Survey of India, Various Issues', 'Ministry of Consumer Affairs, Food and Public Distribution, GOI', etc. The estimates have also been drawn from various reports and data sources of 'The Organisation for Economic Co-operation and Development (OECD)', France, particularly estimates on producer support and consumer support (PSE/CSE).

Key Findings

In India, poorly developed market infrastructure and institutions coupled with smallholder dominated agriculture have led government interventions to achieve twin objectives of self sufficiency and low food prices for consumers. In order to safeguard interests of both farmers and consumers, India not only subsidizes inputs but also output.

Producer Support for Agriculture

The OECD has defined producer support as an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income (OECD, 2002 p. 59). A policy of producer support encompasses several measures viz. an increased output price, a reduced input price or cost share for fixed capital, a direct payment, a revenue foregone by government, a reimbursement of a tax or charge or a gratuitous service in kind to individual farmers, etc. (OECD, 2008). Support for farm product prices, or direct payments based on agricultural production or agricultural area is producer-specific support. Similarly, a payment reducing the price of fertilizer or pesticide for application on farm land, or a payment compensating for yield loss as a result of practicing organic farming is agricultural and

producer specific support. The producer support for agriculture has varied significantly across countries. While countries like India and Turkey are seen to be beset with rise in their producer support to agriculture over the last two decades, other countries like Republic of Korea, Switzerland, Canada, USA, Japan and European Union countries have shown either decline in their producer support to agriculture or a fluctuation in the same during this period. India has shown more than seven folds rise in her agricultural subsidy during the last two and a half decades, which increased from US \$ 3,812 million in 1990 to US \$ 30,518 million in 2008 and further to US \$ 32,096 million in 2015 (Table 1).

Although India has shown rapid increase in her agricultural subsidy during the past two and a half decades, the magnitude of agricultural subsidy is still lower than EU and Japan. The value of agricultural subsidy in EU was estimated at US \$ 1,05,112 million in 1990, which increased to US \$ 1,01,365 million in 2010 with a decline in the same to US \$ 89,987 million in 2015. Similarly, the farm subsidy in Japan increased from US \$ 42,703 million in 1990 to US \$ 52,888 million in 2010 with a decline in the same to US \$ 33,509. Further, the estimates presented in Table 1 also show highest per capita farm subsidy in Switzerland and lowest in India. India is also noticed to be better placed in terms of per hectare subsidy. The subsidy on per hectare basis is noticed to be the lowest in USA and highest in Switzerland. India is only next to USA in terms of subsidy on per hectare basis.

Central Government Subsidies

India subsidizes agricultural inputs with a view to keep farm costs low and high production volume. The fertilizer companies sell fertilizer to farmers at prices lower than the market prices. The difference between selling price and market price constitutes the element of subsidy paid by the Government. On the other hand, the Government supplies irrigation water and electricity to farmers at prices, which are below the cost of production. The effective subsidy to farmers turns out to be 40-75 per cent of the market price in case of fertilizer and 70-90 per cent of cost of production for irrigation and electricity (Grossman and Carlson, 2011). It is to be noted that the cost of India's agricultural input subsidy as a share of agricultural output has almost doubled from 6.0 per cent in 2003-04 to 11.6 per cent in 2009-10 with large increase in subsidies for fertilizer and electricity (Jones, 2013). The estimates relating to agricultural subsidies in India encompassing the period between 1980-81 and 2016-17 are brought out in Table 2.

India has shown phenomenal rise in both food and agricultural input subsidies during the last three and a half decades. While food subsidy in India has grown more than 150 folds during the period between 1980-81 and 2015-16, the rise in input subsidy is about 60 folds during this period. The food subsidy in India increased from US \$ 87 million in 1980-81 to US \$ 1919 million in 2000-01 and further to US \$ 18714 million in 2015-16. On the other hand, the subsidy on agricultural inputs increased from US \$ 165 million in 1980-81 to US



\$ 17149 million in 2008-09 with a decline in the same to US \$ 9720 million in 2015-16. Among various inputs, the subsidy on fertilizer has grown much faster, especially in the decade of 2000s. Although subsidies on various agricultural inputs in India have been growing rapidly in more recent times, it is believed that these subsidies have caused adverse effect in the form of over utilization of inputs, which led to soil degradation, soil nutrient imbalance, environmental harm, and groundwater depletion. Consequently, these problems have caused decreased effectiveness of inputs.

It is to be noted that agricultural input subsidies are one of the most common subsidies practiced as policy instruments in the agricultural sector in order to lower the prices that farmers pay for their inputs below their market prices. Agricultural input subsidies are provided to achieve multi-pronged goals viz. (i) improving the affordability and accessibility of agricultural inputs for smallholder farmers, (ii) developing the input-supply distribution system, (iii) sensitizing farmers to the use of inputs where it may potentially be profitable, (iv) providing social protection for vulnerable groups by increasing productivity and access to food, (v) restoring soil fertility and improve soil fertility management practices, and (vi) reducing social costs due to rural-urban income disparities, with broader goals of raising agricultural production and food security (Hiroyuki and Lee, 2012). In general, the input subsidy programme is formulated and implemented to address issues like boosting food production through increased use of inputs, reducing poverty among smallholders through reduced costs of inputs, developing a private input-supply network, improving soil nutrients, etc.

There has been increase in amount of subsidy in India in recent times on account of three reasons viz. (i) explicit inclusion of off-budget subsidies in the petroleum sector in the Central Government's budget from 2002-03, (ii) rise in the share of explicit subsidies, and (iii) rise in input costs in the face of low recovery rate, i.e. while input costs have gone up, recovery rates have not gone up commensurately. It is to be noted that only a part of the Central Government subsidies is clearly visible in the Government's budget document. Such explicit subsidies, mainly on food, fertilizer and petroleum, accounted for about 38 per cent of total Government subsidies, including those 'hidden' in the provision of social and economic services (GOI, 2004).

Interestingly, before 2002-03, the subsidy on food and fertilizer together accounted for more than 95 percent share in total Government subsidies in India. However, this trend was offset after 2002-03 when petroleum subsidy was incorporated in Government budget. Consequently, the share of food subsidy in total Government subsidy declined from 54.24 per cent in 2002-03 to 33.41 per cent in 2011-12 with arise in the same to 52.79 per cent in 2015-16 (Table 3). The share of petroleum subsidy increased from 14.04 per cent in 2002-03 to 31.42 per cent in 2011-12 with a sharp decline in the same to 11.36 per cent in 2015-16. However, the decade also saw a highly fluctuating share of petroleum subsidy in total

Government subsidy of India, especially from 2003-04 to 2015-16. The share of fertilizer subsidy in total Government subsidy rose from 2002-03 to 2008-09 with a decline in the same after 2008-09.

In fact, the major aim of agricultural subsidy was to support agricultural development in remote areas with pan-territorial pricing and subsidised delivery systems. This was intended to encourage economically and technically efficient use of inputs. Input subsidies are also considered as means for raising farm incomes, particularly of those farmers who are being taxed in other ways through export tariffs and low fixed domestic prices (Dorward et. al., 2008). However, the major problem with input subsidies is their costs, which are difficult to control. In the absence of subsidy and rising input costs, the major sufferers are the smallholders. It is very difficult to target input subsidies to particular types of farmers because of diversion and leakage from small to large scale farmers, which ultimately reduces the efficiency of cost of subsidy programme. In case of fertilizer, the amount of subsidy has been growing rapidly over time. Although the major beneficiaries of fertilizer subsidy are the large farmers who mainly cultivate water-intensive crops viz. rice, wheat, sugarcane, cotton, etc., it has also been debated about the real beneficiary fertilizer subsidy since the benefit goes to both fertilizer industry as well as farmers (Gulati 1990; Gulati and Narayanan 2003).

Fertilizer Subsidy

Fertilizer subsidy has always been an important strategic decision of the Government with the dual objective of increasing indigenous production of fertilizer and stimulating fertilizer consumption. The value of fertilizer subsidy was only US \$ 63 million in 1980-81, which increased steeply to US \$ 9720 million in 2015-16, despite the Government of India decontrolled phosphatic and potash fertilizers with view to bring down fertilizers subsidy. The fertilizers subsidy met the twin objective of increasing production and consumption of fertilizer. The fertilizer industry in India has attracted private investment due to subsidy. However, rapid increase in fertilizer subsidy in more recent times has raised concern about effectiveness of such subsidy.

It is to be noted that the effective rate of the fertilizer subsidy in India increased from 41 percent of the cost of fertilizer production in 2003-04 to 67 percent in 2009-10, which occurred since Government allowed real (inflation adjusted) subsidized fertilizer prices to fall by keeping the nominal (non-inflation adjusted) subsidized fertilizer prices essentially unchanged despite inflation, increased real world prices for fertilizers (represented by the real U.S. price index-blue), and increased real domestic prices for fertilizer industry inputs (Grossman and Carlson, 2011). It has been further contended that this type of outcome, where Government increases its expenditure in order to keep nominal prices unchanged, is typical in India due to political pressure applied by the farmers, who account for two thirds of India's population.



Although the amount of fertilizer subsidy cornered by different states depends on the size of the state, cropping pattern followed, per hectare fertilizer use and its composition, a major chunk of fertilizer subsidy is noticed to be cornered by few states like Uttar Pradesh, Andhra Pradesh, Maharashtra, Madhya Pradesh, Punjab, West Bengal, Haryana and Gujarat, which mainly concentrate on cultivation of water as well as fertilizer intensive crops viz. rice, wheat, cotton and sugarcane (Table 4). These eight states showed a share of 77 per cent in total fertilizer subsidy of India in 1992-93, which declined to 73 per cent in 2007-08, and further to 66 per cent in 2014-15. The state of Uttar Pradesh shows the largest chunk of fertilizer subsidy, followed by Maharashtra, Madhya Pradesh, Andhra Pradesh, Punjab and Gujarat. The lowest share of fertilizer subsidy is noticed for states like Himachal Pradesh, Jammu and Kashmir, Assam, Jharkhand, Uttarakhand and Kerala. In general, the distribution of fertilizer subsidy across states does not indicate the benefits of such subsidy on account of variation in size of state (Chand and Pandey, 2008). This is concomitant from the fact that Uttar Pradesh corners maximum share of about 17 per cent of total fertilizer subsidy of India, while the per hectare fertilizer subsidy for this state is US \$ 63, which stands much lower than US \$ 83/ha as cornered by Punjab, which has nearly 7 per cent share in total fertilizer subsidy of India. The state of Rajasthan shows the lowest per hectare fertilizer subsidy measured at US \$ 21, which has reasonable share in total fertilizer subsidy of India.

It has been pointed out that the disparity in fertilizer subsidy across states is due to variation in productivity resulting from variation in use of fertilizer. This is corroborated from the fact that Punjab and Haryana showing higher per hectare subsidy also have higher productivity of crops. The fertilizer subsidy as proportion of value of crop output also shows higher benefit of fertilizer subsidy going to Punjab and Haryana, followed by Andhra Pradesh, which shows fertilizer subsidy as constituting nearly 5 per cent of value of crop output (Chand and Pandey, 2008). The states like Tamil Nadu, Uttar Pradesh, Bihar, Chhatisgarh and Gujarat show fertilizer subsidy as constituting 3-4 per cent of value of crop output. The states like Assam, Jammu and Kashmir, Kerala and Orissa have shown fertilizer subsidy as constituting only 1-2 per cent of value of crop output.

The fertilizer subsidy outgo for Government of India has been steadily increasing year after year. At the same time, there has also been significant increase in indigenous production of fertilizers, resulting in the overall national perspective of fostering self-reliance in Indian agriculture due to increased use of fertilizer. The increased use of fertilizer is one end of the spectrum, the other end being disproportionate use of urea in agriculture. The fertilizer industries in India mostly manufacture urea and the other fertilizers like potash and phosphate are imported. Though government fixes market price for urea, it is sold to the farmers at subsidised price under floating subsidy scheme of the government, and fertilizer manufacturers are compensated for the loss. The fertilizer companies stick to urea manufacturing despite having facility to process other fertilizers, which hardly brings any

benefit of fertilizer subsidy to farmers since it is given to companies. Consequently, farmers mainly use urea mostly manufactured by Indian companies. Another issue is the delivery of subsidy. According to CACP, subsidy on fertilizer should not be routed through fertilizer manufacturing units, and should be directly given to the farmers and not through priority allocation of natural gas to fertilizer units. This will help the farmers to decide which fertilizer to buy and not rely wholly on urea based fertilizer. This will also solve the problem of disproportionate use of urea by farmers. Another suggestion of CACP is in favour of implementation of per hectare based subsidy mechanism to avoid area wise disparity in allocation of subsidy. Conventionally, the subsidy is mostly directed to state like Punjab, Haryana, Andhra Pradesh, and western UP. Per hectare based subsidy will increase use of fertilizer in eastern states like Orissa, West Bengal, and Bihar etc.

DBT of Fertilizer Subsidy

The concept of Direct Benefit Transfer (DBT) system in Fertilizers was introduced by the Government in October 2016. The system entails release of 100 per cent subsidy on various fertilizer grades to fertilizer companies on the basis of actual sales made by the retailers to the beneficiaries. Further, the system encompasses the sale of subsidized fertilizers to farmers/buyers through Point of Sale (POS) devices installed at each retailer shop with their identification through Aadhaar Card, KCC, Voter Identity Card, etc. Since the system confines to the transfer of subsidy to fertilizer companies, there has been discussion at various forums such as PMO, Cabinet Secretaries and Niti Aayog with respect to transfer of subsidy directly to farmers. A Nodal Committee has already been constituted to formulate policy relating to implementation of Direct Cash Transfer of Fertilizer Subsidy to farmers (GOI, June 2020). However, there has not been any final decision taken on the implementation of direct cash transfer of fertilizer subsidy to farmers. This is despite several meetings being held by Working Group with all the stakeholders. It is to be further noted that the majority of Indian farmers prefer the new system of fertilizer subsidy linked to sales made to them by retailers through POS devices. Under this system of DBT, the subsidy to fertilizer companies is also released only after actual retail sales take place, which makes a clear departure from the earlier system of manual distribution, where subsidy was paid to companies once their dispatched material reached the railhead point or approved godown of a district. The new system is more transparent since it tracks real buyer, curb diversion to non-farmers, and reduce overcharging by retailers. However, as for the system of direct cash transfers (DCT) to farmers as against DBT, the farmers are not very positively inclined due to the belief that paying market price for fertilizers upfront would result in additional financial burden. There is another apprehension that DCT in fertilizers might result in similar fate like subsidy on liquefied petroleum gas cylinders where the cash subsidy was received late or even not at all paid on account of some varied reasons.

Food Subsidy

Food subsidies in India comprises subsidies to farmers through support prices and purchase operations of the Food Corporation of India (FCI), consumer subsidies through the public distribution system (PDS), and subsidies to FCI to cover all its costs (GOI, 2004). Food subsidies are mainly on account of paddy and wheat. The rapid increase in food subsidy in recent years is attributable to what is called the ‘economic costs’ of foodgrains, which include the minimum support prices paid to farmers in the procurement process. Food subsidy is incurred by the Government to meet its obligation towards distributive justice, and also to meet its twin objectives of the food security system by providing minimum nutritional support to the poor through subsidized foodgrains and ensuring price stability in different states of the country. In order to help poor, the Government has kept issue price of wheat and rice unchanged since July 2002 despite steady rise in economic cost of wheat and rice (Table 5). The Government continues to extend large amounts of subsidy on foodgrains for distribution under TPDS, other nutrition-based welfare schemes, and open market operations, which has raised food subsidy substantially.

It is clearly evident from Table 5 that there has been growing trend not only in economic and buffer carrying costs of rice and wheat but also consumer subsidy. The passage of Food Security Bill in September 2013, which ensures 5 kgs of foodgrains per person per month to 75 per cent of rural and 50 per cent of urban population in India, has further raised concern about the possible outcome of such programme.

India’s existing food subsidy programme is already well known for administrative inefficiency, corruption and wastage (Bhalla, 2013; Shiva, 2013). An evaluation report commissioned by the government also documented that only 42 per cent of the subsidised foodgrains released for the poor actually reach them due to corruption and errors in their identification (Planning Commission 2005). Further, the findings of another study showed that the outreach of PDS in the country has been highly inadequate and concentrated more in the relatively developed and less poverty states than vice versa (Arora, 2013). However, it is believed that the new law introduced in September 2013 at least is an attempt to rationalize the already-existing subsidy programme, and it takes a stab at reforming the horrendously wasteful distribution network on which it relies (Allison, 2013).

Conclusion and Recommendations

The major problem with input subsidies is that they lead to reduced public investment in agriculture on account of erosion of investable resources and wasteful use of scarce resources like water and power, apart from causing other harmful effects like intensive use of inputs leading to reduced productivity of inputs, and lowering of water table. Further, though the major beneficiaries of fertilizer subsidy are the large farmers who mainly cultivate water-



intensive crops, the issue of concern is the real beneficiary fertilizer subsidy since the benefit goes to both fertilizer industry as well as farmers. Another issue is the delivery of fertilizer subsidy, which should be directly given to the farmers and not through priority allocation of natural gas to fertilizer units. The concept of Direct Benefit Transfer (DBT) system in fertilizers introduced by the Government in October 2016 and the formulation of policy relating to implementation of Direct Cash Transfer (DCT) of fertilizer subsidy to farmers are yet to fully mature. The final decision on implementation of DCT has not been taken so far. Further, the Government continues to extend large amounts of food subsidy, which is already well known for administrative inefficiency, corruption and wastage. Since the outreach of food subsidy in India has been highly inadequate and concentrated more in the relatively developed and less poverty states, with focus on improving outreach in the northern states. There is also a need to raise subsidies on investment categories, and make the subsidies transparent, targeted, and short-term in nature.

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Table 1: Agricultural Subsidies (Producer Support Estimate): 1990 - 2015

(US \$ million)

Country	Total Farm Subsidy (PSE)							Subsidy (US \$)		Fertilizer consumption (kg/ha)
	1990	1995	2000	2005	2008	2010	2015	Per capita	Per hectare	
European Union (EU)	105,112	123,418	86,227	124,439	132,115	101,365	89,987	202.45	839.17	134.4
Japan	42,703	72,788	54,065	44,430	42,829	52,888	33,509	417.97	11475.01	212.5
India*	3,812	3,621	5,661	9,383	30,518	28,464	32,096	23.24	167.81	146.3
USA	31,266	20,423	52,278	40,626	30,477	25,552	38,785	82.32	154.44	121.2
Turkey	7,562	7,950	9,477	18,358	20,407	22,138	11,569	304.30	911.27	79.9
Rep. of Korea	19,156	25,369	19,408	22,047	16,843	17,461	20,118	362.38	9722.19	278.4
Canada	6,249	4,068	4,303	6,331	5,576	7,431	4,289	218.44	142.49	58.0
Switzerland	5,791	5,938	4,371	5,468	5,570	5,391	7,738	703.44	12537.51	138.9

Note: i) * - Includes subsidy on fertilizer and food

ii) PSE – Producer Support Estimate

iii) Estimates for per capita and per hectare subsidy as well as fertilizer consumption refer to 2010

Sources: OECD, PSE/CSE Database, 2010, and FAO, Rome, and OECD iLibrary, 2016 Edition

Table 2: Central Subsidy on Food and Inputs: 1980-81 to 2016-17

(US\$ million)

Year	Food Subsidy	Input Subsidy				Total Subsidy
		Fertilizer	Electricity	Irrigation	Total	
1980-81	87.25	63.36	48.05	53.56	164.97	252.21
1985-86	221.48	242.28	177.72	223.76	643.76	865.23
1990-91	328.86	622.68	620.27	525.77	1,768.72	2,097.58
1995-96	855.97	904.03	1,064.56	138.79	2,107.38	2,963.36
2000-01	1,618.79	1,852.35	1,197.18	1,779.73	4,829.26	6,448.05
2001-02	2,348.86	1,690.60	1,397.32	1,746.17	4,834.09	7,182.95
2002-03	3,245.10	1,478.52	1,143.76	1,717.32	4,339.60	7,584.70
2003-04	3,380.00	1,590.20	1,952.21	1,465.91	5,008.32	8,388.32
2004-05	3,462.82	2,131.41	2,413.02	1,649.66	6,194.09	9,656.91
2005-06	3,097.58	2,477.85	2,608.19	1,916.78	7,002.82	10,100.40
2006-07	3,223.36	3,519.73	2,648.19	2,278.93	8,446.85	11,670.20
2007-08	4,205.10	4,361.07	2,773.29	2,611.68	9,746.04	13,951.14
2008-09	5,872.62	10,282.28	3,689.80	3,176.51	17,148.59	23,021.21
2009-10	7,844.70	7,111.41	NA	NA	7,111.41	14,956.11
2014-15	15,794.77	9,540.40	NA	NA	9,540.40	25,335.17
2015-16	18,713.96	9,720.13	NA	NA	9,720.13	28,434.09
2016-17	14,788.32	8,901.07	NA	NA	8,901.07	23,689.40

Source: 1) Ministry of Agriculture, Government of India

2) Lok Sabha Unstarred Question No. 147, dated on 09.11.2010 & Centre for Industrial & Economic Research (CIER) (ON141) (ON206)

3) Ministry of Petroleum and Natural Gas, Government of India, (ON1614). Past Issues, & (ON1940)

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Table 3: Sector-wise Share of Subsidies Provided under Government Budget in India

(in per cent)

Year	Food Subsidy	Fertilizers Subsidy				Petroleum Subsidy	Interest Subsidy	Other Subsidy	Total Subsidy (US\$ million)
		Indigenous Urea	Imported Urea	Decontrolled Fertilizers	Total				
2000-01	44.94	35.32	-	16.09	51.42	-	0.41	3.08	3,602.42
2001-02	56.07	25.77	0.15	14.43	40.36	-	0.67	1.75	4,189.26
2002-03	54.24	16.81	0.02	7.84	24.67	14.04	1.71	5.33	5,988.99
2003-04	56.81	19.22	0.00	7.50	26.73	14.33	0.38	1.39	5,949.40
2004-05	56.14	22.29	1.07	11.19	34.55	6.43	1.23	1.39	6,168.72
2005-06	48.56	22.42	2.55	13.88	38.85	5.65	4.58	1.82	6,378.79
2006-07	42.02	22.13	5.73	18.02	45.88	4.77	4.92	1.44	7,671.14
2007-08	44.17	18.26	9.31	18.24	45.81	3.98	3.26	1.57	9,520.27
2008-09	33.73	13.85	7.77	37.43	59.05	2.20	2.69	2.03	17,410.47
2009-10	41.35	12.44	3.26	27.65	43.34	10.58	1.90	2.83	18,973.15
2010-11	36.81	8.70	3.72	23.51	35.93	22.13	2.70	2.44	23,277.85
2011-12	33.41	9.27	6.29	16.56	32.12	31.42	2.32	0.72	29,253.83
2014-15	45.56	14.79	4.73	8.00	27.52	23.34	2.96	0.62	34,665.50
2015-16 (RE)	52.79	19.11*	-	8.31@	27.42	11.36	6.33	2.10	35,450.47
2016-17 (BE)	46.92	20.22*	-	8.02@	28.24	11.73	7.62	5.49	31,517.99

Note: 1) Figures under food, fertilizer and other subsidies are in per cent terms, whereas figures under total subsidy are actual amount of subsidy in crore rupees

2) * - Urea Subsidy estimates, which include indigenous and imported urea

3) @ - Nutrient Based Subsidy Policy estimates

Source: Ministry of Finance, Govt. of India and Ministry of Petroleum and Natural Gas, Govt. of India



Table 4: Distribution of Fertilizer Subsidy in India

States	Fertilizer Subsidy (Share of States) [@]			TE 2005-06 ^{@@}			(Share in per cent)	
	1992-93	1999-2000	2007-08	Share of States in Fertilizer Subsidy	Subsidy/ Ha (US\$)	Subsidy as % of Value of Crop Output	Share of States in Fertilizer Subsidy	Subsidy/ Ha GCA (US\$)
Andhra Pradesh	10.6	10.8	11.3	11.41	22.21	4.73	6.80	82.63
Telangana	-	-	-	-	-	-	4.60	78.28
Assam	0.2	0.6	1.0	0.74	6.94	1.43	1.12	25.81
Bihar	6.0	5.8	6.2	4.22	14.97	3.63	5.26	65.48
Chhattisgarh	-	-	-	1.77	7.50	3.25	2.37	40.24
Gujarat	5.5	5.2	7.0	6.23	13.09	3.12	6.58	50.55
Haryana	5.8	5.3	5.5	5.89	33.77	4.75	5.10	77.32
Himachal Pradesh	0.3	0.2	0.2	0.25	9.45	0.91	0.21	21.19
Jammu & Kashmir	0.4	0.4	0.4	0.45	12.15	1.43	0.43	35.83
Jharkhand	-	-	-	0.67	7.68	1.66	0.45	26.16
Karnataka	4.2	6.2	6.5	6.55	13.03	3.57	7.16	58.98
Kerala	0.7	1.0	0.9	1.03	9.65	1.05	0.82	30.58
Madhya Pradesh	6.2	6.6	7.8	5.38	7.29	2.71	7.03	29.38
Maharashtra	8.5	10.3	10.2	9.11	10.58	2.44	11.01	48.67
Orissa	1.6	2.0	1.9	1.93	6.95	1.77	1.95	37.28
Punjab	11.6	8.6	7.7	8.83	42.51	4.92	6.72	82.55
Rajasthan	4.2	4.7	4.4	4.42	5.28	2.45	5.08	20.51
Tamil Nadu	5.0	5.4	4.8	4.85	19.60	3.90	3.97	74.67
Uttar Pradesh	23.2	19.5	17.5	18.13	21.83	3.93	16.70	62.58
Uttarakhand	-	-	-	0.66	17.26	2.57	0.67	57.33
West Bengal	5.2	6.7	6.4	6.34	23.22	2.39	5.74	59.32
All India	100.0	100.0	100.0	100.00	14.32	3.16	100.00	49.76

Source: @ - Sharma and Thaker (2010); @@ - Chand and Pandey (2008); # - Fertilizer Association of India, 2015



Table 5: Economic Cost of Rice and Wheat, Food Subsidy and Carrying Cost in India
 (US\$/ quintal)

Costs/Subsidy	2000-01	2003-04	2005-06	2007-08	2009-10	2011-12	2013-14	2016-17
I. Economic Cost								
a. Rice								
Procurement Incidentals	0.94	0.41	0.29	2.88	3.96	4.70	6.22	8.02
Distribution Cost	2.55	2.88	3.78	4.00	2.80	3.50	5.36	5.81
Economic Cost	15.26	16.59	18.13	20.80	25.15	28.50	35.11	41.68
b. Wheat								
Procurement Incidentals	1.72	1.86	2.20	2.20	2.94	3.16	3.84	4.93
Distribution Cost	2.23	2.28	3.05	3.28	2.90	3.23	4.71	4.86
Economic Cost	11.86	12.33	13.85	17.61	19.56	21.41	25.62	29.49
II. Consumer Subsidy								
a. Rice								
- APL	4.90	4.14	5.66	9.92	10.90	10.27	24.34	30.54
- BPL	8.15	6.76	8.28	12.53	13.51	13.83	27.90	34.82
- AAY	-	9.65	11.16	15.42	16.40	17.39	31.46	37.65
b. Wheat								
- APL	3.46	5.49	6.99	9.95	13.48	20.31	18.79	21.30
- BPL	5.81	9.01	10.55	13.51	17.04	22.93	21.41	23.92
- AAY	-	12.56	14.10	17.07	20.60	25.81	24.30	26.81
III. Buffer Carrying Cost	3.26	3.88	4.57	5.42	5.51	6.50	5.99	7.04

Source: Economic Survey, 2006-07; 2009-10; 2010-11, 2017-18; and Ministry of Consumer Affairs, Food and Public Distribution, Government of India