

## The Effect of Agricultural Subsidy on Fiscal Management in

### Haryana

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#### Abstract:

Agricultural subsidy is considered very important for increasing agricultural production in an economy. Subsidy may be provided in many forms, including direct payments, loans, tax incentives, and price support. Agriculture subsidy is continuously increasing in Haryana. The power subsidy in agriculture sector has increased by around 20 percent from 2005 to 2019. A very large part of government expenditure is going towards agricultural subsidies. This study intends to examine the impact of agricultural subsidy on fiscal management in Haryana. Fiscal deficit, primary deficit and revenue deficit have increased due to increase in electricity subsidy. The study uses secondary data from annual reports of CAG finance reports of Haryana, Economic Survey, and Statistical Abstract of Haryana. Granger causality test has been used to find out the relationship between subsidy and fiscal deficit. The analysis suggests that in order to reduce the impact of agricultural subsidies on fiscal management, attention needs to be given only to the financially poor farmers. The system should be made transparent by the government. The power subsidy given to the farmers needs to be metered so that the magnitude of actual consumption and the subsidy can be estimated properly.

**Keywords:** Agriculture Subsidy, Power Subsidy, Fiscal Deficit, Revenue Deficit

**JEL Classification:** H2, H3, H6

#### Introduction:

Agriculture refers to the practice of cultivating land, raising crops, and rearing animals for the purpose of producing food, fiber, and other products necessary for human consumption or use. It is a broad field that encompasses a range of activities, including planting, harvesting, irrigation, pest control, animal husbandry, fishing, and sericulture. Agriculture is a crucial component of many societies and economies, providing food and raw materials for various industries and sustaining the livelihoods of millions of people around the world. Agricultural production is a very important for an economy in many ways as it generates employment, produces raw material for subsidiary industries, supplier of wage goods and contributes in external trade. The government gives agricultural subsidy to the farmers to promote agricultural production. Agriculture subsidy refers to a financial support system provided by the government to farmers or agricultural producers to reduce their costs of production and encourage the production of certain crops. In the context of Haryana, cropping pattern is not uniform. This lack of crop diversification has many types of negative effects like decrease in soil fertility, decrease in ground water level, etc. The government gives agricultural subsidies to farmers to increase the production of other crops so that these negative effects can be avoided. Many types of subsidies are included in agricultural subsidy. Power subsidy plays a very important role in agricultural

sector. Power subsidy is a form of financial assistance provided by the government to help reduce the cost of electricity for consumers, particularly in low-income households and in rural areas. All these types of subsidies have a huge impact on fiscal management. Fiscal management refers to the process of managing a government's revenue and expenditure to achieve its economic and social objectives. It involves the formulation and implementation of policies, procedures, and practices that help ensure that the government fiscal resources are used efficiently and effectively. Fiscal management includes various activities such as revenue collection, budgeting, expenditure management, debt management, and financial reporting. Providing subsidies to farmers is an expensive affair for the state which creates budgetary pressure for the government, potentially increasing the fiscal deficit. Agricultural subsidies have been a significant burden on India's fiscal deficit over the years. **Nayak (2015)** described the subsidies and fiscal deficit in post reforms India. Food, Fertilizer, and Petroleum three types of subsidy have been presented here. There has always been only one argument that the fiscal deficit increases only because of all these types of subsidies. Major subsidy trends have been explained in this research paper. Food subsidy has increased manifold from 1991-92 to 2012-13. The share of food subsidy in the total subsidy increased from 22.3 per cent to 33.7 per cent during the same period. Similarly, the share of fertilizer subsidy has also increased substantially.

#### Data and Methodology:

The study begins with examining the trends and growth rates of GSDP, agriculture subsidy, power subsidy and fiscal deficit. Time series data from 2005-06 to 2020-21 has been used for this study. GSDP, agriculture subsidy, power subsidy data has been taken from CAG Finance Report of Haryana, Economic Survey, and Statistical Abstract of Haryana. Fiscal deficit data has been collected from reserve bank of India. Granger causality test has been used to find out the relationship between subsidy and fiscal deficit.

**Table 1: GSDP, Agriculture and Power Subsidy and Fiscal Deficit in Haryana**

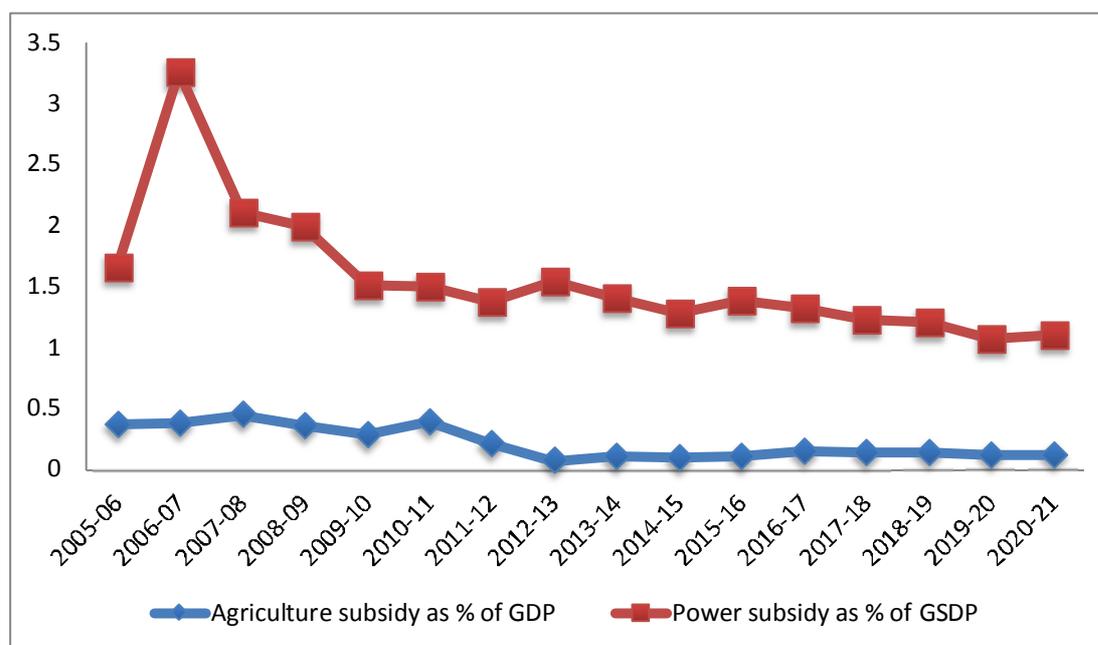
Years	GSDP (In crore of Rupees)	Agriculture Subsidy (In crore of Rupees)	Power subsidy (In crore of Rupees)	Fiscal deficit (In crore of Rupees)
2005-06	108461	408.63	1392.10	714
2006-07	130141	502.16	3759.34	1178
2007-08	154283	695.69	2568.36	1263
2008-09	182914	665.14	2998.65	6557
2009-10	223600	634.59	2770.28	10090
2010-11	265033	1054.01	2948.63	7258
2011-12	307605	674.42	3584.74	7153
2012-13	347032	272.67	5132.22	10361
2013-14	399268	426.08	5205.84	8313
2014-15	437144	415.61	5238.51	12586
2015-16	495504	558.8	6324.16	31479
2016-17	561424	880.16	6618.70	26290
2017-18	638832	939.89	7016.62	19115
2018-19	698939	999.62	7414.55	21912
2019-20	732194	934.51	7011.65	30519

2020-21	741850	944.32	7316.62	25682
<b>CAGR</b>	<b>14.14</b>	<b>3.87</b>	<b>9.76</b>	<b>25.15</b>

Sources: Annual report of CAG finance report of Haryana, volume 2

Table 1 examines the trends of GSDP, agriculture subsidy, power subsidy, and fiscal deficit in Haryana. Gross State Domestic Product (GSDP) is a measure of the total economic output produced within a state's geographical boundaries during a specific period. It is a key indicator of the economic performance and size of a state's economy. GSDP takes into account the value of all goods and services produced within the state, including agriculture, industry, and services sectors. The GSDP of Haryana is calculated by adding up the value of goods and services produced in the state across various sectors. Current price GSDP takes into account the value of goods and services produced in the state using the current year's prices, while constant price GSDP adjusts for inflation by using a base year's prices to remove the effects of price changes over time. GSDP was 108461 crores in 2005-06 and it has more than doubled to 223600 in 2009-10. The share of agriculture subsidy received by the agriculture sector also increased from 408.63 crores to 1054.01 crores in 2010-11. Power subsidy also increased more than two times from 2005-06 to 2009-10. Fiscal deficit increased from 1178 in 2006-07 to 10090 crore in 2009-10. The increase in GSDP has been continuous in a considerable amount. This increase was 495504 crores in 2015-16, which increased to 741850 crores in 2020-21. The agricultural subsidy has decreased slightly since 2010-11 but has increased again since 2014-15. It decreased again in 2019-20. There has been a steady increase in power subsidy since 2010-11 till 2018-19. Fiscal deficit decreased slightly in 2019-11 as compared to 2009-10 and again increased in 2012-13.

Diagram 1: Subsidy as percentage of GSDP

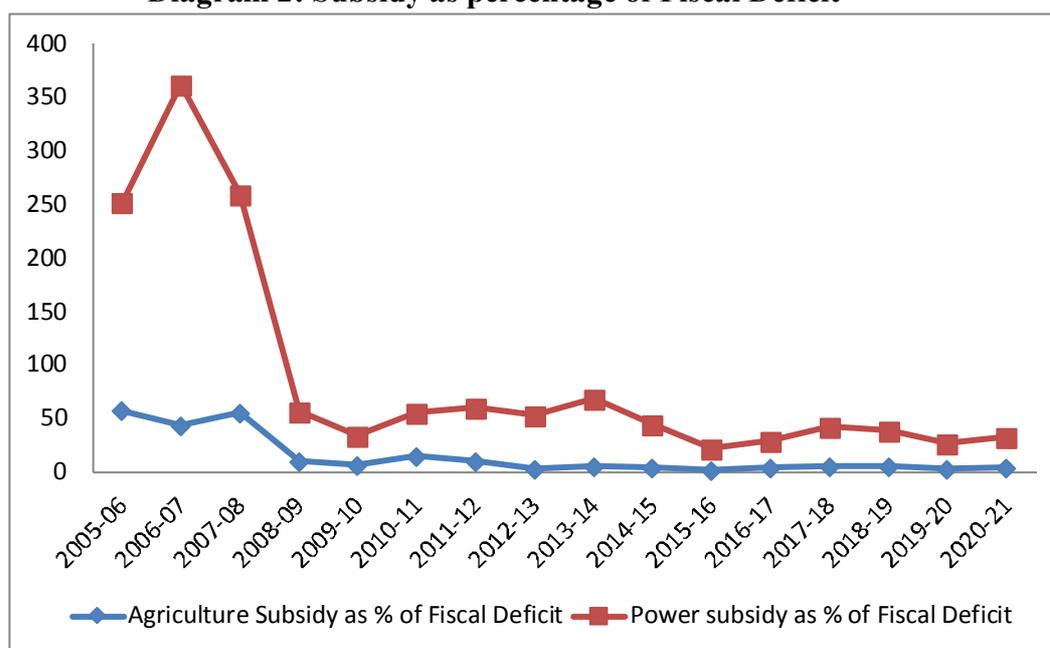


Sources: Annual report of CAG finance report of Haryana, volume 2

Diagram 1 shows agriculture subsidy and power subsidy as a percentage of GDP. In the year 2005-06, the share of agriculture subsidy in GSDP is 0.37 per cent and the share of power subsidy is 1.28 per cent. This share has increased to 0.45 per cent in 2007-08 and the share of power subsidy is 2.88 per cent. Thereafter it started declining and again increased by 0.4 per cent to 0.15 in 2016-17. In 2017-18 it again decreased by 0.2 per cent to 0.12 and power subsidy decreased to 0.98 per cent in comparison to 2017-18.

**Agricultural Subsidy as Percentage of Fiscal Deficit:** Fiscal deficit refers to the difference between a government's total expenditure and its total revenue (excluding borrowing) during a particular period, typically a fiscal year. It is an indicator of the amount of borrowing needed by the government to meet its expenses, and it reflects the extent to which the government's spending exceeds its revenue. Governments often borrow money to cover a fiscal deficit, which can result in an increase in public debt. The share of agriculture and power subsidy in Haryana's fiscal deficit is as follows:

**Diagram 2: Subsidy as percentage of Fiscal Deficit**



**Sources: Annual report of CAG finance report of Haryana, volume 2**

Figure 1 shows the percentage share of agricultural subsidy in the fiscal deficit in Haryana. In 2005-06 agriculture subsidy is 408.63 crores and power subsidy for agriculture sector is 1392.10 crores. It is shown in the table that in 2005-06, the share of agricultural subsidy is 57.14 per cent and the share of power subsidy is 194.95 per cent of the total fiscal deficit. In 2008-09, the share of agricultural subsidy in the fiscal deficit has decreased significantly to 10.14 per cent and the share of power subsidy has decreased to 45.72 per cent. As shown in the table, this share further

reduced to 1.77 per cent in 2015-16 and again increased to 3.06 per cent in 2019-20. The share of electricity subsidy has also reduced substantially to 22.97 per cent in 2019-20.

Pairwise Granger Causality Tests

Date: 07/15/23 Time: 12:19

Sample: 1 16

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
AGRICULTURE_SUBSIDY does not Granger Cause FISCAL_DEFICIT	14	0.02717	0.9733
FISCAL_DEFICIT does not Granger Cause AGRICULTURE_SUBSIDY		1.82199	0.2166

See the result, it is known that  $P > 0.5$ , (If  $P > 0.05$ , then accept  $H_0$ ) it means no causal relationship between agriculture subsidy and fiscal deficit (agriculture subsidy does not granger cause fiscal deficit). And again  $P < 0.05$ , then accept  $H_0$ , it means no causal relationship between fiscal deficit does not granger cause agriculture subsidy.

Pairwise Granger Causality Tests

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Sample: 1 16

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Null Hypothesis:	Obs	F-Statistic	Prob.
POWER_SUBSIDY does not Granger Cause FISCAL_DEFICIT	14	4.77626	0.0386
FISCAL_DEFICIT does not Granger Cause POWER_SUBSIDY		0.25959	0.7769

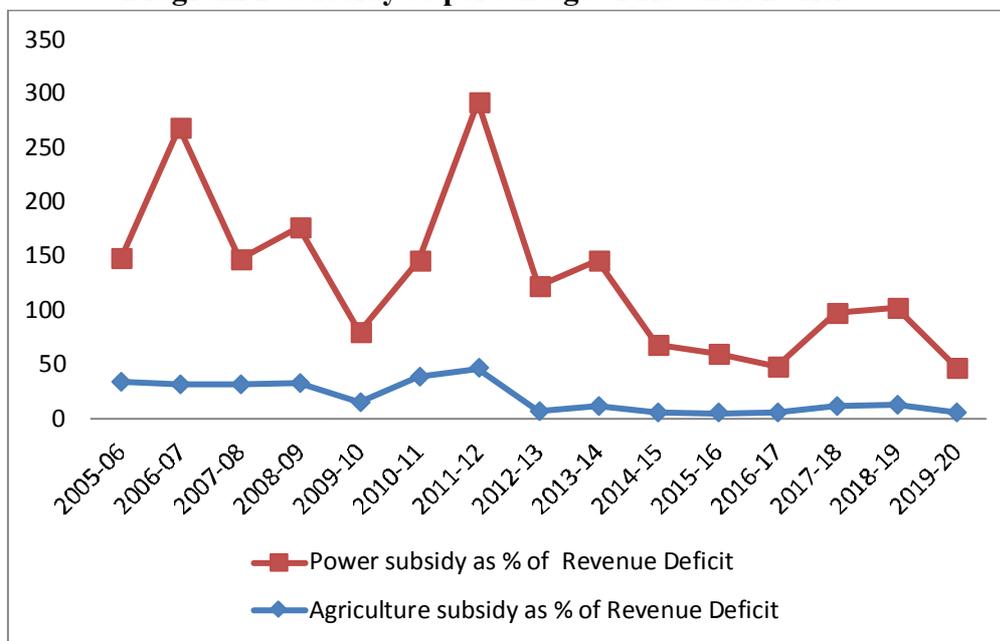
If  $P < 0.05$ , then reject  $H_0$  (it means causality exist). See the result,  $P < 0.05$  it means causal relationship between power subsidy and fiscal deficit (power subsidy does not granger cause fiscal deficit). And again  $P < 0.05$ , then accept  $H_0$ , it means no causal relationship between fiscal deficit does not granger cause power subsidy.

**Agricultural Subsidy as Percentage of Revenue Deficit:**

A revenue deficit occurs when a government's total revenue is less than its total expenditure, excluding borrowing. In other words, it is a situation where a government's operating expenses exceed its current revenue. A revenue deficit can arise due to various reasons, such as low tax revenues, high expenditure on subsidies or social welfare programs, or a decline in revenue from natural resources. Agriculture subsidies have been a major contributor to the revenue deficit in India. The Indian government has been providing subsidies to the agriculture sector for several decades in the form of subsidies on fertilizers, irrigation, seeds, and other inputs. While these subsidies have been instrumental in promoting agricultural production and improving the

livelihoods of farmers, they have also been a significant burden on the government's finances. The share of agriculture and power subsidy in Haryana's revenue deficit is as follows:

**Diagram 2: Subsidy as percentage of Revenue Deficit**



It is shown in figure 2 that in 2005-06, the share of agricultural subsidy in the revenue deficit was 33.63 per cent while the share of power subsidy was 114.75 per cent. In 2009-10, the share of agricultural subsidy in revenue deficit decreased to 14.86 per cent and the share of power subsidy decreased to 64.96 per cent. It increased again after 2009-10. And in 2012-13, it came down significantly to 6.12 per cent. In 2019-20, the share of agricultural subsidy has been 5.49 per cent and the share of power subsidy has been 89.92 per cent in the revenue deficit.

**Conclusion/ Suggestion:**

It is concluded from this study that there has been a huge increase in public debt due to agricultural subsidy. The power subsidy given to the agriculture sector has been kept separate from the agricultural subsidy as it forms a major share of the total agriculture subsidy. There is a lot of pressure on the government budgetary allocation of power subsidy. The increase in GSDP has been continuous in a considerable amount. This increase was 495504 crores in 2015-16, which increased to 741850 crores in 2020-21. The share of power subsidy in the fiscal deficit has been very high from 2005-06 to 2007-8. In 2008-09, the share of agricultural subsidy in the fiscal deficit has decreased significantly to 10.14 per cent and the share of power subsidy has decreased to 45.72 per cent. When the relation between subsidy and fiscal deficit is extracted using the granger causality test, it is found that the fiscal deficit is bigger due to power subsidy. The share of power subsidy in revenue deficit started decreasing from 2014-15 and it started increasing again in 2017-18. The expenditure on agriculture and allied activities as a percentage of total expenditure has increased from 13.9 per cent in 2015-16 to 16.6 per cent in 2020-21. The effectiveness of agricultural subsidies for fiscal management will depend on how they are implemented and managed. Farmers should be divided into different categories and those who

are most needful should be given a priority in allocating subsidy. Government should make the system transparent and on the basis of priority the facility of full metering should be there. In this way, the actual consumption of electricity and subsidy can be estimated properly. It is crucial to have a robust monitoring and evaluation system in place to assess the effectiveness and impact of subsidy programs. Regular evaluation can help identify any inefficiencies, leakages, or duplication of benefits. By monitoring and evaluating subsidy programs, the government can make informed decisions to optimize the allocation of resources and minimize fiscal strain. Therefore, in this way the financial burden of the government in the form of agricultural subsidy can be reduced.

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