



AN ANALYSIS OF INDIAN AGRICULTURE THROUGH PUBLIC EXPENDITURE

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ABSTRACT :

Based on percentage share of public expenditure made for agriculture, a key policy indicator of government's priority towards its development, the study discovers the amount to which the level and composition of public expenditures in the agricultural sector is dependable with national priorities. This study finds the trends in actual spending on agriculture and as a percentage of total government budgets. This paper also studies the budget allocated to agriculture and the actual spending on agriculture and also the trend in the spread between budgeted and actual expenditures. This paper also try to find the allocation (budgeted and actual) to primary commodity groups and Level and share of Public Expenditure and Investment for Agriculture and Allied Sectors during the last four five year plans and annual plans of the 12th five year plan. This paper find that the huge amount of reduction in public expenditure in many folds by the government in the agriculture sector in the last three years is a blunder on the part of government. This would reduce the performance of worst affected sector. India's agriculture growth and private investment in agriculture sector are complements to the public spending.



KEYWORDS : Public Expenditure, Agriculture and Allied Sectors, budgeted and actual expenditures, plan outlay, percentage share of public spending, private investment.

INTRODUCTION:

India has the 10th-largest arable land resources in the world. Out of the 20 agri-climatic regions in the world, 15 major climates exist in India. The country also enjoys 46 of the 60 soil forms in the world. India is the largest producer of pulses, milk, tea, spices, cashew and jute; and the second largest producer of fruits and vegetables, sugarcane, cotton, wheat, rice, and oilseeds. Further, India is the largest producer of mango and banana. In 2017-18 crop years, food grain production in India is estimated at record 284.83 million tonnes. During 2018-19, Government of India is targeting food grain production of 285.2 million tonnes. Production of horticulture crops is assessed at 306.82 million tonnes (mt) in 2017-18 according to third advance estimates. India is among the 15 leading exporters of agricultural products in the world.

Generally, it is a well-said fact that technology, investments, empowering institutions and policies have determined agricultural growth and poverty reduction. India's agricultural gross domestic product (GDP) and total factor productivity growth perceived impressive growth since the Green Revolution period resulting significant investments in public rural goods mainly agricultural research, infrastructure and irrigation. Through the decades of the 1970s and 1980s, agricultural GDP growth achieved new points as the growth stimulus spread into widespread areas with the speedy adoption of high-yielding varieties of seeds. However, this exciting overall growth performance could not be sustained for long and showed a

marked slowdown during the later years of the nineties till early years of the last decade. Several reasons were ascribed to this decline, ranging from deprivation of the land resources due to exhaustive cultivation, waning in public investment, upsurge in energy prices, unproductive markets etc. among others. Though, recovery of agricultural growth since 2004-05 was seen as a sign of optimism, but much of the recent growth has been spurred by price growth rather than productivity induced (Chand and Shinoj, 2012, BIRTHAL et al., 2014). Further, the optimism about catalytic effect of rising rural on-farm sector on agricultural incomes also seems to be fading, as a number of studies emphasized the fact that the growth of the rural non-farm sector is more of price induced rather than driven by agricultural growth (Jatav, 2010, Abraham, 2009, Ranjan, 2009, Himanshu, 2011). The weakening contribution of productivity and rising share of prices in agricultural growth may not be sustainable for long, and in fact, demands a balance between both price and non-price interferences so that all sections of the society are benefitted (Dev and Rao, 2010).

LITERATURE REVIEW

There is rich literature signifying that greater expenditure on rural public goods contributes strongly to agricultural growth across regions, even though with globally, it is a well-articulated fact that technology, investments, enabling institutions and policies have driven agricultural growth and poverty reduction. India's agricultural gross domestic product (GDP) and total factor productivity growth witnessed phenomenal growth since the Green Revolution period following significant investments in public rural goods especially agricultural research, infrastructure and irrigation. During the decades of the 1970s and 1980s, agricultural GDP growth attained new peaks as the growth stimulus spread into wider areas with the rapid adoption of high-yielding varieties of cereals. However, this impressive overall growth performance could not be sustained for long and showed a marked slowdown during the later years of the nineties till early years of the last decade.

Several reasons were attributed to this decline, ranging from degradation of the land resources due to intensive cultivation, decline in public investment, and rise in energy prices, inefficient markets etc. among others. Though, resurgence of agricultural growth since 2004-05 was seen as a sign of optimism, but much of the recent growth has been spurred by price growth rather than productivity induced (Chand and Shinoj, 2012, BIRTHAL et al., 2014). Further, the positivity about catalytic effect of rising rural non-farm sector on agricultural incomes also seems to be weakening, as a number of studies highlighted the fact that the growth of the rural non-farm sector is more of suffering induced rather than driven by agricultural growth (Jatav, 2010, Abraham, 2009, Ranjan, 2009, Himanshu, 2011). The declining contribution of productivity and rising share of prices in agricultural growth may not be sustainable for long, and in fact demands a balance between both price and non-price interventions so that all sections of the society are benefitted (Dev and Rao, 2010).

There is also literature suggesting that enhanced expenditure on rural public goods donates intensely to agricultural growth across regions, although with varying degrees; and within agriculture, expenditure on infrastructure and R&D sectors continue to be the utmost desirable way of growing farm profitability (Fan et al., 2007). Further, rural public goods are complementary to private on-farm investment; investing in rural public goods time and again enhances investments in the other by generating qualifying environment. Indications also shows that agricultural yield and poverty reduction are well-matched goals, with investments in rural public goods usually having high pay-offs for both (FAO, 2012). Accomplishing these goals will necessitate a substantial increase in agricultural spending, but more prominently, setting right precedence and efficiency in spending. In the light of the unending gap in performance of country's agricultural growth in relation to the targets set, questions are being raised about the scale, priorities and effectiveness of public expenditure for agriculture sector.

OBJECTIVE AND METHODOLOGY:

Based on percentage share of public expenditure made for agriculture, a key policy indicator of government's priority towards its development, the study discovers the amount to which the level and

composition of public expenditures in the agricultural sector is dependable with national priorities. The study finds the trends in actual spending on agriculture and as a percentage of total government budgets.

The paper also studies the budget allocated to agriculture and the actual spending on agriculture and also the trend in the spread between budgeted and actual expenditures. The paper also tries to find the allocation (budgeted and actual) to primary commodity groups and level and share of Public Expenditure and Investment for Agriculture and Allied Sectors during the last four five year plans and annual plans of the 12th five year plan. The all India Plan Outlays for public expenditure in Agriculture and Allied Activities, based on the above-mentioned definition, was estimated to have risen from \$42462 in the ninth five year plan to \$58933 in Tenth five year plan and the increase is 38.79% and to \$136381 in the eleventh five year plan and the increase is 131.42% and expected to \$363273 in the twelfth five year plan and expected 166.37% increase in expenditure (table 1). The all India actual public expenditure in Agriculture and Allied Activities was estimated to have risen from \$37239 in the ninth five year plan to \$60702 in Tenth five year plan and the increase is 63% and to \$163105 in the eleventh five year plan and the increase is 168.72%.

Percentage share of Agriculture and Allied Activities from plan outlay in the last four five-year plans have shown fluctuations. During the ninth plan alone the share is more at 4.90 percent compared to the following three consecutive plan periods. During the tenth, eleventh plans the share is less than the 4 percent mark. Even though the contribution of the Agriculture and Allied Activities out of plan outlay have shown impressive growth by increasing many folds, the Percentage share of Agriculture and Allied Activities from plan outlay has been discouraged by the government which means that the government had little scope of increasing the public expenditure on Agriculture and Allied Activities.

The actual expenditure on Agriculture and Allied Activities have also grown in the last four five year plans which is evident from table 1 showing an increase from 37239\$ in the ninth plan to 60702\$ in the tenth plan which is 63% increase and to 163105\$ in the eleventh plan which is 168% increase from the tenth plan. The percentage share of actual expenditure in Agriculture and Allied Activities also show that only half of the entire 20 years have shown 4 percent in the share of Agriculture and Allied Activities in actual expenditure. Tenth plan and twelfth plan show only 3.80 percent and 3.32 percent as a share of Agriculture and Allied Activities.

Growth rate of Agriculture and Allied Activities and growth rate of total plan outlay:

Growth rate of Agriculture and Allied Activities is 38.79 percent in the plan outlay whereas the growth rate of total plan outlay is 77.57% in plan outlay from ninth plan to tenth plan (table 1). Growth rate of actual expenditure in Agriculture and Allied Activities is 63% from ninth plan to tenth plan and the growth rate of total plan outlay from actual expenditure is 71.98 percent from ninth plan to tenth plan. It is evident from the above discussion that the growth rate of Agriculture and Allied Activities is less than the growth rate of total plan outlay in the tenth five year plan.

In the eleventh five year plan, growth rate of Agriculture and Allied Activities in the plan outlay is 131.42 percent and growth rate of total plan outlay is 138.9 percent and proved that again the growth rate of total plan outlay is more than growth rate of Agriculture and Allied Activities. The Agriculture and Allied Activities is neglected in the union plan expenditure. It is evidence from the growth rate of agriculture on actual expenditure has become more (168.70) compared to the growth rate of total plan actual expenditure of 127.18 percent in the eleventh five year plan.

In the twelfth plan, plan outlay for Agriculture and Allied Activities is 363273 \$ out of 7669807\$ which shows that 4.7 percent is the share of Agriculture and Allied Activities and the growth rate is 166.37 percent in actual plan of Agriculture and Allied Activities. The annual growth rate of twelfth five year plan is less than the five year plan allocation in the annual years of 2014-15, 2015-16 and 2016-17 which is 2.38, 2.02 and 2.74 percent respectively. The poor allocation in public expenditure in these three years has discouraged the agriculture sector even though the years 2012-13 and 2013-14 has witnessed more than 4

percent out of the total plan outlay. The impact of the last three five year of 12th five year plan has dragged the share of Agriculture and Allied Activities to less than 4 percent.

Planned and actual expenditure under Agriculture and Allied Activities:

Plan outlay is the planned expenditure which is having only the plan of the government whereas the actual expenditure is the actual spending incurred by the government. The actual expenditure is more important than the planned expenditure because the former is alone going to be the investment or spending happening in the real situation. If there is any significant gap between planned expenditure and actual expenditure it should be carefully monitored because of the reason that the gap may be due to serious implementation problems in the particular sector. It is well known fact that the agriculture sector is a deprived sector and feeble to changes in any of the factors that influence the sector. If the plan outlay is less than the actual expenditure incurred in the sector then the people involved in the sector, production in the agriculture and growth of the agriculture are all beaffected.

The plan outlay in the percentage share of Agriculture and Allied Activities is 4.7 percent, but the attainment of the actual expenditure is 4percent only in the 9th five year plan. In the 10th plan actual expenditure was 3.8 percent which is less than the plan outlay. In the 12th plan also the actual expenditure in 3.62percent as against the plan outlay of 4.7percent. out of the last 4 five year plans only the 11th plan have shown actual expenditure made is more than the plan outlay (table1).

Table 2 shows the plan outlay as the percentage share of Agriculture and Allied Activities from 2012-13 to 2016-17 has declined drastically from 4.53 percent to 2.74 percent and the actual expenditure as the percentage share of Agriculture and Allied Activities has declined more than the plan outlay from 5.4 percent to 1.88 percent. In the entire annual years of 12th five year plan, the plan outlay has not been spend to the full extent. In fact, in the last three years the performance of agriculture expenditure has been on the decline (table 2). The public expenditure in the year 2013-14 on agriculture and allied activities was 64098 \$, reduced to 11531\$in the year 2014-15. Almost four and a half times is the reduction in public expenditure on agriculture and allied activities. In the same year the total plan outlay has reduced from 1370936 \$ to 484533 \$ and the worst part of it is that the percentage share of agriculture and allied activities to total plan too has declined from 4.68% 4.38%. it is 50 percent decline in the year 14-15 from the previous year and there has been a declining trend in all the years after 2013-14 in plan outlay of agriculture and allied activities, total plan outlay and as a percentage share agriculture and allied activities. Hence the actual expenditure on agriculture and allied activities total plan outlay and as a percentage share agriculture and allied activities in the declining trend.

Policy implicationand conclusion:

Agriculture play a vital role in the development of people in villages. The total number of population involved in agriculture and allied activities is three fourth of the total population in india. It is imperative to uplift the poor agrarian to maintain equity and equality and reduce inequality which is more possible with public spending rather than private investment. If the government is not increasing its share of public expenditure on agriculture or make the public spending stagnate, then it will reduce income earning of the large section of people dependent on agriculture. It may further reduce their standard of living and remain below poverty. This will deter the government's objective of doubling of farmers income. The public spending on agriculture is spending to uplift poorer farmers, landless rural labours and hundreds of millions of workers living on the edge of low paying unorganized forms of employment with no social security. The huge amount of reduction in public expenditure in many folds by the government in the agriculture sector in the last three years is a blender on the part of government. This would reduce the performance of worst affected sector. India's agriculture growth and private investment in agriculture sector are complements to the public spending. Thus it is important to increase fiscal space for agriculture and increase spending on agriculture sector by both union and federal governments.

Table 1. Share of Public Sector Outlays and Expenditure under Agriculture and Allied Activities

| Five Year Plan | Agriculture and Allied Activities | | Total Plan Outlay | | % share of Agriculture and Allied Activities | | Growth rate of Agriculture and Allied Activities | | Growth rate of Total Plan Outlay | |
|--------------------------|-----------------------------------|--------------------|-------------------|--------------------|--|--------------------|--|--------------------|----------------------------------|--------------------|
| | Plan Outlays | Actual Expenditure | Plan Outlays | Actual Expenditure | Plan Outlays | Actual Expenditure | Plan Outlays | Actual Expenditure | Plan Outlays | Actual Expenditure |
| Ninth Plan (1997 - 2002) | 42462 | 37239 \$ | 859200 | 941041 \$ | 4.90 | 4.00 | - | - | -- | - |
| Tenth Plan (2002 -07) | 58933 | 60702 \$ | 1525639 | 1618460 \$ | 3.90 | 3.80 | 38.79 | 63.01 | 77.57 | 71.98 |
| Eleventh Plan (2007 -12) | 136381 | 163105 \$ | 3644718 | 3676936 \$ | 3.70 | 4.40 | 131.42 | 168.70 | 138.90 | 127.18 |
| Twelfth Plan (2012 -17)* | 363273 | NA | 7669807 | NA | 4.70 | 3.62 | 166.37 | NA | 110.44 | NA |

Source: Economic Survey and Budget Documents, Ministry of Finance

Growth rate: computed

Table 2. Share of Public Sector Outlays and Expenditure under Agriculture and Allied Activities

| Twelfth Plan (2012-17) | Agriculture and Allied Activities | | Total Plan Outlay | | % share of Agriculture and Allied Activities | |
|-------------------------|-----------------------------------|--------------------|-------------------|--------------------|--|--------------------|
| | Plan Outlays | Actual Expenditure | Plan Outlays | Actual Expenditure | Plan Outlays | Actual Expenditure |
| Annual Plan (2012-2013) | 56669 | 52521 | 1251715 | 971951 | 4.53 | 5.4 |
| Annual Plan (2013-2014) | 64098 | 61356(RE) | 1370936 | 1281022 | 4.68 | 4.79 |
| Annual Plan (2014-15) | 11531 | 9794.88 | 484532.5 | 420881.6 | 2.38 | 2.39 |
| Annual Plan (2015-16) | 11657 | 10942 | 578382 | 582707 | 2.02 | 1.88 |
| Annual Plan | 19394 | - | 706248 | - | - | - |

| | | | | | | |
|-----------|--------|---|---------|---|------|------|
| (2016-17) | | | | | | |
| total | 163349 | - | 4391813 | - | 3.40 | 3.62 |

Source: Economic Survey and Budget Documents, Ministry of Finance

REFERENCES:-

- Abraham, Vinoj (2009), "Employment Growth in Rural India: Distress driven?" *Economic and Political Bathla S* (2014) *Public and private capital formation and agricultural growth in india: state level Analysis of inter-linkages during pre- and post-reform periods. Agric Econ Res Rev* 27(1):19
- Bathla S (2016) *Water scarcity and public investment in irrigation: some reflections and way forward, Yozna. July 1, New Delhi*
- Birthal, P.S.; Pramod Kumar Joshi, Digvijay S. Negi and Shaily Agarwal (2014), *Changing Sources of Chand, R. and P. Shinoj* (2012), "Temporal and Spatial Variations in Agricultural Growth and Its Determinants", *Economic and Political Weekly, Vol.47, Nos.26a&27, June 30, pp.55-64*
- D.C., U.S.A. www.ers.usda.gov/Publications/EIB37/.
- Dev, S. Mahendra and N.C. Rao (2010), "Agricultural Price Policy, Farm Profitability and Food Security", *Economic and Political Weekly, Vol. 65, Nos. 26&27, June 26 – July 9, pp. 174-182.*
- Fan, S., A. Gulati, and S. Thorat (2007), *Investment, Subsidies, and Pro-poor Growth in Rural India, Discussion Paper 00716, International Food Policy Research Institute, Washington, D.C., U.S.A.*
- Food and Agriculture Organization (FAO) (2012), *The State of Food and Agriculture 2012: Investing in Agriculture for a Better Future, Italy, Rome.*
- Government of India (2011), *Mid-Term Appraisal Eleventh Five Year Plan 2007-2012, Planning Commission, New Delhi pp.473.*
- Growth in Indian Agriculture, *Discussion Paper 01325, International Food Policy Research Institute, Washington, D.C., U.S.A*
- Hans P. Binswanger-Mkhize (2010), *The Prospects for Indian Agriculture and Rural Poverty Reduction, Centennial Group, Draft Concept Paper Washington D.C., U.S.A.*
- Himanshu (2011), "Employment Trends in India: A Regional Examination", *Economic and Political Weekly, Vol.66, No.37, September 10, pp.43-59.*
- Households in India, (Jan-Dec 2013), (NSSO-K170/33/5), Ministry of Statistics and Programm Implementation, New Delhi*
- Jatav, M. (2010), "Casualization of Workforce in Rural Non-Farm Sector of India: A Regional Level Analysis across Industries", *The Indian Journal of Labour Economics, Vol. 53, No. 3, pp.501-16.*
- Landes, M.R. 2008, *the Environment for Agribusiness Investment in India, Economic Information Bulletin No. EIB-37, Economic Research Service, U.S. Department of Agriculture, Washington,*
- NSSO (National Sample Survey Organization) (2014), *Key Indicators of Situation of Agricultural*
- Pal, S., M. Rahija and N. Beintema (2012), *India: Recent Developments in Agricultural Research, ASTI Country Note, Agricultural Science and Technology Indicators, International Food Policy Research Policy Institute, Washington, D.C., U.S.A.*
- Pearson, M.; Y. Shin and R. Smith (2001), "Bounds Testing Approaches to the Analysis of Level Relationships", *Journal of Applied Econometrics, Vol.16, pp.289-326.*
- Pingali, P. (2011), *Agricultural Growth, Technology and Poverty Reduction in India, Golden Jubilee Lecture at the Division of Agricultural Economics, Indian Agricultural Research Institute, New Delhi*
- Ranjan, Sharad (2009), "Growth of Rural Non-Farm Employment in Uttar Pradesh: Reflections from Recent Data", *Economic and Political Weekly, Vol.44, No.4, January 24, pp.63-70.*
- Singh, Alka and Suresh Pal (2015), "Emerging Trends in the Public and Private Investment in Agricultural Research in India", *Agricultural Research, Vol.4, No.2, pp.121-131. Weekly, Vol.64, No.16, April 18, pp.97-104.*