

TRAJECTORIES OF INDIAN AGRARIAN SUB-SECTORS AND CHALLENGES AHEAD

¹Mr. Shekhar, ²Ms. Parul Verma, ³Dr. Niranjana Mehto

^{1,2}Research Scholar, ³Assistant Professor
Department of Economics

Babasaheb Bhimrao Ambedkar University, Lucknow, India

Abstract: The agrarian sector is an imperative sector of Indian Economy as it providing both employment and livelihood opportunities to more than 60 percent of the country's population who live in rural areas. Vision 2022 is an effort not to intensify the growth of agriculture sector only but also the development with particular attention towards farmers through accentuating and sustaining their income. Agriculture sector growth can be elevated through technology, irrigation, inputs and farmers concerning pricing policies but without public investment vision 2022 cannot be achievable. Datum divulges that Livestock, poultry, fisheries and horticulture are surging ahead in production growth in recent years and will have greater demand in the future. Therefore, the efficacious investment strategy is highly required in India from this comprehensive vision. The Present Paper explains the significance of dichotomy of dissection and scrutinizes the diversification in the agriculture sector in terms of its output and the adequate measures to bring this output in a proper distributional mechanism for assisting farmer's income in a sustained manner. Macro data has been utilized for interpretation. Furthermore, data is collected from public domain reports- agriculture census, national accounts statistics & Agriculture Statistics at Glance, Various Issues .

Keywords: Agriculture & allied sector, Public Investment, Farmers Income.

I. Introduction

Agrarian chrysalis has been a primary goal of India's efforts to ensure food security and reduce poverty. In pursuing this objective, the planning process in the country has initiated several pro-poor policies and reform measures in the agriculture sector to accelerate agricultural growth. As a major part of Indian populace lean on agrarian sector so the advancement in this sectoral division is a necessary condition for the development of Indian economy. Public measures directed at agricultural development have been focused on creating infrastructure, spreading adoption of modern inputs, increasing credit, enhancing irrigation facilities etc. These initiatives have a direct bearing on agricultural development. In recent years, the emphasis on having a more desirable composition of GDP growth by targeting an average 4 percent per annum growth in agriculture sector has found favor with the policymakers. The agricultural sector has been in the centre of public policy discourse particularly after the global food crisis witnessed in 2008. Earlier too, the policy debates dominated the concerns of significant deceleration of agricultural growth during the 1990s and the acute livelihood hardships of the farming communities and agricultural workers. Consequently, the Eleventh Five Year Plan (2007-2012) has placed heavy emphasis on agriculture and rural development.

II. Potential of Agrarian Sub-Sector

It is true that notwithstanding its potential the agro-economy and rural development, as analyzed by many economists agrarian sector have not achieved growth as expected for the betterment of farmers and rural advancement in India. But the budget 2017-18 is expected to be a game changer in more ways than one. This budget is an effort towards enhanced allocation and identifying right projects and drawing out a crystal clear roadmap will help look at the broad canvas of farm sector. The government has emphasized majorly to boost interrelated sector like horticulture and dairy sector as it has significantly increased allocation in the budget but livestock and fisheries are other major diversified sector originated from the agrarian division have lesser allocated funds in the budget. Agriculture (inclusive of animal husbandry, forestry and fishing) is central to the nutrition needs of India and also remains the largest sector of India's economy as a source of employment. According to the Fifth Annual Employment-Unemployment Survey of the Ministry Labour and Employment, 45.7% of India's workforce in 2014-15 was employed in agriculture. After two consecutive droughts, the sector has seen a turnaround in 2016-17. For the prosperity of a large section of India's workforce, it is essential that we sustain this turnaround. Unsurprisingly, the Prime Minister has set the goal of doubling farmers' income by 2022-23 over that in 2015-16. Achieving this goal would require significantly faster growth in nearly all variables that positively impact farmers' incomes. In the present time if any policies' outcome is not reached to farmers diametrically then the policy will be fully inefficacious. Therefore it is not an affair of maximum allocation of funds rather than the spread utilitarian effect of these policies towards Indian farmers. Practical reach and admittance is a necessary condition for their economic welfare today.

III. Review of Literature

Various economists believe that diversification has a skillful and worthy place in generating the income for farmers. Experiences from different developing countries corroborate the key role of diversification in agricultural development and sustainability (Petit and Barghouti, 1992; Pingali and resorgrant, 1995; Birthal et al., 2005; 2015; Singh at al., 2006) but many

researchers are sceptical about this view (Pretty, 1994; Hardakar, 1997) and believe that high diversification is a subterfuge of subsistence oriented farming systems (Morris and Winter, 1999) therefore in this context it is important to understand the effect of Diversification on production and productivity as they may or may not be always positively Correlated (Cochrane et al. 1994). In India the studies on agricultural diversification are mainly on regional bases due to diverse agricultural situations of the country most of these studies are concentrated on crop diversification due to prime weak agricultural synergy effect and this acts as a push effect on Indian farmers to shift their effort for generating the income source for sustainable livelihood.

The policy stanchion, the operation of upgraded production know-how and public investment in infrastructure, research and augmentation contributed to growth in the crops sub-sector. However, investment in agriculture declined throughout the nineties, leading to a slowdown in the agricultural growth especially in the late nineties. This led to deceleration in the growth of total factor productivity in the north-western region, especially in rice and wheat growing areas (Kumar *et al.*, 2004). In fact, investment in agricultural research, education and road development paid the highest returns to agricultural GDP and reduction in rural poverty (Fan, Gulati and Thorat, 2007). Recognizing the importance of investment and the continuous threat to the production and lowered factor productivity of rice and wheat prompted the government to take corrective measures to reverse such trends and conscious efforts have been made to raise investment in agriculture nevertheless the affirmative approach requires for Investment not only crop sector but also in its potential sub-sector in India.

IV. Agriculture diversification Scenario

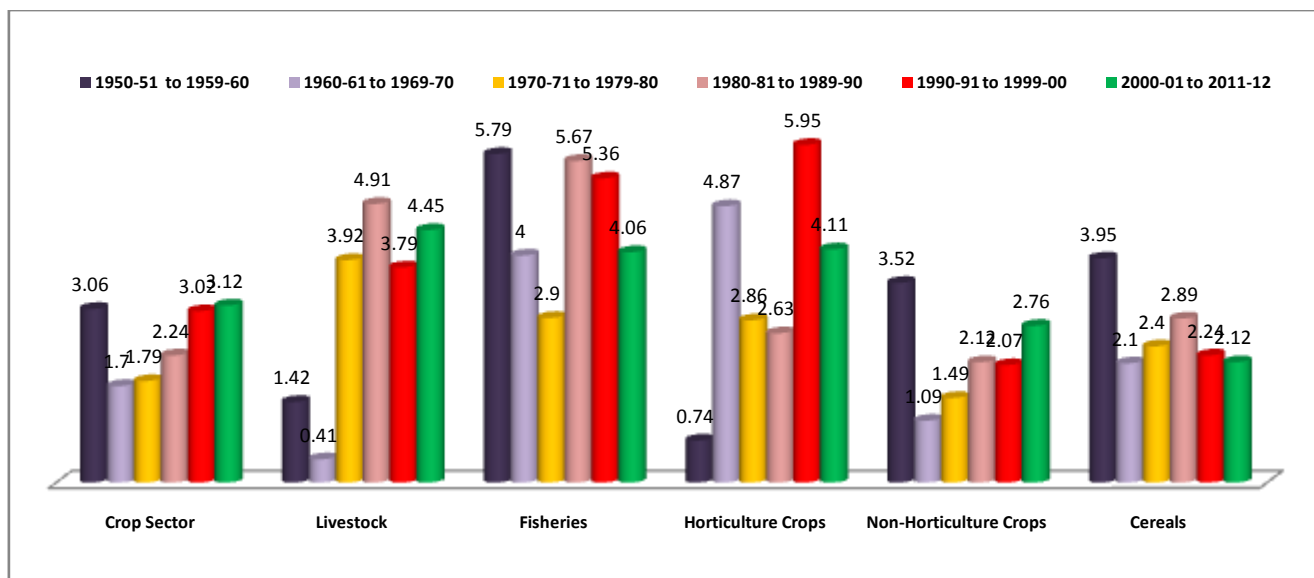
a) Livestock sector

The escalation in livestock sub-sector was unpretentious till 1970. It was 1.4 percent per annum in the fifties and as low as 0.4 percent per annum in the sixties. An incline in growth rate in livestock sector was registered in the seventies when it rose to 3.9 percent per annum. It has observed from table one that livestock sub-sector growth was always greater than crop sub-sector since 1970 and this was even during the heydays of green revolution (seventies and eighties) when the policy prominence was largely focused on the crop sub-sector. The acceleration continued in the eighties (4.9 percent) nevertheless it slowed down in the nineties and after 2000s. Even then, this sub-sector was able to retain a respectable growth rate close to 4 percent per annum. The remarkable performance of the livestock sector is attributed to effective government interventions, the success of the Anand Pattern Cooperatives, and rising demands for livestock products in response to rising incomes in urban and rural areas and growing urbanization. The ease-up of livestock markets with the ingress for the private sector in marketing and processing of livestock produce, improvement in veterinary services, trade-friendly policies (esp. buffalo meat), underlined the improvement in quality and hygiene of the livestock produces etc. gave further fillip to this sub-sector. Future increases in per capita income and changing consumption patterns would lead to still more demand for livestock products which would give a further boost to this sector.

Table: 1 Average Annual Growth Rate in Output for Diversified Sectors of Agriculture (At 1990-00 Prices)

Period	Crop Sector	Livestock	Fisheries	Horticulture Crops	Non-Horticulture Crops	Cereals
1950-51 to 1959-60	3.06	1.42	5.79	0.74	3.52	3.95
1960-61 to 1969-70	1.7	0.41	4	4.87	1.09	2.1
1970-71 to 1979-80	1.79	3.92	2.9	2.86	1.49	2.4
1980-81 to 1989-90	2.24	4.91	5.67	2.63	2.12	2.89
1990-91 to 1999-00	3.02	3.79	5.36	5.95	2.07	2.24
2000-01 to 2011-12	3.12	4.45	4.06	4.11	2.76	2.12

Source: NAS, GOI



b) Fisheries

Fish sub-division has been recognized as a promising source of augmenting income, generating employment and improving nutrition. It is also an important source of livelihood for a large section of the economically backward population. With the changing consumption patterns, emerging market forces and technological developments, it has assumed added importance. On the whole, the growth of the fisheries sub-sector in India has been remarkable; the growth rate of more than 5 percent per annum in the eighties and nineties and is attributed to the rapid development of aquaculture. This sub-sector is still registering an annual growth rate of more than 4 percent per annum. Fish sector is performing remarkably in the context of India's agricultural growth.

V. Changing Contribution of Different Commodities to Agricultural Growth in India

Harvested yields are the major elements of agricultural economy and the functioning of the agrarian division has been traditionally dependent on the operations of crops sub-sector. In spite of this, the contribution of crop sub-sector has been deteriorating strenuously in the agricultural growth from about 79 percent during the 1970s to 60 percent during the 2000s. The contribution of livestock grew almost three times and it accounted for more than one-third of the agricultural growth. Within crops, the share of cereals has gone down from 43 percent in the green revolution period to merely 13 percent in the recent decades. The main source of growth in the crops sector is the horticultural crops. It accounted for 47 percent of the growth in the value of output from crops sector. Among cereals, maize and cotton are the exceptions and their contributions to the agricultural growth have been increasing. Diversification towards high-value agrarian produce has been discerned to be a balanced and viable source of growth, which provides an opportunity to smallholders to enhance their income and enable them to escape poverty (BIRTHAL *et al.* 2014)

Amid livestock products, milk and milk products are the major items. However, this sub-sector seems to be multifarious actively and the contribution of meat, poultry and eggs has been up surging in the growth of this sector. Their involvement influence in the growth of this sub-sector increased from about 3 percent during the 1950s to about 30 percent during 2000-11s. Similarly, in fisheries, the inland fisheries have risen as the source of fisheries growth. Its contribution to fisheries growth was about 31 percent during 1960s and 1970s, and now accounting for 83 percent of the fisheries growth during 2000-11.

VI. Regional Drifts: Appearance of New Sources of Agrarian Growth in India

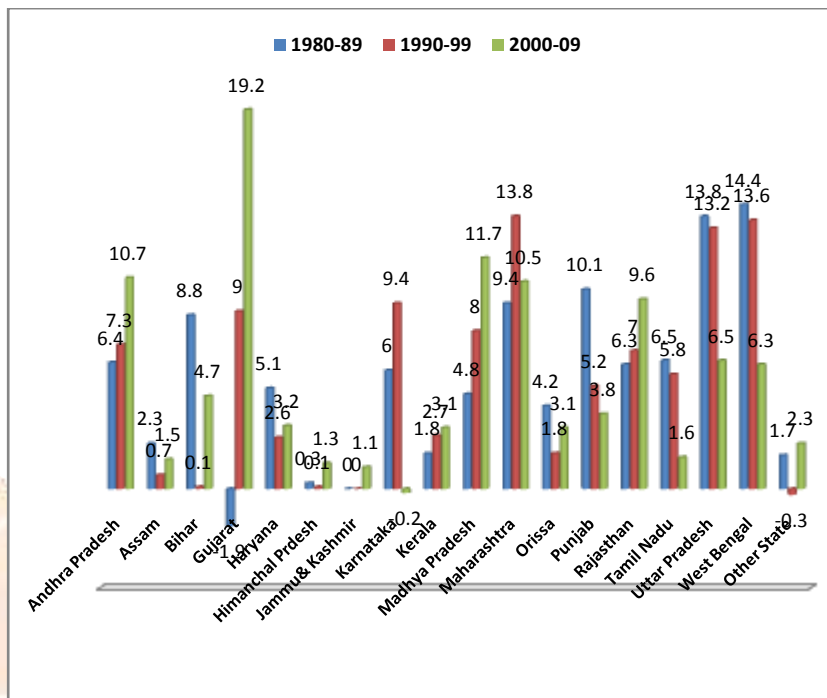
By means of these national trends, there are wide inter-state variations. The ranking of various states based on the productivity witnessed noteworthy changes during this period because of discrepancies in the growth rate of Net State Domestic Product of agriculture. The growth has perceived by different states varies widely. The incisive variations of agricultural growth across states seem to have altered the regional growth sources of Indian agriculture.

Throughout eighties West Bengal (14.4 percent), Uttar Pradesh (13.8 percent), Punjab (10.1 percent), Maharashtra (9.4 percent), Bihar (8.8 percent), Tamil Nadu (6.5 percent) and Andhra Pradesh (6.4 percent) were the main contributors to agricultural growth in India. They together accounted for about 70 percent of the growth in Indian agriculture during the 1980s. During the 1990s, Maharashtra emerged as the biggest contributor to national agricultural growth with 13.8 percent contribution, closely followed by Uttar Pradesh (13.6 percent) and West Bengal (13.2 percent). Two states, low in agricultural productivity per ha, Gujarat and Rajasthan, emerged as the major contributors to agricultural growth during the 1990s and each contributed 9 and 7 percent, respectively. Madhya Pradesh is another state whose contribution to growth in Indian agriculture increased considerably from 4.8 percent during 1980s to 8 percent during 1990s. The contribution from Andhra Pradesh also increased slightly from 6.4 percent

during 1980s to 7.3 percent during 1990s. The contribution of Bihar in the growth of Indian agriculture during the 1990s was nil. The subsequent decade witnessed Gujarat emerged as the biggest source of national agricultural growth. It contributed about 20 percent of the national average growth of agriculture. The contribution from Madhya Pradesh further accelerated and reached to 11.7 percent. Bihar also emerged as one of the major contributor to the national agricultural growth and it contributed about 5 percent to the agricultural growth in India during the 2000s. Even though, the contribution from Uttar Pradesh and West Bengal declined substantially during this period.

Table: 2 Growth Rate of State Contribution in Agriculture GDP of India

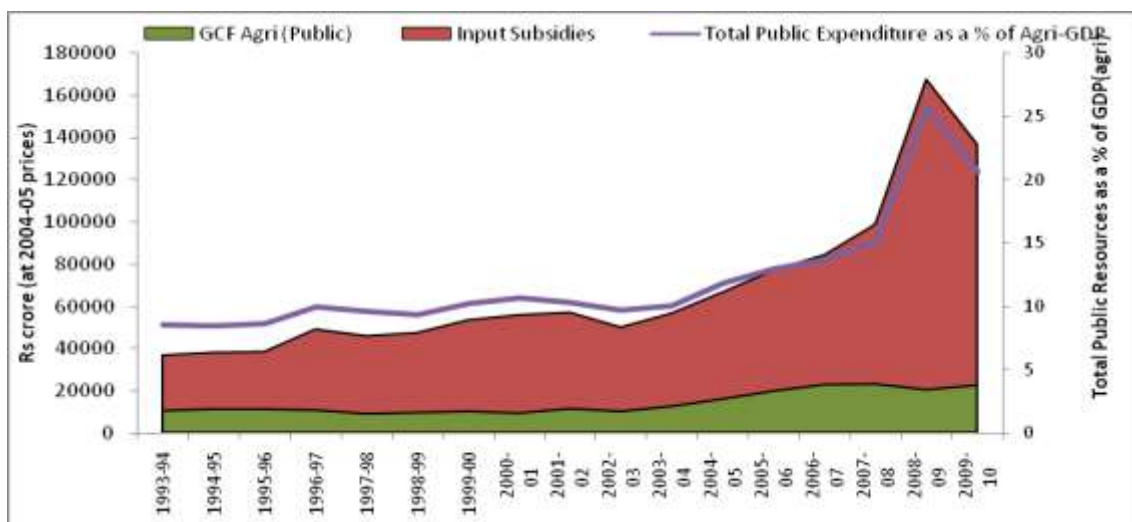
State	1980-89	1990-99	2000-09
Andhra Pradesh	6.4	7.3	10.7
Assam	2.3	0.7	1.5
Bihar	8.8	0.1	4.7
Gujarat	-1.9	9	19.2
Haryana	5.1	2.6	3.2
Himachal Pradesh	0.3	0.1	1.3
Jammu & Kashmir	0	0	1.1
Karnataka	6	9.4	-0.2
Kerala	1.8	2.7	3.1
Madhya Pradesh	4.8	8	11.7
Maharashtra	9.4	13.8	10.5
Orissa	4.2	1.8	3.1
Punjab	10.1	5.2	3.8
Rajasthan	6.3	7	9.6
Tamil Nadu	6.5	5.8	1.6
Uttar Pradesh	13.8	13.2	6.5
West Bengal	14.4	13.6	6.3
Other State	1.7	-0.3	2.3



Source: NAS, GOI

VII. Challenges ahead in Agrarian Sub-Sectors

Public Expenditure on Agriculture- Public expenditure on agriculture primarily comprises of public investment & input subsidies in order to augment the growth of agriculture sector in India. Subsidies contains huge amount of expenditure from government to this sector. moreover, three major input subsidies have been prevailing in Indian economy are (a) *irrigation subsidy* given by charging user cost below the expenditure on the operation and maintenance of base irrigation; and (b) *fertilizer subsidy* covers prearrangements at retail prices lesser than the cost of accessing or importing fertilizers and third is *power subsidy* through handler expenses that are lower than the cost of supplying power. Furthermore, other subsidies provided in terms of *credit subsidy* through an interest subsidy on credit or loan acquired from financial organizations; subsidy on yield insurance and subvention for sales of seeds. A prime ratio of these funding is reported by fertilizer subsidy which has flaunted increasing trend in recent years. Fertilizer subsidy has inclined by around five times in the last ten years from Rs 12,595 crore in 2001-02 to Rs 67,971 crore in 2013-14 (RE) at current prices. However, as a ratio of GDP to Agril, has up surged from 2.6 per cent to 3.5 per cent during the same period.

Table: 3 Composition of Public Expenditure on Agriculture

Source: GOI, Agriculture Statistics at Glance, Various Issues

Additionally, there has been a veiled element of carryover of liabilities in these estimates to the tune of more than Rs 30,000 crore in 2013-14 as per the Fertilizer Association of India. Fertilizer subsidy has been inclined due to increased consumption of fertilizers which has been widely come across through imports, sharp incline in prices of finished fertilizers & their inputs in the international market but stable domestic farm fertilizer prices particularly in instance of urea. It remarked clear sign that this subsidy has led to uneven usage of N, P and K in states like Punjab and Haryana which has deteriorated soil conditions and raised questions on the environmental sustainability. Furthermore, food subsidy is provided for making food (mainly wheat & rice) available at affordable prices to a large section of the population. It represents the basic direct cost incurred by the central government on procurement. During the last few years, food subvention has expanded by more than ten times from Rs 17,494 crore in 2001-02 to Rs 92,000 crore in 2013-14 (RE) at current prices. It is expected to rise further with the extension of National Food Security Act, 2013 in India. On the other hand, food and fertilizer subsidies accounted for disbursement of more than Rs 1.5 lakh crore in 2013-14. In contrast, public investment in Agril-division was around Rs 22, 000 crore -only one-fourth of this. This evidently clears imbalance between use of subsidies & investments as policy instruments for agrarian growth and poverty alleviation. This imbalance also flaunts policy weakening in making sub-sectoral investment in agriculture. As the fraction of public expenditure in terms of agricultural public investment are very low in relation to expenditure incurred on subsidies by central government, hence allied & subsectors of agrarian division has been suffering from optimum investment. It necessitate to be importunately corrected especially when the marginal returns from expenditure on subsidies is much less than that on investments. Thus, it appears that there are sufficient public resources going to agriculture nevertheless, misery lies in the structure of that expenditure as Indian agriculture receives public means more in the form of subsidies than public investments. Around 80 per cent is in the form of subsidies and only 20 per cent is investment in agriculture. High agricultural input subsidies result in inefficient resource allocation, crowding out of public sector investment and degradation of the environment and thus, affecting the agricultural productivity. Therefore, above discussion explicates that agrarian economy has been confronting a great challenge in order to synergize the growth of subsector with an appropriate public investment rather than subsidy.

VIII. Concluding Remarks & Suggestions

The territorial conjunction of agriculture is another dimension, which needs serious attention of the policymakers. This is compelled partly by the diversity in the production potential and extensive cultivation in marginal areas, and partly by policy priority promoting food production apart from of technical or pecuniary effectiveness. In order to bring viability and practicability in the agrarian division, significant attention requires not only towards mechanical effectiveness but also towards dimensions of diversification at a wider level among all the states. Thus, only the farmer's income generating capacity would be increased manifold in future. Niti Ayog mission of doubling farmers' income and its agendas in annual action plan also emphasizes on diversification but there is a need to make optimal adjustment & coordination between policy perspective and their implementation perspective as Indian Agril sector has been confronting a great challenge in order to synergize the growth of subsector with an appropriate public investment rather than subsidy.

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