GROWTH TRENDS OF AGRICULTURE IN INDIA

Sukhvinder[1]Munesh Kumar[2]

Abstract:

This paper analyse the dis-aggregate level investigation for Indian states in terms of their agriculture performance dimensions. Theoretically, the agriculture growth has crucial role for economic growth and development of a nation. The previous experiences of today's developed countries show that the structural changes exits in order of shift from agriculture to industry and then to services. The change possesses the economy moving towards under development to high development.[3] However, the structural composition of India has witnessed a different path than that of developed countries as the economy has prevalence of agriculture sector but shifted very fast to the services sector in its growth journey. The share of the primary sector in GDP at factor cost declined from 55 per cent in 1950-51 to 28 per cent in 1999-00.

Introduction:

Agriculture sector plays a vital role in Indian economy as it absorbs around 50 percent population of India and contributes 13 percent of total GDP of the country.[4] Vast numbers of studies have discussed the dynamics of Indian agriculture sector at India level; however fewer attempts have been made for understanding the agriculture advancements across states. Present paper extends the existing literature in terms of understanding the agricultural advancements in Indian states. For this purpose, study refers extensive literature and accordingly selected dimensions to measure the performance of agriculture sector for Indian states. The agriculture performance measuring dimensions include agriculture composition in output, cropping intensity and agriculture productivity. The detailed indicators are analysed for wide span of period ranging from 2000-15.

Review of literature:

Lehman and Wohlrabe (2013)[1] examined the possibility of forecasting gross value-added (GVA) at regional level in German State Saxony. The study illuminated that sectorial disaggregated forecasts using Regional indicators are more accurate for short term predictions whereas direct forecasts using National and International indicators are valuable for medium and long term predictions. Kapoor (2014)[2] highlighted the

[1] Research Scholar, HSB, GJUS&T, Hisar
[2] Research Scholar, HSB, GJUS&T, Hisar
[3] T.S. Papola (December 27-29, 2005), Emerging Structure Of Indian Economy Implications of Growing Inter-sectoral Imbalances, Presidential Address, 88th Conference of The Indian Economic Association

[4] Planning commission data book & economic survey 2015-16

gulf between changing sectorial distribution of Gross Domestic Product and distribution pattern of labour force. The research also revealed the limited contribution of organized manufacturing sector to the employment generation for unskilled workers in the economy. Besides this, the study stated that infrastructural bottlenecks, imposition of inflexible market policies by Central and State Governments had adversely influenced the growth in India's organized manufacturing sector.

Keeping in view the previous studies it can be said that the gross value addition is an important factor which can be used to determine the growth of an economy; but, current study will be an attempt in this direction to extend the agriculture performance on the various important dimensions.

Objectives:

The study aims to compare the agriculture performance by different dimensions namely; contribution of Agriculture Sector across States, cropping Intensity and food grain productivity in Indian States during the year 2000- 15.

Research Methodology:

Study is based on the secondary data related to various dimensions of agriculture performance of Indian states for the period 2000 to 2015. Data has been taken from the handbook of the RBI related to the Indian economy for the above mentioned period. Trend or growth in the share of agriculture sector to the total gross value added of Indian economy, has been shown using tables.

1. **Contribution of Agriculture Sector across States**

In the list of performance indicator, the first is indicating the composition of agriculture in overall output of the state economy. In this dimension, the states namely Punjab, Uttar Pradesh, Bihar and Haryana are found for relatively higher agriculture contribution. The shares of agriculture sector in these states rise up 34 per cent, 32, 31 and 26 per cent, respectively during 2000-04 (Table 1). Whereas in the same period, the contribution of agriculture sector in states viz. Goa, Tamil Nadu, Maharashtra and Gujarat remained to the tune of 8 per cent, 12, 13 and 14 per cent, respectively, much below the national level of 23 per cent. During the period of 2004-08, the agriculture contribution has declined for most of states except Gujarat. The highest fall in shares (around 4-5 per cent in shares) is observed for states Bihar, Haryana, Karnataka, Orissa and Uttar Pradesh. AP and MP have experienced a marginal dip in agriculture contribution, whereas Gujarat has noticed the slight up in the shares during 2004-08. The fall in agriculture share continued in 2012-15 also, but the fall has remained marginal. However Gujarat's agriculture sector has shown an increase of about 2 per cent in the output composition. During 2012-15, the states i.e. Gujarat, Jharkhand, Karnataka, UP and WB has noticed an upsurge in the agriculture contribution compared to the previous period 2008-12. The sectorial contribution in MP has increased whopping to 31 per cent compared to the previous level of 22 per cent. In the same period, the states likewise Goa, Kerala, Maharashtra and TN have recorded for

lower agriculture contribution as compared to the national average level. The above analysis suggests that most of Indian states except MP have experienced a gradual shift from the agriculture sector in their sectorial composition.

Table 1: Contribution of Agriculture Sector across States (% Share in GSDP)

States	2000-04	2004-08	2008-12	2012-15
Andhra Pradesh	23.53	22.41	22.98	22.95
Bihar	31.61	25.64	23.67	21.86
Chhattisgarh	18.83	15.51	15.33	16.35
Goa	7.17	5.00	3.20	3.23
Gujarat	14.31	14.48	16.01	16.99
Haryana	26.18	21.09	20.37	18.93
Jharkhand	15.58	12.06	12.88	14.77
Karnataka	21.74	15.39	13.94	14.19
Kerala	15.24	13.58	12.30	11.23
Madhya Pradesh	24.77	23.72	22.86	30.75
Maharashtra	13.61	8.66	8.84	8.25
Orissa	24.22	18.80	16.45	16.09
Punjab	33.61	30.30	28.64	25.98
Rajasthan	25.89	21.16	22.31	24.88
Tamil Nadu	12.43	9.92	11.17	10.17
Uttar Pradesh	31.91	25.42	25.99	26.45
West Bengal	22.65	18.83	18.34	18.65
All India	**22.47**	**17.91**	**16.84**	**17.27**

Source: Compiled from Handbook of Statistics on the Indian States, 2016-17

2. Cropping Intensity Pattern in Indian States

In continuance, another indicator for agriculture development is the cropping intensity. It is the ratio between total cropped area and actual net cultivated area expressed in percentage. This indicator explains the productive capacity in terms of utilization of land for agriculture purposes. Higher the cropping intensity implies higher portion of net area is being cultivated or larger number of crops being raised from one particular field in an agricultural year. In this dimension, the states such as Punjab, WB and Haryana have relatively high cropping intensity during 2000-04 with the figures of 187, 175 and 161 per cents, respectively. For the same period, cropping intensity has been on much lower side for states- Gujarat (113%), Chhattisgarh (116%), Jharkhand, Karnataka and TN (117% for each) as compared to the national average cropping intensity (133%). For the period 2004-08, the cropping intensity of Haryana (182) has increased substantially and coincided with that of Punjab (188). Only three states such as Jharkhand, Bihar and Tamil Nadu have reported a fall in cropping intensity during the period 2004-08, whereas all other states could register the upwards move in the indicator. During 2008-12, Orissa and Kerala have reported substantial fall in the cropping intensity (to the rate of 30 and 9 per cent) as compared to their levels of previous period. The pattern of rising cropping intensity continued for majority of states during 2012-15

except Orissa (Table 2). In fact the state has lost the agriculture pie sharply in the recent past period compared to the period of early years of 21st century. In sum there is dominance of Haryana, Punjab, MP, TN and WB in the cropping intensity pattern.

Table: 2: Cropping Intensity across Indian States (%)

States	2000-04	2004-08	2008-12	2012-15
Andhra Pradesh	122	124	126	124
Bihar	139	135	138	145
Chhattisgarh	116	121	120	122
Goa	119	126	123	122
Gujarat	113	119	117	123
Haryana	161	181	182	184
Jharkhand	117	110	113	117
Karnataka	117	123	123	122
Kerala	136	138	129	128
Madhya Pradesh	127	135	144	154
Maharashtra	123	129	130	132
Orissa	143	157	127	115
Punjab	186	188	190	190
Rajasthan	123	129	134	139
Tamil Nadu	117	115	116	121
Uttar Pradesh	150	153	154	157
West Bengal	175	181	181	183
All India	**133**	**137**	**138**	**141**

Source: Compiled from Handbook of Statistics on the Indian States, 2016-17,

3. Food-grains Productivity in Indian States

In fact the advancement of agriculture sector can be well explained by the productivity gains in the agriculture sector. It can account for the impacts of technological developments in the agriculture fields as well as the improvement in package of practices utilized for agricultural produce. The productivity is proxies through the food grain production per hectare (FGPPH). In the early periods of 21st century, i.e. 2000-04, Punjab has reported the highest food grain productivity (3957 kg) followed by Haryana (3090 kg), Goa (2442 kg) and West Bengal (2363 kg) (Table 4.4). It is noticeable that Goa has remained on low pitch for other agriculture performance indicators but secured third rank in productivity. However the food-grain productivity has remained on lower side for states Chhattisgarh, Jharkhand, MP, Maharashtra and Orissa. The hierarchy for food-grain productivity across states have remained similar; however some states likewise Chhattisgarh, Gujarat, Jharkhand and MP have improved the productivity very sharply over the period of time.

Table 3: Food Grain Productivity (Production per hectare in kg)

States	2000-04	2004-08	2008-12	2012-15
Andhra Pradesh	1974	2337	2542	2570
Bihar	1632	1426	1718	2116
Chhattisgarh	897	1119	1214	1501
Goa	2442	2328	2189	2522
Gujarat	1246	1554	1718	2027
Haryana	3090	3238	3544	3657
Jharkhand	1209	1392	1526	1879
Karnataka	1132	1500	1586	1716
Kerala	2070	2262	2501	2633
Madhya Pradesh	1071	1124	1281	1712
Maharashtra	834	969	1095	1078
Orissa	1098	1373	1374	1652
Punjab	3957	4075	4255	4300
Rajasthan	1036	1057	1198	1448
Tamil Nadu	1955	2114	2564	2468
Uttar Pradesh	2114	2070	2371	2333
West Bengal	2363	2485	2565	2712
All India	**1656**	**1746**	**1929**	**2092**

Source: Compiled from Handbook of Statistics on the Indian States, 2016-17,

Conclusion:

In sum, states namely Punjab, Haryana, AP, TN, WB and MP have better development in agriculture sector. However, states such as Maharashtra, Goa and Orissa lacks in agricultural development and required policies to bring their agriculture sector at par to other states.

References:

1. Lehmann, Robert and Klaus Wohlrabe (2013), "Forecasting Gross Value-added at the Regional Level: Are Sectoral Disaggregated Predictions Superior to Direct Ones?", *Leibniz Institute for Economic Research*, University of Munich, December 2013, September 2014, pp. 1-22.
2. Kapoor, Radhicka (2014), "Creating Jobs in India's Organised Manufacturing Sector", *Indian Council for Research on International Economic Relations*, CRIER, September 2014, pp. 1-34.