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REGIONAL AGRICULTURAL DEVELOPMENT: A CASE STUDY OF PUNJAB AND HARYANA

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ABSTRACT

Strong agricultural base is prerequisite for the strong economic development of a country so is the case for the economic development of India. Punjab and Haryana occupy an extremely important place in agriculture in India. Both of these two states are regarded as the Breadbasket of India and have contributed substantially to the country's food security. However, both face some major challenges which require some reorientation of priorities and new development strategies. Haryana which was initially at a lower level of economic development picked up subsequently. Now, a stage appears to have reached where Haryana's per capita income compares favorably with that of Punjab. Agricultural development has taken at a very fast rate in Punjab and Haryana especially after the mid-sixties due to Green Revolution.. Haryana economy witnessed a very healthy annual real growth of 9.1%, as compared to 6.7% of Punjab and 7.9% of India during 11th Plan (2007-12). In 2012-13, the growth of real Gross State Domestic Product (GSDP) of Punjab was 5.2% only as compared to 7.1% of Haryana. There has been a relative deceleration in Punjab economy. During 1966-2013, the contribution of primary sector in GSDP of Punjab and Haryana went down from 58% to 21.8%, and 56.6% to 16%, respectively. Among all States the maximum growth in the workforce took place in the State of Haryana (2.83 percent) followed by the State of Punjab (2.53 per cent). Farm employment in Haryana has improved significantly in contrast with that in Punjab, but there are regional disparities in farm income in Haryana. Punjab once one of the richest Indian States, is now fast becoming poor amid economic challenges like shrinking land holdings, migration and the absence of big industries. On the other hand Haryana today is one of the fastest growing economies in the country. Experts ascribe the slow growth in Per Capita Income in Punjab to sluggishness in the agriculture sector.

Keywords: Economic development, Punjab, Haryana, NSDP, Primary Sector, CGR.

1. INTRODUCTION

Strong Agricultural base is normally regarded as a prerequisite for the economic development of a country. Agriculture growth was the precursor to the acceleration of industrial growth, very much in the way agricultural revolution predates the industrial revolution that spread across the temperate world from England in the mid 18th century to Japan in the late 19th century (World Development Report, 2008). In case of India, more than half a century of planned economic development and high levels of aggregate growth over the last two Periods, the Indian Economy still remains predominantly rural (Indian Development Report, 2008). Indian agriculture has progressed a long way from an era of frequent droughts and vulnerability to food shortages during 1960's to becoming a significant exporter of agricultural commodities. A particular disturbing aspect of economic performance over the several years is that agriculture growth has decelerated after the mid 1990s. The pace of agricultural growth in the eastern and north-eastern regions has been



slower than in the rest of the country. The contribution of the agriculture in GSDP varies from 0.53% in Delhi to 29.75% in Punjab.(PHD Research Bureau, 2011). .The good prospects of production in many crops in these parts of the country should quickly be taken advantage of in the years to come. Though India is one of the leading producers in the world of many major crops like paddy, wheat, pulses, sugarcane, spices, and plantation crops, the comparison in terms of yield levels is not creditable with it achieving a much lower rank in many of these crops. Punjab and Haryana occupy an extremely important place in Agriculture in India. Both of these two States are regarded as the Breadbasket of India and have contributed substantially to the country's food security. However, both face some major challenges which require some reorientation of priorities and new development strategies. On First November 1966, the Indian part of Punjab was trifurcated, leading to the formation of Haryana and Himachal Pradesh on linguistic lines. Haryana emerged on the map of India as a separate state, carved out of Punjab. Agricultural development has taken at a very fast rate in Punjab and Haryana especially after the mid-sixties due to Green Revolution. Haryana has bagged the 'Krishi Karman Award' for Best Performing State for the second consecutive year 2011-12. Present Paper is based on the specific objective to examine the agricultural change and to study the comparative agricultural growth in Punjab and Haryana.

2. METHODOLOGY

The sectoral agricultural contribution towards NSDP was examined in 4 Periods i.e. 1970-71 to 1979-80, 1980-81 to 1989-90, 1990-91 to 1999-2000 and 2000-01 to 2011-12 as well as a whole period from 1970-71 to 2011-12. The estimates obtained are known as NSDP at constant prices. The analysis was done at constant prices based on All India Index of Wholesale Prices, developed by the taking 1970-71 as the base year. Being a study at the State level, it has to be based on Secondary data on NSDP at constant prices. The data were compiled from various issues of the Statistical Abstract of Punjab and Statistical Abstract of Haryana. The information on NSDP at constant prices was available with different base years. The different set of the time series information were spliced so as to get a comparable series of each of the component of the income of the States of Punjab and Haryana. The percentage contribution of Primary sector in NSDP is worked out Period wise during Period-I, Period-II, Period-III, Period-IV and Overall Period at constant prices, 1970-71 as the base year. The trends in the growth of different sectors of economy as well as the whole economy were evaluated through Compound Growth Rates (CGRs) by applying regression analysis in its exponential algebraic form. The CGRs were calculated for each Period and for whole of the period for Punjab and Haryana. Then the growth rates were compared between Punjab and Haryana. The relative share of Primary sector to NSDP was also compared between Punjab and Haryana. The average level performance of agricultural sector as well as total NSDP in different Periods was compared between Punjab and Haryana through the application of t-test.

3. REGIONAL AGRICULTURAL DEVELOPMENT OF PUNJAB AND HARYANA DURING 1970-71 TO 2011-12

Regional agricultural development of Punjab and Haryana can be seen in terms of primary sectors of Punjab and Haryana. Primary sector of Net State Domestic Product (NSDP) is regarded as the best indicator to assess the regional agricultural development of an economy.

3.1 Percentage Share of Primary Sector in NSDP of Punjab and Haryana in NSDP during 1970-71 to 2011-12

Over the past 42 years, the states of Punjab and Haryana have experienced a significance structural transformation. At the beginning of the present study, during 1970-71 economies of both the States were predominantly rural and agricultural. But with the passage of time, in 2011-12 Industry and Services Sectors registered much higher growth rate than in agricultural sector in Haryana but the picture is not bright for the economy of Punjab. A close examination of the study of



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Table 1. Percentage Share of Primary Sector of Punjab and Haryana to NSDP at constant prices.

Year	Punjab	Haryana
	Period – I	
1970-71	58.36	64.74
1971-72	57.80	62.31
1972-73	56.80	61.86
1973-74	58.84	64.09
1974-75	60.62	61.80
1975-76	56.68	58.80
1976-77	56.80	59.51
1977-78	50.46	58.45
1978-79	48.78	55.42
1979-80	47.43	51.77
	Period – II	
1980-81	44.12	54.60
1981-82	43.93	51.25
1982-83	42.50	49.81
1983-84	46.51	46.12
1984-85	46.54	44.97
1985-86	45.72	45.03
1986-87	44.54	43.02
1987-88	45.48	39.45
1988-89	44.76	42.82
1989-90	45.82	43.82
	Period – III	
1990-91	45.54	44.71
1991-92	46.83	44.52
1992-93	47.02	46.28
1993-94	48.23	47.13
1994-95	46.14	41.57
1995-96	39.29	36.95
1996-97	39.52	38.31
1997-98	40.75	35.00
1998-99	41.93	34.80
1999-00	34.21	32.53
	Period – IV	
2000-01	38.30	32.13
2001-02	37.68	29.05
2002-03	35.37	26.33
2003-04	35.49	26.81
2004-05	34.67	24.27
2005-06	33.80	22.06
2006-07	33.08	22.96
2007-08	33.23	23.27
2008-09	32.93	22.41
2009-10	30.89	20.60



2010-11	30.48	21.14
2011-12	30.77	21.54

Source: Worked out from Statistical Abstract of Punjab and Statistical Abstract of Haryana (Various Issues)

Table 1. shows that Primary Sector was the dominant sector of the economy of Punjab and Haryana and accounted for 58.36 in NSDP of Punjab and 64.74 percent in Haryana's NSDP. After fluctuations the share of Primary sectors of both Punjab and Haryana in 1979-80 declined to 47.43 percent and 51.77 percent respectively in Punjab and Haryana. Again during Period-II Primary sector was the driving sector of both the States. In 1980-81 the primary sector was the dominant sector of the economy of Punjab and Haryana and accounted for 44.12 percent in NSDP of Punjab and 54.60 percent in Haryana's NSDP. After fluctuations the share of Primary sector of Punjab was 45.82 marginally higher than 1980-81 and of Haryana declined to 43.82 percent in 1989-90. In 1990-91 the primary sector was the dominant sector of the economy of Punjab and Haryana. The share of Primary sector of Punjab decreased to 34.21 percent from 45.54 percent during this Period while in Haryana this share decreased to 32.53 percent from 44.71 percent. The relative share of primary sector to NSDP was 38.30 percent in Punjab and 32.13 percent in Haryana in 2000-01 which fell down to 30.77 percent in Punjab and 21.54 percent in Haryana in 2011-12. The relative share of primary sector to NSDP was 58.36 percent in Punjab and 64.74 percent in Haryana in 1970-71 which fell down to 30.77 percent in Punjab and 21.54 percent in Haryana in 2011-12.

3.2. Comparative Growth Rates of Primary Sector of NSDP and Total NSDP of Punjab and Haryana during 1970-71 to 2011-12

In order to understand the process of agricultural development occurring in the Economy of Haryana and Punjab, it is necessary to analyze the trends in Net State domestic product and Growth Rate of Primary sector as well as of Total NSDP of Haryana and Punjab. A close examination of Table 2 Clearly indicates that during the Period-I (1970-71 to 1979- 80), the growth rate of total NSDP was 3.39 percent in Punjab and 3.21 percent in Haryana at constant prices (1970 as base period). The growth rates of total NSDP was almost similar in both the states, but in case of primary sector, it was non-significant and positive in Punjab and non-significant and negative in Haryana. Primary sector in both the states witnessed stagnation during Period-I. During the Period-II (1980-81 to 1989-90), the growth rate of total NSDP was 6.56 percent in Punjab and 6.51 percent in Haryana at constant prices. The growth rate of primary sector was much higher in Punjab as compared to that in Haryana. During the Period-III (1990-91 to 1999-2000), in Punjab the growth rate of total NSDP was 6.04 percent and 9.59 percent in Haryana at constant prices. The growth of economy was higher in Haryana as compared to that in Punjab during the Period of 1990-91 to 1999-2000. Agricultural growth rate also exhibited the same trend. During the Period-IV (2000-01 to 2011-12), the growth rate of total NSDP came to be 3.72 percent per annum at constant prices in Punjab while the same was 6.66 percent per annum at constant prices in Haryana. This again showed that Haryana performed better in case of NSDP as compared to the Punjab. Haryana also performed better in

Table 2. Comparative Growth Rates of Primary Sector and Total NSDP in Punjab and Haryana at Constant Prices

Time Period	Sector	Punjab	Haryana
Period-I	Primary	1.02	-4.28
	Total	3.39*	3.21*
Period-II	Primary	6.99**	3.58*
	Total	6.56**	6.51**
Period-III	Primary	2.99**	5.21**



	Total	6.04**	9.59**
	Primary	1.64*	2.99**
Period-IV	Total	3.72**	6.66**
Overall	Primary	3.74**	4.44**
Period	Total	5.31**	7.03**

Source: Worked out from Statistical Abstract of Punjab and Statistical Abstract of Haryana (Various Issues)

Note: (*) means at five percent level of Significance and

() means at one percent level of Significance.**

case of primary sector as compared to Punjab. Over the Period of 42 years from 1970-71 to 2011-12, the growth rate of total NSDP was 5.31 percent at constant prices in Punjab, while it was 7.03 percent at constant prices in Haryana. This revealed that Haryana's economic performance remained better in the four Periods under study as compared to that of Punjab. Sector wise growth rates also indicated that the performance of primary sector was better in Haryana as compared to that in Punjab. However, on the overall, primary sector witnessed stagnation in Punjab.

3.3 Comparison of Primary Sector of NSDP and Total NSDP of Punjab and Haryana at average level with the Help of t-test

The comparisons were made for NSDP in Punjab and Haryana at average level also. Period wise and overall average figures of NSDP were worked out and compared with the help of t-test. The results are presented in Table 3. During Period-I, 1970-71 to 1979-80, the total NSDP was significantly higher in Punjab as compared to that in Haryana. Sector wise analysis also depicted the similar pattern. During the Period-II, 1980-81 to 1989-90, the NSDP was also significantly higher in Punjab as compared to that in Haryana. Sector wise analysis again depicted the similar pattern. During the Period-III, 1990-91 to 1999-2000, the difference in total NSDP was significantly higher in Punjab as compared to Haryana at constant price. The average figure for primary sector was significantly higher in Punjab as compared to Haryana. The differences in secondary and tertiary sector came to be non-significant. During Period-IV, 2000-01 to 2011-12, the NSDP was at par in both the states. There was the only upper hand of Punjab in case of primary sector where Punjab's NSDP was

Table 3. Comparison of NSDP in Punjab and Haryana at Average Level

Time-Period	Sector	Punjab Mean	Haryana Mean	t-value
Period-I	Primary	877.61	517.74	6.83**
	Total	1605.65	959.88	7.40**
Period-II	Primary	1052.94	701.28	4.49**
	Total	2336.43	1541.00	4.42**
Period-III	Primary	1851.26	1274.06	5.72**
	Total	4369.39	3275.63	2.79*
Period-IV	Primary	2609.52	1859.39	7.24**
	Total	7767.87	7838.54	0.12
Overall Period	Primary	1646.01	1124.84	3.63**
	Total	4198.31	3613.51	0.96

Source: Worked out from Statistical Abstract of Punjab and Statistical Abstract of Haryana (Various Issues)



Note: (*) means at five percent level of Significance and

() means at one percent level of Significance.**

Significantly higher than Haryana. On the average of 42 years under study, no significant difference could be surfaced between Punjab and Haryana.

4. CONCLUSION

On the average of 42 years under study, no significant difference could be surfaced between Punjab and Haryana. Overall, it may be concluded that Haryana could secure higher growth rates of primary sector of NSDP as well as total NSDP. Primary sector exhibited crisis of stagnation during 1970-71 to 1979-80 and 2000-01 to 2011-12 in both the states. The incidence of farmer suicides can be traced out of this. Even the research studies in seventies and early eighties concentrated more on the success story of the economic development of Punjab, though hinted at the possibility of emerging problems and challenges. But in the nineties the problems of the State have dominated the scene and there is fear of 'Success Story' turning into a 'Case of Failure'. The people of Punjab may be known for their lavish lifestyle and high spending power but it is true that the state itself lags behind Haryana as far as Per Capita Income is concerned. But it cannot be denied that agriculture forms the backbone of Haryana and Punjab economy. The share of agriculture to state income is also the highest; and it is also a source of supply of raw materials to the leading industries of the state. Hence, the prosperity of agriculture stands for prosperity of Haryana and Punjab. In order to raise state income and per capita income, it is essential that at least for some more, agriculture development may be given greater emphasis in Haryana and Punjab. In the first instance the capital output ratio is not very high in agriculture and hence a small input of capital will bring about a larger output of agricultural goods. To achieve a rapid increase in incomes at least in the initial period, a greater proportion of investment should be made in agriculture.

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