

Growth Performance and Sector Worker Productivity in Punjab and Haryana State Economy

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Abstract: Developed countries are generating employment to the population according to the GDP contribution which is a sign of equal income distribution. The two states, namely Punjab and Haryana, are generally known as developed states of India. The Punjab and Haryana states are generally famous as agriculture developed states where maximum GDP is generated through agriculture sector, but the issue is with the structure of the economy which have changed of both the states during 1980-81 to 2022-23. Punjab and Haryana are almost similar in terms of natural resources such as water availability, land quality, and in terms of economic growth. Agriculture, industry, and service sector which provides the scenarios of the state. The objective of the study is to analyze the comparative behaviors of both the states as a whole and the subsectors of the sector. Further, it focusses on finding the key areas which pushes the economy. Consequently, we focus on identifying the main sectors of the economy of these two states. The data set is from secondary sources that include the National Account Statistics and the Employment and Unemployment survey.

Keywords: Growth, Performance, worker's productivity

INTRODUCTION

Structural changes are important ingredients of modern economic growth (McMillan *et.al.*, 2011). Sectoral change is considered as reallocation of economic activities among the three sectors of the economy, which includes agriculture, industry, and services and all the three sectors are interdependent (Gemmell *et.al.*, 1998). Punjab and Haryana have a significant place in agriculture in India. Both are considered a Breadbasket of India (Saini, 2018). The first pillar of the GSDA is agriculture, Haryana and Punjab contributes 18.6 per cent and 26.1 per cent respectively in 2014-15 and provides employment to more than 40% in Haryana and 36% in Punjab (Singh & Singh, 2017). In agriculture, the dairy sector is the second largest contributor to agriculture GSDA, and the recent growth of Punjab was due to the growth of the growth of the livestock sector (Singh & Singh, 2017). The second pillar is industry; Punjab and Haryana contribute 23.6 per cent and 26% respectively in the gross state domestic product. There are various

subsectors namely manufacturing and construction which growing at fast pace in Haryana as compared to Punjab. The third is the service sector, which is the main driver of the Punjab and Haryana GSDP. Service sector is playing a major role in the developing economies (Acharya, 2003) It provides employment to more than 30% of total employment.

Basically, both the states Haryana and Punjab are endowed with almost similar resources like availability of water, quality of land, other natural resources and also growth of the economy. The average land holding in Punjab and Haryana is 3.77 hectares and 2.25 hectares, respectively. In 2000-2001, Haryana crossed Punjab in terms of per capita, growth of GSDP and volume of GSDP (Chand & Singh, 2016). The study focused on comparative analysis of growth of both the states as a whole and sector wise during 1980-81 to 2022-23. It also focusses on the productivity of workers across sectors in both states.

DATA AND METHODOLOGY

The study is carried out in two states of India named Haryana and Punjab. The data used in the study are collected from secondary sources. The secondary data is collected from Central Statistical Organization (CSO) and employment data PLFS. The study is divided into six phases, i.e. 1980-1981, 1990-1991, 2000-01, 2010-11, 2020-21, 2022-23. The growth trend is estimated from 1980-1981 to 2021-22. The growth is measured at constant 2011-12 price. The data are also taken from the Statistical Abstract of Punjab, the Statistical Abstract of Haryana, and the Directorate of Economics and Statistics. The trend growth rate had been estimated using the following exponential model.

$$Y_{t=1, \dots, n} = ab^{t-1 \dots n}$$

$$\text{Log } Y = \log a + t \log b$$

$$\text{CGR} = (\text{Antilog } b-1) * 100$$

Where,

t = time period in year

Y = Gross value added by sector

a & b = Regression parameters and

CGR = Compound Growth Rate

RESULTS AND DISCUSSION

Punjab and Haryana are the states that had a high growth rate during the initial stage after independence. Both states were agriculture depended

states at that time and the responsiveness of new agricultural technology was observed very effective in the both states. However, performance of the Punjab state was better than the Haryana till 2010-11 (Singh & Singh, 2017). Even with the better growth, the disparity within the areas still exists in Punjab (Singh *et al.* 2013a; Singh *et al.* 2013b) and the cropping pattern concentrates on mono-cropping (Singh *et al.*, 2017).

Table 1: Comparative size (GSVA at current price in Rs. Crores) of Punjab and Haryana state economy over time

Year	Punjab	Haryana	Ratio (PB/HR)
1980-81	5366	3386	1.58
1990-91	20252	13636	1.49
2000-01	74737	58183	1.28
2010-11	224212	260621	0.86
2020-21	477484	645241	0.74
2022-23	563737	870227	0.65

Source: Authors compilation from National Accounts Data, CSO, GoI.

The table1 represents the comparative size of Punjab and Haryana over period. Initially during 1980-81 the GSVA of Punjab was 1.58 times greater than the GSVA of Haryana. The ratio of GSVA of both states reduced to 1.49 times during 1990-91 which was further reduced to 1.28 times during 2000-01. Furthermore, during 2010-11 the ratio of size of both the states stood at 0.86. The ratio drops to 0.74 during 2020-21. During 2022-23 the ratio stood at 0.65. This shows that the size of GSVA of Punjab was higher than Haryana from 1980-81 to 2000-01. But after 2000-01, the size of the Haryana GSVA exceeded the size of Punjab. In 2022-23, the ratio of GSVA was only 0.65.

Table 2: Comparative Change in Composition of Punjab and Haryana Economy over Time (Sector Contribution (%) in GSVA)

Year	Agri & allied	Industry Punjab	Service
1980-81	47.3	21.1	31.5
1990-91	42.2	25.0	32.8
2000-01	37.9	25.2	36.9
2010-11	31.5	26.8	41.6
2020-21	30.9	24.4	44.7
2022-23	28.9	25.1	45.9
		<i>Haryana</i>	
1980-81	53.4	19.8	26.8
1990-91	43.8	25.1	31.1
2000-01	30.2	28.1	41.8
2010-11	21.2	28.7	50.0
2020-21	21.0	30.5	48.5
2022-23	19.4	29.9	50.7

Source: Authors' estimation using National Accounts Data, CSO, GoI.

The economy is divided into three sectors commonly known as agriculture, industry, and service sector. Table 2 highlights the comparative change in the composition of Punjab and Haryana from 1980-1981 to 2022-23. The table shows that during the year 1980-81, both the states are predominated by the agriculture sector where this sector contributes 47.3 per cent to total GSVA in Punjab and 53.4 per cent to total GSVA in Haryana. The share of service sector was 31.5 per cent in Punjab and Haryana. Industrial sector contributed the least in both the states. During 1990-1991, the share in the agriculture sector was highest followed by the service sector. Industry sector was at third place. During 2000-01, the share of agriculture sector declined, and the share of industry and service sector has increased. During 2000-01 the share of the service sector was higher than that of the agriculture sector in Haryana. But industry sector was still lowest in both the states. In 2010-11, the share of agriculture sector declined in both the states and share of industry and service sector have increased contributing 41.6 per cent in Punjab and 50 per cent in Haryana. During the year 2022-23 the share of service sector was maximum in both the states. The share of agriculture sector was higher than that of industry sector in Punjab and the share of industry sector was higher than that of agriculture sector in Haryana. It shows that the pace of change in the composition of economic activities of Haryana was greater than that of Punjab.

**Table 3: Sector wise Comparative Growth rates of Punjab and Haryana
Economy over time**

<i>Year</i>	<i>Agri & allied</i>	<i>Industry</i>	<i>Service</i>	<i>Economy</i>
Punjab				
1980-81 to 1990-91	4.78	7.36	4.70	5.13
1990-91 to 2000-01	2.56	6.77	6.04	4.44
2000-01 to 2010-11	2.10	10.04	7.18	5.80
2010-11 to 2020-21	2.14	4.63	6.70	4.88
2020-21 to 2022-23	2.24	5.63	7.06	5.50
1980-1 to 2022-23	2.55	6.69	6.36	4.90
Haryana				
1980-81 to 1990-91	4.30	9.39	7.71	6.43
1990-91 to 2000-01	1.95	6.14	8.12	5.20
2000-01 to 2010-11	3.62	8.50	12.21	9.07
2010-11 to 2020-21	4.01	7.14	7.90	6.85
2020-21 to 2022-23	3.40	9.02	10.38	8.62
1980-1 to 2022-23	3.28	7.34	9.49	7.05

Source: Authors' estimation using National Accounts Data, CSO, GoI.

The above table3 reflects the sector-wise comparative growth rates of Punjab and Haryana over the period. Initially from 1980-81 to 1990-91

industrial sector had the maximum growth rate in both the states. In Punjab, the growth rate of the agriculture sector stood at 4.78 per cent and 4.70 per cent in service sector. In Haryana, the growth rate of the agricultural sector was 4.30 percent and 7.71 per cent in the service sector. Furthermore, during 1990-1991 to 2000-01 the growth rate of agriculture was least in both states. The growth rate of the industry was greater than the growth rate of the service sector in Punjab. The growth rate of the service sector was higher than that of the industry sector in Haryana. During 2000-01 to 2010-11 the agriculture sector growth continued to decline, and the growth of service sector and industry sector have increased in both the states. During 2010-11 to 2020-21, the growth rate of the industry sector and service sector have declined in both the states, and the growth rate in agriculture sector have improved. From 2020-21 to 2022-23 the growth rate of industrial and service sector has increased, and agriculture sector have declined in both the states. The overall sector wise growth rate was higher in Haryana as compared to Punjab.

**Table 4: Relative change in sector contribution in employment
(% workforce in different sectors)**

<i>Survey year</i>	<i>Agri & allied</i>	<i>Industry</i>	<i>Service</i>
		Punjab	
1983	68.39	12.83	18.78
1993-94	45.87	18.92	35.21
2004-05	42.47	24.06	33.47
2011-12	36.45	31.52	32.03
2017-18	26.04	33.1	40.86
2018-19	24.59	35.38	40.03
2019-20	25.75	31.82	42.43
2020-21	25.54	36.01	38.45
2021-22	25.53	37.29	37.18
		Haryana	
1983	67.38	12.19	20.43
1993-94	51.39	17.60	31.01
2004-05	45.71	23.52	30.76
2011-12	43.34	27.23	29.43
2017-18	27.41	33.84	38.75
2018-19	26.85	32.89	40.26
2019-20	29.21	33.28	37.52
2020-21	28.25	33.91	37.84
2021-22	30.05	31.63	38.32

Source: Authors' estimation using Employment & Unemployment Situation in India Survey and Periodic Labour Force Survey Data, NSO, GoI.

The table 4 shows the relative change in the sectoral contribution to employment. Initially during 1983 the highest rate of employment was in agriculture sector in both states. The agriculture sector contributed the highest in employment in both states until 2011-12. But after 2011-12 the status has changed. There was the development of the other sectors in the economy. The service sector provided the maximum level of employment in both states, at 40.86 per cent in Punjab and 38.75 per cent in Haryana followed by industry and least in the agriculture sector. The employment generation in the agriculture sector was almost stagnant in both states during 2018-22. There was continuous rise in the employment in service sector followed by industrial sector in both the states. Both states have an almost a similar status of employment across the three sectors.

Table 5: Sector wise worker productivity (Rs./Annual) at current prices

<i>Year</i>	<i>Agri & allied</i>	<i>Industry</i>	<i>Service</i>
		Punjab	
1983	6405	15919	16383
1993-94	40766	52583	39180
2004-05	71366	92163	108375
2011-12	195701	186672	316613
2017-18	468785	313965	469893
2018-19	519013	309185	501967
2019-20	468179	316792	463351
2020-21	497273	278179	477130
2021-22	485677	282224	518276
		Haryana	
1983	6890	16892	13856
1993-94	28402	52011	34926
2004-05	53145	147134	150459
2011-12	169361	361746	475041
2017-18	460513	599463	809571
2018-19	514160	693954	856638
2019-20	484961	643808	941376
2020-21	498489	605157	861283
2021-22	520237	777588	1039727

Source: Authors estimation Based on National Accounts data and Employment & Unemployment Situation in India Survey and Periodic Labor Force Survey Data, NSO, GoI.

Table5 highlights the productivity of workers in all three sectors in Punjab and Haryana. In Punjab there is continuous rise in the workers productivity in all the three sectors over the time of study. The worker productivity was highest in the service sector followed by the agriculture

sector and lowest in the industry sector. The annual productivity of workers in services sector stood at Rs. 518276 crores followed by agriculture sector at Rs. 485677 crores during 2021-22. In Haryana also there is a continuous increase in the annual worker productivity in all three sectors from 1983 to 2022. During 2021-22, the service sector has the highest annual worker productivity at Rs. 1039727 crores followed by industry with Rs. 777588 crores. Agriculture sectors have a least annual workers productivity in Haryana. It shows that Haryana has a healthier picture than Punjab in the case of annual workers productivity during the study period. Subsequently, employment contribution from the agricultural sector has been declined over the time in both the states. The employment contribution of industry and service sector has been increased in both the states.

CONCLUSION

In the present study, the growth scenario of two states, Punjab and Haryana was highlighted, the contribution of three sectors of the economy was calculated, namely, agriculture, industry and services sector. The study was conducted in six phases from the time 1980-81 to 2021-22. It was observed that the economic structures of both two states have changed. In 1980-81 the agricultural sector was playing a major role in GSVA in 1980-21 but it declined to 28.9 per cent in Punjab and 19.4 per cent in Haryana. Subsequently, employment contribution from the agricultural sector has been declined over the time in both the states. The contribution to employment from the industry and the service sector has increased in both states. Furthermore, the annual productivity of Haryana was better than that of Punjab.

This shows that there is a need for an improvement in the growth rate through various initiatives like water technologies, seed technologies etc. There should be new start-ups in the industry sector and encourage new technologies in the existing industries. In case of service sector Punjab need to improve for its growth. In sum, all the three sectors are interlinked and inter-dependent.

References

- Acharya, S. N. (2003). *India's Economy: Some Issues and Answers*. Academic Foundation.
- Chand, R. & Singh, J. (2016). *Agricultural Marketing and Farmer Friendly Reforms Across Indian States and UTs*. Study report of National Institution for Transforming India, New Delhi.
- Gemmell, N., Lloyd, T., & Mathew, M. (1998). *Dynamic sectoral linkages and structural change in a developing economy* (No. 98/3). CREDIT Research Paper, No. 98/3, Centre for Research in Economic Development and International Trade (CREDIT), University of Nottingham, Nottingham.

- McMillan, M. S., & Rodrik, D. (2011). *Globalization, structural change and productivity growth* (No. w17143). National Bureau of Economic Research.
- Saini, G. (2018). A Comparative Analysis of Structural Transformation between Haryana & Punjab. *International Journal of Trade and Global Business Perspectives*, 7(01), 3872-3878.
- Singh, A., & Singh, J. (2017). Agricultural Scenario and Issues: A study of Punjab and Haryana. *International Journal of Research in Economics and Social Sciences*, 7(07), 422-430.
- Singh, A., & Singh, J. (2017). Comparative analysis of Punjab and Haryana economy. *International Research Journal of Management and Commerce*, 4(11), 672-684.
- Singh, J., Srivastava, S. K., Kaur, A. P., Jain, R., Immaneulraj, K., Raju, S. S., & Kaur, P. (2017). Farm-size efficiency relationship in Punjab agriculture: Evidences from cost of cultivation survey. *Indian Journal of Economics and Development*, 13(2a), 357-362.
- Singh, J., Yadav, H. S., & Singh, N. (2013). Crop diversification in Punjab agriculture: A temporal analysis. *Journal of Environmental Science, Computer Science and Engineering & Technology*, 2 (2), 200-205p.
- Singh, J., Yadav, H. S., Singh, K., & Singh, N. (2013). Agricultural regional disparity in Indian states: An Inter temporal Analysis. *Journal of Environmental Science, Computer Science and Engineering & Technology*, 2(2), 241-248.