

STRUCTURAL CHANGE AND ECONOMIC GROWTH IN HARYANA

Anita Moudgil

Associate Professor, Department of Economics, D.A.V.College for Girls Yamuna Nagar

Abstract

As an economy moves from lower higher stages of development, there occurs a shift from simpler to more modern and complicated techniques of production on the one hand and from Primary sector to Secondary and /or Service sector on the other. Economic growth of an economy is always associated with structural change in the economy. The present paper studies the structural change and the process of economic growth in Haryana. The methodology includes the process of splicing, the contribution of each sector in the with Nandkarni methodology and SPSS for Curve Estimation. The process of structural change took place in Haryana with the process of economic growth since 1965-66. The contribution of Secondary Sector to growth always remained higher than that of Primary Sector but less than Service Sector.

Key Words: structural change, growth, service sector, Haryana.

Introduction

The process of structural change and pattern of economic growth affect future development patterns of an economy. "Structural Change is defined as a change in the relative weight of significant components of aggregative indicators of the economy such as national product and expenditure, exports and imports and population and labor force. It is a complex phenomenon involving, e.g. different effects upon the happiness of people in different strata, changes in the society's value system and even impacts on international relations. In economic terms, economic growth brings out the above structural change in various types and either directly or indirectly through organizational and institutional changes....." Paulgrave dictionary. In structural change and economic development, a set of interrelated changes in the economic structure of the economy are required for the transition from a traditional economic system to a modern economic system. These structural change involve all economic functions-including the transformation of production and changes in the composition of consumer demand, international trade and resource use as well as changes in the socio economic factors such as urbanization and growth and distribution of country's population.

Economic growth of an economy is always associated with structural change in the economy. The changes take place in the form of Sectoral composition of output as well as occupational structure of the work force. Economic structure is generally divided into three broad sectoral economic activities: Primary, Secondary, Services. The Primary sector mainly covers the agriculture and allied activities; the Secondary sector covers the manufacturing, construction etc. and the Service sector refers to the service activities like trade, transport, communication, real estate, banking and insurance and other services.

Objective: The present chapter studies the structural change and the process of economic growth in Haryana

Coverage and methodology: The study has been carried out for the State of Haryana covering the time period from 1965-66 to 2013-14. The selected variables are NSDP, Sectoral shares of Output. Data on NSDP, GSDP, Primary Sector, Secondary Sector and Service Sector at constant prices have been obtained from Economic and Statistical Organization (ESO), Haryana. The process of Splicing has been used to convert the data (1965-66 to 2013-14) into a common base year 2004-05. Normalization of the spliced values of the NSDP, GSDP, Sectoral Shares, Per capita income has been done to remove the discrepancies in the data.

Splicing old index to new index series:= {Old index} X {100(index of the new base year)}/{Old index of the overlapping year}

Normalization = {Ratio of the spliced value (calculated) of NSDP/GSDP to totalled value of NSDP/GSDP (sum total of sectoral spliced values)} X { Spliced value of ith sector}

Contribution of a sector to growth: To understand the significance of all the three sectors in the growth of Haryana economy, the contribution of each sector in the growth has been calculated following the method in Nandkarni, Avdoot(2009).

The contribution of a sector to growth: $C_g = (W_i \cdot g_i / g_y)$

Where W= share / weight of the ith sector; g_i = growth rate of ith sector; g_y = aggregate growth rate

The contribution of a sector depends on two factors: a) its growth rate (g_i); b) its share in output (W_i).

SPSS has been used for Curve Estimation in order to understand the Structural Change and Economic Growth in Haryana.

Profile of Haryana: Haryana completed 50 years of its formation on November 1, 1966. Haryana is 20th State of India. At the time of its inception, Haryana's SDP was only half of Punjab. After 50 years, it is 4.4 trillion rupees, just 20 percent more than Punjab SDP. Haryana is the region where, along the banks of the River Saraswati, the Vedic Civilization began and matured. It was on this soil that saint Ved Vyas wrote Mahabharat in Sanskrit. Haryana was formed as a separate state on 1st November 1966 after the reconstitution of the erstwhile state of Punjab. Haryana is located on the north-western side of the Indian Union adjoining Delhi. On the north it is bounded by the States of Punjab and Himachal Pradesh, on the east by Delhi and Uttar Pradesh; and on the South and West by Rajasthan. The state has an area of 44212 sq. km. covering 1.3 percent of the total geographical area of the country. The state population is 2.53 crores i.e 2.9 percent (2011 census) and was 2.11 crores i.e. 2.04 percent (2001 census) of the total population of India. There is strong patriarchal social order in Haryana. Social beliefs, attitudes and practices are not encouraging which is reflected in poor gender ratio, female foeticide and infanticide. Caste-violence against women (honour killings), feudal social order like negative role of Khaap Panchayats makes Haryana a less progressive State. However, in terms of economic indicators, Haryana has been a progressive State and has been experiencing Structural Change and fast growth of Service Sector, making Service sector as an engine of growth. The present paper aims to analyze the structure, pattern and growth of the Haryana economy.

Analysis of the Structural Change and economic growth of the economy of Haryana :

With very less resources, Haryana surged ahead of Punjab. It is reflected in terms of economic variables such as average growth rate, per capita income, fiscal discipline and good governance and many more. Structural Change in terms of Sectoral Shares: The growth pattern of different sectors of the economy is the best indicator of structural change in an economy. Sector wise net State Domestic Product for Haryana is presented in table 1. The table is indicative of the fact that the Haryana economy has experienced Structural change as reflected in the changing sectoral share in Output(NSDP).

Table1 : Sector Wise Net State Domestic Product for Haryana at Constant Prices(2004-05)

(Rs. Crores)

Year	Primary Sector	Secondary Sector	Service Sector	Total NSDP
1965-66	4943.857	2057.9194	1794.639	8796.415
1970-71	8463.625	2949.6908	2660.566	14073.88
1974-75	7390.879	3600.2359	3288.153	14279.27
1979-80	8441.397	5484.283	5377.637	19303.32
1984-85	11146.92	7282.8112	7199.989	25629.72
1989-90	14699.93	11801.325	10353.54	36854.8
1993-94	16697.9	13702.231	13687.17	44087.31

1995-96	16931.69	15963.423	15351.68	48246.8
1998-99	17708.49	18709.658	20884.53	57302.68
2003-04	20491.71	23412.249	35474.52	79378.48
2008-09	25239	32237.11	64112.28	121588.4
2013-14	28270.75	44361.97	105674.5	178307.2

Source: ESO, Haryana Statistical Abstracts, Various Years

Table 1 show that the Primary Sector output rose from 4943.85 crores rupees in 1965-66 to 28,270.75 crores rupees in 2013-14, showing a rise of almost 5.71 times during a span of 49 years. The secondary sector output rose from 2057 crores to 44361 crores rupees during the same time period, showing an increase of 21 times. The Service sector output rose from 1794.63 crores to 105674.5 crores, showing a rise of 58 times over a span of almost five decades. Table 2 highlights the percentage share of three main sectors in NSDP. The percent share of Primary Sector in NSDP was 60.13 in 1970-71 which fell to 51.75 percent in the next 5 years, after two decades in 1989-90, this share fell to 39.88 percent, a fall of 21 percentage points and in the next 15 years, this share fell by 24 percentage points and became 15.75 percent in the year 2013-14. This continuous decline in the percent share of Primary sector was picked up both by Secondary sector and Service Sector. The share of secondary sector rose from 20.95 percent in 1970-71 to 32.03 percent in 1989-90 over a period of 20 years, showing a rise of 12 percent points while the share of Service sector showed an increase of 8 percent points during the same period. In the next 15 years, the share of secondary sector started falling and it was 24.88 percent in 2013-14, but the share of Service sector continued to rise and was 59.27 percent in 2013-14, showing an increase of 31 percentage points. Therefore, it is interesting to point out that after 1993-94, the economic growth in Haryana became Service –led as service sector became the dominant sector in Haryana. Comparing the relative shares of the three main sector, it is found that till the year 1993-94, the Primary sector continued to be the largest contributor in the Domestic Product, the year when the relative shares of Secondary and Service sectors was almost the same (31 percent each). After 1993-94, there is a sharp rise in the relative share of Service sector in Net Domestic Product because the other two sectors experienced a decline in their relative share in Net Domestic Product.

Table 2
Sector Wise Net State Domestic Product for Haryana at Constant Prices (2004-05)
(Percent)

Year	Primary Sector	Secondary Sector	Service Sector	Total NSDP
1965-66	56.20	23.39	20.41	100
1970-71	60.13	20.95	18.92	100
1974-75	51.75	25.21	23.03	100
1979-80	43.73	28.41	27.86	100
1984-85	43.49	28.41	28.10	100
1989-90	39.88	32.03	28.09	100
1993-94	37.87	31.07	31.06	100
1995-96	35.09	33.09	31.82	100
1998-99	30.90	32.65	36.45	100
2003-04	25.81	29.49	44.70	100
2008-09	20.75	26.51	52.74	100
2013-14	15.85	24.88	59.27	100

Source: ESO, Haryana Statistical Abstracts, Various Years

FIG: 1

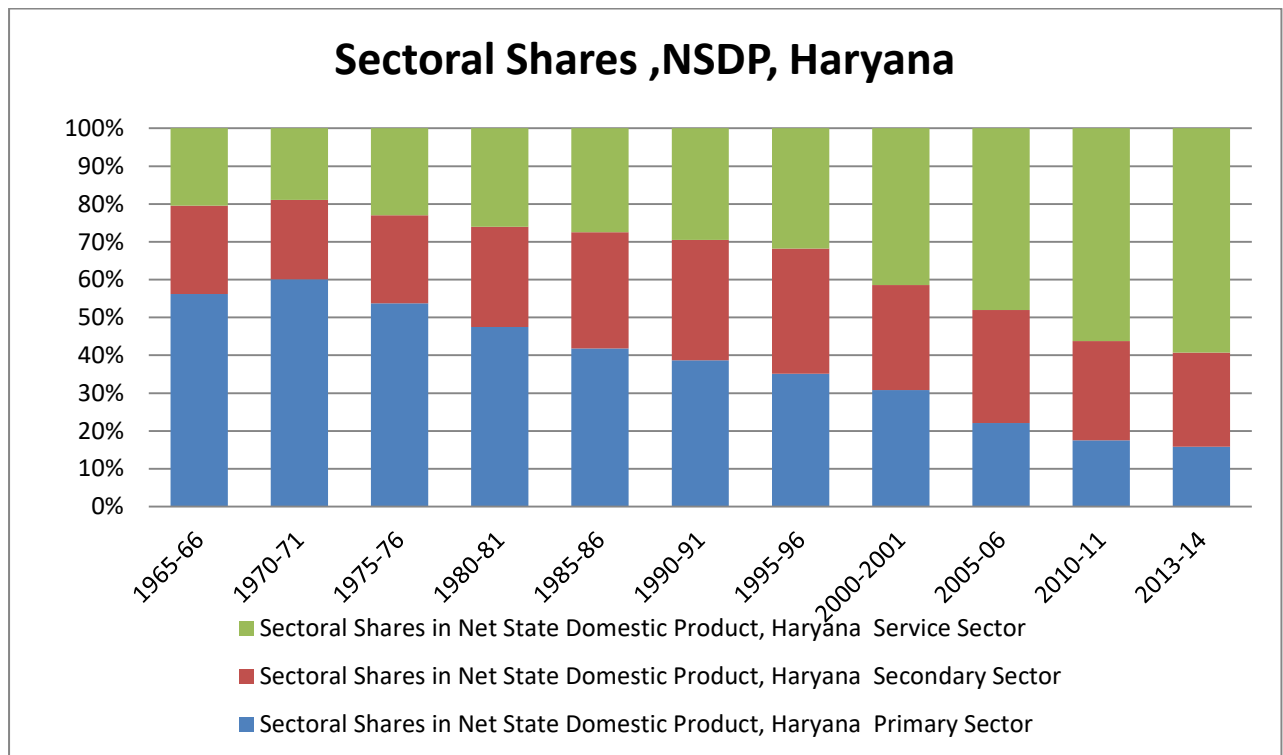


FIG:2

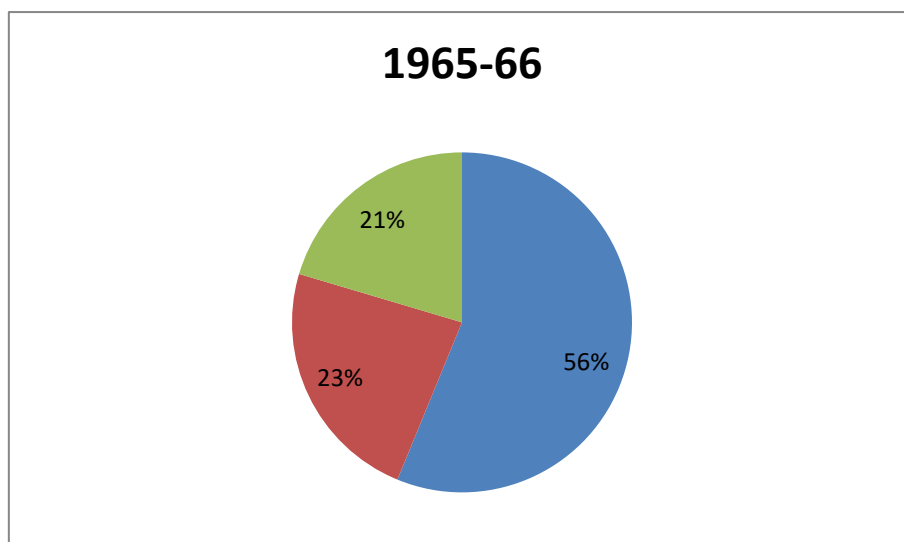


FIG:3

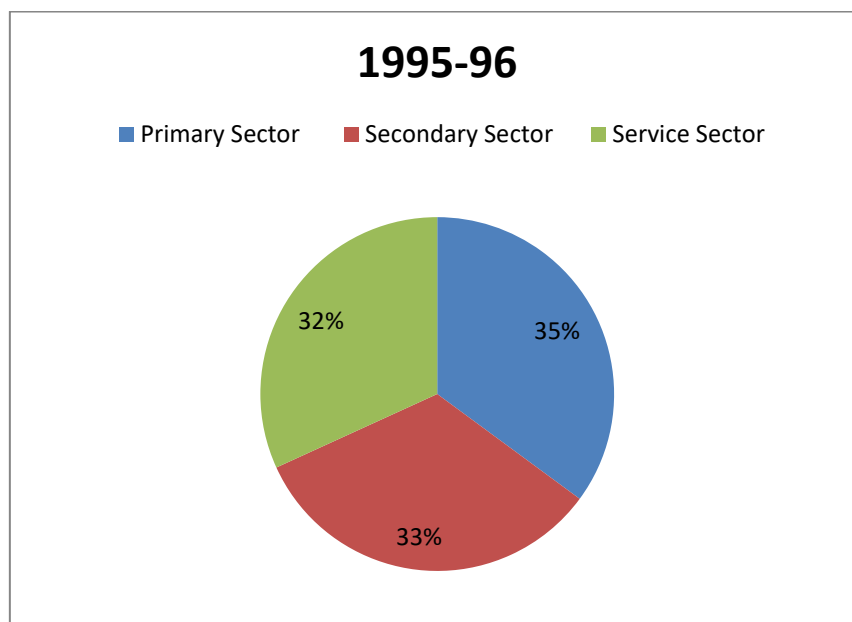


FIG: 4

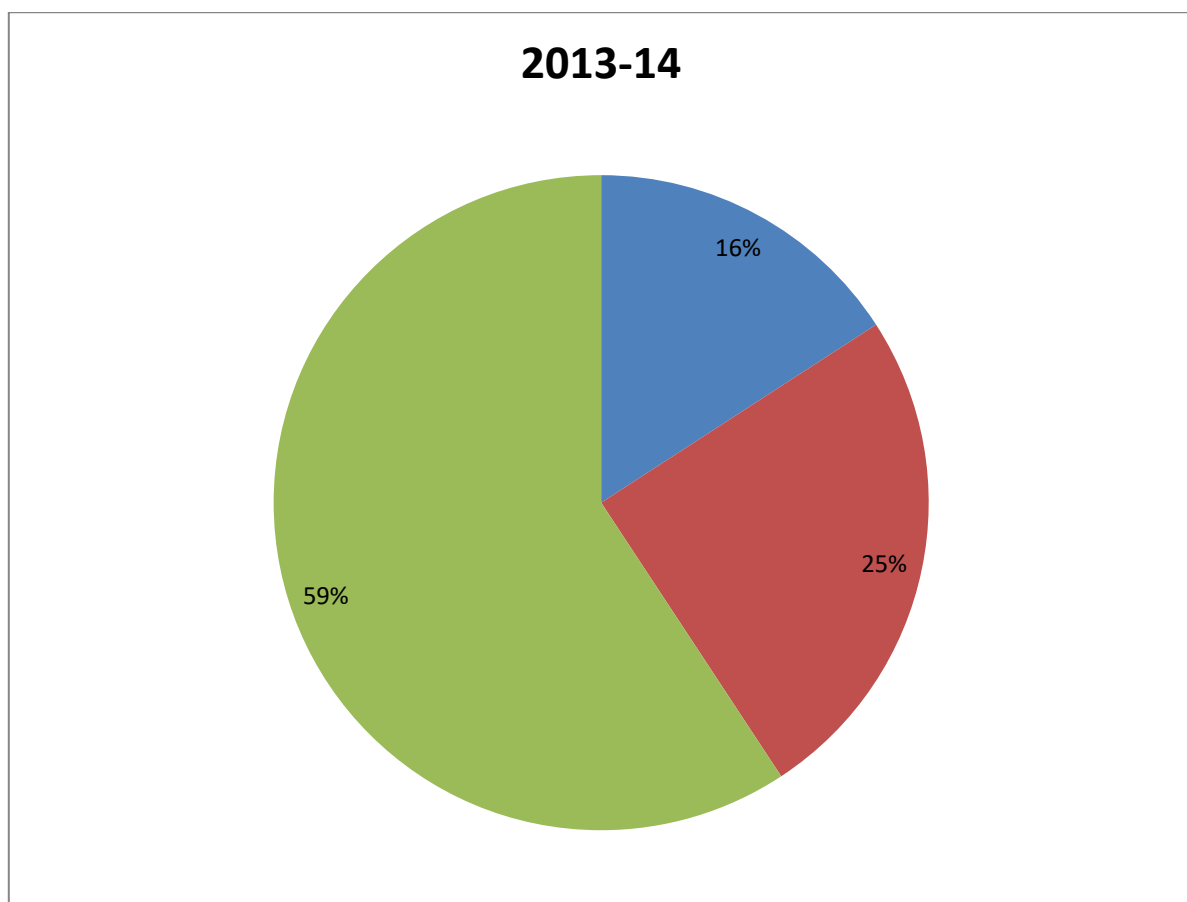
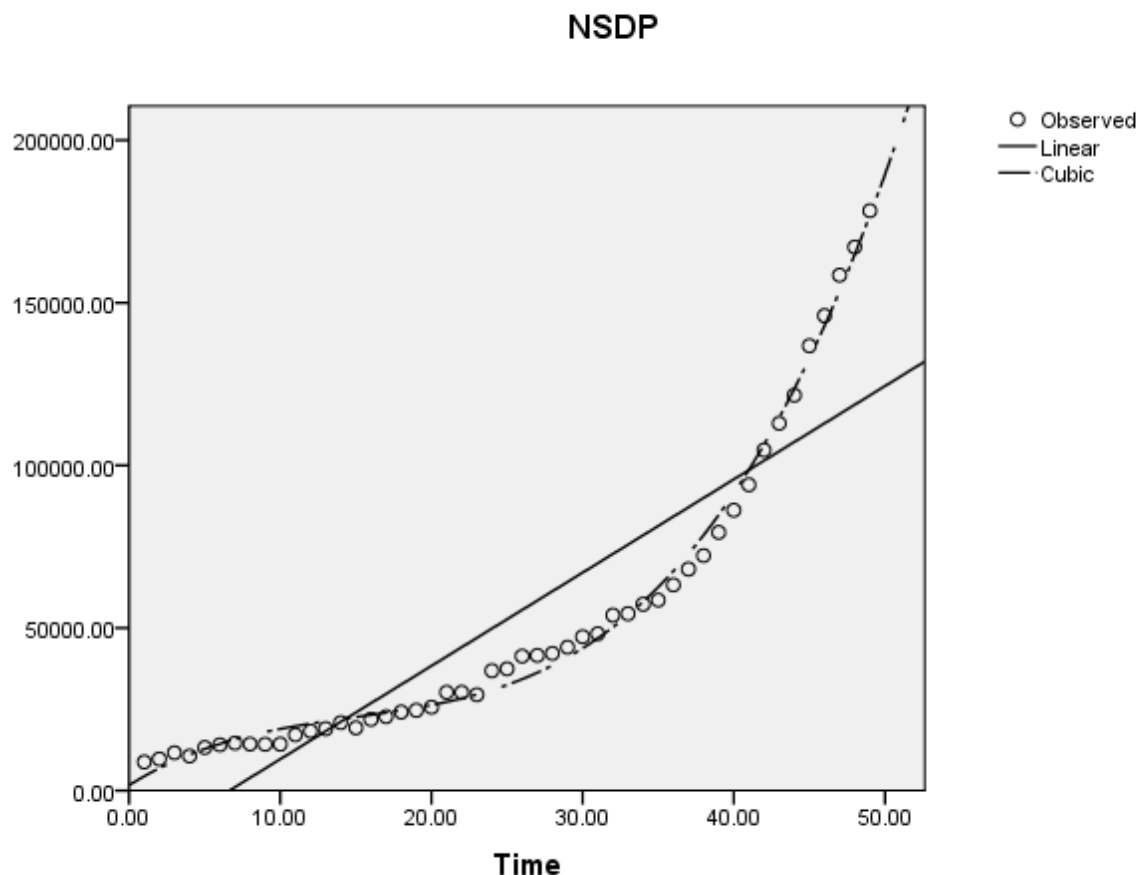


FIG: 1-4 show the change in the Sectoral Shares in NSDP in Haryana , indicating the structural change along with economic growth in Haryana .Up to 1995-96, the Primary Sector dominated

although its share continued to decline. It was after 1995-96 that the Service sector in Haryana became the dominant sector while the share of Secondary Sector reached its maximum(33%).

Economic Growth Trajectory in Haryana

Various curves fitted to long term series of NSDP, as function of time, show that the NSDP of Haryana follows the cubic trend($R\text{-square}=0.994$). Therefore, the cubic curve of NSDP and time is the best measure of long term expected growth trajectory of Haryana. The critical time points in the economic growth of Haryana can be identified by comparing NSDP Linear and Cubic trends presented in the graph below.



The growth trajectory of Haryana shows that there are three critical time points and four periods in the development process of the State: a) The Initial Period (1965-66 to 1980-81). b) The Period of Slow growth (1980-81 to 1995-96). c) The Period of faster Growth of Service Sector (1995-96 to 2006-07); d) Take off Period (2006-07 onwards). The growth pattern and structural change can be understood with the help of this periodic analysis.

Table 3: Sector wise Growth Profile of NSDP, Haryana (percentage)

Period	Primary Sector	Secondary Sector	Service Sector	NSDP
1965-66 to 1980-81	4.77	6.69	7.50	5.87
1980-81 to 1995-96	3.08	6.54	6.38	5.05
1995-96 to 2006-07	2.87	5.57	10.40	6.67
2006-07 to 2013-14	2.19	4.76	10.52	6.88
1965-66 to 2013-14	3.62	6.47	8.67	6.33

Source: Calculated, (ESO, Haryana)

The table 3 shows that the long term growth of net State Domestic product in Haryana has been 6.33 percent. The growth rate of NSDP rose above 6 percent after 1995-96 and it sustained after that. The growth rate of primary sector remained less than the other two sectors. The long term growth rate of primary sector was 3.62 percent, of secondary sector was 6.47 percent and for Service sector, it was 8.67 percent. The growth rate of Service sector always remained above the Primary and secondary Sectors. Haryana's economic growth can be called Service –led growth, especially after 1995-96.

Estimating the Contribution of Main Sectors in the Growth in Haryana

This part of the chapter makes a distinction between the share of a sector in GSDP/NSDP and its contribution to growth. Though the share of service sector in GSDP/NSDP was less than that of Primary sector till 1995-96, the contribution of service sector to growth has always been more than that of the other two sectors in Haryana. Moreover, the contribution of services sector to growth has been rising throughout, that of primary and secondary sector has been decreasing. "The correct statistical way of identifying the leading sector is not by looking at the current share of the sector or its relative growth that has produced the current share of the sector but by looking at the contribution of the sector to aggregate growth...." Nandkarni2009. In case of service sector in Haryana, its contribution to output growth always remained higher than its share in output (NSDP) and after 1992-93, the contribution of service sector to output growth consistently increased as compared to its share and as compared to the contribution of other two sectors in output growth (NSDP).

Table 4 Comparison of Sectoral Shares and Contribution to Growth (Percentage)

Year	Primary Sector Share	Primary Sector Contribution	Secondary Sector Share	Secondary Sector Contribution	Service Sector Share	Service Sector Contribution
1968-69	58.94		21.62		19.44	
1970-71	57.17	50.45	22.28	28.39	20.05	25.31
1974-75	52.92	27.28	24.14	34.8	22.94	43.56
1980-81	47.2	29.6	26.43	37.07	26.37	35.34
1984-85	42.41	-0.69	29.62	56.68	27.97	44.71
1993-94	37.28	29.11	31.45	31.05	31.26	40.58
1995-96	35.19	13.06	31.84	38.15	32.97	50.01
2003-04	27.16	10.57	29.16	29.78	45.07	62.20
2006-07	22.11	8.98	28.66	25.56	49.22	66.36
2008-09	19.93	8.9	27.57	20.48	52.50	73.09
2010-11	18.12	5.91	26.36	18.41	55.51	78.60

Source: Calculated, ESO, Haryana

FIG:5

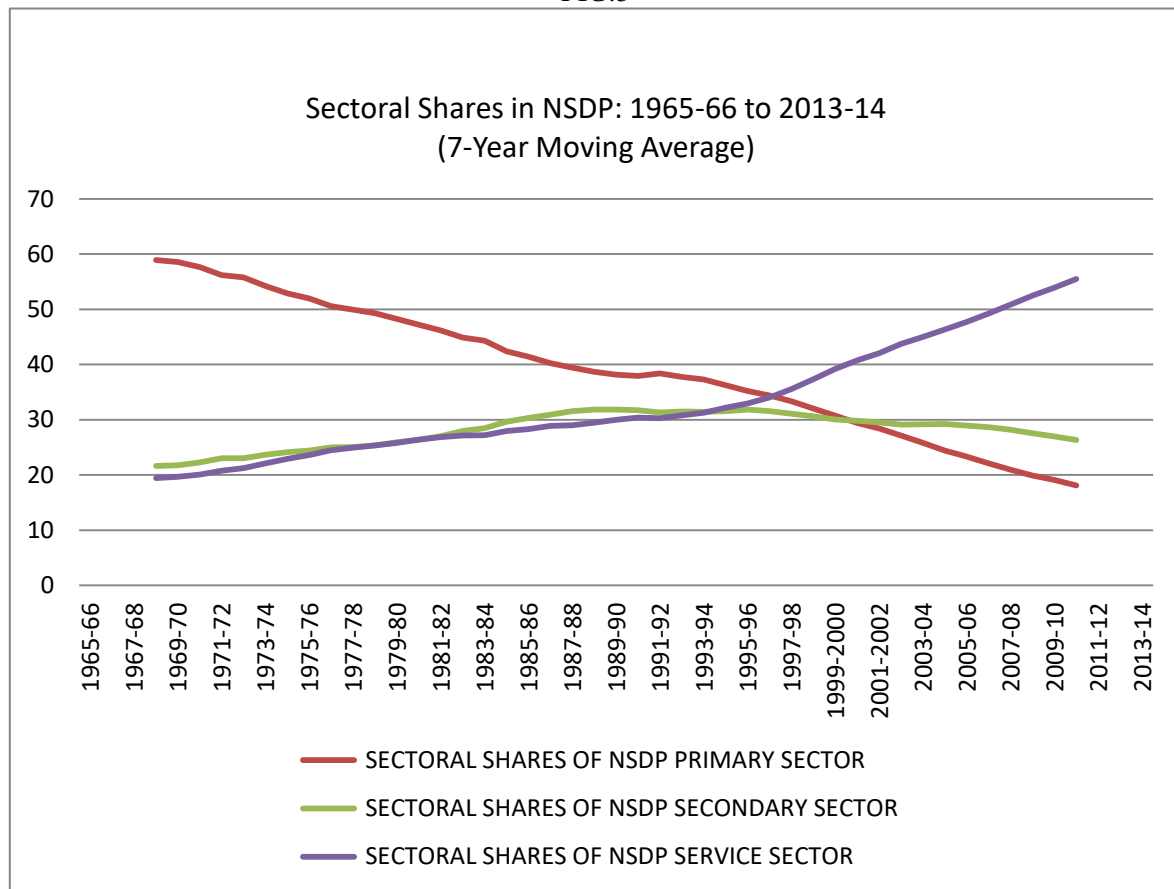


FIG: 6

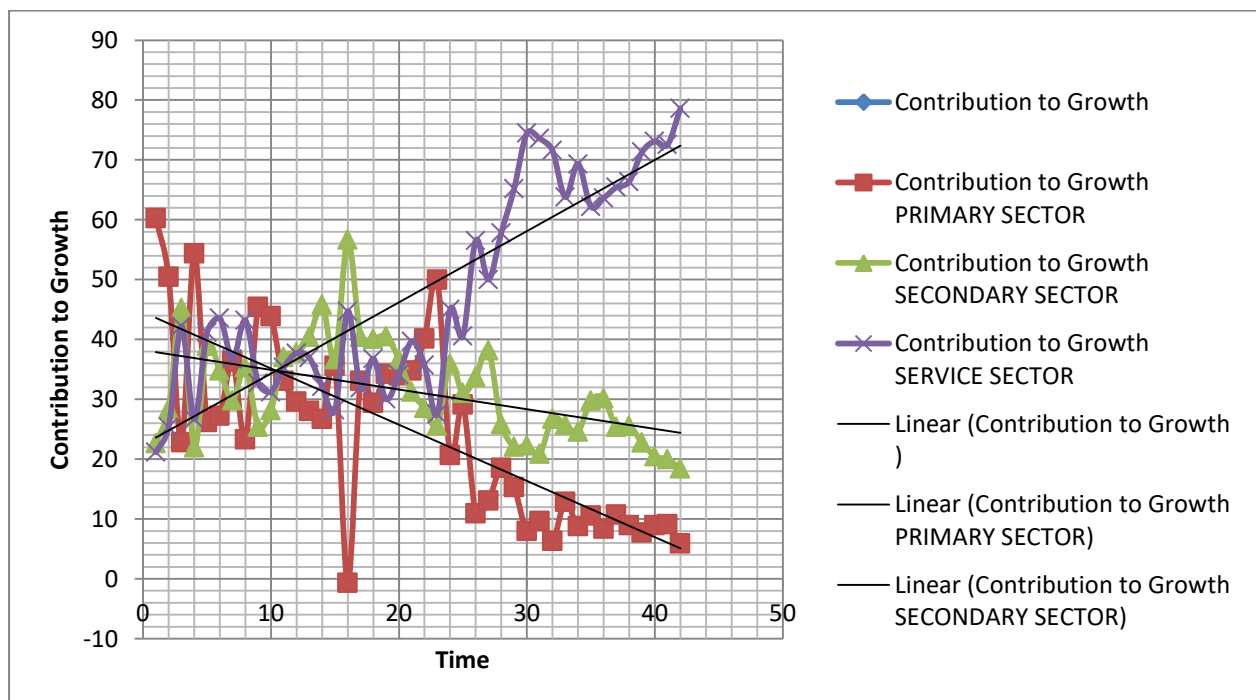


FIG 5 shows that the share of Primary Sector in Output has been falling continuously while the share of Secondary Sector rose upto 1995-96 and then it started falling. The share of Service Sector show a rising trend since 1965-66 and this rising trend accelerated after 1995-96. FIG 6 highlights the

comparative contribution to growth by the three Sectors. Evidently, the share of Service Sector depicts a rising trend and it remained much higher as compared to the other two sectors.

In the nut shell it is found that it is only the service sector whose share has been showing an increasing trend and its contribution to growth also show a rising trend because of its fast growth rate. The growth rate of service sector has always remained much higher than the growth rate of other two sectors and of output (NSDP) as well since 1965-66 to 2013-14. The Service Sector in Haryana experienced a high growth rate since 1965-66 and rose to double digit growth rate after 1997-98 leading to a very high contribution to growth about 78 percent in the year 2010-11.

Haryana growth became service -led since the beginning of 90s although its contribution to growth always remained higher.

Conclusions

- 1) The process of structural change took place in Haryana with the process of economic growth since 1965-66
- 2) The growth trajectory of Haryana depicts three critical time points and four periods in the development process of the State: a) The Initial Period (1965-66 to 1980-81). b) The Period of Slow growth (1980-81 to 1995-96). c) The Period of faster Growth of Service Sector (1995-96 to 2006-07); d) Take off Period (2006-07 onwards).
- 3) The Primary sector dominated in terms of its share in output till 1995-96 but its contribution to growth in Haryana always remained lower. The share of Secondary Sector rose very slowly till 1995-96, after that, its share started falling. The contribution of Secondary Sector to growth always remained higher than that of Primary Sector but less than Service Sector. The Share of Service Sector increased continuously and its Contribution to growth always remained much higher than the contribution of the other two sectors.

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