

# Structure and Pattern of Change in Punjab Economy

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In economics, the terms 'structure' and 'structural change' have widely used with different meanings and explanations. Structural change is a consequence of economic development in all the economies. The process of economic development is a multidimensional phenomenon with the efficient allocation of limited resources. Economic development in general, defined as economic, political and social well-being of the people and also refers to self-reliance, import substitution, behavioural and institutional changes, participation in nation building etc. required for structural evolution of a society in such a way that the fruits of the changes reaches to a large chunk of a society, hence shifting from a low-productivity or low wage economy to the one with high productivity or high wage economy. Therefore, over the period of time, economic development is linked with the rate of growth and structural changes in terms of production and workforce structure. The structural transformation is one of the important feature of economic development i.e. the re-allocation of resources between sectors that further stimulates development. According to the pioneering works done by Fisher (1935), Clark (1940), Chenery (1960) & Kuznets (1971), the share of agriculture in terms of output as well as employment was very large during the early stages of economic development. Further in the next stage, with more development as the share of agriculture declines, there was an increase in the share of industrial sector. After reached the more advanced stage of economic development when the countries become industrialized, the share of services sector got shoot up with the contraction in the share of industrial sector. Kuznets named this typical pattern of structural change i.e agriculture-industry-services sector (primary-secondary-tertiary sector) as modern economic growth.

But the structural change in Punjab economy is quite different from the pattern of growth as mentioned by Kuznets in modern economic growth. Every economy has different pattern of growth as Punjab economy is experiencing the structural change directly from primary sector to tertiary sector by leaving behind the secondary sector. Therefore, in order to study deeply the structure and pattern of growth in the Punjab economy, the following study is based on three broad sections. The first section is based on brief analysis on global economy in some selected nations of the world; second section deals with the analysis based on Indian economy and the last section covers the detailed analysis of structural change in the Punjab economy.

## Structural change in the Global Economy

The experience of global economy in terms of structural change has followed the same pattern of primary-secondary and tertiary sector as documented by Kuznets (1966) and other economists of structural change. In the developed countries, the share of primary sector has registered the continuous fall in the production and employment while the secondary sector has maintain their momentum of increase in the share of output for the considerable period of time. After that the period of de-industrialization (Rowthorn and Wells, 1987) has come i.e the decline in the share of industrial sector. This shrinkage in the share of industrial sector was responsible behind the spurt in the services sector and this period was name as emerging dominance of tertiary sector as well as ‘post-industrial society’ (Clark,1984) in the economies of the developed nations.

All the developed countries have experienced different phases of structural changes during different point of time. During the nineteenth century, the pre-modern era ended at different periods, for example before 1800 in United Kingdom, 1835 in France, 1861 in Italy, 1870 in United States of America and 1878 in Japan etc. according to Kuznets. Around 47 per cent of the population of developed nations was engaged in agriculture during the twentieth century. Further, this proportion had fallen to below 5 per cent by the end of the twentieth century (Feinstein, 1999). In the beginning of the modern development, the share of secondary sector was approximately 25 per cent in almost all the developed nations of the world. But after that all the countries have seen a downward trend in their share in secondary sector. Therefore, the share of secondary sector was 26 per cent in 2006 as compared to 23 per cent in 1801 in United Kingdom, 21 per cent in 2006 as compared to 25 per cent in 1841 in France, 30 per cent in 2006 as compared to 24 per cent in 1841 in Germany, 22 per cent in 2006 as compared to 20 per cent in United States of America and 27 per cent in 2006 as compared to 22 per cent in 1901 in Italy. All the developed countries had experienced a continuous rise in the share of the tertiary sector. The United Kingdom had experienced approximately 50 per cent in the share of tertiary sector in the very beginning of modern economic development in 1901 and then saw a decline till mid 1950’s. Again in 1960’s, the United Kingdom has crossed 50 per cent in its share in tertiary sector while the other countries like Italy, Japan, France and Germany has crossed this 50 per cent for the first time in 1960 (Sodhi, 2011). Therefore, it is quite clear from the economic literature that the structural change in almost all the developed nations were on the lines of the modern economic development i.e. from primary to secondary and then to tertiary sector as suggested by Kuznets.

**Table 4.1: Percentage Sectoral Shares in GDP of Selected Developed Countries for the Year 2000, 2005, 2010 and 2015**

Country	2000			2005			2010			2015		
	P	S	T	P	S	T	P	S	T	P	S	T
<b>United Kingdom</b>	0.92	27.06	72.03	0.66	23.29	76.05	0.74	20.78	78.48	1.05	20.03	78.92
<b>United States</b>	1.17	23.21	75.61	1.17	21.96	76.87	1.16	20.33	78.51	0.65	19.41	79.94
<b>Australia</b>	3.39	26.78	69.84	3.16	26.78	70.06	3.02	26.37	70.60	2.56	25.40	72.04
<b>Germany</b>	1.06	30.91	68.04	0.76	29.40	69.84	0.72	30.16	69.12	0.64	30.49	68.88
<b>France</b>	2.34	23.34	74.32	1.87	21.51	76.62	1.78	19.60	78.62	1.74	19.50	78.76

<b>Japan</b>	1.59	31.06	67.35	1.22	28.13	70.65	1.18	27.54	71.28	1.07	28.89	70.04
<b>Italy</b>	2.85	27.13	70.02	2.25	25.82	71.94	1.97	24.35	73.68	2.26	23.73	74.02
<b>Norway</b>	2.07	41.38	56.56	1.57	42.58	55.85	1.76	39.07	59.17	1.81	34.65	63.54
<b>New Zealand</b>	8.32	25.32	66.35	4.86	25.82	69.32	7.19	23.66	69.15	5.66	23.27	71.07
<b>Spain</b>	4.12	30.74	65.14	3.03	30.43	66.54	2.55	26.01	71.44	2.56	23.64	73.80

**Source:** World Development Indicators, 2015

**Note:** P- Primary sector, S- Secondary sector, T- Tertiary sector

Table 4.1 shows the percentage sectoral shares in GDP of selected developed countries of the world for the year 2000, 2005, 2010 and 2015. The share of primary sector in United Kingdom has registered 0.92 per cent in 2000, 0.66 per cent in 2005, 0.74 per cent in 2010 and in the last 1.05 per cent in 2015. In the same time, the share of secondary sector decreases from 27.06 per cent in 2000 to 20.03 per cent in 2015 and the share of tertiary sector meanwhile rises to 78.92 per cent in 2015 from 72.03 per cent in 2000. United States saw a marginal decline in the share of primary sector to 0.65 per cent in 2015 from 1.17 per cent in 2000. The secondary sector gave a downward trend while the tertiary sectors share jumps to 79.94 per cent in 2015 more than United Kingdom's tertiary sectors share from 23.21 per cent in 2000 in United States. Australia revealed the same picture with the drop in the shares of primary as well as secondary sector and increase in the share of tertiary sector from 69.84 per cent in 2000 to 72.04 per cent in 2015. Germany also have the contraction in the primary and secondary sector from 1.06 per cent in 2000 to 0.64 per cent in 2015 and from 30.91 per cent in 2000 to 30.49 per cent in 2015. The tertiary sector share grows to 68.88 per cent in 2015 from 68.04 per cent in 2000 in Germany. In case of France, the primary sector experienced a decline in the shares from 2.34 per cent in 2000 to 1.74 per cent in 2015, the secondary sector also experienced a decline from 23.34 per cent in 2000 to 19.50 per cent in 2015 and the tertiary sector showed a increase in the shares from 74.32 per cent in 2000 to 78.76 per cent in 2015. In 2015, Japan witnessed an increase in the tertiary sector to 70.04 per cent with the fall in the primary and secondary sector to 1.07 per cent and 28.89 per cent. Italy grew with the approximately 4 per cent rise in the tertiary sector from 70.02 per cent in 2000 to 74.02 per cent in 2015. In comparison to others, Norway still have the highest contribution of 34.65 per cent in the secondary sector in 2015 and the lowest contribution of 63.54 per cent in tertiary sector in 2015. New Zealand also have the highest percentage of 5.66 per cent in agriculture in 2015 followed by 23.27 per cent in secondary sector and 71.07 per cent in tertiary sector in 2015. In the last, Spain showed the expansion from 65.14 per cent in 2000 to 73.80 per cent in 2015 in the tertiary sector whereas the primary and secondary sector falls to 2.56 per cent and 23.64 per cent in 2015 from 4.12 per cent and 30.74 per cent in 2000.

**Table 4.2: Percentage Sectoral Shares in Employment of Selected Developed Countries for the Year 2000, 2005, 2010 and 2015**

Country	2000			2005			2010			2015		
	P	S	T	P	S	T	P	S	T	P	S	T
<b>United Kingdom</b>	1.40	25.30	73.00	1.30	22.20	76.20	1.10	19.20	79.00	1.63	18.45	79.92
<b>United States</b>	2.60	23.20	74.30	1.60	20.60	77.80	1.60	17.20	81.20	1.13	18.53	79.65
<b>Australia</b>	4.90	22.20	66.90	3.60	21.50	68.10	3.20	21.40	68.40	2.65	19.49	78.03

<b>Germany</b>	2.50	33.60	63.90	2.30	30.00	67.80	1.50	28.50	69.90	1.39	27.69	70.92
<b>France</b>	4.00	26.30	69.60	3.60	23.80	72.30	2.90	22.20	74.40	2.71	20.12	75.93
<b>Japan</b>	5.10	31.20	63.10	4.40	28.40	66.00	4.00	25.40	69.50	3.58	25.50	69.35
<b>Italy</b>	5.00	32.00	63.00	4.00	30.90	65.10	3.60	28.80	67.60	3.75	26.60	69.65
<b>Norway</b>	4.10	21.80	74.00	3.20	21.00	75.80	2.40	19.80	77.70	2.01	20.08	77.69
<b>New Zealand</b>	8.70	23.20	67.70	7.10	22.20	70.60	6.80	20.90	71.90	6.08	21.86	71.48
<b>Spain</b>	6.60	31.00	62.50	5.20	29.70	65.10	4.10	23.10	72.80	4.12	19.90	75.97

Source: World Development Indicators, 2015

Note: P- Primary sector, S- Secondary sector, T- Tertiary sector

Table 4.2 shows the percentage sectoral shares of employment in the selected developed nations of the world. The above table of employment of developed nations shows the fact that the share of each sector of employment are in consonance with the GDP shares of each sector. That means the employment structure of almost all the developed nations were similar to their production structure. Therefore, this close proximity of employment and production structures in the developed nations reflects the high degree of inter-sectoral equity.

**Table 4.3: Percentage Sectoral Shares in GDP of Selected Developing Asian Countries for the Year 2000, 2005, 2010 and 2015**

Country	2000			2005			2010			2015		
	P	S	T	P	S	T	P	S	T	P	S	T
<b>China</b>	14.75	45.43	39.82	11.73	46.87	41.40	9.62	46.17	44.20	8.83	40.93	50.24
<b>Indonesia</b>	15.60	45.93	38.47	13.13	46.54	40.33	13.93	44.77	41.30	13.49	40.18	46.33
<b>Thailand</b>	8.50	36.84	54.66	9.20	38.63	52.17	10.53	40.03	49.44	8.72	36.39	54.89
<b>Philippines</b>	13.97	34.46	51.58	12.66	33.83	53.50	12.31	32.57	55.12	10.26	30.90	58.84
<b>Malaysia</b>	8.60	48.32	43.08	8.26	45.93	45.81	10.09	40.50	49.41	8.45	36.43	55.12
<b>Pakistan</b>	25.93	23.33	50.74	21.47	27.10	51.43	24.29	20.58	55.13	25.11	19.96	54.93
<b>India</b>	<b>23.02</b>	<b>26.00</b>	<b>50.98</b>	<b>18.81</b>	<b>28.13</b>	<b>53.06</b>	<b>18.21</b>	<b>27.16</b>	<b>54.64</b>	<b>17.46</b>	<b>29.61</b>	<b>52.93</b>

Source: World Development Indicators, 2015

Note: P- Primary sector, S- Secondary sector, T- Tertiary sector

The experience of some developing countries of Asia in the path of economic development is somewhat different from the experience of the developed nations. Table 4.3 depicts the percentage sectoral shares in GDP of selected developing Asian countries for the year 2000, 2005, 2010 and 2015. The share of primary sector is declining in all the Asian countries like the developed nations. In China, the share of primary sector declined to 8.83 per cent in 2015 from 14.75 per cent in 2000. But the share of secondary sector was the highest in China i.e. 40.93 per cent in 2015 with the increase in the share of tertiary sector from 39.82 per cent in 2000 to 50.24 per cent in 2015. Indonesia showed a small decline in the primary sector from 15.60 per cent in 2000 to 13.49 per cent in 2015. There was a slight difference in the shares of secondary sector and tertiary sector in 2015 in Indonesia. Although, secondary sector declined to 40.18 per cent in 2015 from 45.93 per cent in 2000 whereas primary sector increased to 46.33 per cent in 2015 from 38.47 per cent in 2000.

Thailand registered marginal changes in all the sectors from 2000 to 2015 which was 8.72 per cent in 2015 from 8.50 per cent in 2000 in primary sector, 36.39 per cent in 2015 from 36.84 per cent in 2000 in secondary sector and 54.89 per cent in 2015 from 54.66 per cent in 2000. In 2015, Tertiary sector's growth was highest in Philippines (58.84 %) in contrast to all other Asian countries. There was a marginal fall in the primary sector from 2000 to 2015 along with the decline in the secondary sector from 48.32 per cent in 2000 to 36.43 per cent in 2015 and increase in the share of tertiary sector from 43.08 per cent in 2000 to 55.12 per cent in 2015 in Malaysia. The experience of India and Pakistan is quite similar in relation to other Asian countries as both the countries emerge as service-led economies with the passage of time by bypassing the secondary sector behind. During the year 2000 and 2015, the share of tertiary sector has increased from 50.74 per cent to 54.93 per cent in Pakistan and from 50.98 per cent to 52.93 per cent in India respectively.

**Table 4.4: Percentage Sectoral Shares in Employment of Selected Developing Asian Countries for the Year 2000, 2005, 2010 and 2015**

Country	2000			2005			2010			2015		
	P	S	T	P	S	T	P	S	T	P	S	T
<b>China</b>	50.00	22.50	27.50	44.80	23.80	31.40	36.70	28.70	34.60	28.30	29.30	42.40
<b>Indonesia</b>	45.30	17.40	37.30	44.00	18.70	37.30	38.30	19.30	42.40	32.88	22.33	44.79
<b>Thailand</b>	48.50	17.90	33.60	42.60	20.20	37.20	38.20	20.70	41.10	32.28	23.75	43.97
<b>Philippines</b>	37.10	16.20	46.70	36.00	15.60	48.50	33.20	15.00	51.80	29.15	16.20	54.65
<b>Malaysia</b>	18.40	32.20	49.50	14.60	29.70	55.70	13.30	27.60	59.10	12.47	27.52	60.01
<b>Pakistan</b>	48.40	18.00	33.60	43.00	20.30	36.70	45.00	20.90	34.10	42.07	22.56	35.37
<b>India</b>	<b>59.90</b>	<b>16.00</b>	<b>24.10</b>	<b>55.80</b>	<b>19.00</b>	<b>25.20</b>	<b>51.10</b>	<b>22.40</b>	<b>26.50</b>	<b>46.80</b>	<b>25.43</b>	<b>27.77</b>

**Source:** World Development Indicators, 2015

**Note:** P- Primary sector, S- Secondary sector, T- Tertiary sector

The Table 4.4 indicates the percentage sectoral shares in the employment of these selected developing countries of Asia for the year 2000, 2005, 2010 and 2015. The share of employment in primary sector has been continuously falling in all of these countries but in comparison to GDP shares, the pace of shift in employment has been comparatively much slower from primary sector to other two sectors of the developing economies. India and Pakistan was still lagging behind in their shift in labour force i.e. 46.80 per cent and 42.07 per cent in primary sector against 17.46 per cent and 25.11 per cent in GDP contribution in primary sector in 2015. Further, the labour force in tertiary sector was around 27.77 per cent and 35.37 per cent against 52.93 per cent and 54.93 per cent in 2015 in India and Pakistan. This was the only reason behind the slow growth of most of the developing countries compared to developed countries as the share of each sector in employment in developing nations are not in consonance with their GDP share of that sector like in developed nations. Moreover, Philippines and Malaysia are exceptional cases as their pace in the shift of labour force is quite fast. Both the countries are on the path of economic development in terms of shift in the GDP shares as well as in the shift of labour force. The growth of service sector in Philippines was enlarging due to the rise in the scope of export as well as domestic market in information technology (outsourcing), expansion of tourism and further in the development of domestic prospects for Filipinos in terms of managerial, technical, entrepreneurial

talentso that they will work in Philippines not in overseas (Mitra, 2013). Malaysia is also generated revenues for the economy from the service sector because of the development in the tourism, telecommunications, education and financial services etc.

Hence, every economy exposes to different structural change in the process of economic development. Therefore, from the emerging pattern as given in the above data on the production shares and employment shares in the selected developed nations as well as in the developing Asian nations, it is concluded that the structural change in the developed nations are in accordance with the modern economic development while the most of the developing nations including India followed the shift from the primary sector to tertiary sector directly followed by secondary sector. Further, the employment structure of almost all the developed nations were similar to their production structure reflects the high degree of inter-sectoral equity but the share of each sector in employment in developing nations are not in consonance with their GDP share.

### Structural change in the Indian economy

This section analyses the growth and structural change in the Indian economy. As already discussed, the Indian economy has experienced a maximum growth in the tertiary sector with the passage of time from primary sector followed by secondary sector without symmetrical change in the labour force. This pattern of change in the Indian economy is not in consonance with the experience as observed in developed nations. In his regard, for the deep analyses in the interior of Indian economy, the State/Union Territory-wise sectoral shares in State Domestic Product in relation to Per Capita Income were analysed.

Table 4.5 revealed the State/Union Territory-wise sectoral shares in State Domestic Product in relation to Per Capita Income for the selected 2004-05, 2009-10 and 2014-15 years at constant 2011-12 prices. The nature and extent of the pattern of structural change were different among different states/union territories in the Indian economy. All the states/union territories of the Indian economy were ranked in accordance with their respective per capita income in order to study its impact on their sectoral shares as per the availability of the data. This table is the indication of spatial and temporal pattern of change in the sectoral shares.

**Table 4.5: State/Union Territory-wise Sectoral Shares in State Domestic Product in relation to Per Capita Income for Selected Years**

S. No.	State & Union Territories	2004-05 at 2011-12 prices					2009-10 at 2011-12 prices					2014-15 at 2011-12 prices				
		Per capita income		P	S	T	Per capita income		P	S	T	Per capita income		P	S	T
		Value	Rank				Value	Rank				Value	Rank			
1	Andhra Pradesh	46366	16	38.02	26.82	35.16	63723	16	34.19	27.39	38.42	79441	16	32.14	21.22	46.64
2	Arunachal Pradesh	54968	11	52.24	17.25	30.51	69719	15	41.97	16.13	41.90	82682	15	43.54	16.53	39.93
3	Assam	31767	23	39.36	22.36	38.28	38627	23	33.66	22.00	44.35	42349	24	29.59	22.83	47.58
4	Bihar	13192	27	34.90	11.86	53.24	17728	27	24.64	17.50	57.87	26736	27	21.47	13.05	65.48
5	Chandigarh	146065	2	1.52	15.36	83.12	172803	2	0.94	13.28	85.78	203461	3	0.53	8.88	90.59
6	Chhattisgarh	37700	19	35.27	35.08	29.65	49136	19	31.46	35.16	33.37	62394	20	30.22	33.23	36.55
7	Delhi	110803	3	4.97	21.22	73.80	169169	3	3.62	15.39	80.99	213842	2	2.87	13.36	83.77

8	Goa	153860	1	35.87	48.21	15.93	190547	1	27.43	52.53	20.03	262124	1	5.70	56.91	37.39
9	Gujarat	48519	14	33.09	32.99	33.93	74502	14	23.40	40.64	35.96	108433	10	21.75	39.23	39.02
10	Haryana	66045	5	32.32	32.87	34.82	95740	5	24.84	30.85	44.30	124092	5	20.28	28.86	50.86
11	Himachal Pradesh	59455	8	26.19	41.75	32.06	77540	11	18.11	44.75	37.13	104717	13	17.08	40.51	42.42
12	Jammu & Kashmir	38789	18	24.53	31.75	43.72	47327	20	19.19	29.72	51.09	54289	22	15.50	28.73	55.77
13	Jharkhand	30224	24	21.42	52.98	25.60	35162	24	22.70	38.48	38.82	50071	23	26.16	35.92	37.92
14	Karnataka	58125	10	18.59	28.83	52.58	80639	9	15.91	27.55	56.54	105350	12	12.87	25.19	61.94
15	Kerala	59983	7	14.71	24.40	60.88	87811	6	9.59	21.85	68.56	115225	7	10.91	25.34	63.75
16	Madhya Pradesh	24325	25	41.88	21.82	36.30	33015	25	36.06	26.47	37.46	41336	25	39.05	20.44	40.51
17	Maharashtra	58234	9	24.36	28.64	47.00	87562	7	18.76	31.08	50.16	113379	9	15.55	29.61	54.84
18	Meghalaya	40286	17	34.13	22.23	43.64	51155	18	25.27	29.51	45.21	60927	21	20.33	33.09	46.58
19	Mizoram	37495	20	25.29	17.85	56.86	52755	17	22.69	20.74	56.57	69569	17	18.14	18.37	63.49
20	Nagaland	33708	22	40.31	12.41	47.29	44947	22	32.91	15.69	51.40	62664	19	30.28	15.67	54.05
21	Puducherry	71777	4	9.22	55.68	35.10	119420	4	6.52	54.11	39.38	132548	4	6.08	39.08	54.84
22	Punjab	61152	6	45.29	18.00	36.71	79122	10	36.01	24.35	39.64	96638	14	29.40	22.23	48.37
23	Rajasthan	36004	21	37.46	26.00	36.54	47133	21	30.30	28.23	41.47	64002	18	34.61	22.05	43.34
24	Tamilnadu	48990	13	18.45	34.74	46.80	77236	12	14.28	35.07	50.65	113817	8	12.52	32.40	55.08
25	Telangana	49415	12	26.31	28.70	44.99	75277	13	21.40	30.18	48.42	105488	11	19.35	21.18	59.47
26	Uttarakhand	47532	15	30.55	39.33	30.12	85654	8	16.97	47.36	35.67	120759	6	12.84	48.79	38.37
27	Uttar Pradesh	22922	26	37.65	24.39	37.95	29012	26	30.21	26.96	42.83	35072	26	26.74	24.39	48.87
<b>All India</b>		<b>40268</b>		<b>28.26</b>	<b>27.5</b>	<b>44.25</b>	<b>56543</b>		<b>22.31</b>	<b>29.09</b>	<b>48.60</b>	<b>72889</b>		<b>19.33</b>	<b>28.15</b>	<b>52.51</b>
<b>Correlation with PCI</b>				<b>-0.47</b>	<b>0.18</b>	<b>0.25</b>			<b>-0.57</b>	<b>0.19</b>	<b>0.27</b>			<b>-0.72</b>	<b>0.28</b>	<b>0.35</b>

Source: Calculated from Central Statistics Office, New Delhi

Note: P- Primary sector, S- Secondary sector, T- Tertiary sector

\*Andaman & Nicobar Islands, Manipur, Odisha, Sikkim, Tripura & West Bengal - Data not available

Goa maintains the first rank in terms of per capita income and with the passage of time its share in primary sector declines from 35.87 per cent in 2004-05 to 5.70 per cent in 2014-15 followed by secondary and tertiary sectors. Chandigarh and Delhi above the national average showed the tremendous growth in the share of tertiary sector from 83.12 per cent and 73.80 per cent in 2004-05 to 90.59 per cent and 83.77 per cent in 2014-15. Puducherry also experienced the rise in the share of tertiary sector from 35.10 per cent in 2004-05 to 54.84 per cent in 2014-15 with the fall in the primary and secondary sectors from 9.22 per cent and 55.68 per cent in 2004-05 to 6.08 per cent and 39.08 per cent in 2014-15. Punjab and Haryana, the agricultural economies have slowly increase their tertiary sector share from 36.71 per cent and 34.82 per cent in 2004-05 to 48.37 per cent and 50.86 per cent in 2014-15 followed by primary and secondary sectors. Kerala followed the different pattern in the growth of sectors i.e. first increase in the share of tertiary sector with the decrease in the other two sectors from 2004-05 to 2009-10 and then decrease in the share of tertiary sector with the increase in the other two sectors during 2009-10 to 2014-15. In Himachal Pradesh, the share of primary sector falls from 26.19 per cent in 2004-05 to 17.08 per cent in 2014-15 while the secondary sector showed the marginal decline from 41.75 per cent in 2004-05 to 40.51 per cent in 2014-15 and tertiary sector rises from 32.06 per cent in 2004-05 to 42.42 per cent in 2014-15. Maharashtra followed the same increase in the tertiary sector from 47 per cent in 2004-05 to 54.84 per cent in 2014-15 with the decrease in the primary sector and marginal change in the secondary sector from 2004-05 to 2014-15. From 2004-05 to 2014-15, Karnataka

registered the growth in the tertiary sector from 52.58 per cent to 61.94 per cent. Arunachal Pradesh with the 15<sup>th</sup> rank in 2014-15 as per the percapita income still have the highest share in primary sector (43.54 per cent) in contrast to tertiary sector (39.93 per cent). Telangana experienced the decrease in the primary sector as well as in secondary sector from 26.31 per cent and 28.70 per cent in 2004-05 to 19.35 per cent and 21.18 per cent in 2014-15 and increase in the tertiary sector from 44.99 per cent in 2004-05 to 59.47 per cent in 2014-15. Tamilnadu jumped to 8<sup>th</sup> rank in 2014-15 from 13<sup>th</sup> rank in 2004-05 with the same pattern of change in the sectoral shares i.e. decrease in the shares of primary and secondary sector and increase in the share of tertiary sector from 2004-05 to 2014-15. The structure and pattern of change in the Gujarat economy is different. Gujarat being the industrialized state (Bagchi, Das and Chattopadhyay, 2005), the highest contribution to GDP is by secondary sector which is 39.23 per cent followed by tertiary sector and primary sector (39.02 per cent and 21.75 per cent). Uttrakhand is one of the growing state in India as it jumped to 6<sup>th</sup> rank in 2014-15 from 15<sup>th</sup> rank in 2004-05. The share of secondary sector was highest among primary and tertiary sector in Uttrakhand. Andhra Pradesh showed the constant behaviour in its rank in accordance with per capita income (16<sup>th</sup> rank) during the whole period. The share of tertiary sector climbs to 46.64 per cent in 2014-15 from 35.16 per cent in 2004-05 while the primary and secondary sectors falls to 32.14 per cent and 21.22 per cent in 2014-15 from 38.02 per cent and 26.82 per cent in 2004-05. Meghalaya witnessed the increase in the secondary and tertiary sector to 33.09 per cent and 46.58 per cent with the decrease in the primary sector to 20.33 per cent in 2014-15. Jammu and Kashmir experienced the growth in the tertiary sector to 55.77 per cent in 2014-15 from 43.72 per cent in 2004-05 in contrast to decrease in the other two sectors of the economy. Chhattisgarh falls in the same range of around 30 per cent in all the three sectors. The share of primary sector is 30.22 per cent, secondary sector is 33.23 per cent and the tertiary sector is 36.55 per cent in 2014-15 in Chhattisgarh. The service sector remained one of the dominating sector in Mizoram economy contributed around 63.49 per cent in 2014-15 from 56.86 per cent in 2004-05 due to their improved education sector as well as growing tourism industry whereas the share of primary and secondary sector contributed around 18.14 per cent and 18.37 per cent in 2014-15 from 25.29 per cent and 17.85 per cent in 2004-05. In case of Rajasthan, tertiary sector grows from 36.54 per cent in 2004-05 to 43.34 per cent in 2014-15 whereas the secondary and tertiary sector falls from 37.46 per cent and 26 per cent in 2004-05 to 34.61 per cent and 22.05 per cent in 2014-15. Nagaland witnessed 54.05 per cent in the tertiary sector, 30.28 per cent in the primary sector and 15.67 per cent in the secondary sector in the year 2014-15. Assam experienced the downward trend in the share of primary sector from 39.36 per cent in 2004-05 to 25.59 per cent in 2014-15 with the marginal change in the secondary sector from 22.36 per cent in 2004-05 to 22.83 per cent in 2014-15 and the share of tertiary sector rises from 38.28 per cent in 2004-05 to 47.58 per cent in 2014-15. The contribution of primary sector, secondary sector and tertiary sector was around 26.16 per cent, 35.92 per cent and 37.92 per cent in 2014-15 in Jharkhand. Madhya Pradesh followed the marginal decrease in the primary sector and secondary sector from 41.88 per cent and 21.82 per cent in 2004-05 to 39.05 per cent and 20.44 per cent in 2014-15 and enlargement in the tertiary sector from 36.30 per cent in 2004-05 to 40.51 per cent in 2014-15. Even in the low-income states with 26<sup>th</sup> and 27<sup>th</sup> rank in terms of per-capita income in Uttar Pradesh and Bihar, there was a larger share in the tertiary sector in comparison to the share of primary and secondary sector.

Hence, in terms of correlation between the level of per capita income and the share of sectors, there was a positive and statistically significant correlation between the share of secondary and tertiary sectors with their respective per capita income. But on the other hand, there was a negative correlation between the share of primary sector with their corresponding per capita income level. Almost, all the states/union territories followed the transition from primary sector to tertiary sector. In particular, the high income states/union territories have greater share in the tertiary sector in comparison to the low income states. In case of agricultural dominated Punjab economy, there was a shift in the primary sector to tertiary sector but there was a lack in the growth of secondary sector due to many constraints that we will discuss in the next section.

## **Structural Change in the Punjab economy**

The economy of Punjab holds an extremely important place in the Indian economy. Being lowest in the poverty rates among other states, Punjab occupies a credible record of development. Traditionally, Punjab was one of the richest as well as fastest growing states of India (Swaminathan S. Aklesaria Aiyar, 2012). It is the trendsetter state which achieved the remarkable growth during the Green Revolution period in the mid-sixties and mid-seventies. But during the late eighties, the economy of Punjab slowed down and even gets stagnated in the nineties. It is the largest producer of grain in India and also plays a critical role during military aggression (Human Development Report, 2004). The geographical boundaries of Punjab have shifted two times. First due to violent partition of India in 1947 and second due to administrative division of the Punjab economy into present day Punjab and the states of Himachal Pradesh and Haryana. Further, the state has also suffered from two internal crises i.e. the Naxalite movement of the 1960s and 1970s and also the military movement in the 1980s and the early 1990s. After prolonged struggle, Punjab's law and order agencies have been able to curb militancy (Human Development Report, 2004).

Being the prosperous states of India, Punjab is losing its past glory due to reduction in the rate of growth of the economy in the recent past (Upindersawhney, 2008). As compared to the growth experience of the Indian economy in general and other states in particular, Punjab's economy experienced steadily rising per capita income as well as accelerated economic growth during the early Green Revolution period. This credible development of Punjab was due to the adoption of planned development strategy (Lakhwinder Singh and Sukhpal Singh, 2002). This planned strategy of economic development was based on import-substitution strategy which had growth enhancing effect in the initial period. However, in the post-reform period, the performance of some of the states like Maharashtra in particular and the Indian economy in general was on the roads of improvement but during the same period, the trends in the Punjab economy have been reversed. Further, this post-reform period has exposed the deficiency behind the growth of the Punjab economy and raised the question why the economic performance of the economy has lagged far behind. This dismal performance changed the status of the Punjab economy from the fast growing economy to the slow growing economy (Lakhwinder Singh, 2011). Relative to other Indian states, Punjab kept slipping.

Punjab became the richest state in the country due to the adoption of the New Agricultural Strategy known as 'Green Revolution'. During the 1960's, the rate of growth was almost seven per cent and during

1970's, the rate of growth was around 5.4 per cent which is approximately one and a half to two times faster than the rate of growth of the rest of the economy. The growth of agricultural economy slowed down substantially from five per cent in 1980s to 2.6 per cent in 1990s in contrast to all-India average of 3.2 per cent (UpinderSawhney,2008). In Punjab, the development of industrial sector was largely restricted to small enterprises basically for low-end consumer goods and that was also only confined to few districts. Even the share of secondary sector in Punjab is lower than the all-India average. Further, the share of Punjab in foreign direct investment (FDI) was approximately less than one per cent even after the liberalization in the investment policy in the country. This dismal performance of the secondary sector in Punjab state was considerably low as compared with the performance of some of the leading states like Gujarat and Maharashtra in industrial sector. There are many reasons behind the restricted growth of the secondary sector in Punjab. During the period of 1965 and 1971, Punjab was surrounded by Pakistan and the two Indo-Pak wars which adversely affected the pattern of growth of industrialization in state. Further during the 1980s, the civil strife in Punjab put a constraint on the development of industry in the state. Hence, the economy of Punjab was in the period of stagnation in the agricultural sector as well as in the industrial sector. Usually, the agricultural sector supplies the labour force and investible funds for the development of industrial sector. But this process was not followed by Punjab. It was expected that more and more labourers would shift to the industrial sector with the application of advanced technology in the agricultural sector but still there was around 56 per cent of labour force engaged in agricultural sector between 1961 and 1991.

Since 1980, there are many constraints which are responsible for the stagnation in the agricultural sector which further affected the development in the Punjab. Punjab agriculture being with the very high cropping intensity showed very little scope for the further rise in the 'net sown area'. Even there was a growing demand for land for other non-agricultural purposes due to rising population. Further, there was some sort of improvement in the cropping pattern as well as in the yields per hectare but this improvement was not in consonance as observed in the past with 'Green Revolution'. With the Green Revolution during 1960s and 1970s, the Punjab experienced the high growth rates but with the passage of time since 1980s; its economy experiencing downfall in the growth rates. With the slowdown in the agricultural sector, even the industrial sector was not able to pick the growth in the economy. Punjab's industrial development is also surrounded by number of constraints like the lack of regular supply of power, efficient transport, good roads and also the efficient and responsive governance. Capital requirement is high in case of industrial sector progress and that is only associated to states with good infrastructure and good governance. Over a period of time the services sector has emerged as an important sector of the State in terms of its contribution to NSDP but its pace of growth is slowest as compared to other developed states of India. Further, though the agricultural sector has the highest share in sector-wise workforce, its share has been continuously declining over time.

The structure and pattern of change in the Punjab economy can be analysed by analyzing the sector wise change in the contribution of NSDP (Net State Domestic Product) as well as their corresponding growth rates. The study is an attempt to review the growth of all the sectors in the Punjab economy for the period 1970-2018 by four years clubbing, depending upon the availability of comparable data.

**Table 4.6: Percentage Sectoral Shares in NSDP of Punjab at Constant (2011-12) Prices**

S. No.	Years	Primary sector	Secondary sector	Tertiary sector	Total NSDP
1	1970-74	52.54	7.33	40.13	100.00
2	1974-78	52.10	8.09	39.81	100.00
3	1978-82	51.04	8.97	39.99	100.00
4	1982-86	50.04	9.75	40.21	100.00
5	1986-90	49.48	11.63	38.89	100.00
6	1990-94	49.51	14.36	36.12	100.00
7	1994-98	47.70	16.30	36.00	100.00
8	1998-2002	45.30	17.21	37.49	100.00
9	2002-06	43.65	17.40	38.96	100.00
10	2006-10	37.38	23.75	38.87	100.00
11	2010-14	32.65	23.37	43.98	100.00
12	2014-18	28.32	23.29	48.39	

**Source:** Calculated from Economics & Statistical Organization of Punjab

**Table 4.7: Sector wise Annual Average Growth Rates at Constant (2011-12) Prices in Punjab**

S. No.	Sector	Primary sector	Secondary sector	Tertiary sector
1	1970-74	2.39	6.02	3.57
2	1974-78	5.96	9.54	4.97
3	1978-82	4.97	8.02	7.32
4	1982-86	5.62	8.49	3.64
5	1986-90	5.04	9.81	4.70
6	1990-94	2.93	9.42	1.40
7	1994-98	0.89	5.97	4.86
8	1998-2002	3.42	1.57	3.95
9	2002-06	1.63	6.88	4.06
10	2006-10	1.88	15.69	7.20
11	2010-14	1.56	2.76	7.88
12	2014-18	2.20	5.85	7.22

**Source:** Calculated from Economics & Statistical Organization of Punjab

In terms of percentage wise in NSDP during the period 1970-74, primary sector's share in NSDP experienced the highest share of 52.54 per cent due to Post-Green Revolution prosperity as compared to secondary sector share of 7.33 per cent and tertiary sector share of 40.13 per cent (Table 4.6). But during the same period from 1970-74, primary sector showed a lowest growth rate of 2.39 per cent. The secondary sector showed a highest growth rate of 6.02 per cent during the same period although its contribution in NSDP is lowest in comparison to primary sector followed by the growth rate of 3.57 per cent by the tertiary sector (Table 4.7). In 1974-78, primary sector experienced a little decline in the NSDP i.e. 52.10 per cent from 52.54 per cent in 1970-74. The secondary sector experienced a little increase in NSDP to 8.09 per cent while the tertiary sector showed a little decline to 39.81 per cent in the same period (Table 4.6). In terms of annual average growth rate in 1974-78, the secondary sector grew at a highest growth rate of 9.54 per cent followed by primary sector of 5.96 per cent and tertiary sector of 4.97 per cent (Table 4.7). During the

period 1978-82, the primary sector again saw a decline in NSDP from the previous period to 51.04 per cent. The secondary sector and tertiary sector also again experienced a little increase in NSDP to 8.97 per cent and 39.99 per cent (Table 4.6). Both primary and secondary sectors showed the downward trend in the growth rates from 5.96 percent and 9.54 percent in 1974-78 to 4.97 percent and 8.02 percent in 1978-82 while tertiary sector showed a jump in the growth rate from 4.97 percent in 1974-78 to 7.32 percent in 1978-82 (Table 4.7). In 1982-86, the Punjab economy again experienced the same change in NSDP i.e. a marginal decline in primary sector to 50.04 per cent from 51.04 percent and while a marginal increase in the secondary and tertiary sector to 9.75 percent and 40.21 per cent from 8.97 per cent and 39.99 percent (Table 4.6). In terms of growth rate, the secondary sector has registered the maximum growth of nearly 8.49 per cent followed by 5.62 per cent growth rate of primary sector. The tertiary sector grew at a rate of nearly 3.64 per cent which was the least of all the sectors (Table 4.7). Again in the next four years in 1986-90 (Table 4.6), the primary sector again saw a reduction in its share to 49.48 percent and tertiary sector also saw a decline in its share to 38.89 percent whereas the secondary sector grows to 11.63 per cent. In Table 4.7 in 1986-90, growth rate of secondary sector was the highest i.e. 9.81 per cent in comparison to primary and tertiary sector which is 5.04 percent and 4.70 percent. The share of primary sector witnessed a marginal increase of 0.03 percent from 49.48 percent in 1986-90 to 49.51 percent with the growth rate of 2.93 percent in 1990-94. Again in 1990-94, the tertiary sector showed a decline in NSDP share to 36.12 percent with greater decline in growth rate to 1.40 percent from 4.70 percent. The secondary sector witnessed an increase in its share in NSDP contribution to 14.36 percent with a little decline in growth rate to 9.42 percent in 1990-94. Both primary and secondary sector experienced a decrease in NSDP to 47.70 percent and 36.00 percent in 1994-98 while the share of secondary sector expands to 16.30 percent in 1994-98 from 14.36 percent in 1990-94. In Table 4.7, the striking growth rate of primary and secondary sector was observed in 1994-98 as it declined to 0.89 percent and 5.97 percent from 2.93 per cent and 9.42 percent in 1990-94. The tertiary sector experienced a comparatively higher rate of growth i.e. 4.86 per cent in 1994-98 in comparison to 1.40 per cent in 1990-94. Between the 1998-2002 period, the climb in the share of secondary and tertiary sector was observed i.e. 17.21 per cent and 37.49 per cent from 16.30 per cent and 36.00 per cent in 1994-98. Similarly, the primary sector share drops to 45.30 per cent in 1998-2002. In terms of growth rate in 1998-2002, the primary sector gained momentum in growth rate i.e. 3.42 per cent. On the other hand, both secondary and tertiary sector grew at a decline in growth rate to 1.57 percent and 3.95 per cent in 1998-2002. In 2002-06, the primary sector again registered a decline of 43.65 percent in its NSDP contribution with the lowest growth rate of 1.63 percent while the secondary and tertiary sector registered an increase in its NSDP contribution of 17.40 percent and 38.96 percent with the growth rates of 6.88 percent and 4.06 percent. From the Table 4.6 and 4.7, it is clear that the share of primary sector saw a continuous decline in its share in the NSDP to 28.32 per cent in 2014-18 from 37.38 per cent in 2006-10 and 32.65 per cent in 2010-14. In terms of growth rate, the primary sector experienced the rate of growth of 2.20 per cent in 2014-18 from 1.88 per cent in 2006-10 and 1.56 per cent in 2010-14. The share of tertiary sector experienced the continuous increase in NSDP share from 2006 onwards to 48.39 percent in 2014-18 from 38.87 percent in 2006-10 and 43.98 percent in 2010-14. The growth rate of tertiary sector was 7.20 percent in 2006-10, 7.88 percent in 2010-14 and 7.22 percent in 2014-

18. The secondary sector has witnessed a continuous downward trend in NSDP like primary sector i.e. 23.75 per cent in 2006-10, 23.37 per cent in 2010-14 and 23.29 per cent in 2014-18. The growth rate of secondary sector showed a fluctuating trend i.e. 15.69 per cent in 2006-10 (highest among all the periods after 1970), 2.76 per cent in 2010-14 and 5.85 per cent in 2014-18. The most captivating point is that the share of tertiary sector in NSDP has crossed the primary sector share in NSDP over the period of time i.e. from 1970 to 2018.

Punjab economy is rising from the ashes of social turmoil with the new process of growth in the sense that the economy followed the similar swing for the share of primary sector in state income to decline and that of other sectors to expand. Therefore, the above data revealed that during the study period the economy of Punjab undergo a change in the sector-wise distribution of NSDP (Sawhney,2008) but the pattern of change in the economy among other Indian states is the slowest. The speed of the structural transformation in the Punjab economy relative to the national economy got lapse and decelerated (Singh and Singh, 2016). Punjab was one of the most flourishing state of India in juxtaposition to overall Indian economy and other states of the Indian Union but is losing its glory because of numerous economic and non-economic reasons (Ravneet kaur,2012 ). The decade of 1970s was known as the take-off stage of Green revolution period in the Punjab economy. Moreover, the period of 1980s and 1990s represented the period of social turmoil resulted in doubtful future

of the state. During the introduction of economic reforms, Punjab economy was healing from the dark past and they were also trying to update the system to face the international competition resulting from Liberalization, Privatization and Globalization. Historically, Punjab being the agrarian economy, agriculture sector remains the prominent sector in both output and employment. The temporal profile of the Punjab economy showed that traditionally the primary sector that used to be the dominant sector was gradually replaced by the tertiary sector and secondary sector in order. The break in the series is clearly visible during the year 2001 when the tertiary sector has started to take off and left behind both the primary and secondary sector. The primary is losing the share and the tertiary sector is gaining the ground in terms of its contribution of net state domestic product. The tertiary sector has become a dominant sector but still in terms of national/ other state comparisons, Punjab is far behind.

Furthermore, the picture will be clearer by exploring the sector wise employment shares in all the sectors in Punjab. In Table 4.8, rural-urban male-female participation rate is given in primary, secondary and tertiary sectors of the economy. The period of 1993-94 for Punjab economy was the recovery period from social turmoil i.e. first recovery from the dark past and then reorienting the system. The above data also reveals the change in the economic system of the economy i.e. population is shifting from primary sector to other sectors slowly and gradually. In 1993-94, rural female participation rate in primary sector was more than rural male as females were taken care of the household activities along with the agricultural activities and males were shifted towards other sectors for more earning.

**Table 4.8: Sector-wise employment (PS+SS) shares in different NSS rounds of survey in Punjab**

Various Rounds	UM				UF				RM				RF			
	P	S	T	Total	P	S	T	Total	P	S	T	Total	P	S	T	Total
<b>50th Round (93-94)</b>	6.6	33.7	59.7	100	30	19.5	50.5	100	68.1	12.4	19.5	100	92.7	1.5	5.8	100
<b>55th Round (99-00)</b>	6.5	32.9	60.6	100	20.1	15.5	64.4	100	63.7	16.6	19.7	100	90.6	2.6	6.8	100
<b>61 Round (04-05)</b>	4.1	36.6	59.3	100	15.2	25.1	59.7	100	54.8	24	21.2	100	89.7	3.8	6.5	100
<b>64 Round (07-08)</b>	6.6	34.7	58.7	100	10.3	22.3	67.4	100	54.7	24.5	20.8	100	82.7	8.4	8.9	100
<b>66 Round (09-10)</b>	6	38.7	55.3	100	21.1	25.1	53.8	100	53.5	27.7	18.8	100	82.3	5.1	12.6	100
<b>68 Round (11-12)</b>	4.4	40	55.6	100	11.8	25.1	63.1	100	43.5	34.9	21.6	100	75.4	11.8	12.8	100

Source : Various rounds of NSSO

Note: UM - Urban Male, UF - Urban Female, RM - Rural Male, RF - Rural Female, P-Primary Sector, S-Secondary Sector, T-Tertiary Sector

Rural male participation rate was greater than rural female in secondary sector as secondary sector includes activities like manufacturing, construction, electricity etc. during the same period. In tertiary sector as the requirement is more of skilled and educated labour and the availability of skilled educated labour is more of rural males as compared to rural females. Therefore, rural male percentage in tertiary sector is greater than rural female in 1993-94. As economic activity expands, people are migrating to urban centres from rural areas for better education system, higher standard of living and for numerous benefits too. In 1993-94, urban female participation in primary sector is more than urban male in urban areas for the same reason as discussed above as female were handling both household and primary activities and males were shifted towards other secondary and tertiary sectors according to their abilities. Due to lack of awareness, facilities and education, rural male-female percentage rate in primary activities were much higher than urban male-female. In secondary sector in 1993-94, urban males performing secondary activities were more than urban females. More freedom in thinking, awareness and education compel people in urban areas to involve in tertiary activities as compare to other sectors in the economy. Hence, male female participation in urban areas was more than rural male female in tertiary sector in 1993-94. With the passage of time in 2011-12, number of rural male female percentage in primary sector has declined; leading to addition of rural population in secondary as well as in tertiary sector with the marginal fluctuation. Similar is the case with urban population too, people are migrating towards secondary and tertiary sectors from primary sector in the economy. In urban areas, highest participation in tertiary activities was given by females as compared to males. It may be due to females in urban areas are also equally competent and educated like men. One of the most important reason is that tertiary sector includes

both organized and unorganized sector, therefore, there are many services in unorganized sector that are only performed by females.

## Conclusion

Hence to sum up, we can say that the analysis of structural change indicates that the fact that the pattern of change in the Punjab economy is from primary sector to tertiary sector that has bypassed the secondary sector. As we knew, for the deep understanding of the structure and pattern of growth in the Punjab economy, this study is based on three broad sections. The first section is based on brief analysis on global economy in some selected nations of the world; second section deals with the analysis based on Indian economy and the last section covers the detailed analysis of structural change in the Punjab economy. On the basis of three sections, the main conclusions are as follows:

- The experience of global economy in terms of structural change has followed the same pattern of primary-secondary and tertiary sector as documented by Kuznets (1966) and other economists of structural change. In the developed countries, the share of primary sector has registered the continuous fall in the production and employment while the secondary sector has maintain their momentum of increase in the share of output for the considerable period of time. This shrinkage in the share of industrial sector was responsible behind the spurt in the services sector and this period was name as emerging dominance of tertiary sector as well as 'post-industrial society' (Clark,1984) in the economies of the developed nations. Every economy exposes to different structural change in the process of economic development. Therefore, from the emerging pattern as given in the above data on the production shares and employment shares in the selected developed nations as well as in the developing Asian nations, it is concluded that the structural change in the developed nations are in accordance with the modern economic development while the most of the developing nations including India followed the shift from the primary sector to tertiary sector directly followed by secondary sector. Further, the employment structure of almost all the developed nations were similar to their production structure reflects the high degree of inter-sectoral equity but the share of each sector in employment in developing nations are not in consonance with their GDP share.
- The Indian economy in general has experienced a maximum growth in the tertiary sector with the passage of time from primary sector followed by secondary sector without symmetrical change in the labour force. This pattern of change in the Indian economy is not in consonance with the experience as observed in developed nations. Further, in terms of correlation between the level of per capita income and the share of sectors, there was a positive and statistically significant correlation between the share of secondary and tertiary sectors with their respective per capita income. But on the other hand, there was a negative correlation between the share of primary sector with their corresponding per capita income level. Almost, all the states/union territories followed the transition from primary sector to tertiary sector. In particular, the high income states/union territories have greater share in the tertiary sector in comparison to the low income states.
- As compared to the growth experience of the Indian economy in general and other states in particular, Punjab's economy experienced steadily rising per capita income as well as accelerated economic growth during the early Green Revolution period. However, in the post-reform period, the performance of some of the states

like Maharashtra in particular and the Indian economy in general was on the roads of improvement but during the same period, the trends in the Punjab economy have been reversed. Further, this post-reform period has exposed the deficiency behind the growth of the Punjab economy.

- Punjab agriculture being with the very high cropping intensity showed very little scope for the further rise in the 'net sown area'. Even there was a growing demand for land for other non-agricultural purposes due to rising population. This puts the limit on the growth of primary sector.
- During the period of 1965 and 1971, Punjab was surrounded by Pakistan and the two Indo-Pak wars which adversely affected the pattern of growth of industrialization in state. Further during the 1980s, the civil strife in Punjab put a constraint on the development of industry in the state. Punjab's industrial development is also surrounded by number of constraints like the lack of regular supply of power, efficient transport, good roads and also the efficient and responsive governance. Capital requirement is high in case of industrial sector progress and that is only associated to states with good infrastructure and good governance.
- Usually, the agricultural sector supplies the labour force and investible funds for the development of industrial sector. But this process was not followed by Punjab. It was expected that more and more labourers would shift to the industrial sector with the application of advanced technology in the agricultural sector but still there was around 56 per cent of labour force engaged in agricultural sector between 1961 and 1991.
- Over a period of time the services sector has emerged as an important sector of the State in terms of its contribution to NSDP but its pace of growth is slowest as compared to other developed states of India. Further, though the agricultural sector has the highest share in sector-wise workforce, its share has been continuously declining over time.
- Punjab economy is rising from the ashes of social turmoil with the new process of growth in the sense that the economy followed the similar swing for the share of primary sector in state income to decline and that of other sectors to expand. Therefore, the above data revealed that during the study period the economy of Punjab undergo a change in the sector-wise distribution of NSDP (Sawhney,2008).
- In the rural-urban male-female participation in the primary, secondary and tertiary sectors, it is concluded that with the passage of time in 2011-12, number of rural male female percentage in primary sector has declined; leading to addition of rural population in secondary as well as in tertiary sector with the marginal fluctuation. Similar is the case with urban population too, people are migrating towards secondary and tertiary sectors from primary sector in the economy. In urban areas, highest participation in tertiary activities was given by females as compared to males. It may be due to females in urban areas are also equally competent and educated like men. One of the most important reason is that tertiary sector includes both organized and unorganized sector, therefore, there are many services in unorganized sector that are only performed by females.

## References

- [1]Aiyar, Swaminathan S. Anklesaria (2012): 'Why Punjab has suffered Long Steady Decline', Economic Freedom States of India.
- [2]Bhattacharya, B.B. and Mitra, A. (1989): 'Industry-Agriculture Growth Rates: Widening Disparity: An Explanation', Economic and Political Weekly, August 26, Vol. XXIV, 1963-70.

- [3]Bhalla, G.S.; Chaddha, G.K.; Kashyap S.P. and Sharma, R.K. (1990): 'Agricultural Growth and Structural changes in the Punjab economy: An input-output analysis', International Food Policy Research Institute, Centre for the study of Regional development, Jawaharlal Nehru University, New Delhi.
- [4]Bhowmik, Rita (2000): 'Role of Services Sector in Indian Economy: An Input-Output Approach', Artha Vijnana, Vol. 42, No.2.
- [5]Chand Ramesh and Parappurathu Shinoj (2012): 'Temporal and Spatial Variations in Agricultural Growth and Its Determinants', Economic and Political Weekly, Vol.XLVII, No. 26 & 27.
- [6]Joshi, Seema (2004): 'Tertiary Sector Driven Growth in India: Impact on Employment and Poverty', Economic and Political Weekly, Vol. 39, No. 37.
- [7]Kaur, Ravneet (2010); 'Tertiary Sector in Punjab: Growth and Structure', M.Phil Thesis, Department of Economics, Punjabi University, Patiala.
- [8]Khanna, Kamini (2011): 'Growth and Structural Changes in Punjab Economy: A study of Post-Green Revolution period', Political Economy Journal of India.
- [9]Kumar, Vinod (2012): 'Role of Services Sector in India', Political Economy Journal of India, Vol 21, No. 1.
- [10]Mazumdar, Surajit (2011): 'Growth and Structural Changes in Output in India since Independence – A Study Report', Indian Council of Social Science Research (ICSSR).
- [11]T.S., Papola (2012): 'Structural Changes in the Indian Economy – Emerging Patterns and Implications', Institute for Studies in Industrial Development, Working Paper No. 2012/02.
- [12]Sawhney, Upinder (2008): 'Growth of Services Sector in a predominantly agricultural economy', Political Economy Journal of India.
- [13]Sekhon, Suchetra (2004): 'Growth of Tertiary Sector in Punjab', M. Phil Thesis, Department of Economics, Punjabi University, Patiala.
- [14]Singh, Inderjeet (2000): 'Structural Change in the Punjab Economy: A Study in the Input-Output Framework', in Punjab Economy: Emerging Issues, Guru Nanak University, Amritsar Singh, Lakhwinder (2012): 'Vision for Economic Development in Punjab', Centre for Development Economics and Innovation Studies, Punjabi University, Patiala.
- [15]Singh, Lakhwinder and Singh, Sukhpal(2002): 'Deceleration of Economic Growth in Punjab: Evidence, Explanation, and a Way-Out', Economics and Political Weekly, Vol.37, No.36.
- [16]Sethi, A.S. and Raikhy, P.S. (2000): 'Structural Analysis of Punjab Economy: Implications for Policy', Punjab Economy: Emerging Issues, Guru Nanak Dev University, Amritsar.
- [17]Sethi, Amarjit Singh (1997): 'Dynamics of National Income', Deep and Deep Publications, New Delhi, Guru Nanak University, Amritsar.
- [18]Singh, Nirvikar (2010): 'Structural Change and Growth in India', Department of Economics, University of California.
- [19]Sodhi, Rupinder Singh (2010): 'Structural Change and Dynamics of Tertiary Sector in India', Ph.D Thesis, Punjabi University, Patiala.
- [20]Singh, Inderjeet (2014): 'Service Sector and Economic Growth in Punjab', Centre for Development Economics and Innovation Studies (CDEIS), Discussion Paper No. 8