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STRUCTURAL CHANGE IN EASTERN STATES OF INDIA

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ABSTRACT

Structural change refers to a long-term shift in the basic structure of an economy which is often associated to growth and economic development. The present paper attempts to study structural change in addition to certain socio-economic indicators in the eastern states of India. Time period of the study is from 1980-81 to 2010-11. A unique feature of structural transformation in these states has been a decrease in the share of primary sector in the NSDP and an increase in the share of tertiary sector. The process of urbanisation was found in all regional economies with West Bengal showing the highest figures. Next was Jharkhand followed by Orissa and Bihar both showing the lowest figures. Some extent of inequality was also found in the eastern states with urban inequality being greater than rural during all points of time. Bihar showed the lowest value of Ginni Co-efficient both in the rural as well as the urban sector. West Bengal performed well in the socio-economic indicator of population below poverty line by having the least level of poverty among the Eastern states. In case of demographic indicators of sex ratio, Orissa and in literacy rate, West Bengal has shown the highest figure while Bihar fared the poorest in both the indicators.

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KEYWORDS

Primary sector, secondary sector, structural change, structural transformation, tertiary sector.

1. INTRODUCTION

As an economy grows there is change in its structure also. A well-documented characteristic of modern growth is structural change or structural transformation. Over the past years structural transformation has been witnessed in India just like many developed and developing economies across the world. This phenomenon has prevailed at the state level too. In continuation of my earlier work on structural change in northern and southern states of India, the present study is of structural change and certain socio-economic indicators of the eastern states of India. An attempt is made to study the transformation of the eastern states of India. The time period of the study is from 1980-81 to 2010-11. Major sources of data have been CSO, RBI publications, Planning Commission and Socio-economic Review of States.

The process of economic growth is seldom consistent. Economic growth leads to change in structure of an economy referred to as structural change or structural transformation. Structural transformation comprise the following characteristics; a falling share of agriculture in output and employment, rising share of urban economic activity in industry and modern services, migration of workers from rural to urban areas, demographic transition etc. Structural transformation has been studied extensively. A vast literature already exists on the topic which includes the noteworthy contributions of Fisher (1939), Clark (1940), Chenery (1979), Kuznets (1961), and Syrquin (1975). They all conclude that the growth in an economy is characterised by a shift from the primary to the secondary and lastly to the tertiary sector.

2. REVIEW OF LITERATURE

Research work has been carried out across the world to study the process of structural change. Caselli and Coleman II (2001) have presented a joint study of the U.S. structural transformation and regional convergence where they find empirically that most of the regional convergence is attributable to the structural transformation. Alessandrini and Buccellato (2008) have studied the different patterns of growth of China, India and Russia. By exploring and focusing on the sector transformations involved in the three economies, they have shown that the growth strategies implemented present specific characteristics in terms of gradualism and policy choices. These studies suggest the prevalence of structural transformation in these economies. Moving closer, the existence of structural transformation has also been observed in the Indian economy. Mazumdar (2011) has studied the growth and structural changes in output since India's independence. The study presents an analytical description of the twin processes of growth of output and changes in its composition in the Indian economy since independence. Papola (2012) in his study highlights the major structural aspects of India's economic growth over the past three decades from the viewpoint of its long-term sustainability. Similarly, studies show the existence of structural transformation at the regional level in the Indian economy. Studies conducted by Bagchi, Das and Chattopadhyay (2005) have examined the structural changes in the economy of Gujarat. They have observed that the pattern of growth of Gujarat has not been uniform across different sectors. Khanna (2011) examines the structural changes that have taken place in the Punjab economy, since the Green revolution. These studies highlight the existence of structural change/transformation in various national and sub-national economies thereby building a strong ground to the present study of structural change and certain socio-economic indicators of East India.

3. STATEMENT OF THE PROBLEM

The present paper attempts to study structural change/transformation in addition to certain socio-economic indicators in the eastern states of India. It evaluates the relative performance of the eastern states viz-a- via each other in various indicators of structural change in the last few decades.

4. OBJECTIVES

1. To determine whether the state economies of East India are undergoing any structural change.
2. To evaluate the relative performance of the state economies of East India on various socio-economic indicators.

5. DATA ANALYSIS, RESULTS AND DISCUSSION

5.1 COMPOSITION OF NSDP OF EASTERN STATES

The share of various sub-sectors i.e. primary, secondary and tertiary in NSDP from 1980-81 to 2010-11 are presented in Table 1. It was seen that structural transformation has occurred in all four eastern states of India with notable interstate differences. In 1980-81, Orissa and Bihar showed the highest shares of primary sector in the NSDP each having a share of 55.43% and 55.22%. For Orissa, the share declined over the years and reached 32.76% in 2010-11. Bihar also saw a fall in its share of primary sector which reached to 26.50% in 2010-11. They were followed by Jharkhand whose share was 36.46% in 2000-01 which declined to 26.75% in 2010-11. (Data for Jharkhand is available since 2000-01). The least share was shown by West Bengal being 32.60% in 1980-81 which declined to 23.94% in 2010-11.

Although the economies saw a shift out of the primary sector, it was not so well absorbed by the secondary sector. West Bengal showed the highest share of secondary sector in the NSDP but it witnessed a decline over time. It was 29.28% in 1980-81 and reached 15.51% in 2010-11. Jharkhand showed an increase from 26.75% in 2000-01 to 27.55% in 2010-11. Orissa and Bihar showed varying shares of secondary sector over time. In Orissa it increased from 15.44% in 1980-

81 to 21.53% in 1990-91. Thereafter it declined to 17.54% in 2000-01 and further to 16.64% in 2010-11. Bihar showed a share of 17.33% in 1980-81, increased to 21.66% in 1990-91. It saw a major fall in its secondary sector share to 08.66% in 2000-01 with a mild recovery to 17.40% in 2010-11.

A decline in the share of primary sector in NSDP has been absorbed by a rise in tertiary sector. The economies that used to be dominated by the primary sector have turned around to be predominantly tertiary sector oriented. West Bengal showed a maximum share of tertiary sector in NSDP at all points of time. It was 38.11% in 1980-81 and rose to 60.54% in 2010-11 which was the highest among the eastern states. It was followed by Orissa and Bihar, both of which showed a gradual increase in the share of tertiary sector. Jharkhand trailed behind having the lowest share of tertiary sector.

TABLE 1: COMPOSITION OF NSDP OF EASTERN STATES (IN PERCENT)

		1980-81	1990-91	2000-01	2010-11
WEST BENGAL	Primary Sector	32.60	33.47	32.29	23.94
	Secondary Sector	29.28	26.02	18.43	15.51
	Tertiary Sector	38.11	40.49	49.26	60.54
ORISSA	Primary Sector	55.43	43.92	39.71	32.76
	Secondary Sector	15.44	21.53	17.54	16.64
	Tertiary Sector	29.22	34.54	42.74	50.59
BIHAR	Primary Sector	55.22	49.44	41.77	26.50
	Secondary Sector	17.33	21.66	08.66	17.40
	Tertiary Sector	27.43	28.89	49.56	56.09
JHARKHAND	Primary Sector	N.A.	N.A.	36.46	26.75
	Secondary Sector	N.A.	N.A.	26.75	27.55
	Tertiary Sector	N.A.	N.A.	36.77	45.69

Source: CSO

5.2 URBANISATION

Urbanisation exists in the eastern states of India but at a low level. Table 2 presents the urbanisation percentages of various eastern states. West Bengal has performed the best in East India by showing rates almost double than the rest of the Eastern states. It has shown a consistent rise in the level of urbanisation being 26.47% in 1981, 27.48% in 1991, 27.48% in 2001 and 31.89% in 2011. It was the only state to have been at par with the national level in case of urbanisation. It was followed by Jharkhand which is a comparatively newly formed state. The states of Orissa and Bihar have shown a dismal picture with the urbanisation rates being least for Bihar being 12.47% in 1981, falling to 10.40% in 1991 and 11.30% in 2011.

TABLE 2: URBANISATION (In Percent)

States	1981	1991	2001	2011
WEST BENGAL	26.47	27.48	27.48	31.89
ORISSA	11.79	13.38	14.99	16.68
BIHAR	12.47	10.40	10.46	11.30
JHARKHAND	N.A.	21.25	22.24	24.05
ALL INDIA	23.34	25.71	27.81	31.16

Source: Socio Economic Review of Gujarat

5.3 GINI CO-EFFICIENT

The Ginni Co-efficient is a measure of inequality in a population. A lower Ginni Co-efficient indicates a more equal distribution, with 0 corresponding to complete equality while a higher Ginni Co-efficient indicates more unequal distribution with 1 corresponding to complete inequality.

Table 3 presents the Ginni Co-efficient for East India. It was seen that the urban areas showed a greater level of inequality as compared to the rural. Comparing with the other eastern states Bihar showed the lowest value of Ginni Co-efficient both in the rural as well as the urban sector during the time period of the study showing greater level of equality amongst the eastern states. On the other hand, West Bengal showed the highest Ginni Co-efficients in the urban sector throughout the time period, whereas highest Ginni Co-efficients in the rural sector was shown by West Bengal in 1983-84 and 1993-94 and by Orissa in 1999-00, 2004-05 and 2009-10 showing a greater level of inequality in these areas.

The Ginni Co-efficient of the Eastern States was less or equal than the All India level at all points of time thereby representing a greater level of equality in East India than seen at the national level.

TABLE 3: GINI COEFFICIENT

	Rural	Urban
1983-84		
WEST BENGAL	0.28	0.32
ORISSA	0.26	0.29
BIHAR	0.25	0.29
JHARKHAND	N.A.	N.A.
ALL INDIA	0.29	0.32
1993-94		
WEST BENGAL	0.25	0.33
ORISSA	0.24	0.30
BIHAR	0.22	0.30
JHARKHAND	N.A.	N.A.
ALL INDIA	0.28	0.34
1999-2000		
WEST BENGAL	0.22	0.34
ORISSA	0.24	0.29
BIHAR	0.20	0.31
JHARKHAND	N.A.	N.A.
ALL INDIA	0.26	0.34
2004-05		
WEST BENGAL	0.27	0.37
ORISSA	0.28	0.35
BIHAR	0.20	0.33
JHARKHAND	0.22	0.35
ALL INDIA	0.30	0.37
2009-10		
WEST BENGAL	0.23	0.38
ORISSA	0.26	0.38
BIHAR	0.22	0.33
JHARKHAND	0.24	0.35
ALL INDIA	0.29	0.38

Source: Planning Commission

5.4 POPULATION BELOW POVERTY LINE

As depicted in Table 4 population below poverty line was the highest for Orissa and Bihar and was much above the All India level. For Orissa it was highest in 1983-84 (65.29%), 1999-00 (47.15%) and 2004-05 (46.4%) and for Bihar in 1993-94 (54.96%). West Bengal performed well on this indicator by having the least level of poverty among the Eastern states. Its rates were declining overtime from 54.85% in 1983-84 to 24.7% in 2004-05. Jharkhand being a newly formed state had data for 2004-05 only which shows poverty rate of 40.3% which is way above the national level but less than Orissa and Bihar for the year 2004-05. On the whole, the Eastern states have not fared well on this indicator by having rates much higher the national level.

TABLE 4: POPULATION BELOW POVERTY LINE (In Percent)

States	1983-84	1993-94	1999-2000	2004-05
WEST BENGAL	54.85	35.66	27.02	24.70
ORISSA	65.29	48.56	47.15	46.40
BIHAR	62.22	54.96	42.60	41.40
JHARKHAND	N.A.	N.A.	N.A.	40.3
ALL INDIA	44.48	35.97	26.10	27.50

Source: Planning Commission

5.5 SEX RATIOS

The demographic indicator of sex ratio for East India is presented in Table 5. Orissa has performed markedly well among the eastern states in this indicator by having sex ratios of 981, 971, 972 and 978 in the years 1983-84, 1993-94, 1999-2000 and 2004-05 respectively which were much above the national level at all points of time. It was followed by Jharkhand with the rates 940, 922, 941 and 947 for the respective years. West Bengal is on the third position and has not fared too well. Bihar showed a good figure of 948 in 1981 occupying the second position after Orissa but failed to maintain the same and fell to the fourth position in 1991, 2001 and 2011 being below the national level too.

TABLE 5: SEX RATIOS

States	1981	1991	2001	2011
WEST BENGAL	911	917	934	947
ORISSA	981	971	972	978
BIHAR	948	907	921	916
JHARKHAND	940	922	941	947
ALL INDIA	934	927	933	940

Source: Planning Commission

5.6 LITERACY RATES

Literacy rates depicted in Table 6 have shown a gradual rise in all the eastern states. The highest rates were shown by West Bengal being 48.65%, 57.70%, 68.64% and 77.08% in 1981, 1991, 2001 and 2011 respectively which was higher than the All India level at all points of time. It was followed by Orissa and Jharkhand. The least rates were shown by Bihar being 32.32% in 1981, 37.49% in 1990, 47.00% in 2001 and 63.82% in 2011 where the figures although showed an increase but were less than the All India level.

TABLE 6: LITERACY RATES (Percent)

States	1981	1991	2001	2011
WEST BENGAL	48.65	57.70	68.64	77.08
ORISSA	33.62	49.09	63.08	73.45
BIHAR	32.32	37.49	47.00	63.82
JHARKHAND	35.03	41.39	53.56	67.63
ALL INDIA	43.57	52.21	64.84	74.04

Source: Planning Commission

6. CONCLUSION

The present study highlights certain interrelated factors which determine the ongoing process of structural change in the states of East India. A unique feature of structural transformation in these states has been seen in the declining share of primary sector in the NSDP and the increasing share of tertiary sector in NSDP during the time period of the study. West Bengal has shown the largest increase in the services sector. Orissa and Bihar, although being an agriculturally dominated state has also witnessed a rise in the services sector. Jharkhand although a comparatively newly formed state, has also witnessed an increase in the share of tertiary sector.

Structural change is characterised with urbanisation which was found in miniscule level in Eastern states with West Bengal performing best by showing the highest figures throughout. It was followed by Jharkhand. The states of Orissa and Bihar have shown a dismal picture with the urbanisation rates being least for Bihar.

In terms of inequality, the eastern states showed greater urban inequality than rural at all points of time. Bihar showed the lowest value of Ginni Co-efficient both in the rural as well as the urban sector during the time period of the study showing greater level of equality amongst the eastern states whereas highest Ginni Co-efficients in the rural sector were shown by West Bengal in the early time period and Orissa in the later showing a greater level of inequality in these areas.

The socio-economic indicator of population below poverty line has witnessed West Bengal performing well on this indicator by having the least level of poverty among the Eastern states. It showed the least rate in population below poverty line for the entire time period. Population below poverty line was the highest for Orissa and Bihar and was much above the All India level. On the whole, the Eastern states have not fared well on this indicator by having rates much higher than the national level.

In case of demographic indicator of sex ratio Orissa has shown the highest figures followed by Jharkhand while Bihar fared the poorest in the later years and was much below the national level too. In case of literacy rates, West Bengal performed the best throughout while Bihar showed a poor show in this indicator too.

Thus, structural change is taking place which is an indicator of development with West Bengal topping the charts on various indicators. Suitable measures need to be administered so that these states may progress to achieve balanced growth and be at par with each other in the process of development.

7. SCOPE OF THE FUTURE RESEARCH

The present study was conducted taking into consideration only the eastern states of India. It can be extended to study structural change by including various other states of India, India as a whole and a comparison of various economies of the world may also be made. As far as the limitations are concerned, since data were collected mainly from secondary sources certain variations in the time periods were found in few indicators due to the non-availability of data for specific years from the same source. Also, data for Jharkhand was not available for all the years as it is a comparatively newly formed state which made it difficult to compare it with the other eastern states for the years for which the data was missing.

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