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## Structural Change of Bihar Economy during 1999 to 2010: A District Level Analysis

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### **Abstract:**

Conventionally, the economic growth of a country is appraised in form of gross domestic product (GDP). In Bihar, the per capita net state domestic product (NSDP) is the lowest among the major states in India, and it is only one-third of the national level of per capita GDP. The services, industry, and agricultural sectors contributed 52 per cent, 28 per cent, and 20 per cent to India's overall GDP respectively, in 2006. However, the contribution of these major sectors to GDP at state level is not uniform. For Bihar at state level, the share of primary sector<sup>1</sup> is continuously decreasing over the stated time period. For the secondary<sup>1</sup> sector, the share had decreased after bifurcation of Bihar, however, that share increased a little bit in 2009-2010. And similar to the India average, the share for Tertiary sector is continuously increasing at 60% of NDDP. The districts like Patna, Begusarai, Munger and Bhagalpur which are higher per capita NDDP, are very less share in primary sector. The most important part here is the very low share of industrial sector. However, the share of industrial sector has started increased during the period 2005-2010. Structure of Bihar's economy is changing not only at state level, but at district level also. And these changes need to be more cautious planning and good initiatives from Govt. And the change is already in its way.

**Key words:** Bihar, Net District Domestic Product (NDDP), Sectoral Contribution, Structural Change

### **1. Introduction**

Conventionally, the economic growth of a country is appraised in the form of gross domestic product (GDP), as this measure incorporates the performances of all kinds of economic activities undertaken in the country (Panda, 2008). Bihar is considered to be one of the most underdeveloped states in India, with the latest estimated population of 94.5 million. In Bihar, the per capita net state domestic product (NSDP) is the lowest among the major states in India, and it is only one-third of the national level of per capita GDP (Tsujita, et. Al., 2010). According to the estimates of the National Sample Survey Organisation (NSSO) in 2004-05 show that the incidence of poverty<sup>1</sup> is 42.1% in rural area of Bihar, that is much grates than the 28.3% in rural area of all India. The social development progress, like education and health, is also slower than that of other states (Tsujita, et. Al., 2010). Recently, it has been reported that economic growth in Bihar has improved, particularly in sectors such as construction, hotels, restaurants, communication and trade. And that growth largely comes from the non-agricultural sector and the urban areas rather than from the agricultural sector. Moreover, almost 70% of the workforce in Bihar are engaged or from the rural areas. Bihar is also experiencing from growing intra-state disparity. For an example, the per capita gross district domestic product (GDDP) for Patna district is by far the highest among the 38 districts in Bihar (Tsujita, et. Al., 2010). The difference has also increased at district level, in recent years, with the ratio of per capita GDDP in Patna district to that of Sheohar district, which has the lowest income in Bihar, increasing sharply from 3.3 in 1998-99 to 8.6 in 2006-07 (GoB. 2007, 2010).

For this present study, the recent period of development in Bihar is divided three phase; namely, a) First phase, pre-bifurcation period, b) Second phase, Bihar under Ravri Devi Govt. after bifurcation phase, and c) Third phase, Bihar under Nitish Kumar Govt. in post 2005 era. And these divisions are characterized by the political and geographical factors. These three phases are described below in brief:

<sup>1</sup> Incidence of poverty is defined as the percentage of the population below the poverty line in terms of monthly per capita expenditure.

### *1.1. First Phase: Pre-bifurcation Economy of Bihar*

The first period is the Bihar's pre-bifurcation economy. This is the period when the structure of the economy, its resources, and its politics were noticeably different from the Bihar after bifurcation in November, 2000. The districts that constitute Bihar and Jharkhand today are always very different in characteristics, such as socially and economically. Moreover, "Jharkhand is rich in mineral deposits and has been the home for manufacturing activities. On the other hand, districts constituting Bihar have large swathes of alluvial soil, often replenished by flood waters, which are particularly suitable for agriculture" (Mukherji & Mukherji, 2012). At that time period the level of economic output was stagnated. And there was a substantial change in the structure of Bihar's economy. It transforms from being largely an agricultural economy to an economy in which the services and industrial sectors contributed considerably. Bihar were more like an agrarian economy in output than India average, whereas its transformation into a services-based economy, like all India average, was evidently in progress. "This large restructuring of the economy over the period 1980-2000 is quite striking, not only because of the very limited expansion of economic output accompanying it, but also due to the very limited change in employment structure that took place simultaneously. In 1999-2000, over 715 out of every 1,000 employed rural males and 845 out of every 1,000 employed rural women were engaged in agriculture. In comparison, the services sector for rural men employed a meagre 161 out of every 1,000 employed rural males, and the number was lower for women. In the few urban pockets of Bihar (largely located around Patna) employment in services was dominant, particularly for men, and over time, the number employed in services has been gradually increasing" (Mukherji & Mukherji, 2012). Ghosh and Gupta (2010) argue that due to the lack of expansion in the non-agricultural sector, there is a limited expansion in output in Bihar. Employment scenario during that period also clearly shows that the non-agricultural sector was unable to draw people out of agriculture to non-agricultural sector.

### *1.2. Second Phase: Bihar under Ravri Devi Govt. in Post-bifurcation*

The political bifurcation of undivided Bihar into today's Bihar and Jharkhand brought to fore the need for norms on how financial and infrastructural resources would be shared across the two new states. This process of bifurcation was very asymmetric – while all physical assets came to Jharkhand, and other financial liabilities were distributed using population norms. "Bihar grew absolutely and relatively poorer simply due to this bifurcation. At the time of bifurcation, serious concerns were expressed about whether the 'reduced' Bihar could even form a viable state on economic grounds" (Bhattacharya 2000). Rashtriya Janata Dal (RJD) was in power during this period under the leadership of Ravri Devi. "Consequently, not only was Bihar's economy different prior to 2000, but the prospects for growth before and after bifurcation were also very different. Changes in statistics such as poverty ratios, per capita incomes and Human Development Indicators (HDI) across these two time-frames are thus different, not only because the people and economic resources were split across Bihar and Jharkhand, but also because these factors would accumulate in Bihar and Jharkhand at different rates" (Mukherji & Mukherji, 2012). The bifurcation artificially secure Bihar's transformation into a services-led economy that has become more dependent on the services sector, and still remains one of the poorest states in India. According to Simon Kuznets, the key features of modern economic growth seen in an economically dominant nation is the structural "... shift away from agriculture to non-agricultural pursuits and, recently, away from industry to services; a change in the scale of productive units, and a related shift from personal enterprise to impersonal organization of economic firms, with a corresponding change in the occupational status of labor" (Kuznets 1971). The most income of Bihar now comes basically from the services sector, but the agricultural labor still not moving out to non-agricultural services<sup>2</sup> (Mukherji & Mukherji, 2012). While this is the standard structural imbalance in the entire country, the extent of the balance is quite acute for Bihar.

### *1.3. Third Phase: Bihar under Nitish Kumar Govt. in Post 2005 era*

The third period is the period "after the 2005 elections in Bihar when Nitish Kumar, and his political party Janata Dal (United) (JD(U)), came to power together with the Bharatiya Janta Party (BJP). This period saw major changes in policy, administrative, and overall governance changes as well as rapid economic growth. This period marks a clear break from the past, in both a statistical and qualitative sense. While many of the structural changes seen in the past continue, and the relative position of Bihar amongst other states remains as is, there is distinct increase in economic growth" (Mukherji & Mukherji, 2012). The pace of growth in per capita income has been the highest in the post 2005 period. According to Mukherji and Mukherji (2012), there was an annual fluctuations in the growth rate during the period 2005-10 saw a compounded annual growth of 8.6% for Bihar (that was significantly higher than the growth seen for India (7.04%) over the same time).

## **2. Background Literature**

"Structural change analysis is differentiated from standard economic research in that it assumes that the infinite multiplicity of reality can be studied by focussing on a relatively small number of groups or activities that comprise the economic system, and thus form the economic structure. In this sense, a structural representation provides a selective description of the economic system, which is obtained by substituting the observed heterogeneity with sets of classes of relatively homogeneous groups of agents or sectors of activity. In this framework, the definition of structure and of the unit of analysis is made to depend on the problem under investigation. This allows for a considerable degree of flexibility that is absent from standard micro and macroeconomic analyses, thus making it an appealing tool for the study of economic dynamics" (Silva & Teixeira, 2008). Structural change analysis has an important tradition in economic theory. Fisher (1939), in his turn, adopted a tri-partite decomposition of the economy, distinguishing between primary, secondary and tertiary production. "In terms of a theoretical

<sup>2</sup> 64% of its workforce employed in agriculture (National Sample Survey Organization, NSSO (2011)).

explanation for such sectoral changes, the Petty-Clark's law suggests that as a country's economy develops, the proportion of GDP generated from the primary sector declines and the proportion of GDP generated from the secondary sector increases first. After the industrial sector gathers momentum, the secondary sector dominates the economy in contributing to GDP. When the economy matures in terms of industrial development, then the contribution of the tertiary sector to GDP becomes the number one source superseding both the primary and secondary sectors" (Kalairajan and Singh, 2013).

As argued by Bhattacharya and Mitra (1990), the tertiary sector became the largest sector even before the secondary sector dominated the economy in India at the aggregate level, and also at the regional level. According to Schultz (1978), "farmers the world over, in dealing with costs, revenues and risks, are calculating economic agents. Within their small individual allocative domain they are fine-tuning entrepreneurs, turning so subtly that many experts fail to see how efficient they are". If this vision of farmers is correct, not only could agriculture supply wage goods and inputs, but also, through technological modernisation, rising productivity, incomes and rural prosperity, the sector will stimulate growth in industry, particularly in manufacturing. For its part, industry can not only supply, agriculture with modern production inputs, but also produce consumer goods to satisfy expanding consumer horizons. This perception of the intersectoral relation amounts to a dynamic two-way relationship between agriculture and industry (Kalairajan and Singh, 2013). The Bihar economy's gains in the post-2005 period were robust and qualitatively different from previous periods. Mukherji and Mukherji (2012) stated that the average growth rate across districts in Bihar was quite robust. While the average growth rate appears to have been stagnant in the pre-2005 period, there is a sharp rise in growth rates post 2005, indicating a period of unprecedented acceleration of the Bihar economy.

Most of the paper on Bihar talks about the growth of GDP only. There are a few works on structural changes, at the state level in Bihar. However, there is no such work was found which showing the structural changes in District level of Bihar. So, there is a vacuum of investigation on structural shift for Bihar. This paper is, therefore, trying to make up this research gap.

### 3. Objective

The objective of this paper is to find the structural shift that has taken place in the Bihar economy during the period 1999-2000 and 2009-2010, at district level. The analysis has been carried out using the data available on NDDP in three different periods, namely, 1999-2000, 2004-2005, 2009-2010. The period 1999-2000 is reflecting the scenario of the first phase, in fact at the end of the phase. The period, 2004-2005 is representing the second phase and the period 2009-2010 is that of for third phase. By using these three time periods of these three phases, the analysis of structural change is done within dynamic structure.

For this, the data was collected from the statistical handbook of Bihar and Bihar factsheets, published by the Govt. of Bihar.

### 4. Findings and Discussion

#### 4.1. Per capita NDDP in Bihar

According to Kalairajan and Singh, (2013), the services, industry, and agricultural sectors contributed 52 per cent, 28 per cent, and 20 per cent to India's overall GDP respectively, in 2006. However, the contribution of these major sectors to GDP at the state level is not uniform. In case of Bihar almost 60% of NSDP is coming from the services sector. In sheer levels, the most important services sector in Bihar is Trade, Hotels, and Restaurants that forms about 27.3% of NSDP by 2010. "Other Services, capturing professional incomes of lawyers, doctors, and income from teaching in non-governmental educational establishments (including tuition centers) also remains important. The fastest growth within this sector has been with the Communications sub-sector, establishing the importance of a nascent ITE&S sector in Bihar as well" (Kalairajan and Singh, 2013).

The per capita income in Patna is much larger than in any of the other districts in Bihar. Therefore, Bihar's economy without Patna's is extremely underprivileged in comparison to the rest of India. Thus, Bihar's average per capita income is larger than 33 districts in 2000 and the number remains same over the investigation as it is shown in Table -1. The 5 districts with higher per capita income that the Bihar's average are Patna, Munger, Begusarai, Muzaffarpur and Bhagalpur and remains same over the same investigation period. Only Muzaffarpur and Bhagalpur have exchanged their position in ranking in per capita NNDP. The structural changes of the rich five districts are different from other districts. However, almost all the districts have made improvements in per capita income in absolute terms, Table-1 captures the fact that this growth has been uneven across districts and that some districts have made rapid gains in relative terms. The districts like Khagaria, Lakhisarai, Katihar, Nalanda, Vaishali, Madhubani and Saran have shown important gains. Whereas, Kaimur, Madhepura, Sitamarhi, Supaul, Samastipur, and West Champaran have had significant declines in their relative ranks. Quite clearly there has been all-round growth, and per capita incomes have increased one-and-a-half times in this period, but the pace of this growth has been uneven and some districts have been able to grow much faster than others.

1999-2000		2004-2005		2009-2010	
Name of Districts	Per Capita NDDP (Rs.)	Name of Districts	Per Capita NDDP (Rs.)	Name of Districts	Per Capita NDDP (Rs.)
Patna	21484.04	Patna	29756.62	Patna	42969.70
Munger	7509.80	Munger	8651.22	Munger	13558.49
Begusarai	6983.35	Begusarai	8345.81	Begusarai	10691.37
Muzaffarpur	6033.95	Bhagalpur	7313.94	Bhagalpur	10346.88
Bhagalpur	5911.51	Muzaffarpur	6839.63	Muzaffarpur	9288.95
<b>All Bihar</b>	<b>5766.33</b>	<b>All Bihar</b>	<b>6770.86</b>	<b>All Bihar</b>	<b>9067.33</b>
Rohtas	5730.30	Rohtas	6409.61	Rohtas	8202.31
Saharsa	5243.89	Madhubani	6269.55	Lakhisarai	8114.57
West Champaran	5204.87	Katihar	6055.65	Bhojpur	7757.88
Bhojpur	5181.81	Saharsa	5879.22	Nalanda	7493.08
Buxar	5173.23	Khagaria	5550.73	Vaishali	7456.38
Bhabhua	5091.00	Lakhisarai	5526.50	Katihar	7453.51
Gaya	5064.91	West Champaran	5508.36	Gaya	7282.02
Nalanda	5039.85	Vaishali	5426.78	Saharsa	7274.42
Vaishali	4819.89	Gaya	5376.82	Khagaria	7135.86
Lakhisarai	4747.69	Samstipur	5213.96	West Champaran	7066.36
Aurangabad	4741.93	Bhojpur	5163.58	Samstipur	7037.84
Jahanabad	4694.59	Nalanda	5140.93	Darbhanga	6706.38
Purnia	4653.16	Supaul	5092.17	Jahanabad	6703.96
Katihar	4633.84	Purnia	5087.61	Buxar	6586.84
Khagaria	4633.17	Darbhanga	4998.67	Purnia	6479.77
Samstipur	4620.39	Bhabhua	4957.50	Saran	6431.91
Gopalgang	4539.01	Madhepura	4949.97	Madhubani	6339.76
Shekhpura	4510.98	Kisangang	4947.99	Aurangabad	6261.57
Kisangang	4497.50	East Champaran	4912.97	Banka	6124.59
Supaul	4410.05	Banka	4834.28	Gopalgang	6058.50
Darbhanga	4361.59	Buxar	4773.12	Nawada	5976.54
Siwan	4316.21	Aurangabad	4747.71	Arwal	5968.59
Madhepura	4313.81	Jahanabad	4745.86	Shekhpura	5955.48
Nawada	4280.61	Saran	4720.86	Bhabhua	5947.34
East Champaran	4277.71	Gopalgang	4608.58	Siwan	5912.63
Arwal	4264.54	Siwan	4550.63	Kisangang	5789.84
Jamui	4221.03	Jamui	4383.60	East Champaran	5695.24
Madhubani	4177.67	Shekhpura	4277.86	Jamui	5570.55
Saran	4176.45	Arwal	4263.54	Supaul	5535.34
Banka	4047.32	Nawada	4208.18	Sitamarhi	5491.41
Sitamarhi	4016.28	Araria	4172.98	Araria	5305.72
Araria	3978.97	Sitamarhi	3935.53	Madhepura	5300.68
Sheohar	3163.75	Sheohar	3314.92	Sheohar	4055.61

Data Source: Govt. of Bihar

Figure 1

#### 4.2. Structural Change at District Level

For Bihar at state level, the share of primary sector<sup>3</sup> is continuously decreasing over the stated time period. For the secondary<sup>4</sup> sector, the share had decreased after bifurcation of Bihar, however, that share increased a little bit in 2009-2010. And similar to the India average, the share for Tertiary<sup>5</sup> sector is continuously increasing at 60% of NDDP.

So, overall, almost more than 50% of NDDP of Bihar is contributed by the tertiary sector. However, the importance of agriculture is not decreasing rapidly. Whereas, the share of Secondary sector is till very low in almost all districts, but increasing after 2005 election. The more details picture of share of all the three sectors during the all three time period are shown in the table – 2, below. Very interesting part here is that the share of industry is steadily increased from 2004-05 to 2009-2010 in all the districts.

<sup>3</sup> In Primary sector, the activities like Agriculture & Animal Husbandry, Forestry & Logging, Fishery and Mining & Quarrying.

<sup>4</sup> In Secondary sector includes, Manufacturing (Registered), Manufacturing (Un-Registered), Construction, Electricity, Gas & Water Supply.

<sup>5</sup> And the Tertiary Sector includes, Transport & Communication (Railways, Transport by other means, Storage, Communication), Trade Hotel and Restaurants, Banking & Insurance, Real Estate, Ownership of Dwelling, Legal & Business Services, Public Administration, Other Services.

Table - 2		Percentage (%) share of Primary, Secondary and Tertiary Sector in NDDP in Bihar during 1999-2010								
Sl. No.	Name of Districts	in 1999-2000			in 2004-2005			in 2009-2010		
		Primary Sector	Secondary Sector	Tertiary Sector	Primary Sector	Secondary Sector	Tertiary Sector	Primary Sector	Secondary Sector	Tertiary Sector
1	Patna	6.21	5.78	88.01	4.31	4.01	91.68	2.91	6.20	90.89
2	Nalanda	38.98	12.28	48.74	34.26	12.91	52.83	28.59	17.72	53.69
3	Bhojpur	41.16	11.97	46.88	35.05	12.27	52.69	32.41	16.14	51.44
4	Buxar	53.06	9.63	37.31	44.76	11.98	43.27	38.56	17.43	44.01
5	Rohtas	43.99	13.12	42.89	46.12	12.20	41.68	33.91	19.06	47.03
6	Bhabhua	58.84	14.02	27.14	53.03	12.53	32.44	44.42	18.52	37.06
7	Gaya	31.16	12.21	56.63	29.15	11.66	59.19	23.73	15.24	61.03
8	Jahanabad	40.12	14.73	45.15	35.78	15.85	48.37	27.95	20.41	51.65
9	Arwal	40.88	12.01	47.11	37.46	13.68	48.86	28.06	21.72	50.22
10	Nawada	48.86	10.66	45.48	37.96	11.26	50.79	32.25	13.51	54.24
11	Aurangabad	48.95	14.12	36.94	46.33	13.22	40.45	38.66	18.04	43.30
12	Saran	34.04	14.22	51.74	36.04	13.98	49.98	24.67	21.42	53.92
13	Siwan	45.34	13.23	41.42	41.78	14.60	43.62	27.30	24.31	48.38
14	Gopalgang	46.01	15.32	38.67	47.68	16.41	35.91	34.56	25.91	39.52
15	Muzaffarpur	35.78	13.28	50.94	35.25	11.43	53.32	24.80	16.58	58.62
16	East Champaran	52.14	11.67	36.19	55.28	10.08	34.63	42.27	16.60	41.13
17	West Champaran	54.15	12.67	33.18	53.34	11.74	34.92	43.22	17.06	39.72
18	Sitamarhi	44.25	13.36	42.39	40.12	14.59	45.29	31.89	19.61	48.50
19	Sheohar	54.91	9.12	35.98	57.27	8.93	33.80	49.76	12.74	37.49
20	Vaishali	42.78	14.67	42.55	43.96	13.23	42.82	31.17	20.31	48.52
21	Darbhanga	32.62	12.35	55.03	34.86	11.71	53.42	24.72	17.27	58.01
22	Madhubani	46.28	9.78	43.95	61.76	6.72	31.52	43.54	12.07	45.39
23	Samstipur	42.48	11.60	45.92	42.59	11.08	46.33	34.49	15.74	49.78
24	Begusarai	23.51	25.33	51.16	27.88	16.02	56.10	19.75	20.36	59.89
25	Munger	16.27	24.56	59.17	19.30	18.92	61.78	12.27	28.66	59.07
26	Shekhpura	41.42	13.11	45.47	38.82	13.98	47.21	34.00	19.51	46.48
27	Lakhisarai	32.41	14.43	53.16	32.96	14.24	52.79	26.45	21.36	52.19
28	Jamui	34.79	28.88	36.33	39.59	21.90	38.50	32.11	27.60	40.29
29	Khagaria	46.78	10.66	42.56	30.14	10.27	39.59	39.43	16.47	44.10
30	Bhagalpur	26.31	17.34	56.35	28.37	14.19	57.43	20.33	20.24	59.43
31	Banka	52.73	13.73	33.54	59.34	11.45	29.21	51.05	16.00	32.95
32	Saharsa	47.25	9.29	43.46	49.26	8.99	41.75	38.39	14.54	47.07
33	Supaul	61.29	9.07	29.64	65.32	8.55	26.13	50.37	14.60	35.02
34	Madhepura	62.49	8.20	29.31	66.77	7.01	26.22	53.26	11.19	35.54
35	Purnia	46.97	9.59	43.44	48.36	8.48	43.16	40.11	12.21	47.68
36	Kisangang	54.32	11.41	34.07	56.46	10.76	32.78	43.61	17.87	38.52
37	Araria	53.32	10.80	35.39	54.42	10.70	34.88	47.04	15.35	37.61
38	Katihar	43.71	10.96	45.33	51.02	8.89	40.09	38.87	13.52	47.60
	All Bihar	34.60	11.85	53.55	33.62	10.04	56.34	24.69	14.68	60.64

Data Source: Govt. of Bihar

Figure 2

4.2.1. Primary Sector

It can largely be said that the agricultural sector in Bihar, as in other eastern states of India more or less stagnated (at least in terms of per capita output) until the end of the 1970s. The shares of primary sector in three time periods are also presented here with the Chart-1, below. It can be shown from the Chart-1 that the districts like Patna, Begusarai, Munger and Bhagalpur which are higher per capita NDDP, are very less share in primary sector. And the share of Primary sector in NDDP is very high for the districts like, Buxar, Bhabhua, East & West Champaran, Banka, Supaul, Madhepura, Kisangang and Araria, more than 50% in 1999-2000. However, the share of primary sector in almost all the districts have decreased from 1999-2000 to 2009-2010. In addition, almost in three-fourth districts are having increasing share of primary sector in 2004-05.

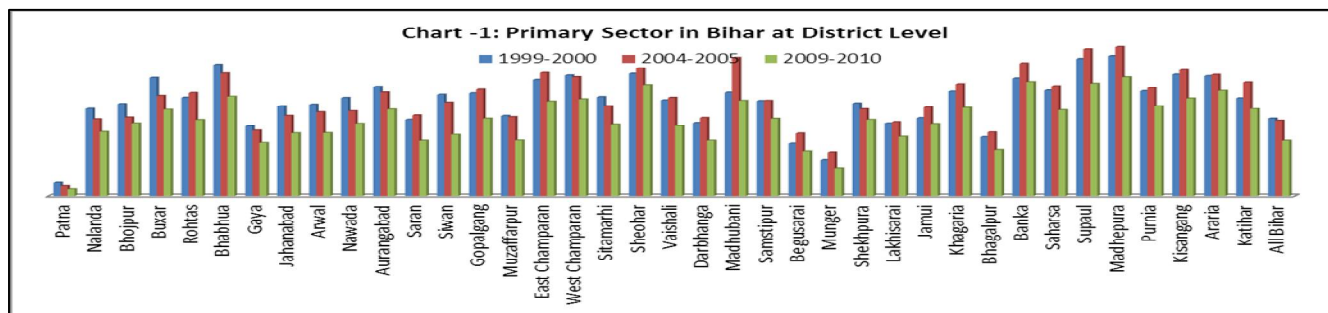


Figure 3

4.2.2. Secondary Sector

The much important sector is the secondary. After bifurcation of Bihar in 2000, today’s Bihar faced a lots of problem, because almost all industries were became a part of the new state, Jharkhand. So, after bifurcation of Bihar, the present day Bihar became just as a agrarian state. And, in thrid phase a lots of initiative was take to encourgaje for industrial development under the Nitish Kumar Govt. in Bihar. That’s reflected through the almost all districts of Bihar. The most gainers districts here are Siwan, Gopalgang, Munger, Jamui, as it is shown in chart-2, below. However, the share of secondary sector is very less in comparision to Primary and Tertiary sectors.

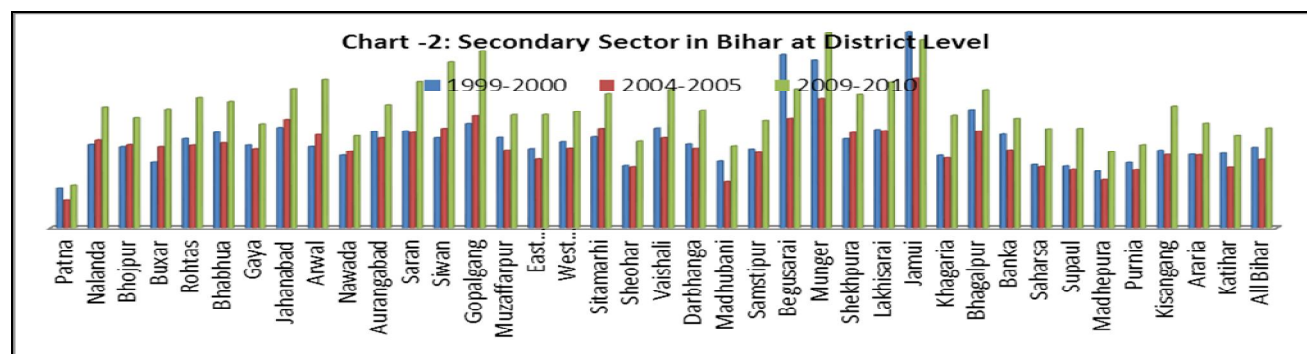


Figure 4

4.2.3. Tertiary Sector

The services sector has been leading growth in India since the early 1990s and this is the case for Bihar too. Eichengreen and Gupta (2011) estimate that within the services sector, sub-sectors such as communications, business services, financial services, education, health and hotels account for roughly half the services growth seen in India between 2000 and 2008. In all the districts of Bihar, the share of tertiary sector has been increasing steady. The share for Panta districts is more than 90% of its NDDP. Some districts like, Banka, Bhabhua, Sheohar, Supaul, Madhupura, Araria and Krishangang have very low share of tertiary sector in comparision to other Districts.

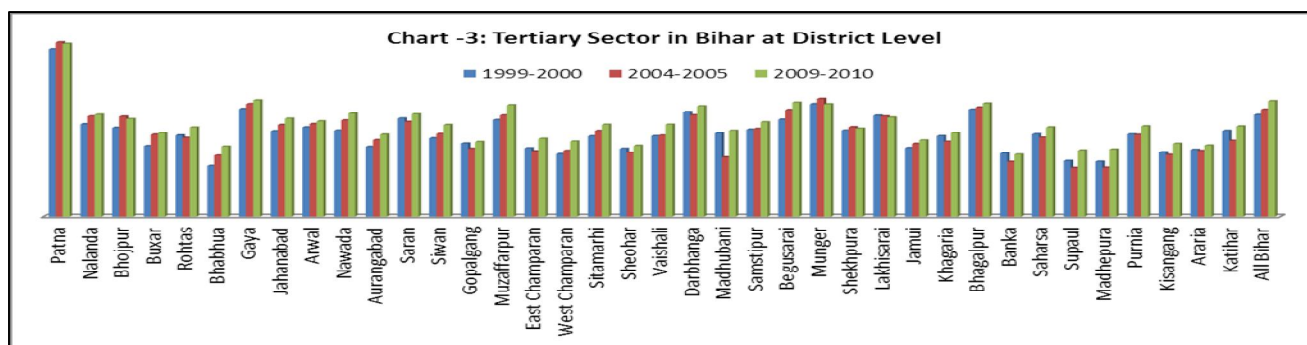


Figure 5

5. Concluding Remarks

As it is very clear that the structural change in Bihar at district level is clearly in underway. The tertiary sectors is continously getting important for contributing in NDDP in Bihar. The share of agriculture is decreasing significantly. However, that share for agriculture is still very high in Bihar. Bihar is still an agrarian economy, and trying to be a service-led economy. The most important part here is the very low share of industrial sector. However, the share of industrial sector has started increased during

the period 2005-2010. "With a very weak industrial sector the chances of sustaining growth through strengthening industry seems very limited currently. In addition, with power situation being very constrained there is little ability to support industrialization. Thus, only small or very niche enterprises are likely to flourish. In this respect, agro-and horticulture based industries have begun entering Bihar" (Mukherji & Mukherji, 2012). Apart from a structural transformation of the economy, the other issues, like the issue of productivity, the lack of skill generation, the absence of vocational training and the absence of job ready candidates are need to re-emphasized that can engage in growing sectors and sub-sectors of the economy. Productivity is low in Bihar. Extensive and creative investment in creating institutions to develop skills with clear links to business is imperative. Overt attempts at targeting the differential sectoral distribution between national income and the labour force are needed. Such attempts all have long gestation periods and while these investments are needed today, they will not immediately resolve the shortage of skills and productivity in Bihar. Structure of Bihar's economy is changing not only at state level, but at district level also. And these changes need to be more casious planning and good initiatives from Govt. And the change is already in its way.

## 6. References

1. Basu, K. and Maertens, A. (2007): "The Pattern and Causes of Economic Growth in India", BREAD Working Paper No. 149, April, 2007.
2. Bhattacharya, B. B. and Sakthivel, S. (2004): "Regional Growth and Disparities in India: Comparison of Pre- and Post-Reform Decades", *Economic and Political Weekly*, Vol. 39, No. 10, pp. 1071-1077.
3. Bhattacharya, D. (2000): "Bihar after Bifurcation: A Challenging Future", *Economic and Political Weekly*, Vol. 35, No. 43-44, pp. 3800-3804.
4. Das Gupta, C. (2010): "Unravelling Bihar's 'Growth Miracle'", *Economic & Political Weekly*, Vol. XLV, No. 52, December 25, 2010.
5. Dholakia, R. H. (2009): "Regional Sources of Growth Acceleration in India", Working Paper No. 2009-03-06, Indian Institute of Management, Ahmedabad, India.
6. Fisher, A.G.B., (1939): "Production, primary, secondary and tertiary", *Economic Record*, Vol. 15, pp. 24-38.
7. Fujita, K. (2012): "Development Strategy in Bihar through Revitalizing the Agricultural Sector: A Preliminary Analysis", IDE Discussion Paper No. 332, Institute of Development Economics, JETRO, Chiba, Japan.
8. GoB (2007): *Economic Survey 2006-07*, Finance Department, Government of Bihar, March.
9. (2009): *Economic Survey 2008-09*, February, Finance Department.
10. - (2010): *Economic Survey 2009-10*, March, Finance Department.
11. Kalirajan, K. and Singh, K. (2013): "Understanding Sectoral Economic Growth in India: The Potential for Services", *Institutions and Economics*, Vol. 5, No. 1, April 2013, pp. 91-112.
12. Kuznets, S. (1971): Nobel Prize Lecture. (Available at: [http://www.nobelprize.org/nobel\\_prizes/economics/laureates/1971/kuznets-lecture.html](http://www.nobelprize.org/nobel_prizes/economics/laureates/1971/kuznets-lecture.html); accessed 18th April 2012).
13. Misra, B. (2010): "Changing Dimensions of India's Growth Process: A State Level Analysis", MPRA Paper No. 21848, available at <http://mpra.ub.uni-muenchen.de/21848/>
14. Mukherji, A. and Mukherji, A. (2012): "Bihar: What Went Wrong? And What Changed?", Working Paper No. 2012-107, September, 2012, National Institute of Public Finance and Policy, New Delhi.
15. Nachane, D. M., Ray, P. and Ghosh, S. (2002): "Does Monetary Policy Have Differential State-Level Effects? An Empirical Evaluation", *Economic and Political Weekly*, November 23, 2002, pp. 4723 - 4728.
16. Panda, R. C. (2008): "Paradigm Shifts in Growth Perspectives of Indian Economy", *The Journal of Income and Wealth*, Vol. 30, No. 1, January-June, 2008.
17. Pangotra, P. and Govil, A. (2008): "Urban Development Strategy for Bihar: A Management Perspective", Working Paper No. 2008-04-02, Indian Institute of Management, Ahmedabad, India.
18. Saravanan, S. and Durai, A. J. (2012): "Growth Pattern Disparities: An Inter-state and Inter-state Analysis", *Atlantic Review of Economics*, Vol. 2.
19. Schultz, T.W. (1978): *Distortions of Agricultural Incentives*, Bloomington: Indiana University Press.
20. Sharma, A. N. (2005): "Agrarian Relations and Socio-Economic Change in Bihar", *Economic and Political Weekly*, March 5, 2005, pp. 960-972.
21. Shetty, S. L. (2003): "Growth of SDP and Structural Changes in State Economies: Interstate Comparisons", *Economic and Political Weekly*, Vol. 38, No. 49. Pp. 5189 - 5200.
22. Shingal, A. (2013): "Growth, Convergence and Trade: The Services Sector in India's States", Working Paper No. 2013/33, NCCR Trade Regulation, Swiss National Centre of Competence in Research.
23. Silva, E. G. and Teixeira, A. A. C. (2008): "Surveying Structural Change: Seminal Contributions and a Bibliometric Account", *Structural Change and Economic Dynamics*, Vol. 19, pp. 273-300.
24. Syrquin, M. (2005): "Kuznets and Modern Economic Growth Fifty Years Later", WIDER Conference: Thinking Ahead: The Future of Development Economics, Helsinki, June, 2005.
25. Tsujita, Y., Oda, H., and Ghosh, P. (2010): "Development and Intra-State Disparities in Bihar", *Economic & Political Weekly*, Vol. XLV, No. 50, December 11, 2010