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GROWTH AND RELATIVE ECONOMIC POSITION OF ODISHA

Priyabrata Sahoo¹

Abstract

Odisha has seen a high economic growth in the 2000's decade. The growth rate of sectors has been calculated for the four decades, 1970-71 to 2013-14 using dummy variable regression model. The decadal growth analysis of NSDP of Odisha taking five-year moving average can be classified into three phases. The first phases from 1972-73 to 1981-1982 has seen lower growth rate especially the low primary sector growth. The second phase 1982-83 to 2001-02 has seen low growth in the primary sector and a high growth in the Secondary sector in general and Mining in specific. The third phase achieved a high growth in Primary and Tertiary sector and spurt in the overall growth of NSDP. The decomposition of growth into sector shows, Tertiary sector, remains the major driver of growth over the year. Primary sector seen a reduction in its contribution to growth and secondary sector contribution remain the same over the year. The relative economic position of Odisha can be looked into by looking into the Per Capita Income (PCI) of major states. In spite of high economic growth, Odisha's relative economic position is not better off in comparison to all India and among high-income states. Its position has improved only in comparison to the low-income state.

Key Words: Growth, NSDP, per capita NSDP, Relative Economic Position, Structural Change, Odisha.

JEL Codes: O40, O47.

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However, the author is solely responsible for any remaining errors.

1. INTRODUCTION:

Economic growth of a country reflects how better an economy utilizes its natural resources and factors of production. The growth is a necessary condition for development, and various income indicators are used to measure the growth of an economy. The economic position of an economy can be known by the performance of its economic indicators. To know the relative economic position of an economy, its economic indicators have to be compared with those of another economy. The indicators are broadly income and non-income. The Gross State Domestic Product, Net State Domestic Products (NSDP), per capita net state domestic products are used as the income indicators of economic wellbeing.

The structural transformation as a concept has started with the writings of Fisher (1952), Kuznet (1972) and Kaldor (1967). The structural transformation can be explained either by demand side, supply side or both. The exponents of the demand side, (Kuznet) is of the view that with increase in income the demand for food (agricultural commodities) increases less than proportionately to income *i.e.* income elasticity demand will be less than one and the demand for non-food items, industrial goods (clothing, consumer durables) increases more than proportionately. As the demand pattern changes, it causes changes in demand structure and hence decline in agricultural production and an increase in manufacturing output. With the increase in income more the demand pattern shifts from manufacturing to more service products. The change in production structure changes the employment pattern. On the other hand, Kaldor argued that the agriculture sector depends on land which is subject to diminishing returns to investment. There is a limit to increasing productivity in agriculture which is not applicable to the manufacturing sector. Hence, manufacturing plays an engine of economic growth in developing countries.

There are lot of literature on growth, structural breaks, nature and composition of growth at the national level. According to Binswanger (2013), economic growth and structural transformation taking place in India is a stunted one. Though, the share of income in the agricultural sector has declined, the share of employment decline in agriculture is slower. The industrial sector remained stagnant since a decade, both regarding output and

employment. Though the income-generating capacity of the service sector is very high the employment creation capacity of the service sector is very low. The nature and timing of structural breaks in the Indian economy are controversial. The major structural break in the Indian economy has taken place in the 1980s and 2000s (Wallack (2003), Panagariya (2004), Balakrishnan and Parameswaran (2007), Kaur (2007)). Hence the post-independence period can be splitted into three phases. The first phase from 1950-80 has seen a growth rate of 3.5 % popularly known as Hindu rate of growth. The second phase from 1980-2000 has recorded a growth rate of 5 % and the third phase from 2000-2010 has experienced a growth rate of 7 %. Sen and Kar (2014) argued the growth in the recent period is in the sectors such as mining, telecommunication, real estate, *etc.*, which are attributed to the 'closed ordered deal' between the business houses and the political agents. This type of growth pattern is not sustainable.

The state Odisha is situated in the eastern region of India and is having 3.5 % of the population mass of all India. It is bestowed with huge natural resources and is having the potential for high economic growth. But, amidst the plenty, it has been considered as backward states of India. The ratio of NSDP of Odisha to all India has been declined over time. Regarding per capita income, it is 6th lowest among the states and 64% of the per capita income of all India for the year 2012-13 at 2004-05 constant prices. The economic reform which has started in the 1980s has increased its pace in the 1990s and has a significant effect on growth. The impact of reform on growth may not be homogeneous and vary among regions. Odisha is a state which has been considered a backward state since independence. Some of the recent literature observed that the relative economic position of Odisha has improved. Samantaray, A. and *et.al* (2014) took both the income and non-income indicator (literacy rate, infant mortality rate and maternal mortality rate) to show the improved economic position of Odisha. He has also done a primary survey on three different regions of Odisha and shows that the recent decade has seen an occupational mobility and high asset holding. Panda (2008) has shown in his paper that Odisha has achieved a higher growth rate in the recent past with a high reduction in poverty. The paper tries to re-examine the proposition, 'did Odisha achieve a high growth rate and Structural change in recent past? If yes, what are the phases and the sub-sectoral growth in different

phases? Is there any major structural change in the composition of output in Odisha? The paper is organized as follows. Section 2 discusses the data and methodology used here. Section 3 explains the sectoral composition of output in Odisha. Section 4 describes the phases of economic growth and decomposition of growth in Odisha. Section 6 gives the relative economic position of Odisha and section 7 provides a concluding remark of the paper.

2. DATA AND METHODOLOGY:

The data on per capita NSDP and NSDP from 1970-71 to 2013-14 has been taken from EPW Research Foundation. The data are of different base years as 1970-71, 1980-81, 1993-94 and 2004-05 at constant prices. The splicing method has been used to make the whole series at a common base of 2004-05. The trend line of the sectoral data shows huge fluctuation. The five year moving average method is used to make the data series trend line smooth. To find out the regimes in a time series data, we must first of all find out the major structural breaks by using appropriate methods. The breaks may occur due to the change in any policy regimes as the introduction of the neo-liberal regime in India, policy intervention by the states as the introduction of the green revolution, or due to any external shocks like oil price crisis. The limitation of the structural break analysis has been explained by Dholakia (2011). Hence, we have done a decadal growth analysis using the dummy variable regression analysis. The growth rate can be estimated using the simple exponential function.

$$\ln Y_t = a + g_t + u_t \quad \dots\dots\dots (1)$$

Where $\ln Y_t$ is the log of income, g is the growth rate, t is the time trend, and u_t is the random disturbance term.

The parameter of the growth a and g varies from one growth regime to other. The growth rate calculation is nothing but the output time relation over a period. The relation can be written as - $Y_t = \alpha(1+r)^t u_t$ which can be linearized as $\ln Y_t = a + g_t + u_t$.

Where Y_t = output, t = time, $a = \ln\alpha$ = constant, r = the compound annual growth rate, $g = \ln(1+r)$ and $\ln u_t \sim \text{IND}(0, \sigma^2)$ i.e., normally distributed with mean zero.

The exponential growth poses a restriction on the parameter of output trend that is a constant percentage of growth. The sub-period analysis of growth can be done for a time series using the dummy variable interaction model. Three dummy has been used for the four decades.

$$\ln Y_t = a_1 D_1 + a_2 D_2 + a_3 D_3 + (b_1 D_1 + b_2 D_2 + b_3 D_3)t + u_t \quad \dots\dots\dots (2)$$

Where $D_1 = 1$ for the 2nd period and 0 for others
 $D_2 = 1$ for the 3rd period and 0 for others
 $D_3 = 1$ for the 4th period and 0 for others

Balakrishnan and Parameswaran (2007) has done the decomposition analysis for all India among the sectors. Consider two sub-periods 1 and 2 respectively consisting of n_1 and n_2 years. Denotes aggregate GDP, primary, secondary and tertiary sector income by Y , P , S , and T . Let w_{it} denotes the share of each sector i in year t , g the growth rate.

Then Y can be written as

$$Y_t = P_t + S_t + T_t \quad \dots\dots\dots (3)$$

From equation (1) the growth rate of Y can be written as –

$$g_{Yt} = w_{Pt} g_{Pt} + w_{St} g_{St} + w_{Tt} g_{Tt} \quad \dots\dots\dots (4)$$

Where g_{yt} is the growth rate of Y in the year t and g_{pt} , g_{st} and g_{Tt} represents the growth of primary, secondary and tertiary sectors respectively over time t and can be explained as the growth rate of Y .

$$g_{Yt} = \frac{Y_t - Y_{t-1}}{Y_{t-1}} \quad \dots\dots\dots (5)$$

The average annual growth rate for the period one can be written as follows.

$$\overline{g_{Y1}} = \overline{w_{P1}g_{P1}} + \overline{w_{S1}g_{S1}} + \overline{w_{T1}g_{T1}} \dots\dots\dots (6)$$

where,

$$\overline{g_{Y1}} = n1^{-1} (\sum_{t=1}^{n1} g_{Yt}) \text{ and,}$$

$$\overline{w_{i1}g_{i1}} = n1^{-1} \left(\sum_{t=1}^{n1} w_{it}g_{it} \right)$$

Similarly, the average growth rate for the second period can be written as –

$$\overline{g_{Y2}} = \overline{w_{P2}g_{P2}} + \overline{w_{S2}g_{S2}} + \overline{w_{T2}g_{T2}} \dots\dots\dots (7)$$

$$(\overline{g_{Y2}} - \overline{g_{Y1}}) = (\overline{w_{P2}g_{P2}} - \overline{w_{P1}g_{P1}}) + (\overline{w_{S2}g_{S2}} - \overline{w_{S1}g_{S1}}) + (\overline{w_{T2}g_{T2}} - \overline{w_{T1}g_{T1}}) .. (8)$$

Dividing the equation throughout by left-hand side value and multiplying by 100 gives the percentage contribution of each sector to the change in average growth rate of Y in period 2 over the previous period.

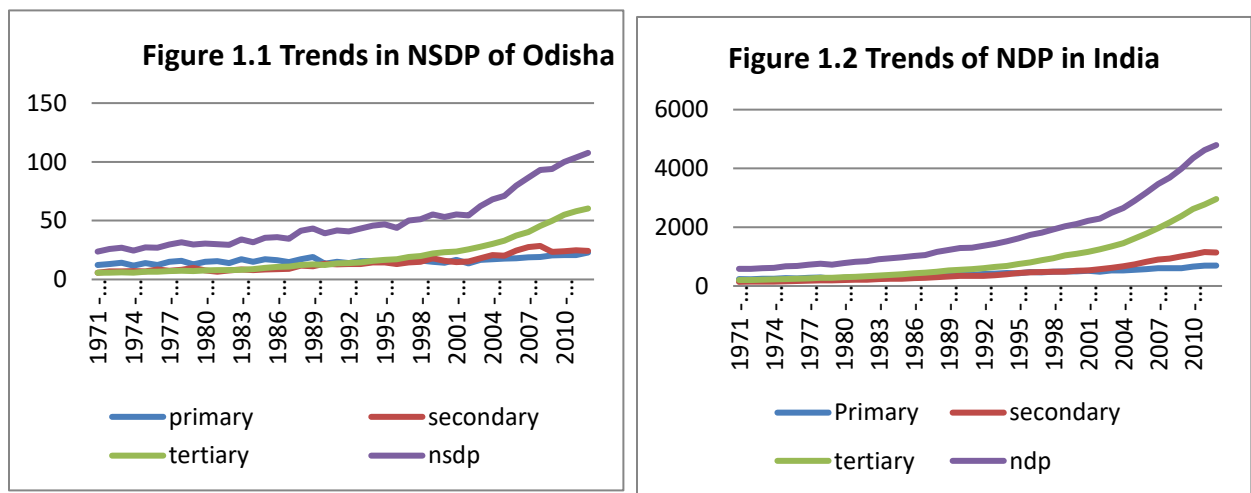
3. SECTORAL COMPOSITION OF NSDP IN ODISHA:

The sectoral composition changes with the growth of an economy. The share of agricultural sector in GDP starts falling while the shares of industry and service sector start rising. Though, the share of manufacturing starts in rising at the initial stages, it starts declining after a point. Odisha has achieved a higher growth rate in the recent decade. Odisha’s economy has been undergoing a structural change with the service sector becoming more prominent accounting for more than half (56%) of the NSDP followed by the industrial sector (24%). The agriculture sector has a mere 20% share of the total NSDP of Odisha in the year 2011-12. In the case of all India, primary sector constituted only 13% of the NDP. The share of the industry and service sector to the NDP is 22% and 65% respectively.

If we look in figure 1.1 and 1.2, primary sector is the mainstay of Odisha and whose sectoral income is higher over the secondary sector through-out. Even the tertiary sector income also is less than the primary sector up to 1996-97. It is after 1997 only the service sector in

Odisha has seen a rising trend which is faster than the primary and secondary sector. While in the case of all-India the tertiary sector takes over the primary sector in 1990-91 and hence while the structural change starts little earlier in India and in Odisha it is felt in the later period. The structural transformation is directly from primary to tertiary sector bypassing the industrial sector. Hence, the structural transformation taking place in India as well as Odisha is stunted in nature.

Figure: 1- Sectoral Trends of NDP of Odisha and All India in 00000 Lakhs.



Source – Calculated by Author.

Phases and Decomposition of Sectoral Growth:

The whole period of 1970-71 to 2013-14, four decades in Odisha can be divided into three phases. The first phase (1972-73 to 1981-82) as low growth phase, second phase (1982-83 to 2001-02) as medium growth phase and the third phase (2002-03 to 2011-12) as high growth phase. The tertiary sector is the major driver of growth in all these three periods. The green revolution does not seem to have much impact on the growth of the primary sector in the first phase.

Table 1: Sectoral Composition of NSDP in Odisha

(Per cent)

SECTORS	1972-73 to 1981-82	1982-83 to 1991-92	1992-93 to 2001-02	2002-03 to 2011-12
Agriculture	37.38	35.02	25.45	18.41
Forestry and Logging	11.33	8.10	4.63	3.36
Fishing	0.51	0.82	1.46	1.28
primary	49.22	43.94	31.55	23.05
Mining and Quarrying	1.21	1.49	3.89	6.37
Manufacturing	7.98	7.70	7.37	7.58
Registered	3.81	4.34	4.62	5.26
Unregistered	5.56	4.69	3.78	2.40
Construction	14.63	14.43	15.89	11.77
Electricity, Gas and Water supply	1.57	1.92	2.10	2.29
secondary	26.78	26.86	30.28	28.09
Transport Storage and Communication	1.74	2.54	4.15	8.59
Railways	0.27	0.47	0.80	1.08
Transport by other means	1.58	2.09	3.09	5.81
Communication	0.09	0.13	0.34	1.58
Trade, Hotels and Restaurants	7.55	8.32	10.60	14.04
Banking and Insurance	0.47	1.20	2.27	4.98
Real Estate, Ownership of Dwellings and Business Services	7.21	7.54	7.44	6.46
Public Administration	2.43	3.51	4.37	4.03
Other Services	4.40	5.88	9.16	10.76
tertiary	24.00	29.19	38.17	48.86
Total	100.00	100.00	100.00	100.00

Source: Calculated by the Author from EPW Research Foundation NSDP data series.

While the impact of liberalization on this sector and more so on the industrial sector can be seen from the second phase. While the secondary sector achieved very high growth in this period, the primary sector has seen a negative growth rate. The major structural break though happens in 2000's with higher growth of primary and tertiary sectors. While the national level growth has seen a consistency among the sectors, the growth pattern in Odisha is more volatile.

Table 2: Sub-Sectoral Growth Rate of Odisha

(Per cent)

SECTORS	1972-73 to 1981-82	1982-83 to 1991-92	1992-93 to 2001-02	2002-03 to 2011-12
AGRICULTURE & AH	1.71	0.74*	-0.17	3.97
FORESTRY & LOGGING	1.66	-3.69	1.52***	0.85**
FISHING	6.23	9.58	4.90	3.31
PRIMARY	1.74	0.07	0.31	3.48
MINING & QUARRYING	1.68*	12.35	12.32	4.02*
MANUFACTURING	2.98*	7.11*	1.24***	2.90***
REGD.MFT	3.04***	12.14	1.99***	0.34***
UNREGD. MFT	1.71	1.83**	-1.36	5.77
ELECTRICITY GAS WS	4.59	6.64	0.49	3.62***
CONSTRUCTION	2.64	5.87	1.45*	6.18
SECONDARY	2.58	6.48	2.44***	4.58
TRADE-HOTEL- REST	1.94	5.47	5.14	10.85
TRANS-STO- COMM	3.99	11.06	9.63	12.45
RAILWAY	5.11	15.94	4.90***	7.74*
TRANSPORT BY OTHER	2.69	10.63	9.02	12.24
COMMUNICATION	5.42	7.38***	23.32	17.25
BANKING INSURANCE	11.52	13.48	10.72***	16.71
REAL EST. & OWN DWE	3.70	2.70	2.77	4.91
PUBLIC ADMIN	5.69	6.45***	6.36***	4.56*
OTHER SERVICES	4.11	7.68	8.34	7.41
TERTIARY	3.53	6.10	6.36	9.56
TOTAL NSDP	2.39	3.54	3.25	6.76

Source: Authors own calculation from EPW Research Foundation NSDP data.

Note: *significant at 5% level, **significant at 10% level, ***significant at 1% level.

Table 3: Sub-Sectoral Growth Rate of Odisha

(Per cent)

SECTORS	1972-73 to 1991-92	1992-93 to 2011-12	1972-73 to 2011-12
AGRICULTURE & AH	1.76	1.83***	1.00
FORESTRY & LOGGING	-0.98	1.57	-0.75
FISHING	7.61	3.81	6.91
PRIMARY	1.30	1.89*	0.84
MINING & QUARRYING	5.07	10.06	9.65
MANUFACTURING	2.93	4.46**	3.24
REGD. MFT	4.69	4.84***	4.45
UNREGD. MFT	1.10	0.97	0.76
ELECTRICITY GAS WS	4.93	5.04**	4.68
CONSTRUCTION	2.91	2.47***	2.97
SECONDARY	3.10	4.12*	3.76
TRADE-HOTEL-REST	3.64	8.06	5.67
TRANS-STO-COMM	6.63	12.62	9.07
RAILWAY	8.53	7.84***	8.51
TRANSPORT BY OTHER	5.68	11.68	8.04
COMMUNICATION	6.59	22.98	13.49
BANKING INSURANCE	12.69	13.61*	11.89
REAL EST. & OWN DWE	3.13	3.69	3.14
PUBLIC ADMIN	6.37	4.59	5.32
OTHER SERVICES	5.67	7.18	6.77
TERTIARY	4.69	7.82	6.00
TOTAL NSDP	2.72	5.11	3.51

Source: As in Table.2

Note: *significant at 5% level, **significant at 10% level, *** significant at 1% level.

Phase I: Low Growth Phase (1972-73 to 1981-82):

The first phase has seen a growth rate of 2.39 % in NSDP. The green revolution which has started at the national level in 1968-69 has very less impact on the agriculture of Odisha. Though, the mainstay of livelihood in Odisha is agriculture and around 60 % of the total population depends on this sector in 1970-71. This sector has grown at 1.71 % per annum. The secondary sector grows at a rate of 2.58 % in this phase. It is the electricity, gas and water supply sub sector which grow at a rate of 4.59 % which is highest among the sub-sector of secondary in this phase. It is because of the power sector reform in the state.

Odisha is the first of the state which brings the power sector reform in the country. The Industrial base has been built in this period. The heavy industries as Rourkela steel plant have been built by the then chief minister Biju Patnaik in 1960s which is the first of the kind public sector in India along with Bhilai, Bokaro and Durgapur steel plant. Among the sub-sectors of the tertiary sector, it is the transport, banking- insurance and public administration which grows at a faster rate. The tertiary sector as a whole grows at a rate of 3.53% in this phase, which has seen a high growth rate. The main driver of growth in this period remains the service sector.

Phase II: Medium Growth Phase (1982-83 to 2001-02):

This phase consists of two decades as the rate of growth, which remain more or less same in both the decades. But, the compositions of growth vary in both the decades. The 1980's decade has seen a growth rate of 3.54% while the 1990s decades has witnessed a slight slowdown to 3.25%. But, the primary sector has recorded a very low growth rate and the agriculture sector has seen a negative growth rate of -0.17% in the second decade of this phase. The reduction in the growth rate might be the result of a change in policy regime by the national level as well the state. The drastic reduction in public investment, subsidies on agriculture might have led to a negative growth of this sector. The huge flow of foreign direct investment to the rural hinterland of Odisha results in high growth in the industrial sector in general and the mining sector in particular. The secondary sector as a whole for the 1980s decade grows at a rate of 6.48% and mining and registered manufacturing grows above 12%. The 1980s decade has a golden period for the industrial sector while the sector has seen a slowdown in the second decade of this phase. The heavy industries such as NALCO, NTPC, MCL have been built in this period. The mining sector has seen a growth rate of 12.30% annually over these two decades which is because of the huge demand for mineral resources from foreign countries as China and Japan. The government of Odisha also provides the basic infrastructure facilities, to these companies. The manufacturing sector especially the registered manufacturing has seen a high growth rate in that period. The various steel plants such as Tata Steel in Kaling Nagar - Jaipur, Vedanta at Langigarh-Niyamagiri, Posco South Korean MNCS in Jagatsingpur have established their plants to

exploit the rich mineral resources of the state at a cheap rate. Several other corporations have signed the Memorandum of Understanding with the Government of Odisha to set up their power plants, in Odisha. Although, the exploitation of these mineral resources results in high growth rate in Odisha, it hardly benefits the poor masses. The companies which were set-up in the tribal and forest regions have exploited the water, forest, and land (Jal, Jangal, and Jamin) resources and that has affected the rural livelihood and pushed their life into misery. The tertiary sector has seen a growth rate of above 6% in both the decades. It is the transport storage communication, banking and insurance sub-sector which have seen a high growth rate in this phase. This phase saw a negative growth in agriculture and higher growth in the industrial sector.

Phase III: High Growth Phase (2002-03 to 2011-12):

This phase has seen a high growth rate in NSDP and also the agricultural and primary sector. The growth is 6.76 %, while the tertiary sector growth is 9.50% and the primary sector growth is 3.48%. There is a revival in the agricultural sector which has growth at 3.97%. The revival of agricultural sector is due to the huge public investment in irrigation, private investment in commercial crops in some part of Odisha. The political stability in the state also played a role. The Naveen Patnaik government led by BJP-BJD came to power in 2000 March for the first time. Later on, though the coalition has broken down still, the Patnaik Govt has been in power for the fourth consecutive term and continuing till now. The industrial sector has seen a reduction in growth rate. The growth rate of the industry has declined from 4.58%. Though the industrial growth rate is lower than 1980s which is higher than the 1990s. The mining sector saw a drastic fall in the growth rate. The social awareness among the people in various regions of Odisha against these multinationals not to give up their land resulted in social movement and protest. The Supreme Court judgment on the environmental pollution and forest rights also restricted the functioning of these MNCs. Still, it is the unregistered manufacturing, electricity gas and water supply and construction boom which resulted in a growth in the sector. The service sector has seen a high growth rate 9.56%. It is the trade-hotel-restaurants, finance-

banking - insurance, transport storage and communication which have seen a higher growth in this period. The period has recorded a higher growth in the primary and tertiary sector.

Comparing the pre-reform period the post-reform has witnessed a higher growth in Odisha. The two decades of the post-reform 1992-93 to 2011-12 growth rates is 5.11% in comparison to 2.72 % growth in the pre-reform 1972-73 to 1991-92 periods. All the three sectors have seen high growth in the post-reform period. Among the sub-sectors, it is mining and quarrying, trade hotel and restaurant, transport storage and communication which has seen a higher growth rate. In the long run of the four decades, the NSDP growth rate of the economy is around 3.51% per annum. It is the communication, banking insurance, mining quarrying, trade hotel and restaurants which witnessed a long run high growth rate. The growth of primary, secondary and tertiary sector over the long run in the four decades are 0.84%, 3.76% and 6% respectively.

Though the growth of a sector gives its performance over the year, it does not provide its sectoral contribution to overall growth rate. For the decomposition of growth rate both the share of the sector and its annual average growth rate have taken into account. The growth of the sub-sectors will be higher if the level of that sector is lower. Hence, the sectoral growth rate only gives us the picture of growth trends. If we want to know about sectoral contribution to the overall growth rate we have to look both the level and growth through decomposition. Each sector's contribution to the total growth can be measured by multiplying the average growth with an average share of that particular sector. Balakrishnan and Parameswaran (2007) has done the similar decomposition analysis at the national level. To know the sectoral contribution of growth in Odisha, the same method has been adopted in the paper. Table.2 presents the sectoral decomposition of growth in Odisha.

Table.2 shows the sub-sector wise contribution to the overall NSDP. Though, in the second phase the contribution of primary sector has declined but it is the contribution of service and industrial sector which has risen resulting in a higher growth. If we look to the sub-sectors in the first phase it is the agriculture which has the highest contribution to

the growth followed by construction, real estate, and ownership dwelling. The first decade of the second phase has seen the highest contribution by the construction, agriculture, trade-hotel restaurants, registered manufacturing and other services. While the second decade of the second phase *i.e.*, the 1990's has seen a drastic fall in the contribution of agriculture, primary and registered manufacturing and secondary sector while the mining and quarrying, transport-storage communication, other services have seen high growth in the contribution to the overall NSDP in that period. In the third phase, *i.e.* in the 2000's decade, the primary sectors contribution has increased due to increase in the contribution of the agriculture while the secondary and tertiary sector contribution has declined. The main contribution to the growth are trade-hotel-restaurants, transport-storage-communication, banking –insurance and agriculture sector.

Though, there is a very high increase in the contribution of the agricultural sector and drastic fall in the contribution of mining sub-sectors in the third phase the main contributor of growth in that period remains the tertiary sectors. The sub-sector which contributes more for the whole period 1970-2011 are the trade-hotel-restaurants, construction, finance-insurance-real estate and business services. Table.2 also shows each sub-sector contribution to the primary, secondary and tertiary sector.

4. RELATIVE ECONOMIC POSITION OF ODISHA:

The NSDP of an economy represents the overall economic performance of that economy. An economy having high income is counted as a richer state than the economy having low NSDP. If we look to the NSDP of Odisha over the year, its share has been declining over the year. The share of NSDP of Odisha to all-India which was around 3.9% in the 1970-71 declined to 2.25 in the 2012-13 (Figure-2.1). The per capita income is used as a better indicator of standard of living. The per capita income of Odisha and India in the 1970-71 is Rs. 10248 and Rs. 10016 respectively which in 2012-13 became Rs. 25,415 and Rs. 38,856 at 2004-05 constant prices. That means the per capita income of India increases faster than the Odisha. While the per capita income for Odisha

Table 4: Sectoral Decomposition of Growth Rate in Odisha

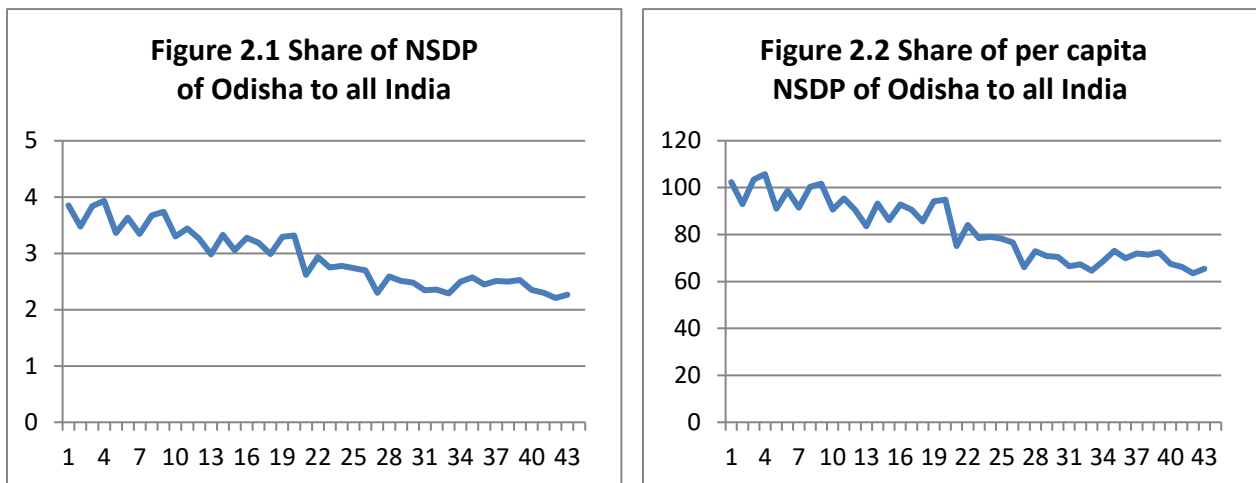
(Per cent)

YEAR/ SECTORS	1972-73 to 1981-82	1982-83 to 1991-92	1992-93 to 2001-02	2002-03 to 2011-12	1972-73 to 1991-92	1992-93 to 2011-12
AGRICULTURE & AH	0.53	0.49	-0.11	0.70	0.02	0.62
FORESTRY & LOGGING	0.19	-0.29	0.01	0.03	0.07	0.02
FISHING	0.03	0.08	0.09	0.05	0.08	0.05
PRIMARY	0.74	0.25	-0.03	0.77	0.17	0.68
MINING & QUARRYING	0.02	0.17	0.49	0.39	0.50	0.19
REGD.MFT	0.10	0.41	0.12	0.26	0.06	0.13
UNREGD. MFT	0.08	0.04	-0.03	0.11	-0.06	0.13
CONSTRUCTION	0.37	0.64	0.24	0.53	0.12	0.69
ELECTRICITY GAS WS	0.06	0.13	0.06	0.14	0.05	0.13
SECONDARY	0.58	1.33	0.78	1.24	0.67	1.27
RAILWAY	0.01	0.06	0.05	0.08	0.05	0.08
TRANSPORT BY OTHER	0.03	0.18	0.28	0.71	0.31	0.69
COMMUNICATION	0.00	0.01	0.09	0.26	0.09	0.22
TRADE-HOTEL-REST	0.12	0.44	0.56	1.40	0.55	1.26
BANKING INSURANCE	0.05	0.15	0.23	0.81	0.25	0.81
REAL EST. & OWN DWE	0.23	0.21	0.21	0.30	0.21	0.33
PUBLIC ADMIN	0.13	0.21	0.24	0.14	0.22	0.13
OTHER SERVICES	0.16	0.41	0.72	0.71	0.67	0.71
TERTIARY	0.72	1.65	2.34	4.34	2.36	4.24
TOTAL NSDP	2.01	3.11	3.01	6.25	3.19	6.19

Source: As in Table.1

increases by around 248 percentages at the national level it increases by 388 percentages over the period 1970-71 to 2012-13. In Figure 2.1 over time the ratio of NSDP of Odisha to all India also the ratio of per capita NSDP of Odisha to India has declined which has shown in figure 2. Hence, both the decline in the share of NSDP and per capita NSDP shows the decline in the relative economic position of Odisha over the decade. If we have a close look at the figures 2.1 and 2.2 we can see that though the share has been declining after 2003-04 it has seen a slight rise and fall showing though the economic position has improved after 2003-04 again it has seen a decline. There are three phases here as well from 1970-1992, 1993-2003 and 2003-04 onwards.

Figure 2: Relative Position of Odisha in Comparison to All India

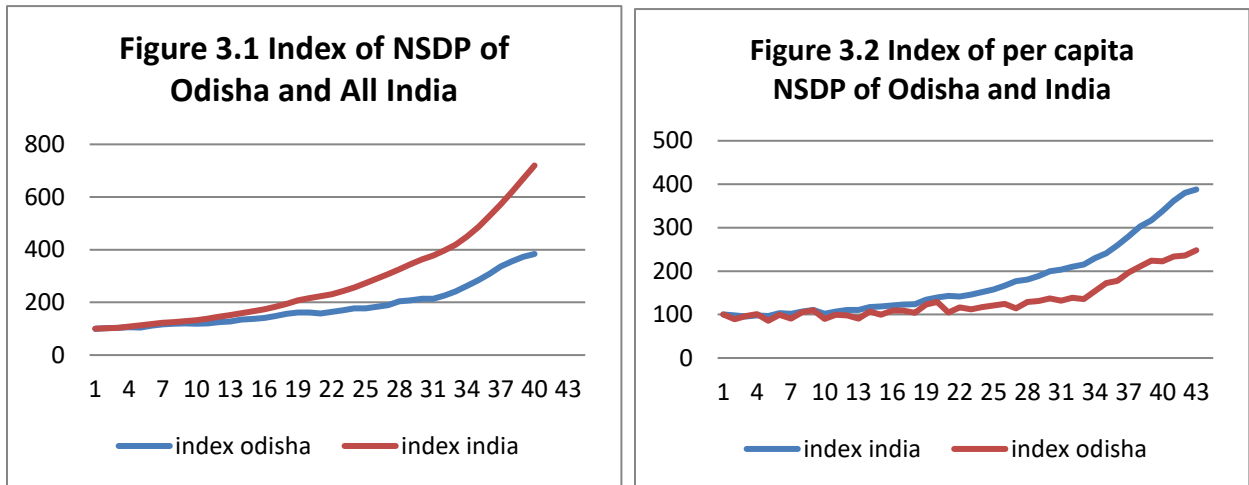


Source: Authors calculation from EPW Research Foundation NSDP data.

Both the figures 3.1 and 3.2 represent that the index of NSDP and index of per capita NSDP of Odisha increases slower than the national level. Hence, the above figures reflect that in comparison to all-India over the year the relative economic position of Odisha has declined. If this is the case with the all –India is it the relative economic position of Odisha has improved or deteriorated on the states has been described in the next section. The graph also saw an increase in divergence between the two indexes, showing the relative position which became worse off. ²

² The ratio of NSDP and Per capita NSDP are at 2004-05 constant prices. The analysis contradicts the analysis of Samantray *et al.* (2014) that the relative economic position of Odisha has improved taking the long-term data at current prices.

Figure -3: Relative position of Odisha in comparison to All India

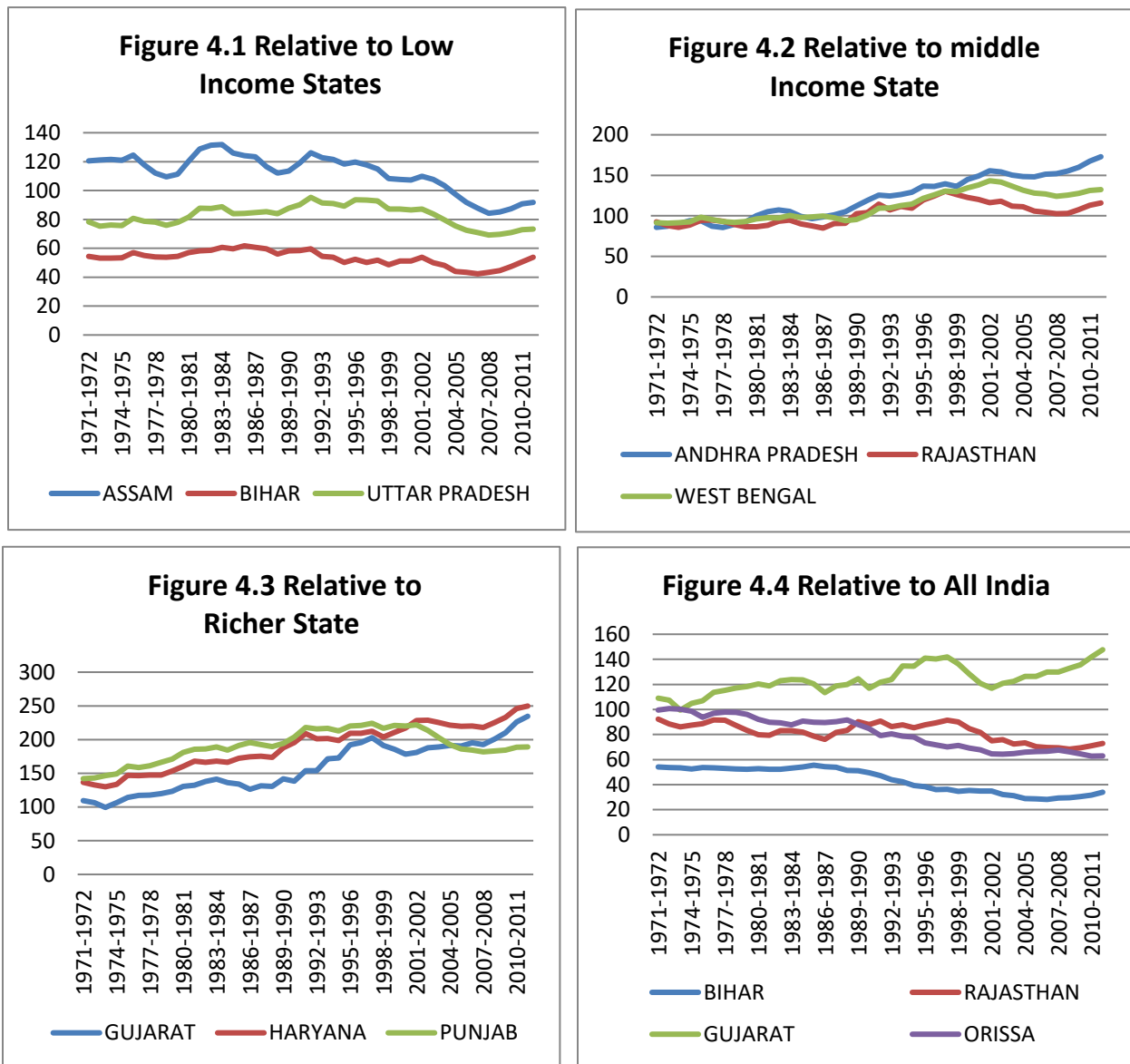


Source: As in Figure-2.

To compare the relative performance of Odisha with other states, the major states have been classified into high income, middle income, low-income states taking into consideration their per capita income. From each group three states has chosen. States Assam, Bihar and Uttar Pradesh are in the lower income groups, Andhra Pradesh, West Bengal, Rajasthan come under middle-income groups and Punjab, Gujrat and Haryana come under the high-income groups. The ratio of the per capita income of those states to Odisha has been compared from 1971-72 to 2011-12, at 2004-05 prices, to get the relative economic position of Odisha. The figures 4.1 to 4.4 represent the relative economic position of Odisha on other states. The trend line below 100 reflects that the relative economic position of Odisha is better of and vice versa. Figure 4.1 shows that among the low-income states the relative economic position of Assam was better off than Odisha but after 2000s the economic position of Odisha has improved. The performance of both Bihar and UP was bad through out the period. Figure 4.2 shows West Bengal, Rajasthan and Odisha have same per capita income in 1970's. West Bengal outperformed both Odisha and Rajasthan over the year. Where as Rajasthan has not performed well, Andhra Pradesh per capita income raised faster. Figure 4.3 shows the high-income states are way ahead of Odisha regarding per capita income. Gujarat and Haryana increased their relative position throughout whereas Punjab relative position has declined after 2002-03 but still it is way ahead of Odisha in per capita income. Figure 4.4 shows the relative economic position of

states from each group on all India. The per capita income of Gujarat is higher than the national average while Rajasthan and Odisha is lower and Bihar is lower than the national average. Rajasthan and Odisha per capita income is more or less coincide with the year. All the figure represents that the relative economic position of Odisha has improved among the low income performing states and some of the middle-income states.

Figure 4: Relative Position of Odisha in comparison to States and All India



Source: Calculated by Author from EPW NSDP state data

5. SUMMARY AND CONCLUSION:

The paper presents the growth, composition and the relative economic position of state Odisha for four-decades starting from 1970-71. The major structural change in Odisha has taken place in 2000s. Though the 1990s has seen high growth in comparison to the previous phase due to the high industrial growth it has been considered as the lost decade due to negative agricultural growth. Later the third phase after has been considered as the golden phase due to the high agriculture and service sector growth though industrial growth has been slow down. The regional wise analysis of the growth of agriculture has to be looked into, to have a clear understanding of the distribution of agricultural growth in the third phase. The service sector remains the main contributor to growth over the period. Agriculture in the primary sector, construction, mining and manufacturing in the secondary sector and trade-hotel-restaurants, transport, finance-business and real estates in the service sector remains the main contributor to growth in Odisha. Odisha relative position regarding per capita income has been declining over the year. Among the major Indian states, its relative position has improved in comparison to the low-income states. It is far behind the high-income states regarding per capita income. Hence, the economy of Odisha in recent decade has seen a higher growth rate, regarding relative economic position its improvement is not up to a mark. The several non-income indicators like life expectancy, literacy, *etc.* will give us a broad picture of how the fruits of growth of Odisha economy has been enjoyed by the masses and how inclusive the growth is which is outside the purview of this paper. Though, the paper looked into the composition of growth, it remains silent on the nature of growth in Odisha, political economy and history of Odisha economy and how several factors and policy changes are influencing the growth at several phases which will broaden the study. The further work in this field will enhance the lapses in this paper.

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