RURAL-URBAN TRANSFORMATION DUE TO DEVELOPMENT OF SPECIAL ECONOMIC ZONES (SEZS): A CASE STUDY OF GAUTAM BUDDHA NAGAR, DISTRICT, U.P

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ABSTRACT

Special economic zone (SEZ) is a geographically delimited area and generally physically secured with inherent benefit of location. SEZs are useful for the socio-economic development of a country; it started in 1999 in India. At present there are 415 formally approved SEZ units in India, and among them 205 are operational and out of 205, there are 8 SEZs in Gautam Buddha Nagar district of U.P. SEZ has several impacts in a particular area like employment generation in non-primary activities, infrastructural development, urbanizations and growth in GDP and per capita income etc. So it has been tried to examine these impacts in Gautam Buddha Nagar. The study is based on the data collected from the District Census handbook, Department of Industry and Commerce and Statistical Abstract of U.P for 2001 and 2015. To analyze the block wise change in level of urbanization fifteen variables related to driving urban force, urban economic base and urban infrastructure are selected thereafter, Z score technique is applied to transform scores into standard score. Composite values of these standard scores of each variable are used to show the level of urbanization and their variation between 2001 and 2015. The study shows that Composite Z score (CZs) value is highest in Bisrakh (0.94) followed by Dadri (0.51), Jewar (-0.50) and Dankaur (-0.87) in 2001 but in 2015 CZs is highest in Dadri (3.59) followed by Bisrakh (2.21), Dankaur (-1.62) and Jewar (-2.05) which shows that there is a block wise shift in level of urbanization. Besides this there is a rise in GDP of about 259%, per capita income increased by 173.06%, number of towns increased from 9 to 13, and contribution of tertiary sector in GDP increased from 13% to 33% between 2001 and 2015. This shows that SEZ has a significant positive impact in the region.

Keywords: Tertiary Sector, Rural-urban transformation, Special economic zone, Urbanization.

Introduction

Rural-urban transformation is a process of comprehensive societal change whereby rural societies diversify their economies and reduce their reliance on agriculture; become dependent on distant places to trade and to acquire goods, services, and ideas and move from dispersed villages to towns and small and medium cities (Berdegue J, Rosada T & Bebbington A, 2014).

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According to the census of India (2011), 31.16% of the population lives in urban areas contrary to 11.4% in 1901 (Datta P, 2012). According to a survey by the UN State of the World Population report in 2007, by 2030, 40.76% of the country's population is expected to reside in urban areas. With a high rate of urbanization significant changes have taken place. For better lifestyle, employment, education etc. people from rural areas migrated to the urban area. So in this process rural-urban linkages took place (Pawan, 2016). Rural-urban linkages made people from rural areas tempted to have lifestyles like urban areas and in this process started to follow the urban culture and lifestyle. So major concern in the present situation is that not only are cities growing in number but rural communities are adopting urban culture, no longer are rural communities retaining their unique rural culture. Rural people are following the material culture of urban people (Pundir R S and Singh K, 2001).

Special economic zones (SEZs) play a significant role in the phenomena of rural-urban transformation. There is a need for a large patch of land for the development of SEZs. So on large scale land is needed to be acquired. In India total land area is 29, 73,190 sq km of that 16, 20,338 sq km is under agriculture. The share of the agriculture area in the total area is 54.5 %. For the development of proposed SEZs (formally and principle approved SEZs) approximately 2061 sq km area was allotted i.e. not more than 0.12 % of the total agricultural land in India (Ministry of Agriculture, 2006).

In India development of SEZs is an urban phenomenon; they are generally located adjacent to mega cities, for example Noida SEZs is located in the National Capital Region of Delhi (Sahoo P, 2015). SEZs in India are able to provide better reach towards technological development, better connection with the help of transport, improved education services and also change the economic structure of rural areas as a large number of people engage into non-primary activities. Because of the above said development there is easy movement of people, goods and services and also penetration of waste and pollution and blurring the boundaries between urban and rural areas (Tacoli C, McGranahan G & Satterthwaite D, 2015).

The latest schemes & incentives provided by the Govt. of India & State Government and the initiatives taken by Noida, Greater Noida & Yamuna expressway Industrial Development Authority for infrastructural and industrial development in the district such as Infrastructural & Investment Policy 2012, Infotech Park, Biotech park, Exposition Mart, Yamuna Expressway, Noida-Greater Noida Expressway, Delhi – Mumbai Industrial Corridor etc. will boost the industrial growth in the District especially for micro, small & medium enterprises. Thus it has a high potential of phenomena of rural-urban transformation. So, the main objective behind this paper is i) to analyze the block-wise level of urbanization ii) to analyze the welfare status of the district iii) to analyze block-level rural-urban transformation of Gautam Buddha District.

Study area

Gautam Buddha Nagar district is located in the north-western part of the state of Uttar Pradesh, in the vicinity of India's capital New Delhi. It is a newly created district which emerged in the year 1997 from portions of Bulandshahr & Ghaziabad districts. Geographical coordinate point of the study area is 28°34' N and 77°55 E. According to the district brochure of Gautam Buddha Nagar (AAP 2008-09), the district has a geographical area of 1442 km with headquarters in the industrial city of Greater Noida. It has three Tehsils and four developmental blocks viz. Bisrakh, Dadri, and Dankaur & Jewar. The district is bounded by Ghaziabad District to the North, Bulandshahr district to the East and Aligarh District to the South. The Yamuna River separates the district from Haryana State and Delhi to the West. As per 2011 census the total population of the Gautam Buddha Nagar district is recorded as 1,648,115 and the population density is 1,286 persons per sq. km. Within the total population of the study area, the total number of male population is 890,214 and 757,901 are females. The sex ratio in the district is 851 females per 1000 males. The population growth rate is 37.11% and average literacy rate is 80.12%. The rural and urban population is 40.88% and 59.12% respectively. The study area is also a vigorous and significant one within the state of Uttar Pradesh in terms of economic activities. Agriculture is the dominant economic activity in this district. However, due to fast industrialization land size under cultivation is decreasing rapidly. The availability of land for agriculture has tremendously decreased due to acquisition of land for the Noida Special Economic Zone (NSEZ) and Yamuna ExpressWay. The district has potential to become India's one of the most industrialized and developed districts and able to sustain large population and also accelerate phenomena of rural-urban transformation.
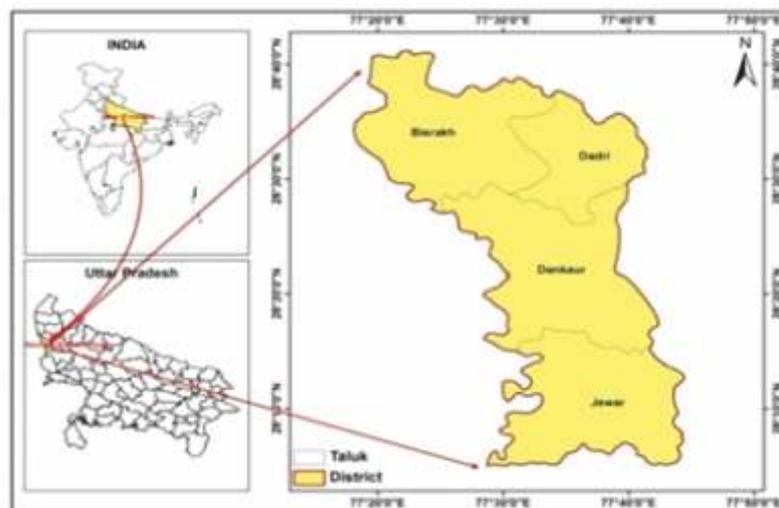

Figure 1: Study Area

Database and methodology

The data used for the analysis of rural-urban transformation has been collected from secondary sources including the District census handbook of Gautam Buddha Nagar for 2001, statistical abstract of Gautam Buddha Nagar district for 2001 and 2015, State Planning Institute, Economics and Statistics Division, Uttar Pradesh. Physical transformation is analyzed on the basis of simple tabular analysis of block-wise land use data. Simple change analysis is done to see the physical transformation of the district. To analyze the block wise change in level of urbanization fifteen variables are selected and Z score technique is applied to transform them into comparable units using equation 1. Composite values of these variables are used to show the level of urbanization and their variation between 2001 and 2015 using equation 2. These variables are shown in Table 4 with their description. Economic transformation is calculated by using the district level GDP, BPL and workforce participation data.

$$Z = \frac{X - x}{SD} \dots \dots \dots \dots \dots equation\ 1$$

Where,

Z= Standard score

X=Original values of the score

x = Mean of variables

SD= Standard deviation of variables

The Z-score of each indicator is added block-wise to find composite Z-score(s).

$$CZS = \sum Zij \dots \dots \dots \dots equation\ 2$$

Where,

CZS denotes composite Z-scores

Zij indicates the sum of Z-scores of indicators j in block i.

The level of urbanization is supported by other indicators of rural urban transformation like population growth, agriculture inputs, change in urban agglomeration or towns, poverty, sectoral share in GDP and per capita income. These data are collected from statistical abstract of U.P, Department of Commerce and industries.

Result and discussion

Physical transformation (2001-2015)

Physical transformation from rural to urban mainly depicts the transformation of agriculture into non-agriculture areas. The Food and Agriculture Organization (FAO) identifies three

broad 'stages' of physical transformation from rural to urban which is reflected in the form of changes in the composition of rural land use (Cartetto et al., 2007). The first stage of physical transformation is linked to agriculture when the workforce is concentrated mainly on agriculture in rural areas. At this stage, the people mainly engaged in agriculture and non-farm activity is limited and concentrated in the countryside with little dependence on rural-urban linkages. The second stage is associated with rural areas where a lower share of households directly depends on agriculture with greater rural-urban linkages. The third stage witnesses the maturing of trends that emerge in the second stage, with stronger links to the urban sector. In this stage a large part of agricultural land is converted into non-agricultural land.

So to see the physical transformation of the G B Nagar block-wise area under different agricultural and non-agricultural activities is shown in table 1 and table 2 for 2001 and 2015 respectively. In 2001 area under net sown class was highest among all land use classes in each block and also at district level. Net sown area is highest in Jewar block which is agriculture dominated area and lowest in Bisrakh block. Reason behind the lowest net sown area in Bisrakh block is that Bisrakh is an urban dominated area located near Delhi and Noida is largest city of this block. Non- agricultural land is also highest in Bisrakh block with 18.4% land followed by Dadri with 16.6% land.

In 2015 also net sown area was highest in Jewar (68.90%) and lowest in Bisrakh (21.2%). Non-agriculture land is highest in Bisrakh (43.10%) and lowest in Dankaur (3.5%). Study shows that in G B Nagar during 2001 and 2015 there is very high loss (61.12%) in the area under net sown area. But there is an increase in area under present fallow land, non-agricultural land, forest and other fallow land (table 3).

Table 1 : Block wise distribution of land use (2001)   (in hectares)

S. No	Block	Net sown area	Forest	Barren Cultivable waste Land	Present fallow Land	Other Fallow land	Barren & uncultivable land	Non- agriculture use	Pasture	Bush, forest & garden	Total
1	Dankaur	45322	82	2636	2918	1662	1193	5284	344	744	60185
2	Jewar	39286	117	278	2231	768	1324	3482	38	430	47954
3	Bisrakh	28083	114	838	2834	3852	592	8392	123	638	45466
4	Dadri	23586	82	765	2026	1864	1092	5990	169	485	36059
5	Total	136277	395	4517	10009	8146	4201	23148	674	2297	189664

Source: Sankhiki Patrika, G B Nagar, U.P (2001)

Table 2 : Block wise distribution of land use (2015)   (in hectares)

S. No	Block	Net sown area	Forest	Barren Cultivable waste Land	Present fallow Land	Other Fallow land	Barren & uncultivable land	Non-agriculture use	Pasture	Bush, forest & garden	Total
1	Dankaur	12269	513	613	3087	1761	102	10165	200	117	28827
2	Jewar	19921	300	490	3782	1615	280	2251	51	183	28873
3	Bisrakh	8150	1190	10	8455	3368	473	16571	147	25	38389
4	Dadri	12638	0	712	4872	2193	752	6725	123	60	28075
5	Total	52978	2003	1825	20196	8937	1607	35712	521	385	124164

Source: Sankhiki Patrika, G B Nagar, U.P (2015)

Table 3 : Change in land use (2001-2015)   (in percent)

S. No	Block	Net sown area	Forest	Barren cultivated	Present fallow land	Other fallow land	Barren & Uncultivated	Non-agriculture	Pastures	Bush, forest & garden
1	Dankaur	-72.93	525.61	-76.75	5.79	5.96	-91.45	92.37	-41.86	-84.27
2	Jewar	-49.29	156.41	76.26	69.52	110.29	-78.85	-35.35	34.21	-57.44
3	Bisrakh	-70.98	943.86	-98.81	198.34	-12.56	-20.10	97.46	19.51	-96.08
4	Dadri	-46.42	-100.0	-6.93	140.47	17.65	-31.14	12.27	-27.22	-87.63
5	Total	-61.12	407.09	-59.60	101.78	9.71	-61.75	54.28	-22.70	-83.24

Source: Sankhiki Patrika, G B Nagar, U.P (2001 & 2015)

Change in Level of urbanization and social transformation

There is rapid growth in urbanization in the district because of its proximity to NCT of Delhi, establishment of planned industrial estates, discouragement of establishment of large industries inside Delhi (Mohan, Rakesh & Dasgupta S (2005). In the present study three indicators are used to measure the level of urbanization viz. driving urban force, urban economic base and urban infrastructure. Growth in urban population, increase in the number of towns and their distribution are the most important indicators of driving urban force. There is also a close relation between urbanization and urban economic base. In the present condition industrialization and economic development are pre required conditions for urbanization. People move from subsistence agricultural practice or primary activity towards non-primary activity. Structural change in the economy causes urbanization and it is a common phenomena in developing countries, where urban centers act as a growth engines and nucleus of innovation and knowledge (Sharma N.K, 2009). Cities like Noida are already developed as a hub of

multinational firms and IT industries. Besides this Energy and Power utility companies such as Reliance Infrastructure, NTPC Limited, Tata Power, Gas Authority of India Limited, Indian Oil Corporation, Bharat Heavy Electricals Limited have their corporate offices in Noida. For the analysis of urban economic base three variables are used as shown in table 4.

Urbanization acts as a focus point for the restructuring of the whole economy as it regulates and modifies the sectoral composition of output, income and employment. Progress of the urban area is based on the progress of its economy and the development of industries which is based on available resources and infrastructure in the district. Infrastructure development is a prerequisite to form a base for any type of development whether it is social, economic or regional. There is a significant role of the means of communications in accelerating industrialization. Fast means of communication helps in provision of fast movement of finished items to the markets and of the raw materials to the production units. The Noida-Greater Noida Expressway is perched to become a dependent urban pocket in Noida with high-quality infrastructure. This 23 km long corridor has attracted real estate investors and buyers with its good infrastructure facilities and connectivity to the other regions of NCR.

Table 4 : Variables of level of urbanization

S. No	Variables/ Indicators	Description
		Driving urban force
1	X1	Percent of urban population to total population
2	X2	Percent of urban population to rural population
3	X3	Increase in urban population
4	X4	Number of towns per 100 sq km of total area
5	X5	Number of towns per 100 sq km of urban area
6	X6	Percent of household in urban area
7	X7	Percent of total literate to total population
		Urban economic base
8	X8	Percent of male workers to the total urban population
9	X9	Percent of urban workers to total workers
10	X10	Percent of factory workers to total workers
		Urban infrastructure
11	X11	Total road length per 100 sq km of total area
12	X12	Number of banks per 100 sq km of total area
13	X13	Number of banks per 1000 of population
14	X14	Number of hospitals per 100 sq km of total area
15	X15	Number of hospital beds per 1000 population

Block-wise different indicators of level of urbanization are shown in table 5 and table 6 for 2001 and 2015 respectively. Level of urbanization is calculated for both the year 2001 and 2015. Study shows that in 2001 driving urban force indices was highest in Bisrakh (1.49) followed by Jewar (-0.35), Dankaur (-0.47) and Dadri (-0.67). At the same time, the level of urban economic base is highest in Bisrakh (2.95) followed by Dadri (-0.05), Dankaur (-0.52) and Jewar (-2.38). In terms of urban infrastructure Bisrakh block is at the lowest position (-3.62). Urban infrastructure is lowest in Bisrakh because the total population of Bisrakh is highest among all blocks and facilities like banks and hospital beds are calculated in terms of per thousand populations. Whereas overall level of urbanization is highest in Bisrakh (0.94) followed by Dadri (0.51), Jewar (-0.50) and Dankaur (-0.87) table 7. Nevertheless despite being lowest in terms of urban infrastructure it is on top among four blocks in terms of overall level of urbanization in 2001. The main reason behind the high level of urbanization in Bisrakh Block is its proximity to Delhi which makes it a favorable location for all types of activities related to investments, development of residential societies by builders, establishment of corporate offices and MNCs etc.

In 2015 driving urban force was highest in Bisarak (1.45) followed by Dadri (-0.12), Dankaur (-0.35) and Jewar (-0.83) whereas, urban economic base is highest in Dadri (1.49) earlier than it was in Bisrakh in 2001. Besides this in respect of urban infrastructure Dadri stands at top (2.35), followed by Dankaur (-0.62). Overall in 2015 the level of urbanization is highest in Dadri (3.59) followed by Bisrakh (0.21). Between 2001 and 2015 there was a wise shift in the level of urbanization. In 2015 the level of urbanization was highest in Dadri block which was in Bisrakh in 2001. Because the population in Bisrakh is greater than Dadri, the value of indicators calculated on the basis of per head population like number of towns per thousand of population is lower in Bisrakh than Dadri.

The Pearson correlation technique is used to show the association of urbanization with urban driving force, urban economic base and urban infrastructure and it was found that there is a medium degree of positive correlation between level of urbanization and driving urban force (figure 2). There is a high degree of positive correlation between urban economic base and urban infrastructure with level of urbanization (figure 3 & 4).

Table 5 : Spatial variations in indicators of level of urbanization (2001)

S. No	Block	Driving urban force							Urban economic base				Urban Infrastructure			
		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15
1	Bisrakh	1.50	1.50	N.A	-0.35	1.50	1.50	1.39	1.50	1.50	-0.06	-0.85	-1.03	-1.60	0.61	-0.82
2	Dadri	-0.50	-0.50	N.A	-1.23	-0.50	-0.50	0.06	-0.50	-0.50	0.95	1.34	-0.42	-0.78	0.96	-0.08
3	Dankaur	-0.50	-0.50	N.A	0.39	-0.50	-0.50	-0.62	-0.50	-0.50	0.47	-0.68	1.31	1.16	-1.28	-0.58
4	Jewar	-0.50	-0.50	N.A	1.17	-0.50	-0.50	-0.83	-0.50	-0.50	-1.38	0.19	0.15	0.44	-0.26	1.51

Source: District Census Handbook (2001), Statistical Abstract (2001 & 2015)

Table 6 : Spatial variations in indicators of level of urbanization (2015)

S. No	Block	Driving urban force							Urban economic base				Urban infrastructure			
		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15
1	Bisarak	1.35	1.49	1.50	1.39	-0.51	1.33	1.35	-0.49	1.33	-1.19	0.42	0.03	-1.77	1.39	-0.99
2	Dadri	-0.70	-0.57	-0.50	-0.29	1.49	-0.70	-0.20	1.49	-0.72	0.41	0.96	1.16	0.94	-0.29	-0.51
3	Dankaur	0.16	-0.34	-0.50	-1.02	-0.37	0.21	-0.07	-0.38	0.20	-0.36	0.00	0.10	0.05	-1.02	0.15
4	Jewar	-0.81	-0.59	-0.50	-0.08	-0.61	-0.84	-1.07	-0.62	-0.82	1.13	-1.38	-1.29	0.06	-0.08	1.43

Source: District Census Handbook (2001), Statistical Abstract (2001 & 2015)

Table 7 : Change in level of urbanization (2001-2015)

S. No	Block	2001				2015			
		Driving urban force	Urban economic base	Urban infrastructure	Composite Z Score	Driving urban force	Urban economic base	Urban infrastructure	Composite Z Score
1	Bisarak	1.49	2.95	-3.62	0.94	1.45	-0.44	-0.82	0.21
2	Dadri	-0.67	-0.05	1.10	0.51	-0.27	1.49	2.35	3.59
3	Dankaur	-0.47	-0.52	0.00	-0.87	-0.35	-0.67	-0.62	-1.62
4	Jewar	-0.35	-2.38	2.10	-0.50	-0.83	-0.38	-1.16	-2.35

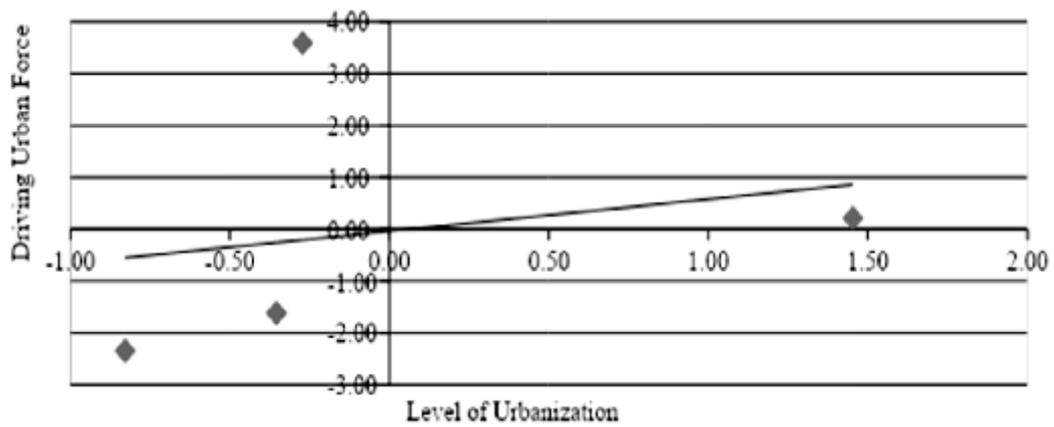*Source: District Census Handbook (2001), Statistical Abstract (2001 & 2015)*

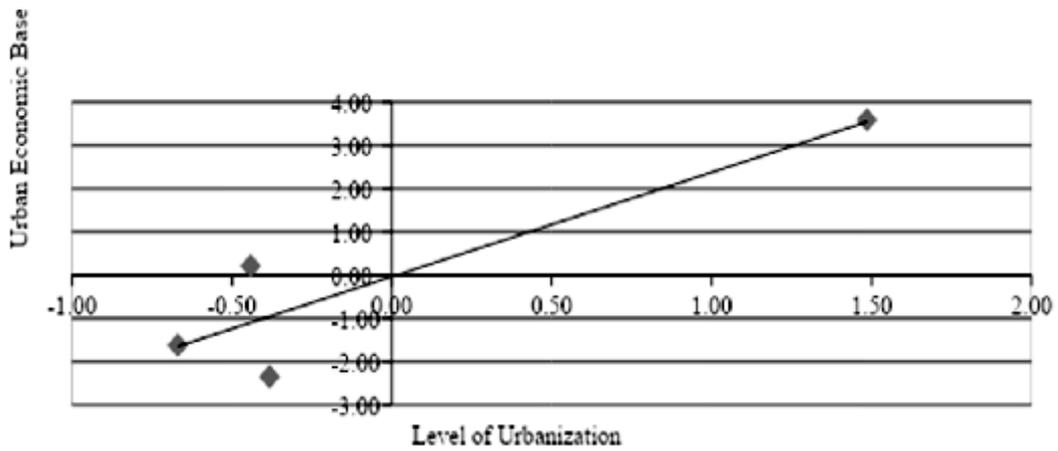**Figure 2 : Driving Urban Force and Level of Urbanization**

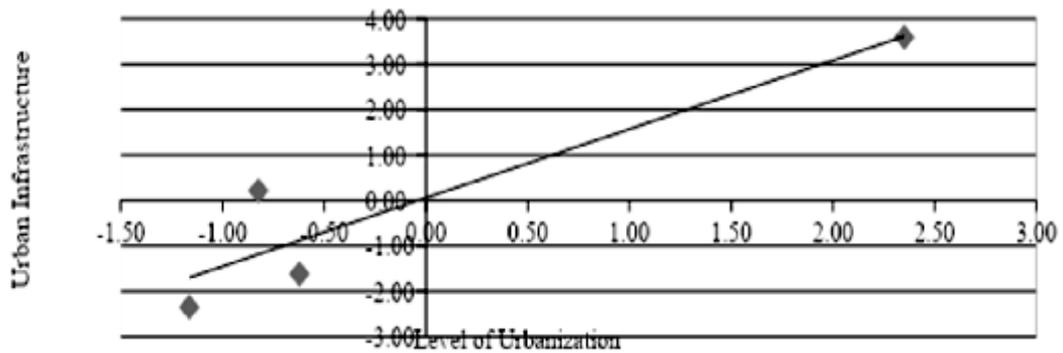**Figure 3 : Urban Economic Base and Level of Urbanization**

Figure 4 : Urban Infrastructure and Level of Urbanization

Economic transformation

Economic indicators like growth of Gross Domestic Products (GDP) at constant price, Share of economic sector in GDP, Work force participation rate, agriculture and non agriculture enterprises, per capita expenditure on food and non-food items are displayed at district level to know the economic transformation of the study area.

Gross Domestic Product (GDP)

There is significant economic transformation in Gautam Buddha Nagar where there is about 560 % increase in GDP between 2000 and 2014 from 4508.62 Crore to 29735.60 Crore (table 8). Because part of Delhi NCR Gautam Buddha Nagar has become a favorable place for high foreign direct investments, for setting up of SEZs, for private investments and finally these features help in a stable macroeconomic environment and strong export growth.

Table 8 : Growths of GDP of Gautam Buddha Nagar (2000-2014)

S. No	Year	GDP in Rs. Crore	Growth rate (%)
1	1999-00	4508.62	-
2	2000-01	4569.47	1.35
3	2001-02	4677.26	2.36
4	2002-03	4571.72	-2.26
5	2003-04	4984.51	9.03
6	2004-05	6050.27	21.38
7	2005-06	6608.23	9.22
8	2006-2007	8301.00	25.62
9	2013-2014	29735.60	258.22

Source: State Planning Institute, Economics and Statistics Division, Uttar Pradesh

Share of economic sector in GDP

Study shows that in G B Nagar from 2001 to 2013 the secondary sector plays the most important role in GDP. But between this duration structural changes in the economic sector of Gautam Buddha Nagar take place. It is seen in the study that there is a decrease in contribution of the primary sector in GDP and increase in secondary and tertiary sectors. In 2001 the share of the primary sector in GDP was 11% and about 75 % share of secondary and 13 % share of tertiary sectors. But between 2001 and 2005 there was a decline in share of primary and secondary sector with about 3 % and 17 % and an increase in share of tertiary sector with about

20% increases. Between 2005 and 2013 also the share of primary sector decreased (3%) and share of secondary sector increased (4%) but there is little increase in tertiary sector (1%) (table 9).

Table 9 : Share of economic sector in GDP

S. No	Sector	Sector wise GDP			% Share in GDP			Change (2001-2013)
		2001	2005	2013	2001	2005	2013	
1	Primary	746.04	731.18	1505.03	11.98	8.81	5.061	-6.93
2	Secondary	4645.59	4813.39	18312.64	74.65	57.99	61.58	-13.06
3	Tertiary	831.7	2756.43	9917.92	13.36	33.20	33.35	19.99
4	Total	6223.33	8301	29735.6	100	100	100	

Source: *State Planning Institute, Economics and Statistics Division, Uttar Pradesh*

Welfare trends

Population below poverty line (BPL), per capita income, number of enterprises, work participation rate and per capita expenditure on food and non-food items and total per capita expenditure are used to show the welfare trend of Gautam Buddha Nagar. It is seen in the study that there is a decrease in the number of households below the poverty line in 2001 to 2011 from 105100 people to 23205 people. So there is about 78% decrease in BPL Household. There is about a 173 % increase in per capita income at current prices and about 52% increase in the number of enterprises. Workforce participation increased with 4.2%, where male workforce and female workforce participation increased with 3.2% and 5.7% respectively. According to the Report of the Expert Group to Review the Methodology for Measurement of Poverty (2014), Per capita expenditure decided for BPL is 972 and 1407 Rs. in rural and urban areas respectively in India. In Gautam Buddha Nagar per capita income is 1221.4 in rural area and 3766.82 in urban area which is significantly higher than the decided limit of BPL (table 10).

Table 10 : Indicators of welfare trend of Gautam Buddha Nagar

S. No	Years	BPL House-hold	Per capita Income	No. of enterprises	Workforce participation (%)			Per capita Expenditure on food and non-food items (Rs)					
					Male	Female	Total	Rural			Urban		
								Food	Non-food	Total	Food	Non-food	Total
1	2001	105100	45148	47464	46.6	10.9	30.3	N.A	N.A	N.A	N.A	N.A	N.A
2	2011	23205	123283	72049	49.8	16.6	34.5	766.29	455.1	1221.4	1107.33	2659.49	3766.82
3	Change (%)	77.92	173.06	51.80	3.2	5.7	4.2						

Source: *State Planning Institute, Economics and Statistics Division, Uttar Pradesh*

Discussion

The main objectives of SEZs policy is to create employment opportunities for introducing better facility, to improve lifestyle of rural area and develop industrial corridor of manufacturers and service sector, provide sustainable rural development in agriculture most particularly to farmers, poor people and landless people, to get employment opportunities, to increase income sources directly and indirectly (Desai N, 2006). Overall attitude towards the SEZs project is to develop import-export services thereby attracting foreign investors. The government provide such types of infrastructural facility for Special Economic Zone (SEZs) projects in order to start manufacturing units, to develop industrial sector and increase foreign direct investment for sustainable economic development to the backward region and rural area and thereby provide better facility through road, transportation, water, electricity, communication facility, health facility, education, and generation of employment opportunities (Ramananda M.S & Pandian V.A, 2012).

Rural-urban transformation has been defined in many different ways, but largely as a 'process of comprehensive societal change driven by global and homogenizing forces that interact with localized structures, institutions, and actors to produce uneven patterns and outcomes of development' (Cartetto et al.,2007). It has also been described as a 'process whereby the sharp economic, social, and cultural differences between rural and urban gradually blur and bleed into each other along a continuous gradient' (Tacoli C, McGranahan G & Satterthwaite D, 2015). Criteria used to define a process of rural- urban transformation include diversification of rural economies, increased dependence on more distant places to trade goods, access to services and ideas, movement to towns and small/medium cities, and cultural assimilation into large urban areas (Glaeser E, 2011). The focus when talking about rural-urban transformation has tended to be on migration of rural people to cities moving away from agriculture, when there are actually many other factors at play, which contribute to changing rural and urban realities.

So, all above discussed phenomena noticed in the Gautam Buddha Nagar district of U.P. The 1990s saw huge growth in the Indian economy and additional migration to the capital city Delhi exceeded planning estimates. At the outskirts of Delhi, a large amount of land was reclaimed from the River Yamuna flood plain to construct a city for about half a million population widely known as New Okhla Industrial Development Area (NOIDA, popularly known as Noida). As a planned expansion, Noida's infrastructure and utilities were carefully laid out. It was developed to accommodate additional population growth of Delhi for 20–25 years. But, with the massive influx to Delhi, it became overloaded in just 15 years. It is one of the largest planned industrial townships of Asia, and symbolizes harmony between human habitat and industrial enterprise in India (Singh R.B & Singh S, 2011). So after that greater

Noida developed to accommodate the additional population and fulfill the rising demand of residential colonies. So in this study also it is found that there is rural-urban transformation in Gautam Buddha Nagar district where there is about 78% decrease in BPL Household. There is about a 173 % increase in per capita income at current prices and about 52% increase in the number of enterprises. Workforce participation increased with 4.2%, where male workforce and female workforce participation increased with 3.2% and 5.7% respectively.

Conclusion

Rural India is experiencing rapid transformation in terms of physical, social and economic terms. Physical transformation means transformation in terms of land use, for instance transformation of agricultural land into non-agriculture. Social transformation means transformation in terms of standard of living, availability of basic infrastructure. Economic transformation means change in sectoral workforce participation. So, the main focus of the study is the analysis of change in physical, social and economic transformation in Gautam Buddha Nagar district and finally to analyze the phenomena of rural-urban transformation of the district. It is found from the analysis that from last decade Gautam Buddha Nagar has maintained a high economic growth rate, high rate of urbanization and a shifting pattern in the contribution of the economic sector into the GDP of the district. Level of urbanization has also increased between said periods. Number of towns increased from 9 to 13 and percent of urban population increased from about 40% to about 60%. Gross Domestic Product of the district rose by about 259 % between 2001 and 2015. Contribution of tertiary activities in the GDP of the district is growing between 2001 and 2015 from 13 to 33%. There is an increase of about 52% in the number of enterprises. Per capita income increased 173.06% between 2001 and 2015. So from the above discussed information we can conclude that phenomena of rural-urban transformation are very significant in the case of Gautam Buddha Nagar.

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