

COMPARATIVE ANALYSIS OF BHOPAL, INDORE AND GWALIOR'S URBAN TRANSFORMATION

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ABSTRACT: The paper aims at appraising the existing transformation process in three growing cities of Madhya Pradesh. The way of developing process affects urban transformation physically and socio-culturally. Cities should balance its physical growth and socio-cultural development; seek to achieve an optimal relationship among all its growth parameters. Growth should enable all residents to share the fruits of urban development and fully realize their personal growth. Cities should co-ordinate balanced development through the provision of services and infrastructure, should take into consideration the interests of disadvantaged groups. The transformation of cities to sustainable development is critical and challenge in a developing country like India. The author has compared physical, social and infrastructural parameters of Bhopal, Indore and Gwalior cities in Madhya Pradesh, India; analysing their growth rates and grading them.

Keywords: *Urban Transformation, Population Growth, Sex Ratio, Industrial Status, Sustainability.*

Introduction: Transformation denotes changes over time. The city of today is an outcome of many generations' mind, culture, migration etc. To analyse city transformation, one needs to study its history which has shaped it standing test of time. Evaluating dimensions of city transformation from the city of industrial age to global city requires examination of the way city has been formed. According to; **Saunders, "Cities are places where large number of people live and work together. Cities are 'complex of institutions'."** Now compete on an international system of information services but they do not lose their local identities. The dominant parameter of urbanization is growth, be it urban expansion or wealth. Growth effects social and economic well-being of a city. [1]

Urban Transformation is little concerned with the causes but more with the contextual and contingent aspects of change. [2] Range of questions is required for exploring urban transformation e.g that are included and excluded in these changes? How are people governed under the existing conditions? Some cities face faster population growth than their capacity leading to slum and squatter. In this competitive world, important question is how the sense of self and identity is created by the city and city dwellers?

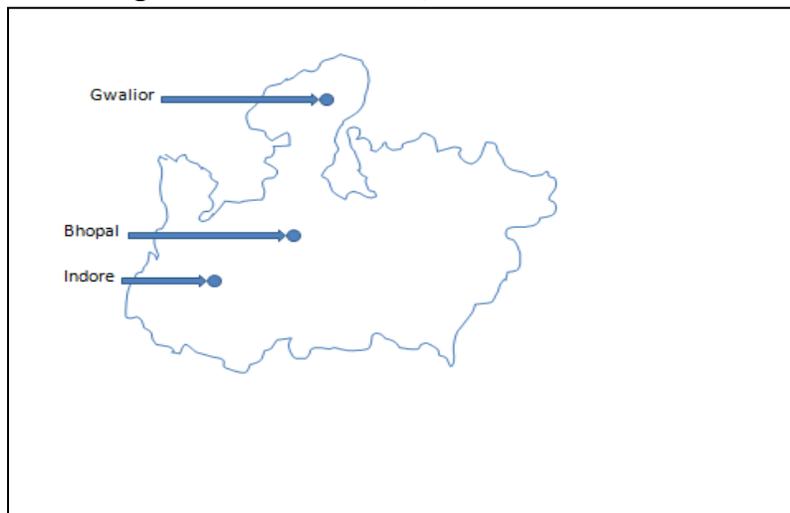
ANALYSIS OF URBAN TRANSFORMATION:

As Urbanism is the way of life, its transformation shall be due to changes in size, density and heterogeneity of the city. These processes brought complexity to urban life and changed social relations from knowledge about neighbours and intimacy to impersonal relations of formal

nature. Hence Anthropological studies are important in studying Transformation of city from inception to present state. The demographic features within which transformation is taking place needs good understanding. [6]

Study area of the paper covers Bhopal, Indore and Gwalior in Madhya Pradesh. As its name signifies, Madhya Pradesh is the central state of India. It is second largest state in the country in terms of area. Population of Madhya as per census 2011 is about 72 million, which is less as compared to other large states of India. The density is 230 which is much less than the national average density. The growth rate of Madhya Pradesh is 20 % which is above national average of 17%; this reveals that the population is increasing due to progress of the state.

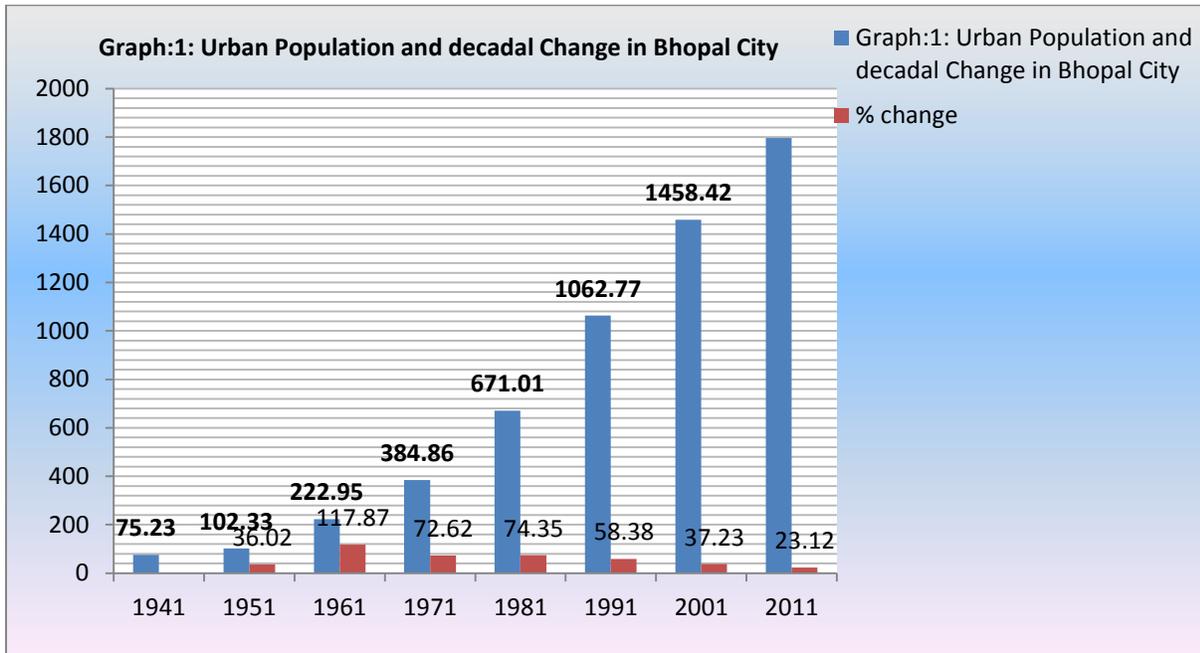
Source: Fig: 1: Location of Cities, Census of India



The literacy rate in the state is 70% which has to be improved in future. 27.63 % of total population of Madhya Pradesh is dwelling in urban areas. Average literacy rate in Madhya Pradesh, as far as urban regions are concerned is 82.85%. The three cities Bhopal, Indore and Gwalior have population of around five million which is 30% of the urban population and 8 % of the total population of Madhya Pradesh. All the three

cities were parts of former princely states- later integrated in independent India. The princely states merged and formed Madhya Pradesh in 1956 and became the biggest state of India with Bhopal as its capital. Another state was carved out of it in 2000 forming Chhattisgarh, which made Madhya Pradesh the second largest state of country. This political and administrative history and the legacy have continued to influence the city management and citizens' expectations.

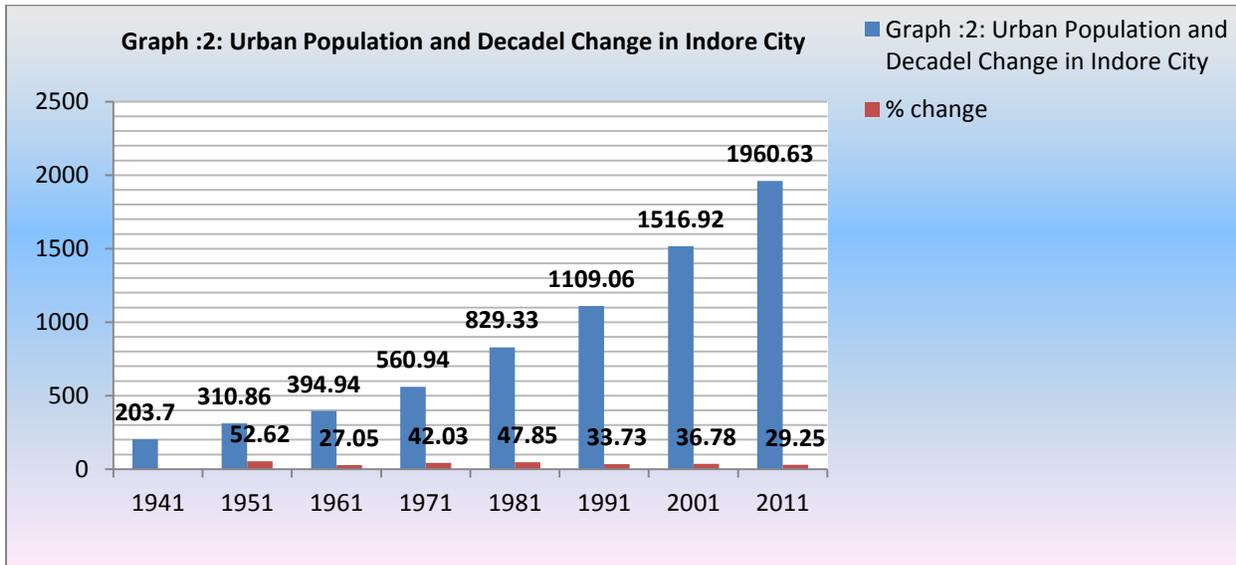
Indore, largest of the cities in Madhya Pradesh is an industrial and commercial city. Bhopal has been the administrative capital of Madhya Pradesh since 1956; Gwalior has its distinctive identity associated with the Scindhia dynasty. Indore had a pious woman ruler Ahilya Bai Holkar who is respected as next to goddess in the city. Bhopal was ruled by five beghums who ruled successfully even while following the practice of veiling [8]



Tab. 1: Urban Population and Decadal Change in Bhopal City

Year	Population ('000 person)	Decade	% Change
1941	75.23		
1951	102.33	1941-1951	36.02
1961	222.95	1951-1961	117.87
1971	384.86	1961-1971	72.62
1981	671.01	1971-1981	74.35
1991	1062.77	1981-1991	58.38
2001	1458.42	1991-2001	37.23
2011	1795.65	2001-2011	23.12

Urban population growth for Madhya Pradesh and India has been at an annual rate of 3.2% over the decade of 2001-2011. Indore has a growth rate of over 3.8% in the last decade. Bhopal has 3.3% whereas Gwalior is growing at well below the state level of growth. Meaning the cities except Indore have shown declining rate of growth in the last twenty years. Bhopal grew very rapidly after becoming state capital in 1956 and more than doubled its population in the decade 1951-1961, but after that it has shown a gradually declining rate of growth, slowing from 58% in 1991 to 37.23% in 2001 to 28.62 % in 2011. Bhopal continues have the after effects of the trauma of the industrial disaster of Union Carbide MIC gas leakage in 1984. The gap of thirty years the scars and consequences of this tragedy are still there. [3]

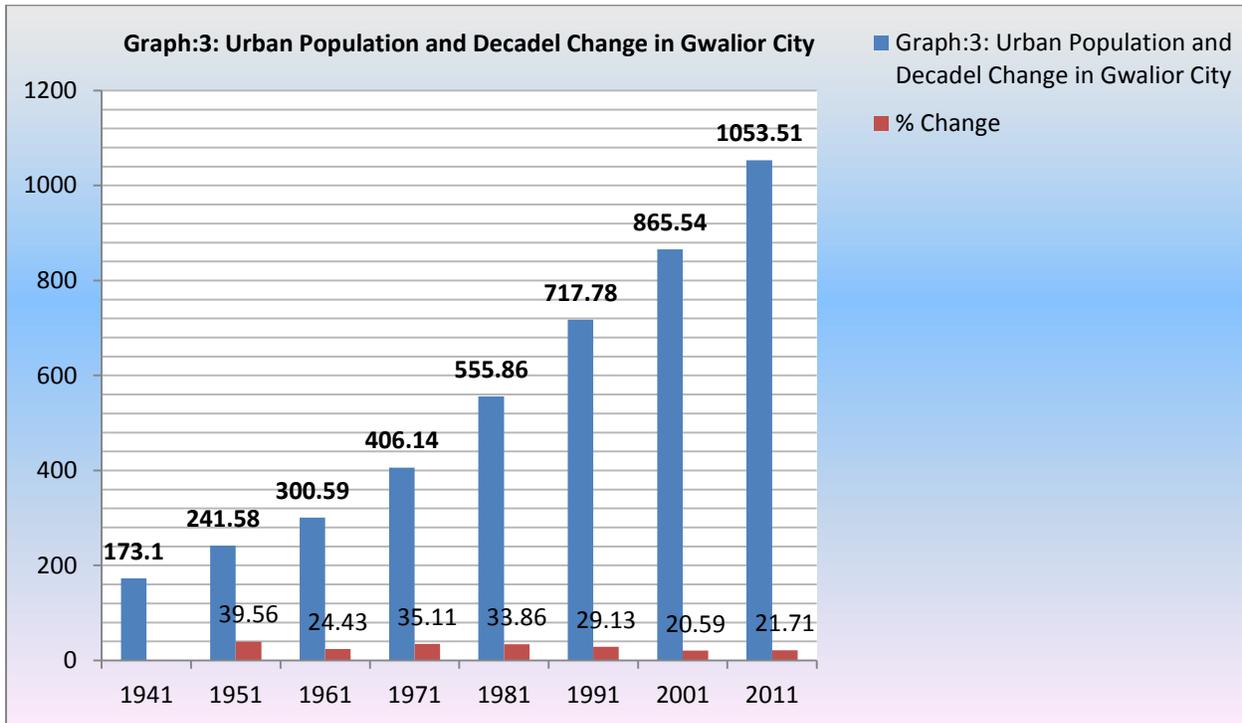


Tab. 2: Urban Population and Decadal Change in Indore City

Year	Population ('000 person)	Decade	% Change
1941	203.7		
1951	310.86	1941-1951	52.61
1961	394.94	1951-1961	27.05
1971	560.94	1961-1971	42.03
1981	829.33	1971-1981	47.85
1991	1109.06	1981-1991	33.73
2001	1516.92	1991-2001	36.78
2011	1960.63	2001-2011	29.25

Indore is the largest city of the state. Its rate of growth has been higher than the national average. It is a fast growing city of the state. The fast development and growth of industries within Indore and its neighbouring areas is expected to continue to attract migration for better employment opportunities. [4]

Gwalior is the fourth largest city in the state after Jabalpur which is third. The city's decadal change in its population is less than the national average and even lower than the change in previous decades. Gwalior's economy has been suffering since the late 80's due to closure of large industrial units. It is expected that the establishment of the industrial sectors like Malhanpur in an adjacent district may lead to further employment opportunities. [5]



Tab. 3: Urban Population and Decadal Change in Gwalior City

Year	Population ('000 person)	Decade	% Change
1941	173.10		
1951	241.58	1941-1951	39.56
1961	300.59	1951-1961	24.43
1971	406.14	1961-1971	35.11
1981	555.86	1971-1981	33.86
1991	717.78	1981-1991	29.13
2001	865.54	1991-2001	20.59
2011	1053.51	2001-2011	21.71

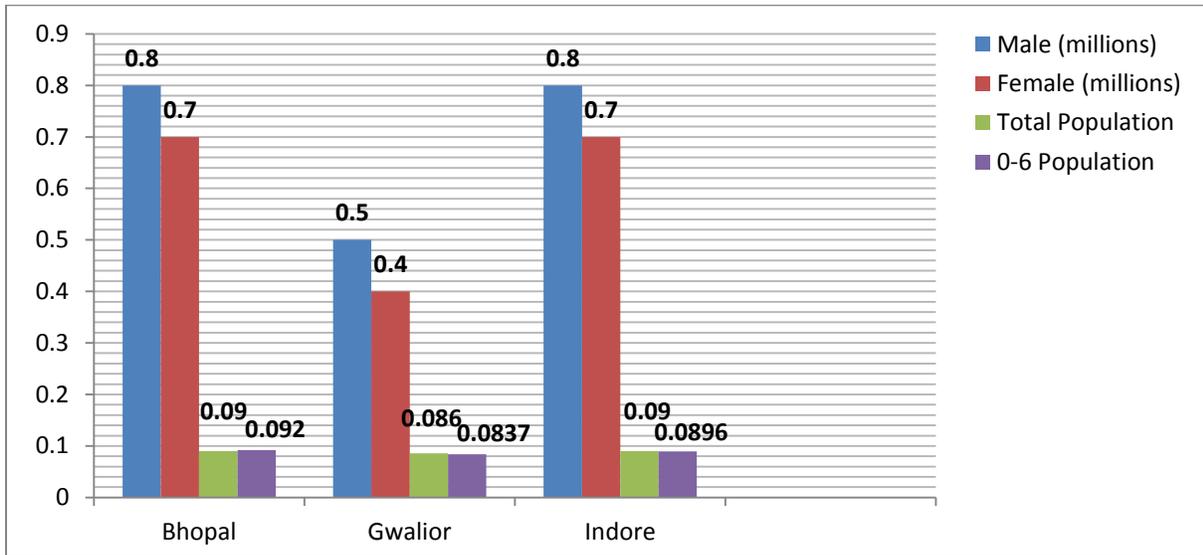
SEX RATIO:

Number of states in India is facing the problem of declining sex ratio for women (number of women per one thousand men). Adverse sex ratio in the age group of 0-6 will again have impact upon future adult women to men ratio. This is because of the lack of social education in our society. Madhya Pradesh has a sex ratio of 920 in total population and in urban areas the situation is still worse, ratio being 899. Bhopal has the ratio as 898, Gwalior has ratio 861 and Indore's sex ratio is 904. Meaning Indore only has the sex ratio more than urban Madhya Pradesh. [9]

Tab. 4: Population, Sex Ratio of total population and of 0-6 year's population in three cities

City	Male (In Millions)	Female (In Millions)	Sex Ratio	
			(Total Population)	(0-6 Population)
Bhopal	0.8	0.7	898	929
Gwalior	0.5	0.4	861	837
Indore	0.8	0.7	904	896

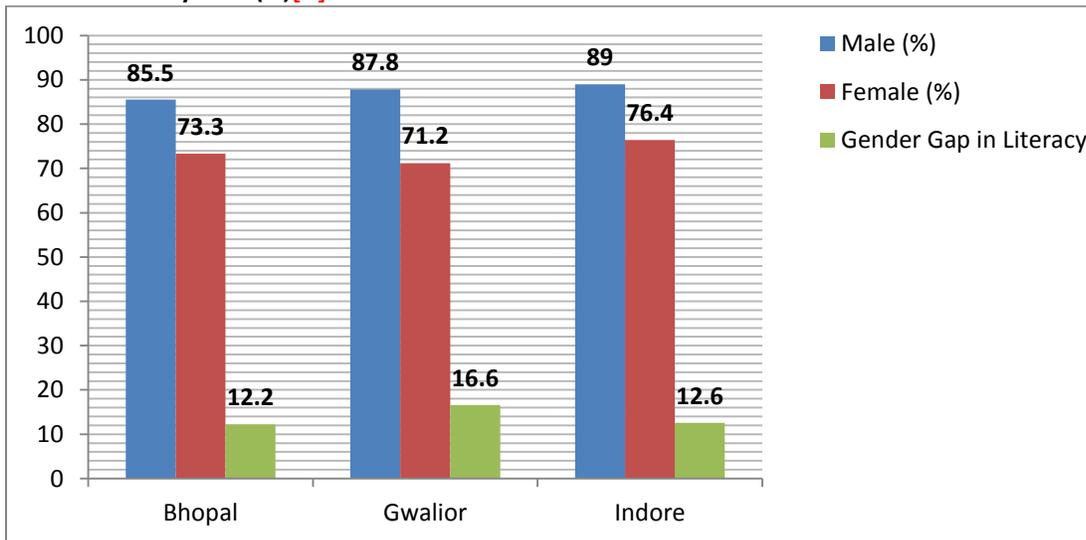
Chart:4: Population, Sex Ratio of Total population and of 0-6 year's population in three cities



LITERACY RATE:

Literacy rate in the three cities are mentioned in the table as per Indian Census. Indore has the highest literacy rate (percentage of literate people) while Bhopal has lowest among three.

Chart: 5: Literacy Rate (%)[9]



Tab. :5: Literacy Rate (%)

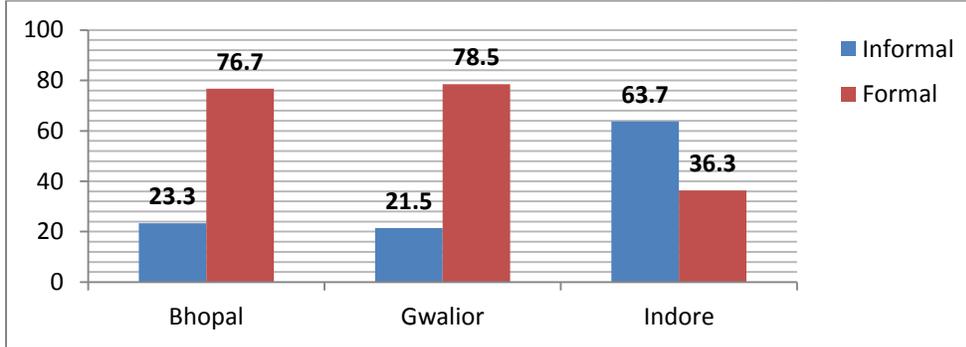
City	Literacy Rate (%)		
	Male (%)	Female (%)	Gender Gap in Literacy
Bhopal	85.5	73.3	12.2
Gwalior	87.8	71.2	16.6
Indore	89	76.4	12.6

EMPLOYMENT STATUS:

According to UN- Habitat survey, average proportion of main income earners in formal employment across the cities is 62% and rest of 38% in informal employment. The proportion

of formal employment in Indore is just 36% whereas that in Gwalior and Bhopal are 79% and 77% respectively. In Indore informally employed sector has greatest contribution to the economy. 75% of the main income earners are in clerical, sales and service sector; 8% are in professional or managerial occupations, only 3% population is involved in agricultural production. [9]

Chart: 6: % Household with Main Income Earner in Informal/Formal Employment



Tab. :6: % Household with Main Income Earner in Informal/Formal Employment

City	% Household with Main Income Earner in Informal/Formal Employment	
	Informal	Formal
Bhopal	23.3	76.7
Gwalior	21.5	78.5
Indore	63.7	36.3

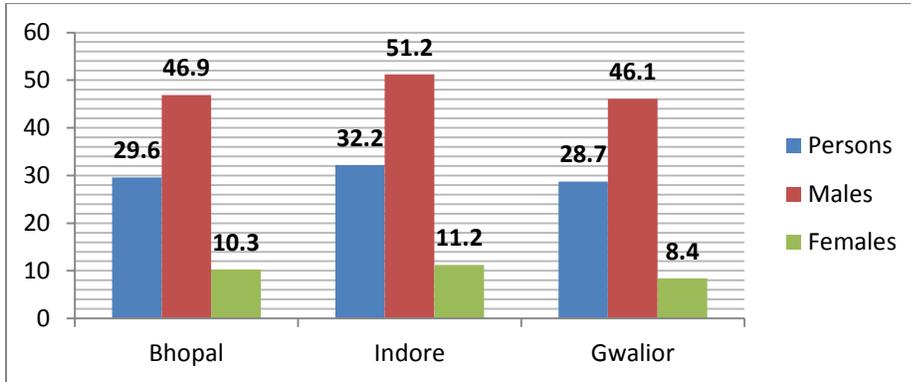
Source: PPTA Household Survey

INDUSTRIES:

Indore is the state’s largest city and is business and trading capital of Madhya Pradesh. It has good road connectivity. It has been the hub of trade and commerce for western India. Cotton textiles are major product of the city, but it also produces iron and steel, chemicals and machinery. Various new manufacturing industries are taking the place of textile industry which is in the state of decline. Still Indore is one of the largest textile industries in India. [3] It has one of the largest trans- shipment centres for truck transport in India. Today Indore is enjoying a phenomenal industrial and business development. New high tech companies are there to replace the older industries in India. There are two main industrial areas outside the city: Pithampur to the south and Dewas to the north-east. The industrial areas within Indore are Sanwer Road, Polo Ground and Udyog Nagar. Bhopal is majorly an administrative city with large number of population being state and central government employees. [9]

WORK PARTICIPATION RATE (%)

Chart: 7: Persons in Three Cities



Tab. : 7: Persons in Three Cities

City	Persons	Males	Females
Bhopal	29.6	46.9	10.3
Indore	32.2	51.2	11.2
Gwalior	28.7	46.1	8.4

Source: Census of India

According to the table Bhopal has higher work participation rate than Gwalior but lower than Indore. Most of the work force in Bhopal belongs to service class. Major industrial areas in Bhopal include BHEL, industrial area and service industries in old town, New Market and MP Nagar area. [4] Bhopal is blessed with abundant water from lakes, which was a timeless vision of Raja Bhoj. It has strong railway connections and road network. Agriculture and mining resources are plenty but still due to many reasons including low risk taking factor, the city did not grow in terms of industries and commerce.

As far as Gwalior is concerned, there are no large scale industries within the Gwalior Municipal Corporation boundary. Major industrial areas in Gwalior include Maharajapura, Baraghata and Birla Nagar. Small scale industries in Gwalior include food products, processing, pulses and preservation units, stone cutting, tiles and construction units, ice and cold storage units etc. Within the radius of 20 Km from the city, there are two large industrial growth centres; they are Malanpur – Ghirungi and Banmore. Gwalior is known for handicrafts like carpets and sandstone products [5] The city has a large Fairground having 104 Acres of area and is available for showcasing and marketing of products of all kinds. Gwalior has raw materials, skilled labour and market potential, its industrial growth and development still needs to be explored.

CONCLUSION:

Cities contain enormous diversity, cities have grown in terms of population but the pace of infrastructure growth has to catch with pace of city growth and needs. The historical roots and the layers of physical and social structure have transformed the cities into present social and physical infrastructures and practices. Transformation of the three cities Bhopal, Indore and Gwalior will have to follow the pursuit of Sustainability. According to world commission on environment and development (1987) ; they require :

- **A political system that secures effective citizen participation in decision making.**
- **An economic system that is able to generate surpluses and technical knowledge on a self- reliant and sustained basis.**
- **A social system that provides for solutions for the tensions arising from disharmonious development.**
- **A production system that respects the obligation to preserve the ecological base for development.**
- **A technological system that can search continuously for new solutions.**
- **An international system that fosters sustainable patterns of trade and finance.**
- **An administrative system that is flexible and has the capacity for self correction.**

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