

POTENTIAL FOR INDUSTRY-BASED ECONOMIC GROWTH IN THE GWALIOR REGION

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DOI: <https://www.doi.org/10.58257/IJPREMS35780>

ABSTRACT

The Gwalior region is strategically poised for significant industry-driven economic expansion, leveraging its proximity to critical infrastructure such as the Chambal Expressway and the Delhi-Mumbai Dedicated Freight Corridor. This region, enriched with abundant agricultural output, presents vast opportunities for agro-based industries, including food processing and packaging. The region's industrial potential is further bolstered by the availability of land, favorable government incentives, and a growing network of logistics and transportation links. However, to unlock this potential fully, it is imperative to address key challenges such as inadequate storage facilities, the scarcity of skilled labor, and the need for a more equitable land acquisition policy. By overcoming these hurdles, the Gwalior region can emerge as a vibrant industrial hub, driving sustained economic growth and employment generation.

Keywords: economic development, Freight corridor, industrial development

1. INTRODUCTION

The Gwalior region, located in the northern part of Madhya Pradesh, is gaining recognition as a promising area for industrial growth. Spanning a population of over 2 million people, with a population density of approximately 396 persons per square kilometer, the region is strategically positioned at the intersection of major transportation networks. The Chambal Expressway and the Delhi-Mumbai Dedicated Freight Corridor significantly enhance the region's connectivity to key markets across India, making it an attractive destination for industrial investment.

Gwalior's economic landscape is diverse, with agriculture playing a pivotal role—major crops include wheat, rice, and sugarcane, contributing to the region's potential for agro-based industries. The area is also supported by ongoing government initiatives, such as the establishment of state investment corridors and special economic zones, which aim to bolster industrial infrastructure and attract investors. Despite these advantages, the region faces challenges including inadequate storage facilities, a shortage of skilled labor, and issues related to land acquisition. This study examines the Gwalior region's potential for industry-based economic growth, exploring how strategic investments and policy interventions could transform it into a key industrial hub in India.

INDUSTRIAL HISTORY OF GWALIOR: Before independence, Gwalior was the capital of Central India and was ruled by the royal family of the Scindia family. Gwalior was already full of industries, because more than 500 small and big industries here provided employment to the youth of many states of the country. Industries had a major contribution in the economic prosperity of Gwalior and its surrounding districts, but among all these industries there was no unit that provided the maximum employment. After that, the then Maharaja of Scindia State, Jivajirao Scindia, planned to establish a big industry. After that, in 1922, ruler Jivajirao Scindia came to Gwalior with the country's famous industrialist Seth Ghanshyam das Birla. After that Jiwaji Rao Scindia kept Ghanshyam Das Birla in his palace. After that planning started to establish a big industry in Gwalior.

“On 24 February 1921, Maharaj Jiwaji Rao Scindia of Scindia State gave more than 700 bighas of land to Ghanshyam Das Birla in the name of "Biralla Brothers" to open a mill. After that, in 1923, machines were installed in this mill for cloth production and after that this mill started functioning.” (census, 2011)

In which about 16000 laborers started working. About one lakh yards of plain cloth started being produced here every day. After that, at the time of independence, the name of this mill was converted to 'JC Mill' i.e. 'Jivaji Rao Cotton Mills Limited'. After some time, fancy and zakat looms were installed in this mill. After that, along with clothes, their production for bed covers and warm clothes also started.

In the year 1952, when preparations started to modernize this JC Mill. After that, danger started looming on this biggest mill. To modernize this mill, first of all the number of workers was gradually reduced and production was continuously increased. Due to this modernity, the number of 16000 laborers was reduced to 8000. Meaning, the future of 8000 laborers was left in darkness. After that, a big plan was going on inside the JC Mill to crush the workers, then the JC Mill management applied to the state government and said that they want to do retrenchment. After that, JC Mill management and the state government together adopted a planned approach and indirectly found another way. After that, on 28 April 1992, the then Sunderlal v Patwa government of Madhya Pradesh gave a notice for non-payment of electricity bill. It was informed by the government that the electricity bill at JC Mill is around Rs 4 to 5 crores and the total including penalty is more than Rs 55 crores. After that, on the pretext of non-payment of electricity bill, the

electricity department cut off the electricity of JC Mill. After that, this JC Mill was completely closed. In which there was mourning in the homes of more than 15,000 laborers working in this mill and they became unemployed forever.

2. STUDY AREA INTRODUCTION

2.1 Study area: One of the Countermagnet cities, Gwalior is a significant and historic city in the Indian state of Madhya Pradesh. Gwalior is strategically situated in the Gird area of India, 319 kilometres (198 miles) south of Delhi, the nation's capital. One of the 51 districts that make up the central Indian state of Madhya Pradesh is Gwalior district. Its administrative centre is at the historic city of Gwalior. One of India's largest metropolitan areas is the Gwalior Metropolitan Region. Antari, Bhitwar, Bilaua, Dabra, Morar, Lashkar, Morar Cantonment, Pichhore, and Tekanpr are some of the other towns and cities in this district.

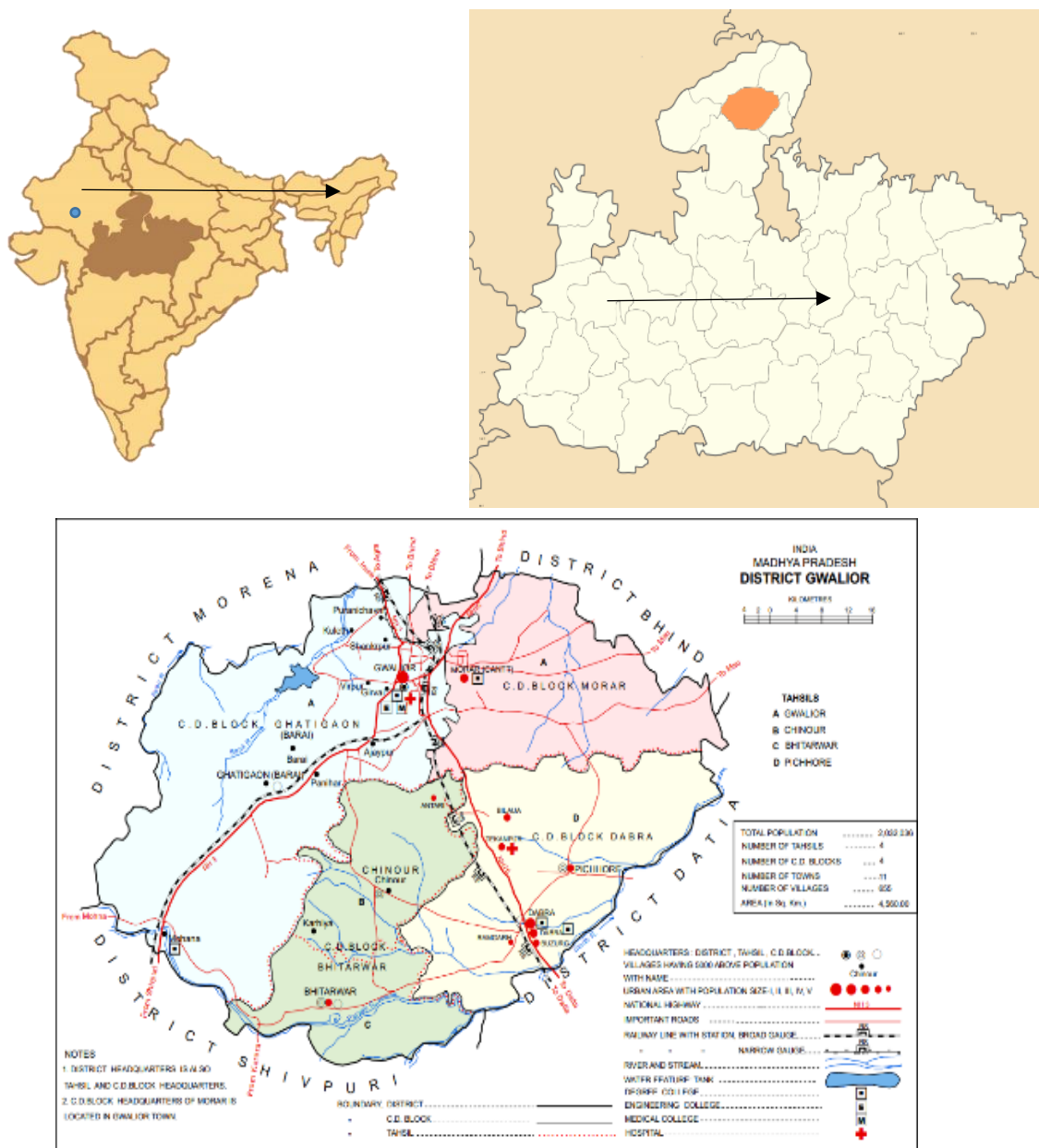
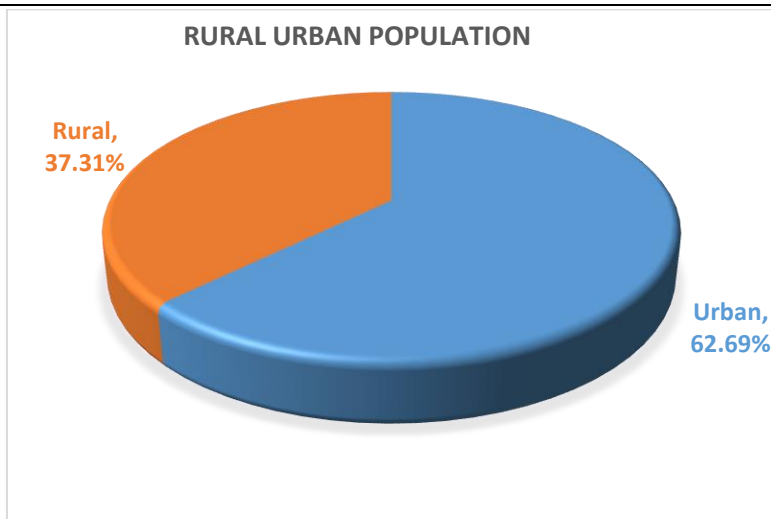


Figure 1 location map of gwalior

2.2 Data collection

2.2.1 In India's National Capital Region, Gwalior Industries has established itself as a countermagnet. One of the thriving industrial centers, Gwalior is renowned for its advantageous position. The Gwalior industries are developing into industrial estates under the management of stand-alone industrial development enterprises. The goal of the independent industrial development corporations is to advance Gwalior's industries. In actuality, any initiative designed to bolster Gwalior's function as a countermagnet would promote the city's industrial growth as a prospective industry.

“Gwalior has 4 CD Blocks namely Morar, Pichhor, Bitarwar and Dabra. There are 5 Sub-Districts, 11 towns and 655 Villages.” (District wise skill gap study of (M.P), january,2013)



2.2.2. Climate data: “With hot summers from late March to early July, a humid monsoon season from late June to early October, and a cool, dry winter from early November to late February, Gwalior boasts a subtropical climate.” (District wise skill gap study of (M.P), january,2013) Kappen’s classification of climate states that the city experiences humid subtropical weather. 48 °C was the highest temperature ever recorded, and -1 °C was the lowest. India experiences some of the warmest summers in the world, beginning in late March.

With daily mean temperatures reaching around 33–35 °C (93–95 °F) in May and June, the warm season comes to an end in late June when the monsoon season arrives. Rainfall in Gwalior occurs mostly during the rainy season, which runs from the end of June to the beginning of October, accounting about 900 mm (35 in) of annual precipitation.

With roughly 310 mm (12 in) of rain, August is the wettest month. Beginning in late October, Gwalior experiences a relatively warm winter with daily highs in the 14–16 °C (58–62 °F) range and largely sunny, dry weather. With average lows of 0 °C (32 °F) and sporadic cold spells that bring temperatures dangerously low, January is the coldest month.

2.2.3 Demographics: The division that oversees Gwalior, which is located close to Agra, includes the district of Gwalior. There are 20.30 people living in Gwalior as per the 2011 Census. In comparison to Madhya Pradesh's 236 and India's 382, the population density is approximately 445 people per square kilometre. Gwalior has a lower percentage of its people living in rural areas than the state as a whole—37.3%. The district has a greater population density than the state average due to its high level of urbanization, with around 62.68% of the population residing in urban areas. The district is highly motivated to become more urbanized, which is one of the main causes of its increased population density.

2.3.1. Density: “Gwalior district's population density for 2011 is 445 persons per square kilometre, according to the preliminary provisional figures made public by Census India 2011. In Gwalior district, there were 358 persons per square kilometre in 2001. 4,560 square kilometres are under the administration of the Gwalior district.” (District wise skill gap study of (M.P), january,2013)

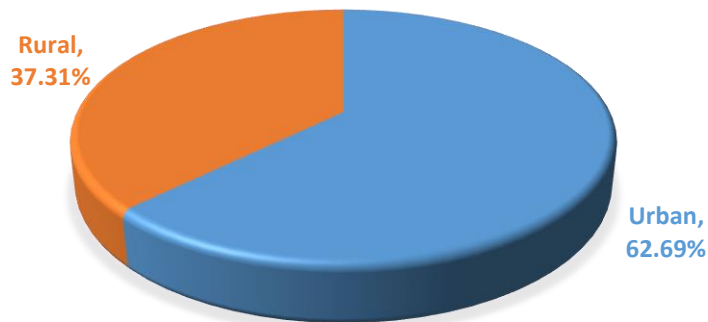
2.3.2. Urban and rural Population: Six2.69% of all Gwalior residents, as of the 2011 census, reside in the district's urban areas. There are 1,273,792 individuals living in urban areas overall, with 680,978 men and 592,814 women. According to data from the 2011 census, the urban area of Gwalior district has an 871-sex ratio. “In the Gwalior district, the child-to-sex ratio was 837 at the 2011 census. There were 146,465 children in the urban zone aged 0 to 6, with 79,744 males and 66,721 females.” (District wise skill gap study of (M.P), january,2013)

Of all urban people, 11.71 percent live in the Gwalior district's child population. “The 2011 census found that the average literacy rate in the Gwalior district was 83.19%, with males and females having respective literacy rates of 89.17% and 76.37%. There are actually 536,097 males and 401,752 females among the 937,849 literate persons in the urban area.” (District wise skill gap study of (M.P), january,2013)

In the Gwalior districts, 37.31% of people reside in rural villages, according to the 2011 census. A total of 758,244 people call the Gwalior district home, of which 409,349 men and 348,895 women reside in rural regions. Eighty-two females for every 1000 males are found in the Gwalior district's rural parts. There are 844 girls for every 1000 boys in the Gwalior district when looking at child sex ratio data. The number of children in rural areas between the ages of 0 and 6 is 114,953, with 62,354 males and 52,599 females.

“Fifteen percent of the rural population in the Gwalior district is made up of children. Census data from 2011 shows that the literacy rate in Gwalior district's rural parts is 65.19 percent.” (District wise skill gap study of (M.P), january,2013) 76.95 percent of men and 51.42 percent of women were literate, according to gender. Males made up 267,017 and females made up 152,344 of the totals 419,361 literate population.

RURAL URBAN POPULATION



2.3.2. Literacy: Although the district's literacy rate—roughly 77.9% of the entire population—is low, it is higher than Madhya Pradesh's average of 70.6%. “Compared to the state average of 60%, the female literacy rate is lower at 68.3%. At 86.3%, the male literacy rate is also higher than the state.” (District wise skill gap study of (M.P), january,2013) 80.5% on average. In the district, there are 1408 government, 559 non-government, and registered primary schools. There are 46 higher secondary schools and 66 high schools. Noteworthy, the overall literacy rate according to the 2001 Census was 69.4%; hence, a notable improvement over the previous ten years could be observed.

DISTRICT	MADHYA PRADESH	GWALIOR
Population (2011)	72,597,565	2,030,543
Decadal Population Growth Rate (2001-11)	20.3%	24.4%
Population Density Per Sq. km (2011)	236	445
Level of Urbanization	27.6%	62.7%
Gender Composition- Female Per 1000 Male Population (2011)	930	862
Proportion of ST Population (2011)	20.3%	3.5%
Literacy Rate (2011)	70.6%	77.9%
Male-Female Literacy Rate Gap (2011)	20.5%	18.0%
Number of Literates (2011)	43,827,193	1,384,434
Enrolments in Primary & Upper Primary Schools (2010)	15,356,399	15,356,399
Number of Primary & Secondary Healthcare Centres per 1000 Population (2011)	0.14	0.06
Contribution to State Economy (2008-09)	-	3.75%
Per Capita Income (2008-09)	24,709	33,886
Contribution of Primary Sector to Economy (2008-09)	31.5%	11.3%
Contribution of Secondary Sector to Economy (2008-09)	22.9%	26.8%
Contribution of Tertiary Sector to Economy (2008-09)	45.6%	61.9%

Source: National Skill Development Corporation

3. SECTOR FOR ECONOMY GENERATION

Gwalior's economy has significant growth potential across various sectors, including manufacturing, agriculture, tourism, and education.

The region's strategic location makes it ideal for agro-processing, textiles, and light engineering industries, while its rich historical heritage offers opportunities for cultural and religious tourism. The expansion of educational institutions and infrastructure, such as the Chambal Expressway, enhances connectivity and supports economic activities. Additionally, the IT and services sector, along with healthcare and wellness, present opportunities for job creation and economic diversification, positioning Gwalior as a hub for sustainable growth.

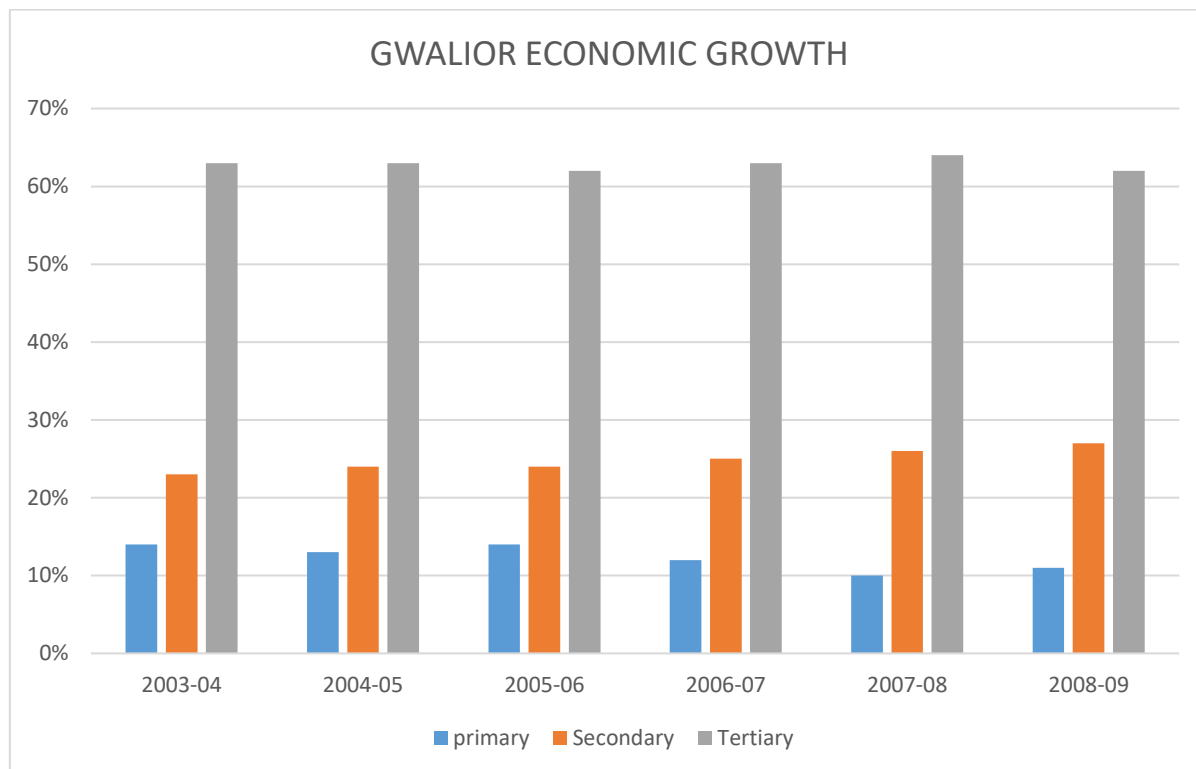


Figure 2: National Skill Development Corporation

Agriculture and related sectors: Gwalior, a region known for its agricultural activities, produces a variety of crops, including rice, wheat, maize, corn, and tuar (pigeon pea). Despite the general increase in per capita production of cereals, pulses, and food grains, soybean production is declining.

Agricultural Production Trends

- Cereals: Per capita production increased from 195 kg/hectare in 1998-99 to 205 kg/hectare by 2003-04.
- Food Grains: Output per capita rose from 1939 kg/hectare to 2104 kg/hectare over the same period.
- Employment in Agriculture
- Cultivators: 27.1% of workers are cultivators.
- Agricultural Labourers: 7.6% of workers are agricultural laborers.
- Rural Workforce: 60.5% of the rural workforce is engaged in farming and agricultural activities.
- Agriculture plays a vital role in Gwalior's economy, employing a significant portion of the labor force, especially in rural areas.

Between 2007-08 and 2010-11, agricultural land in Gwalior increased from approximately 217,278 hectares to 259,595 hectares. In 2009-10, wheat was the dominant crop, occupying around 94,000 hectares. Groundwater irrigation covered 1,128.48 hectares out of a total 1,810.23 hectares of irrigated land. By 2006, the district had 14,698 tube wells and 33,048 dug wells for irrigation. The net sown area accounted for 56.8% of the total geographical area. Wheat was the main food grain produced, while mustard was the primary oilseed. Additionally, from 2005-06 to 2008-09, the district registered 8,567 tractors for agricultural use.

District wise incremental manpower requirements: "Estimation indicate that districts of Indore, Bhopal, Jabalpur, Gwalior and Ujjain have the highest human resource requirement given the industrial and service-oriented activities centered around

these districts." (District wise skill gap study of (M.P), january,2013)

Table 1: Estimation of Supply of Manpower in the industrial region of Gwalior

DISTRICT	ESTIMATED POPULATION (2017)	WORKING AGE POPULATION (2017)	LABOUR FORCE (2017)	WORK FORCE (2017)	INCREMENTAL SUPPLY DURING (2012-2017)
Gwalior	2292098	1444022	614907	573914	178038
Morena	2212780	1394052	679839	634517	169750
Bhind	1907270	1201580	585604	546563	142049
Shivpuri	1894188	1193338	733162	684285	126222
Guna	1409051	887702	473238	441688	112652
Ashoknagar	950666	598920	323131	301589	72620
Datia	845434	532623	374211	349263	49295
Sheopur	746295	470166	266079	248341	46233

District	Incremental Human Resource Requirement 2012-22
Indore	827438
Bhopal	758419
Jabalpur	473812
Gwalior	341759
Ujjain	286270

4. INDUSTRY

Gwalior district is home to several medium to large-scale industries. Notable companies include the Taj Group of Hotels, Railway Spring Factory, and J.B. Bangharam Foods. The industrial parks in Gwalior offer essential facilities to support the growth and development of these industries.

In 2008-09, there were approximately 72,000 enterprises, both registered and unregistered. The DTIC oversees various locations dedicated to industrial development, including the ancient industrial area in Gwalior, industrial areas in Gospura and Biralanagar, as well as Baraghata, Barai, Maharajpura, and Biloua. These industrial zones collectively cover around 500 hectares of land, with the Old Industrial Area in Gwalior comprising over half of this total area.

The development of Gwalior's industry is significantly supported by its existing industrial regions. These areas contribute to the city's economic growth by fostering a diverse range of sectors. Key industries include traditional handicrafts and handloom, which highlight Gwalior's artisanal heritage, as well as tanning and leather production. The city also has a strong presence in food packaging and fast-moving consumer goods (FMCG). Additionally, Gwalior's industrial landscape encompasses electrical and electronics manufacturing, agrochemicals, flavors and fragrances, pharmaceuticals, and dyes. Each of these sectors plays a crucial role in strengthening the local economy and enhancing the city's industrial capabilities.

One of the major enterprises in the area is the railway spring plant, which has seen investments exceeding INR 50 crores. The region also features significant sectors such as food processing, agriculture, and chemicals. A new IT park in Gwalior, with an anticipated investment of approximately 2,000 crores, is expected to create around 2,000 jobs. The city is already home to several engineering institutions. Engineering-focused enterprises have invested more than 52 crores in the LMI (Large and Medium Industries) sector, providing jobs for about 450 people. Prominent companies in this sector include Hindustan Vidyut Product Private Limited and the Railway Spring Factory. Additionally, large agricultural enterprises employ around 700 individuals and represent about 7.2 percent of the total investment. Chemical industries account for 7% of this sector and employ nearly 250 people. From 2007 to 2012, small-scale enterprises secured investments totalling more than 43 crores. During this period, over 50% of these funds were channelled into essential sectors. Specifically, 11.5% of the investment went into Engineering and Engineering Services, highlighting the sector's significant role in industrial development. Food Processing received the largest share, at 19.7%, reflecting its critical importance in the region's economy. Metal Industries also attracted a substantial portion of the investments, with 12.1%, indicating a strong focus on this sector. Additionally, Agriculture garnered 13.4% of the investments, underscoring its vital contribution to the local economy. These allocations illustrate a strategic emphasis on sectors that are integral to both industrial growth and economic stability.

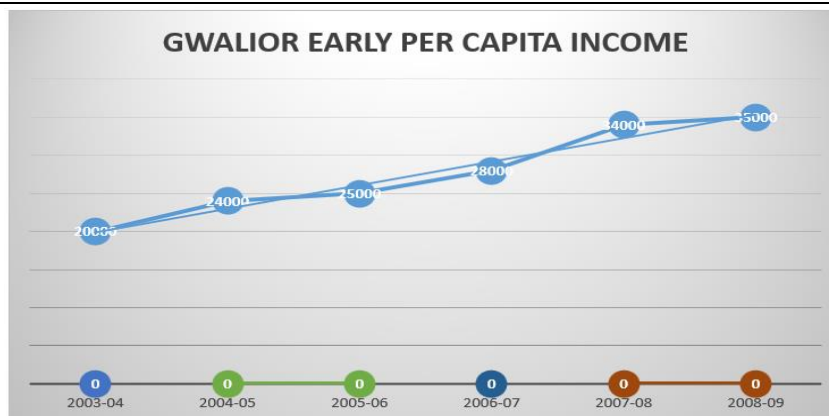


Figure 3 National Skill Development Corporation

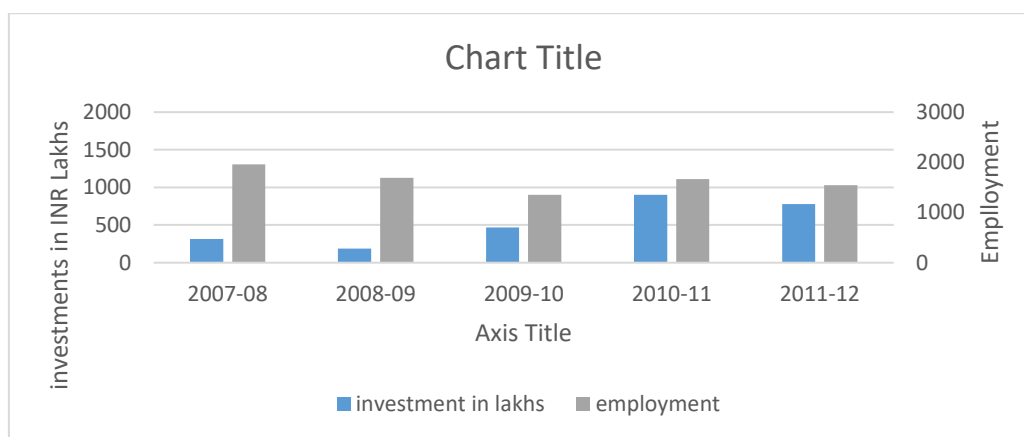
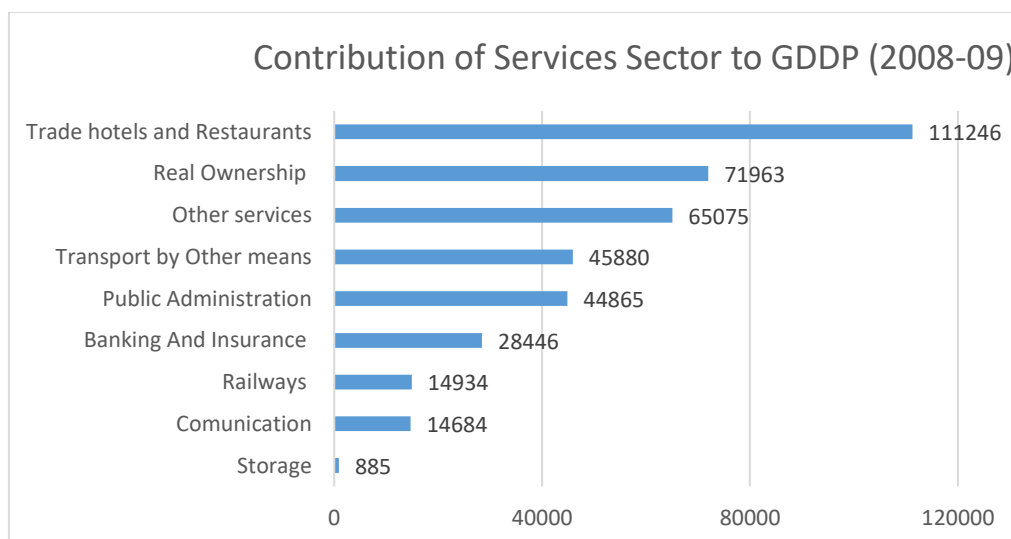


Figure 4 National Skill Development Corporation

5. SERVICE SECTOR

“The services sector in the area has been gradually rising, accounting for around 61 percent of GDDP. Between 2006-07 and 2008-09, the sector saw a 16.25 percent growth, with the Hospitality Industry, Real Ownership, and Transport categories leading the way, as well as Public Administration.” (Economic rejuvenation of a region - case of Gwalior, 2018)



The Hospitality Industry is expanding rapidly, with an annual compound growth rate (CAGR) of about 18.7%, highlighting a growing need for specialized training. Gwalior’s increasing appeal as a weekend destination has spurred growth in the hotel sector, driven by attractions such as Gwalior Fort, the Scindia Museum, and the Rani Laxmibai Museum. Additionally, the prestigious Scindia School attracts visitors and affluent families from across India.

From 2007-08 to 2010-11, the number of bank branches in the district grew from 131 to 146. Over the same period, deposits surged from 3,460 crores to 8,476 crores, more than tripling in just five years. The entry of private sector banks,

including ICICI, HDFC, and Axis, has diversified financial services in the region, now offering travel and life insurance and share trading services.

The logistics and transportation sector is also on the rise, thanks to improved road infrastructure and better rail and air connections. From 2007 to 2008, the sector grew at a CAGR of 16.5%. Gwalior boasts a well-developed network of roads, including 161.2 kilometers of national roads, 9.0 kilometers of state highways, 212.4 kilometers of major roads, 1,079.3 kilometers of pucca roads, and 165.7 kilometers of kuccha roads. The road density is 23.9 kilometers per 100 square kilometers, with an average of 1.1 kilometers of country roads per village.

6. WORKFORCE DISTRIBUTION IN THE AREA

Employment Overview in Gwalior

According to the 2001 census, Gwalior's workforce participation rate stands at 32.5%. Within this workforce, 27.1% are engaged as cultivators, and 7.6% work as agricultural laborers, highlighting the significant role that agriculture plays in the local economy. In fact, agriculture is a major source of employment, providing jobs for 60.5% of the rural workforce in the district.

The district's dependency ratio is 75.3%, which is notably lower than the state average of 84.3%. Despite this lower dependency ratio, a substantial portion of the dependent population remains either unemployed or underemployed. In Gwalior, marginal workers aged between 15 and 59 years make up 4.8% of the total population, while the non-working population rate for the district is 27.1%.

Migration patterns reveal that individuals from nearby districts such as Tikamgarh, Bhind, Morena, and Datia frequently relocate to Gwalior in search of employment. These migrants typically find work in roles such as agricultural laborers, coolies, or rickshaw drivers. Additionally, students from ITI Gwalior and other local educational institutions are eager to secure jobs within the city. They are looking for positions that offer a minimum salary of INR 8,000 per month and have shown a particular interest in employment opportunities with companies like BHEL or in the railroad sector, reflecting a demand for stable and well-paying jobs in these industries.

7. RECOMMENDATIONS

The focus of policies is increasingly shifting from agriculture towards industry and the service sector, a move expected to enhance per capita income and overall economic growth. To support this shift and ensure its success, the government needs to formulate a detailed strategy and actively communicate its schemes to the public. By keeping residents informed about these initiatives, the government can help them take full advantage of available opportunities, thereby improving their living standards and contributing to economic progress.

Addressing pressing issues such as farmer suicides and high infant mortality rates is crucial. The state must implement targeted interventions to reduce these problems, which not only impact the well-being of the population but also affect overall productivity and economic stability. Improved healthcare services, mental health support, and economic assistance programs can play a role in mitigating these issues.

To stimulate private investment, it is essential for the state government to upgrade infrastructure. High-quality infrastructure attracts businesses and investors by improving connectivity and operational efficiency. In addition, promoting agro-based industries will integrate agricultural activities with processing and packaging, which can boost value addition and attract further investment in the sector.

As Gwalior becomes more popular as a weekend tourist destination, with attractions such as Gwalior Fort, Scindia Museum, Gujari Mahal, Man Mandir Palace, and Ghaus Mohammed's Tomb, it is important to develop the tourism sector. Enhanced connectivity to major cities like Delhi and Agra, along with a variety of hotel options including upscale choices like the Taj, will drive the demand for hospitality services. This growth in tourism will create new job opportunities in the hospitality sector, requiring skilled workers and service professionals.

Furthermore, new initiatives are needed to ensure the safety and empowerment of women in the Gwalior region. Providing women with a secure working environment is vital for their participation in the local economy. Creating a socially inclusive environment is also important to support Scheduled Tribes (ST) and Scheduled Castes (SC). Ensuring equitable development and community integration will help maintain social harmony and contribute to a more inclusive and balanced economic growth.

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