



# **KARNATAKA'S**

## **INDUSTRIAL ECOSYSTEM 2013**





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# 1 Introduction

## Karnataka – an overview

Karnataka is the Eighth largest state in the country in terms of total geographic area covered and seventh largest in terms of Gross State Domestic Product (GSDP). Its industrial cumulative annual growth rate (CAGR) for the period 2004-13 stands at 6.9%<sup>1</sup>, making Karnataka as one of the Top ten fastest<sup>2</sup> growing state economies in the country. Karnataka is blessed with a coastline of around 300 km along the western side with the Arabian Sea and is endowed with a robust mineral wealth on the eastern side bordering Andhra Pradesh.

The state is home to major industries & service based companies, especially the knowledge based sectors such as IT Product development and Services, Biotechnology & Engineering. The state has been successful in attracting major investments across various important sectors that have propelled its growing economy. Bengaluru, the state capital is the 3rd largest city in India and one of the progressive & modern cities of India known for its industrial development. Of the 30 districts in the state, Mysore, Mangalore and Hubli-Dharwad are among the other important locations.

Government of Karnataka's Industrial & Commerce (I&C) Department is the principal entity responsible for managing the industrial development and attracting investments in the state. The I&C department has pioneered several important initiatives & framed key policies for attracting investment in Karnataka, making the state, a truly “emergent state” in India.

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<sup>1</sup> Economic Survey of Karnataka 2012-13, Govt. of Karnataka

<sup>2</sup> <http://planningcommission.nic.in/data/datatable/>

## Socio - Economic Profile

### Karnataka - Socio-Economic Snapshot<sup>3</sup>

<b>Area</b>	191,791 Sq.Kms	8 <sup>th</sup> largest in India; 5.8% of India's land area, 30 Districts
<b>Capital City</b>	Bengaluru	3 <sup>rd</sup> most populous city in India
<b>Population</b>	6.11 Crores	9 <sup>th</sup> Largest in India
<b>Population Density</b>	319 persons per Sq.Kms	Lower than the national average - 382
<b>GSDP in 2011-12 (Const. 2004 Prices)</b>	INR 303, 444 Crores	5.9% growth vis-à-vis 2011-2012, Ranked 8 <sup>th</sup> in India
<b>Per capita Income (Const. 2004 Prices)</b>	INR 44,389	Increase of 4.9% vis-à-vis 2011-12, Approx 16 <sup>th</sup> Rank in India
<b>Urbanization</b>	39%	7 <sup>th</sup> in India
<b>Human Development Index</b>	0.519	12 <sup>th</sup> in India
<b>Literacy Rate</b>	75.60%	16 <sup>th</sup> in India, 3 <sup>rd</sup> in South India
<b>Poverty</b>	23.6%	Bottom 10 in India

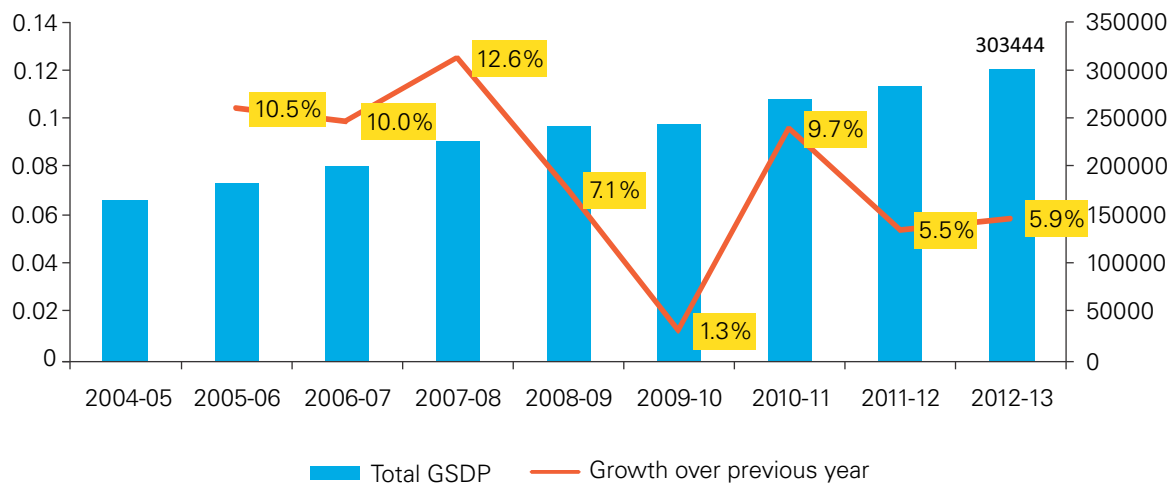
<sup>3</sup> Economic Survey of Karnataka 2012-13; census.gov.in; planning commission of India; NSDC state report; IBEF Presentation on Karnataka

## 2 Current Status of Industrialization

### Structure of Karnataka' Economy - GSDP analysis

- ✓ Gross State Domestic Product (GSDP) is INR 303,444 Crores for the year 2012-13 (estimated at constant prices, Base: 2004-05) has grown by 5.9% over the previous year 2011-12. Eight year Compounded Annual Growth Rate 2005-13 is 6.9%
- ✓ Karnataka is predominantly a Service-driven economy with the Tertiary<sup>4</sup> sector contributing about 58% of total GSDP in 2012-13 and an average contribution of about 54% since 2004-05.
- ✓ Share of Primary<sup>5</sup> sector in the GSDP has been steadily declining from 19.9% in 2004-05 to 14.9% in 2012-13

**Figure 1: Trends in Karnataka State Domestic Product**



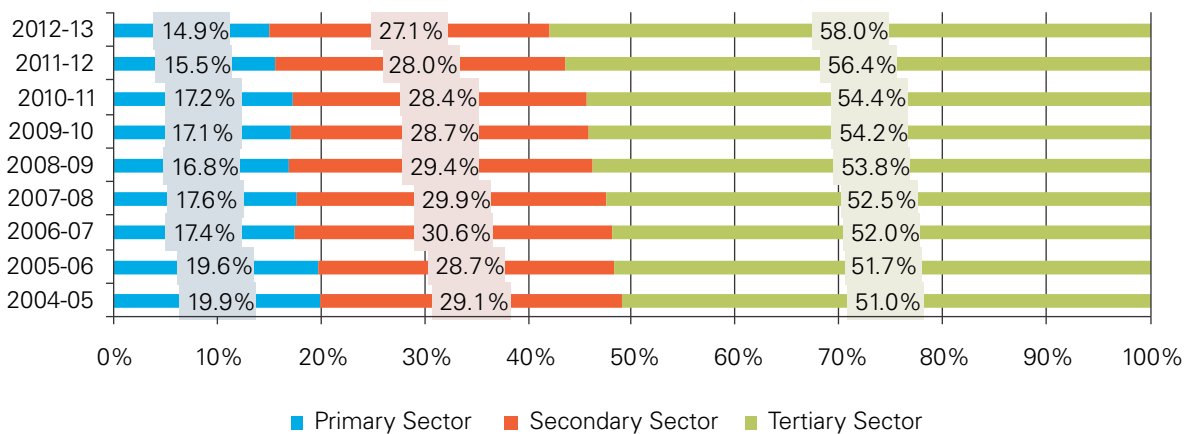
Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

<sup>4</sup> Tertiary Sector includes Trades, Hotels & Restaurants; Real Estate & Business Services; Banking & Insurance; Communication

<sup>5</sup> Primary Sector constitutes of Agriculture, Forestry, Fishing, Mining & Quarrying

- ✓ Share of Secondary<sup>6</sup> sectors has been fairly constant in the past 9 years with marginal fall of about 2%, from 29.1% in 2004-05 to 27.1% in 2012-13
- ✓ Among the sub-sectors under the Tertiary sector, (a) Trade, Hotels and Restaurants, (b) Banking and Insurance and (c) Real Estate and **Business Services**<sup>7</sup> have seen phenomenal growth with contribution of approx 35-40% over the past few years

**Figure 2: Trends in Sectoral Break-up of Karnataka Gross State Domestic Product**



Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

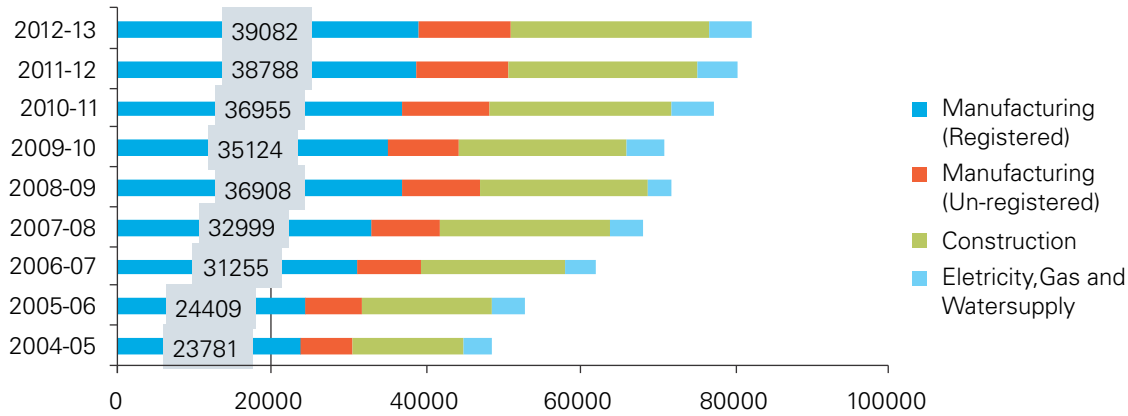
Growth in the tertiary sector & specifically the services sectors has boosted an entrepreneurial ecosystem with the establishment of numerous companies in the state, fuelling one of the best growth phase of the state's economy and socio-economic progress of its people in the last decade. Service driven economies have an admirable share of growth during the growing phase of an economy. But such economies in general face deeper impacts of recessions and take a relatively longer time to recover.

Hence to counter the dependence on Services sector, the state is actively trying to focus on promoting Manufacturing, Construction, Agriculture & allied sectors. This focus can be further synchronized with the state's growth targets by prioritizing projects that are employment-oriented & growth-oriented.

<sup>6</sup> Secondary Sector constitutes of Manufacturing (Registered & Unregistered), Construction, Electricity, Gas & Water Supply

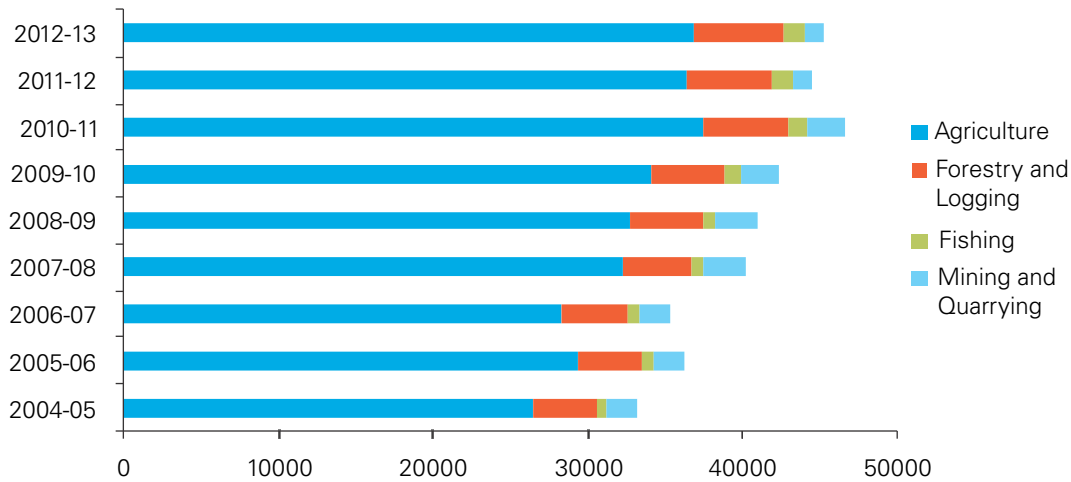
<sup>7</sup> A few key business service sectors include Telecommunications, Information Technology, Banking & Financial Service, and Education among others.

**Figure 3: Contribution of Secondary Sector to GSDP (In INR Crores)**



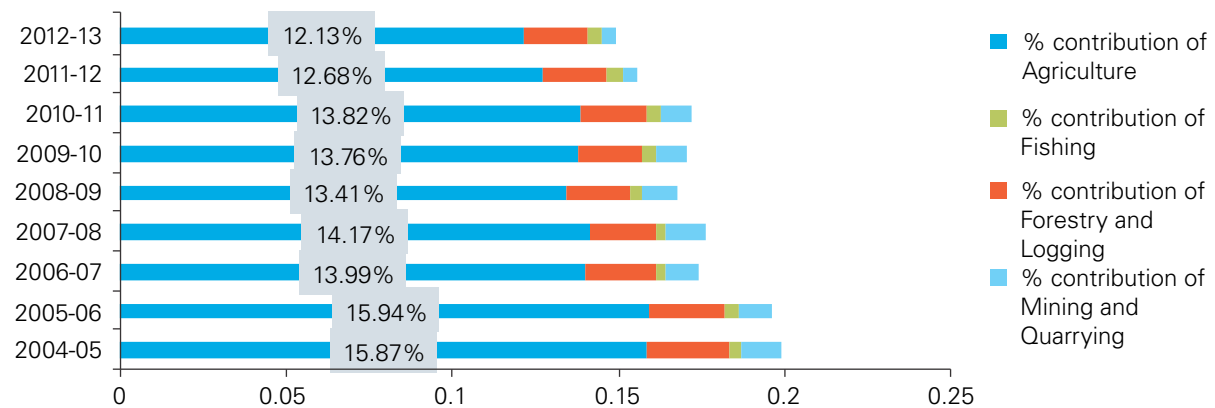
Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

**Figure 4: Contribution of Primary Sector to GSDP (In INR Crores)**



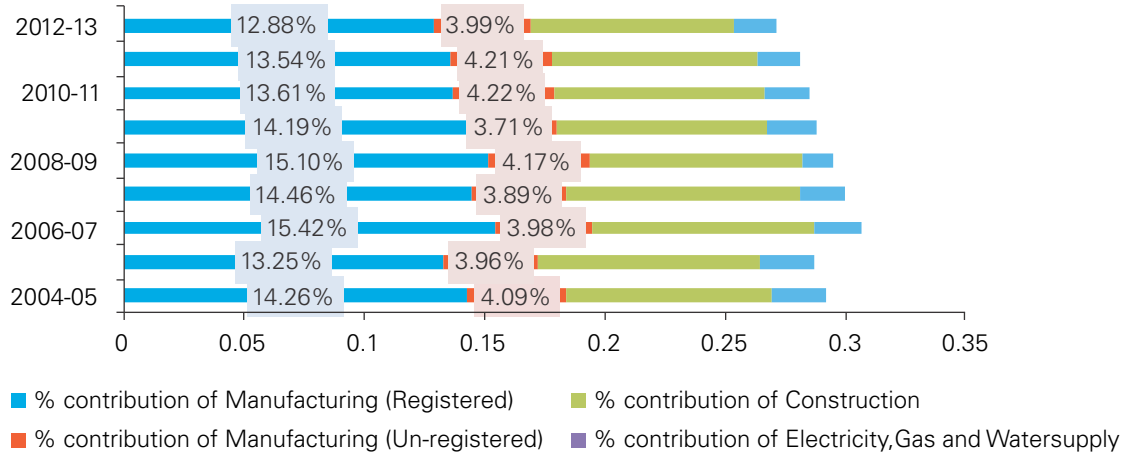
Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

**Figure 5: Contribution of Primary Sector to GSDP (In %)**



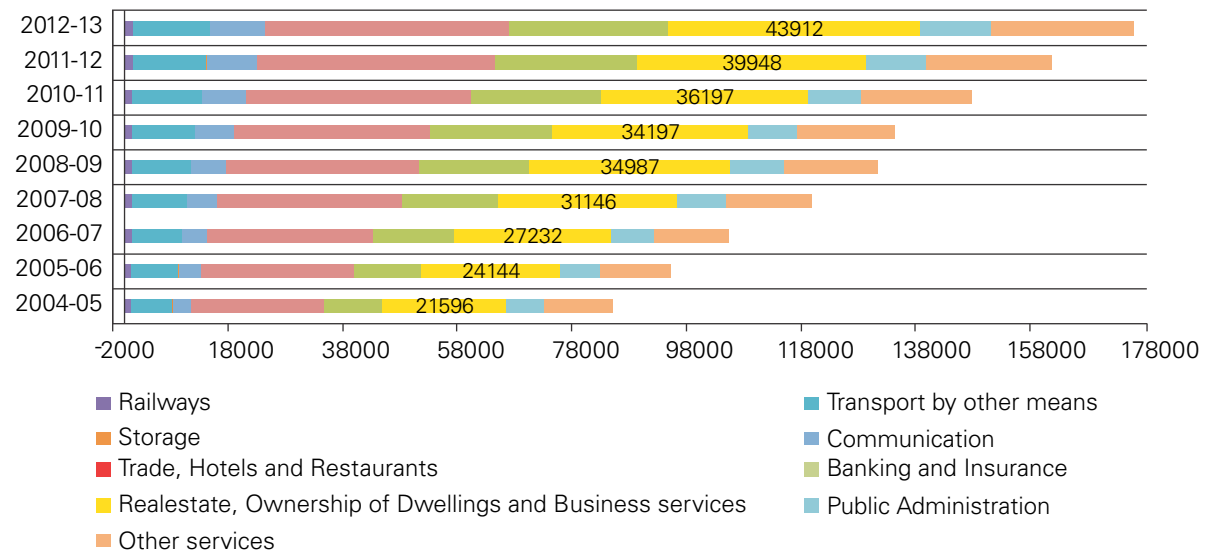
Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

**Figure 6: Contribution of Secondary Sector to GSDP (In %)**



Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

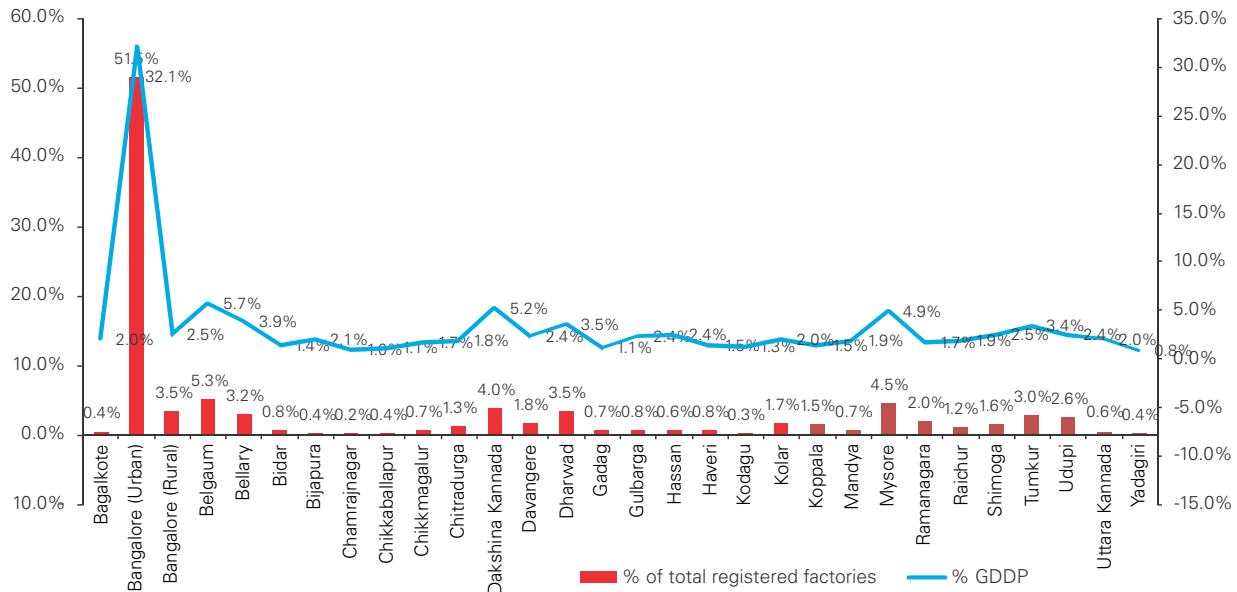
**Figure 7: Contribution of Tertiary Sector to GSDP (In INR Crore)**



Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

## Regional Contribution

**Figure 8: Karnataka Gross District Domestic Product (GDDP), registered factories and MSME Units**



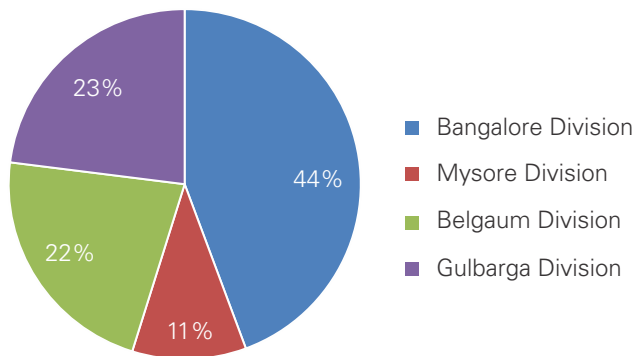
Source: Economic Survey 2012-13, Government of Karnataka; YES BANK Analysis

- ✓ The Geographical distribution of Karnataka's GSDP shows that the economic activity is highly concentrated in Bengaluru (Urban) district. This district alone has 51% of total factories registered in the state.
- ✓ Only 2 other districts have over 4% share, Belgaum & Mysore. This implies that 10% of the total districts have over 60% of total factories in the state. Top 7 districts share more than 80% factories in a state with a total of 30 districts.
- ✓ Further the Bangalore division hosts about 44% of the total projects approved by SLSWCC & SHLCC in the past 5 Year

**Table 1: District-wise spread (in %) of total Registered Factories in Karnataka**

#	0-4% Share in Total Factories registered in Karnataka				#	Above 4% Share
1	Bagalkote	10	Chitradurga	19	1	Bengaluru (U)
2	Bengaluru (R)	11	D. Kannada	20	2	Belgaum
3	Bellary	11	Davangere	21	3	Mysore
4	Bidar	13	Dharwad	22		
5	Bijapur	14	Gadag	23		
6	Chamrajnagar	15	Gulbarga	24		
7	Chikkaballapur	16	Hasan	25		
8	Chikkmagalur	17	Haveri	26		
9	Udupi	18	U Kannada	27		

**Figure 9: Projects Approved by SLSWCC and SHLCC**



Source: Karnataka Udyog Mitra; YES BANK Analysis

Balanced growth is critical for economic growth to be sustainable. Imbalanced growth could lead to significant discrepancies in the living standards of the population ultimately leading to discontent. It also triggers rural population to migrate to growing urban centers. Current Urbanization in Karnataka is 38-40%, which is one of the highest in the country and has grown by 4.5% in the current decade, 2001-2011. Rural population in the state currently stands at about 61% implying that 2 of every 5 people in the state live in urban areas.

## Investment Inflow

Attracting investments into a state is an important priority of the state government and Karnataka has been largely successful in attracting key investments in the state, especially in the recent decade, with the Information Technology (IT) & Bio-technology (BT) industries being one of the biggest beneficiaries. The state has been proactive in introducing several important policies, schemes & identifying key development zones like Special Economic Zones, Special Investment Regions, Industrial Estates and envisioning growth corridors like Suvarna Karnataka Development Corridor.

In terms of the total projects approved in the state since 2001, the State Level Single Window Clearance Committee (SLSWCC) that approves project below INR 50 Crore investment has approved 4729 project attracting an investment of over INR 76,768 Crore and generating close to 22 Lakh jobs. The State High Level Clearance Committee (SHLCC) headed by the honorable Chief Minister that clears investment proposals above INR 50 Crore investment, has cleared 906 investment proposals amounting to over INR 11.25 Lakh Crore and potentially creating about 63 Lakh jobs.

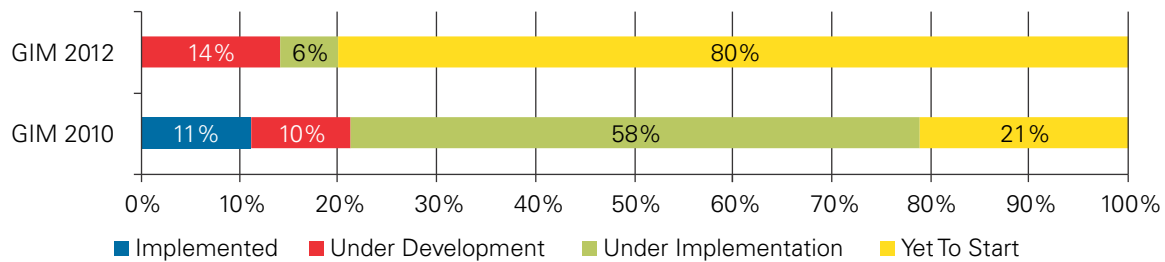
The Global Investor Meet (GIM) conducted by the state government to channelizing investments into Karnataka, was conducted in 2010 & 2012. Statistically, GIM 2012 witnessed 222<sup>8</sup> MoUs signed between the state government and private sector attracting close to INR 2.54 Lakh Crore with a potential to create 12 Lakh jobs. GIM 2010 witnessed MoUs with 389 companies collectively attracting INR 3.9 Lakh Crore with a potential to create 7 Lakh jobs.

<sup>8</sup> Advantagekarnataka.com



- ✓ Of the total 222 MoUs signed during GIM 2012, 13 (~6%) are under implementation with an investment of INR 3874 Crore and 31 (~14%) projects are under construction worth about INR 10,000 Crore.
- ✓ Of the total 389 MoUs signed during GIM 2010, 43 projects have been implemented with INR 21190 Crore investment and employing 24680 people. 39 projects are under development investing INR 9835 Crore & ability to generate 21905 jobs.
- ✓ About 80% of MoUs signed in 2012 & about 21% of them signed in 2010 are yet to be initiated

**Figure 10: GIM 2010 & 2012 MoU Implementation Status**



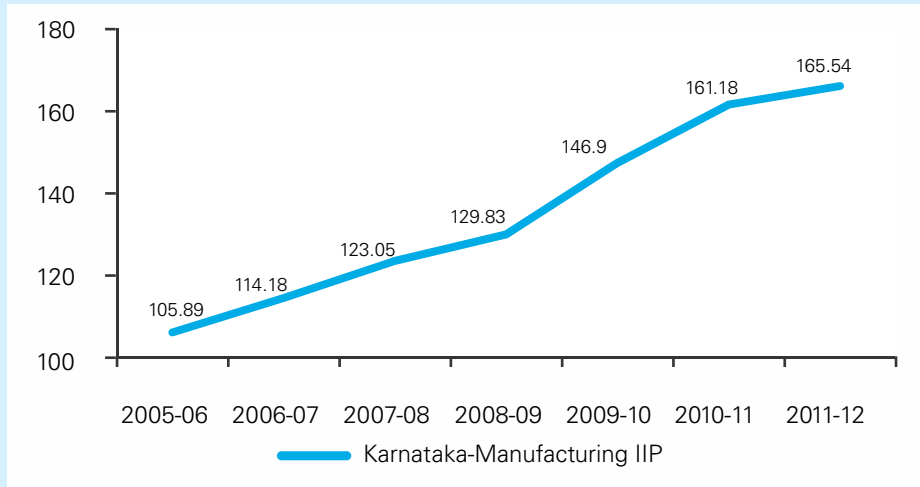
Source: Advantagekarnataka.com, Economic Survey Karnataka 2013, Yes Bank Analysis

Timely execution of planned projects is extremely crucial for maintaining investor interest. Delays in execution increase the cost of capital, impact the viability of the project & can also impact its competitiveness. The state can carry out a detailed study to identify reasons for execution delays which would help enlist the causes and aid in addressing them.

### Manufacturing Sector in Karnataka

Karnataka is home to some of the largest heavy industries in India. Various PSUs like Bharat Heavy Electrical Limited, Hindustan Aeronautics Limited, Bharat Earth Movers Limited and other Multi-national companies like Volvo & Bosch have manufacturing facilities situated in the state. Even though Karnataka is well known as a destination for investment in manufacturing, the sector has been languishing with a contribution around 12% to 18 % (registered and unregistered) in the past few years. The Index of Industrial production is a key indicator of the manufacturing sector in the state.

**Figure 11: Karnataka – Index of Industrial Production**



- ✓ Overall the IIP in Karnataka has been growing steadily at a CAGR of around 6.5%
- ✓ However in the recent years the growth has tapered and is below the inflation rate indicating no real growth.
- ✓ The impact on Mining sector has also contributed to the declining trend in the manufacturing sector of Karnataka.

### Policy Initiatives to Boost Manufacturing

- ✓ Among the various key steps taken by the state Government to boost the manufacturing sector, a Manufacturing Taskforce is constituted to study and recommend measures to revive the manufacturing sector in the state.
- ✓ The Government of Karnataka is also set to revise its Industrial Policy in the coming months to boost the manufacturing sector based on the recommendations of the Taskforce committee. The revised industrial policy shall be in effect from April 2014.
- ✓ The Government of Karnataka is in process of preparing a detailed project report for setting up the National Investment and Manufacturing Zone (NIMZ) at Tumkur District. The state has also approached the Central Government seeking approval for setting up two additional NIMZs in the state.

## FDI inflows

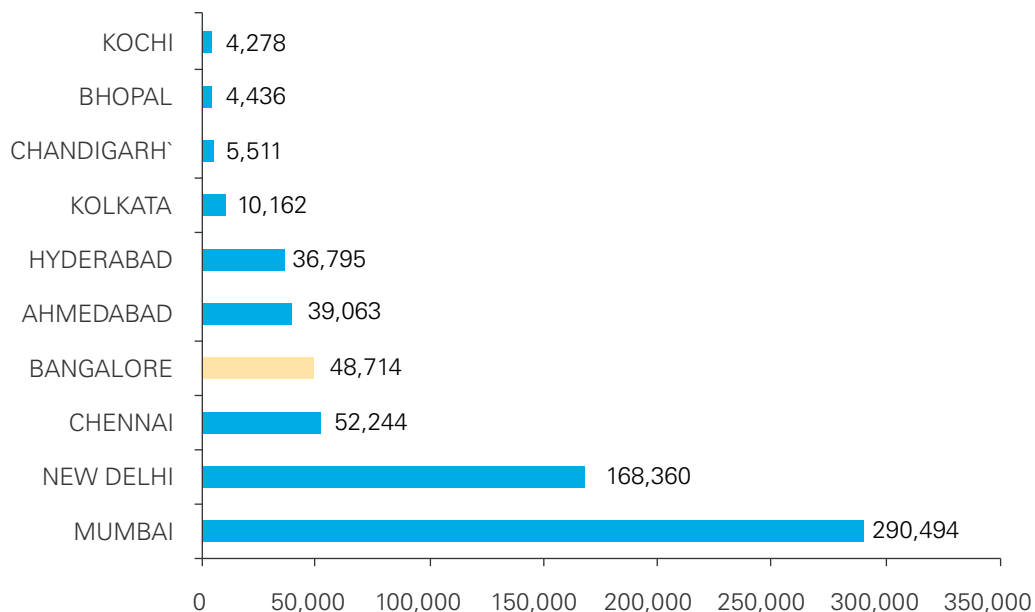
Karnataka ranked 4<sup>th</sup> in the country in terms of Total FDI inflows from January 2000 to February 2013 at INR 48,714 crore<sup>9</sup> which is about 5.8% of total FDI attracted in India. Top countries<sup>10</sup> that invested FDI equity in Karnataka in this period include Mauritius (41%), USA (13%), Netherlands (6%), Cyprus (5%) and Germany (5%)

In 2012-13 (April – March), Karnataka attracted \$1023 Million (INR 5553 Crore) of FDI, ranking 4th after Maharashtra, NCR & Tamil Nadu.

**Table 2: FDI Inflows - April 2012 - March 2013, Dept. of Industrial Planning & Promotion**

#	RBI's - Regional Office (April - March)	State	2012-13 INR (US\$)
1	MUMBAI	MAHARASHTRA, DADRA & NAGAR HAVELI, DAMAN & DIU	47,359 (8,716)
2	NEW DELHI	DELHI, PART OF UP AND HARYANA	17,490 (3,222)
3	CHENNAI	TAMIL NADU, PONDICHERRY	15,252 (2,807)
4	BANGALORE	KARNATAKA	5,553 (1,023)
5	AHMEDABAD	GUJARAT	2,676 (493)

**Figure 12: Top 10 FDI Destinations in India (INR Crores)**



Source: [http://www.dipp.nic.in/English/Publications/FDI\\_Statistics/2013/india\\_FDI\\_February2013.pdf](http://www.dipp.nic.in/English/Publications/FDI_Statistics/2013/india_FDI_February2013.pdf)

<sup>9</sup> Economic survey of Karnataka 2013

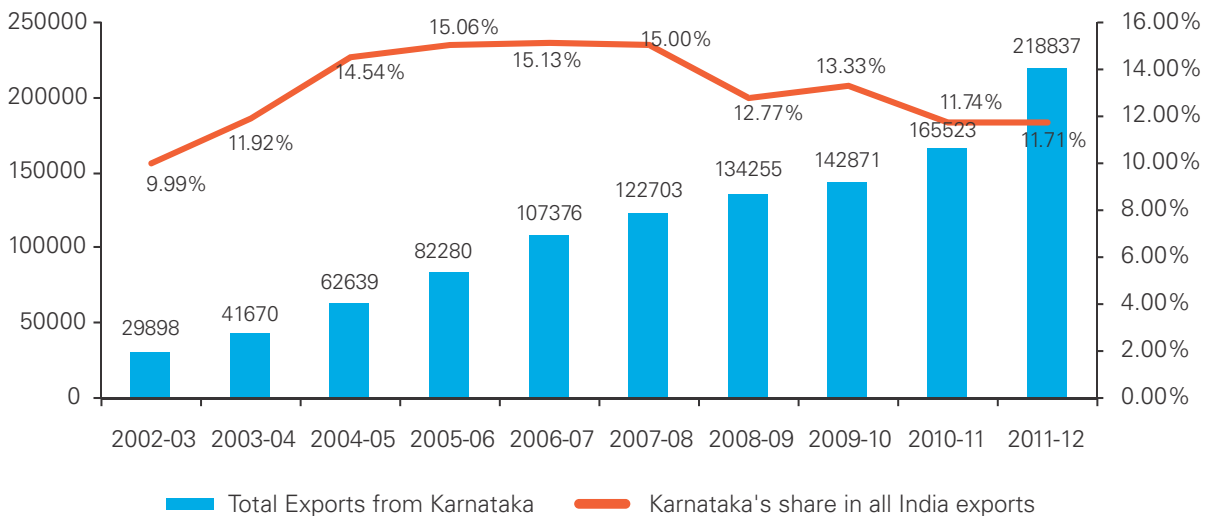
<sup>10</sup> Department of Industrial Policy & Promotion, Government of India

## Exports

Karnataka is one of India's Top exporting states consistently enjoying a share of around 10-15%. In terms of value of exports. Computer Software & Electronics constitute the bulk of the state's export at a ten year average of 56.4% followed by Petroleum products (9.7%) and readymade garments (9.5%).

In terms of growth, Basic Chemicals, Pharmaceuticals and Cosmetics have shown the highest ten year average growth of around 34.8% followed by Gems & Jewellery at 33.3%. Other high growth sectors include Spices (29.2%), Petro products (27%), Computer Software (27.4%), Engineering products (25.7%), Marine products (25.1%) and Coffee products (20.6%). Overall the ten year average growth rate of Karnataka's export was around 25.5%.

**Figure 13: Trends in Export from Karnataka (INR Crore)**



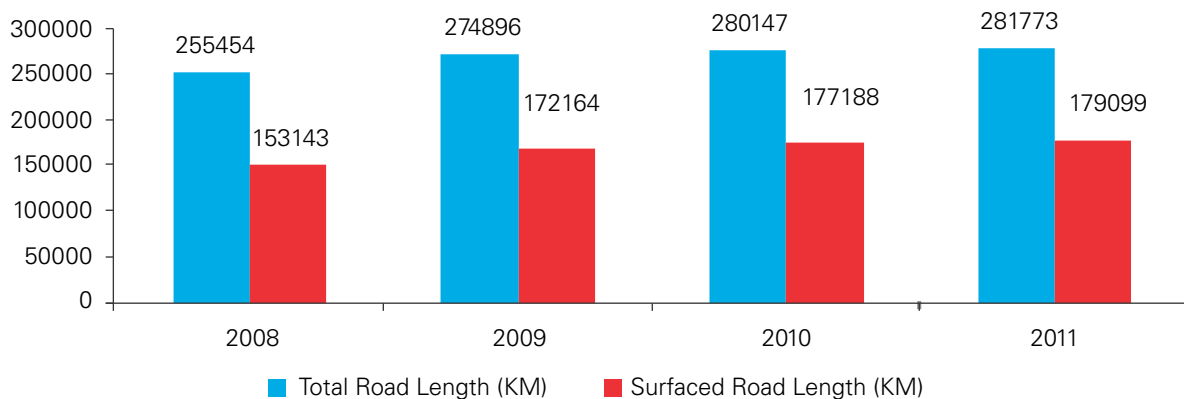
Source: Economic Source: Survey 2012-13, Government of Karnataka; YES BANK Analysis

# 3 Karnataka – Infrastructure Readiness

## Road Connectivity

The Total Road Length in Karnataka as of 2011 was about 281,773 Kms<sup>11</sup>. In terms of total geographical area, Karnataka can be compared to Gujarat and Karnataka has fared well in terms of Total Road Length, which has progressively grown by 2.5% CAGR over the past four years.

**Figure 14: Trends in Total and Surfaced Road Length in Karnataka**



Source: Government of India; YES BANK Analysis

Transport of Industrial goods and machinery is best facilitated by 4 and 6 Lane roads. As per estimates, more than 60% of total freight movement in India is done via road transport. Hence efficient roads form an extremely crucial infrastructure requirement for economic progress. However, The Average total surfaced road length in Karnataka is 62.3% of the total road length. Comparatively Gujarat stands at 90.5%, Tamil Nadu at 82%, and Maharashtra at 81.8% of the total road length. The total length of four lane carriage width roads in Karnataka is about 975.75 Kms, the principal component of which is NH4 covering Chennai – Kolar – Bengaluru – Hubli – Belgaum – Pune – Bombay running to about 700 KMs in the state. Therefore the total four lane road in the state is only a fraction of the total road length in the state, which is an important task on hand.

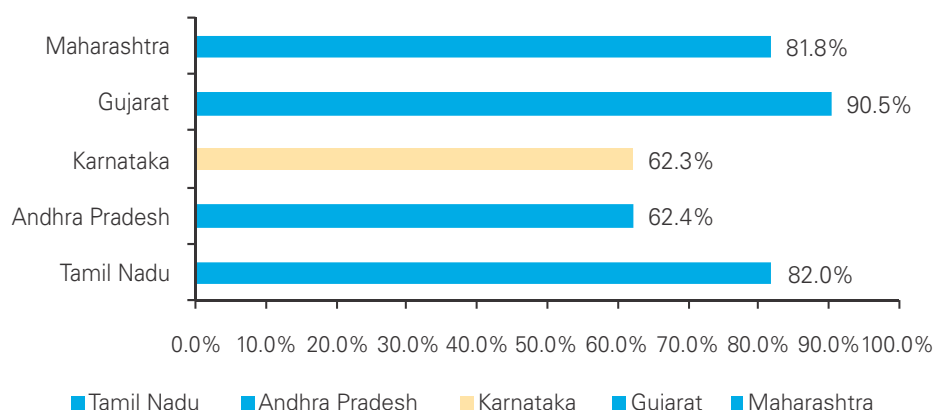
<sup>11</sup> <http://data.gov.in/dataset/total-and-surfaced-road-length-31st-march-2011>

The nodal agencies handling the road sector in Karnataka are the Public Works Dept. and Karnataka Road Development Corporation Ltd.

**Table 3: Comparative Analysis of Total Road Length of various States**

State	Geographical	Road Length (Kms)				CAGR
		2008	2009	2010	2011	
Tamil Nadu	130,058	181213	188037	190055	192339	1.5%
Andhra Pradesh	275,045	345012	232280	235678	238001	-8.9%
Karnataka	191,791	255454	274896	280147	281773	2.5%
Gujarat	196,024	146630	153521	155614	156188	1.6%
Maharashtra	307,713	223322	399416	406660	410521	16.4%

**Figure 15: Comparative Analysis showing Surfaced road length as a percentage Total road length**



Source: Government of India; YES BANK Analysis

## Rail Connectivity

Railways are the lifeline of heavy industry. They are an essential mode of transportation especially for moving heavy industrial goods. As per certain estimates, close to 26-28% of total freight movement in the country is through railways for transportation. Hence to achieve superior industrial status Karnataka has to focus on developing a robust rail system to optimize supply chain bottlenecks between minerals rich areas, factories and terminal markets. The Total Rail Track length in Karnataka was about 3250 Kms as on December 2009. 80 of 176 taluks are yet to be connected by railways<sup>12</sup>.

<sup>12</sup> Rail Infrastructure Plan Report, Government of Karnataka

While it is encouraging to note the state government's recent interventions to improve rail connectivity in Karnataka, the state could also study the feasibility of a dedicated rail freight corridor which specially can boost the Manufacturing, Mining & Construction sectors. The proposed Bengaluru – Mumbai and Chennai – Bengaluru industrial corridor offers a tremendous opportunity for a dedicated freight corridor on the lines of project in North India between Mumbai & New Delhi.

**Table 4: Comparative Analysis Showing Total Rail Length of various States**

State	Area ( Sq Km )	Route Length in Kilometers			
		Broad Gauge	Meter Gauge	Narrow gauge	Total
Andhra Pradesh	275,045	4904	268	0	5172
Gujarat	196,024	3119	1422	787	5328
Karnataka	191,791	3069	97	84	3250
Kerala	38,363	933	117	0	1050
Maharashtra	307,713	4489	313	733	5535
Tamil Nadu	130,058	2507	1624	0	4131

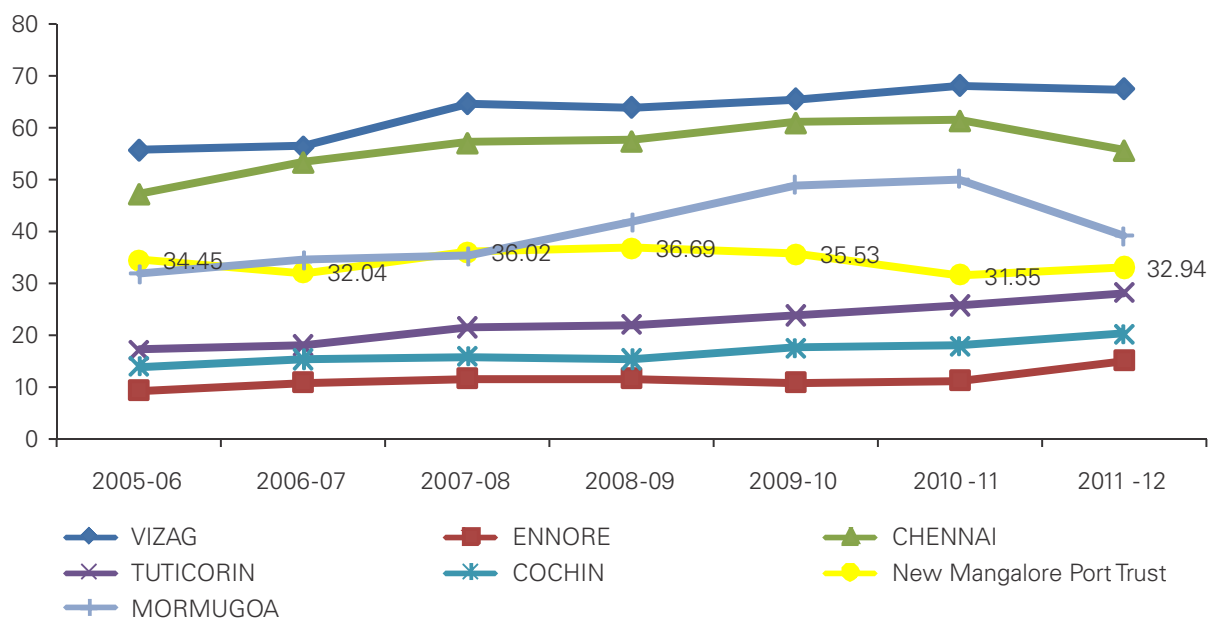
Source: Rail Infrastructure Plan Report, Government of Karnataka; Data as on December 2009

## Ports and Shipping

Ports and shipping form the gateway to trade. Karnataka has 11 ports of which New Mangalore is the Major Port and the rest are Minor Ports. The Present total capacity of New Mangalore Port is 44.20 Million Tonnes (MT)<sup>13</sup>. Comparatively Chennai Port has a capacity of 55.75 MT, Cochin at 28.37 MT and Visakhapatnam at 62.23 MT.

<sup>13</sup> <http://www.shipping.nic.in/writereaddata/l892s/PerformanceofMajorPorts-24060860.pdf>

**Figure 16: Trend in Traffic Handled at major Ports in South India – 2005-06 to 2011-12 (in Million Tonnes)**



Source: Ministry of Shipping, Government of India

Analysis of the traffic trends at major Ports in southern India over the last seven Years reflects that Vizag and Chennai ports dominate the region in terms of the total annual traffic handled. The closest competitors to New Mangalore port are Cochin and Mormugoa. Comparatively the New Mangalore port has seen a decline in traffic while both Mormugoa and Cochin have witnessed relative growth.

One of the principal issues facing the New Mangalore port is its connectivity. Transporting heavy containers from Mangalore port is a key issue due to the Western Ghats near Mangalore. This region poses a challenge for navigation of heavy containers through the Ghat region, impacting its utilization (~83% in 2009 – Ministry of Shipping). Considering the low utilization, Mangalore Port evidently has potential to handle larger traffic, if the connectivity issue can be addressed. Study could be initiated to identify possibility of tunneling, other alternatives or benefit of developing other minor ports. The Infrastructure Development Department is the Principal Authority dealing with the infrastructure development in Karnataka.

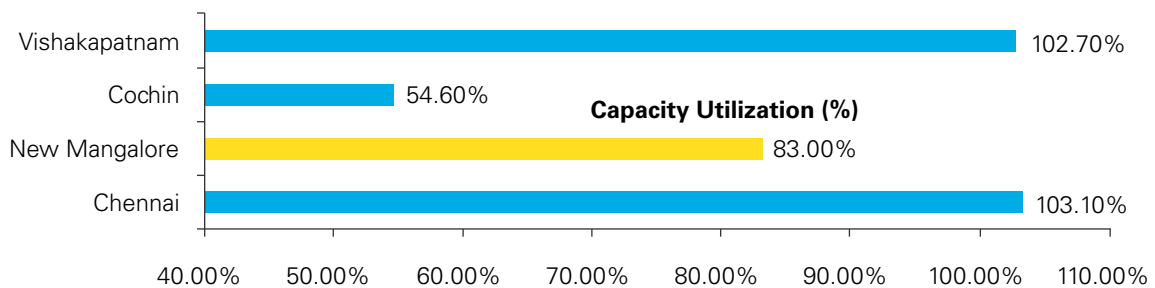


**Figure 17: Area around the New Mangalore Port Depicting Hilly regions of Western Ghats**



Source: Google Maps; YES BANK Analysis

**Figure 18: Capacity Utilization of Important Ports in South India (in %)**



## Airports

Karnataka has five domestic airports and two international airports. The Domestic Airports include Bengaluru, Mangalore, Belgaum, Hubli and Mysore while the International flights are operated from Bengaluru and Mangalore (customs airport)<sup>14</sup>. The present Bengaluru Airport is one of the most successful models operated under a Public Private Partnership model.

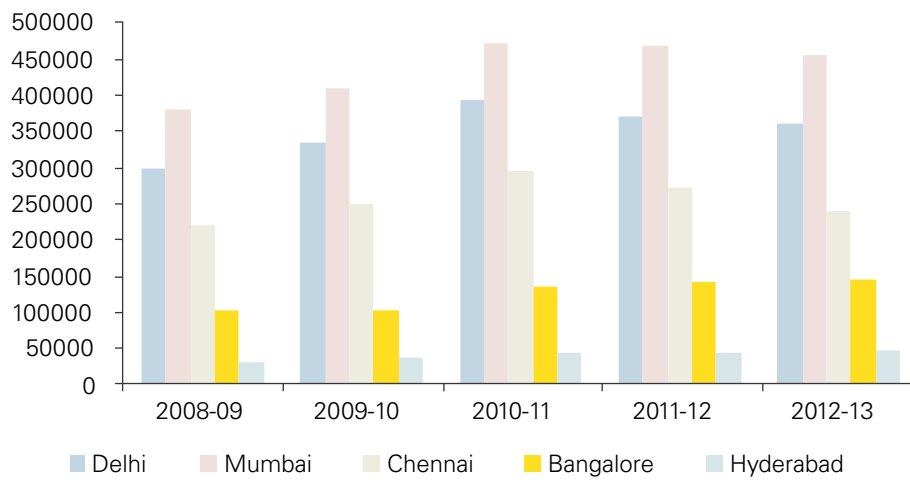
Bengaluru ranks fourth in the country in terms of International Passenger Traffic after Delhi, Mumbai and Chennai while it ranks third in terms of Domestic Traffic overtaking Chennai in

<sup>14</sup> <http://www.aai.aero/allAirports/airports.jsp>

the recent years. It handles traffic of close to 12 million annually. Bengaluru also ranks fourth in international freight traffic and third in domestic freight traffic, overtaking Chennai.

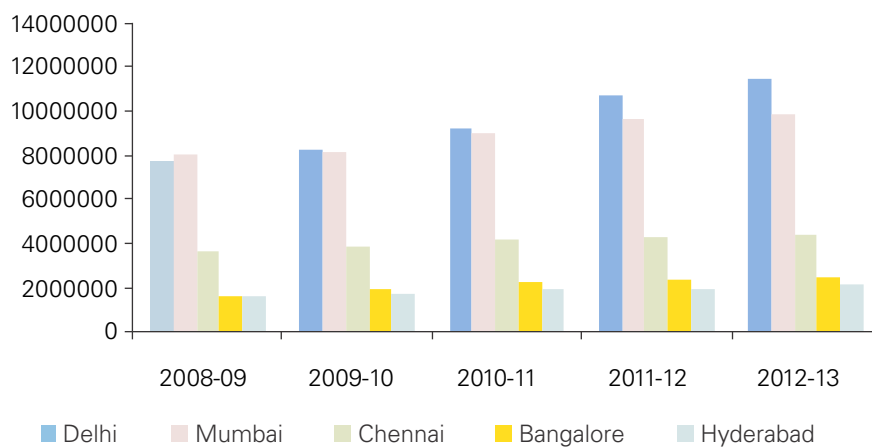
Other airports in the state like Mangalore, Hubli & Mysore are considered for operations and Upgradation. While the government has actively initiated to develop other airports in the state in locations like Gulbarga, Hasan, Shimoga & Bijapur, the feasibility of different airports can be studied in detail in order to prioritize their development.

**Figure 19: Trends in International Freight Traffic in India**



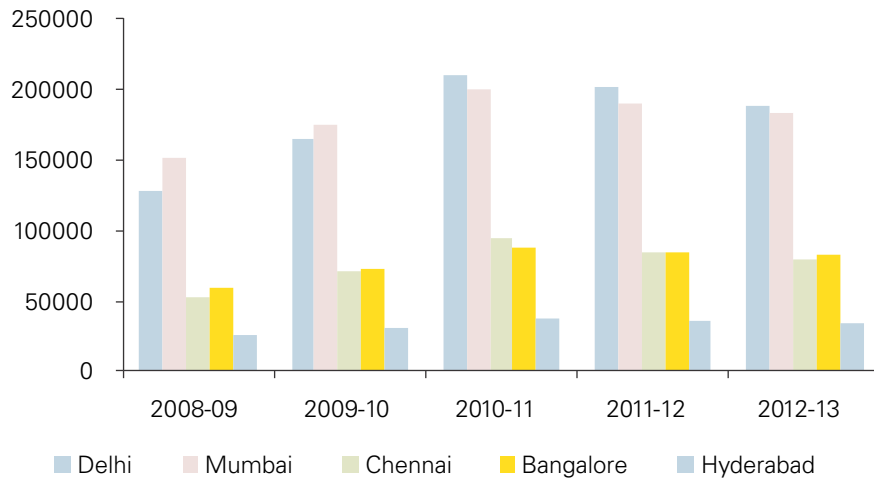
Source: Airports Authority of India; YES BANK Analysis

**Figure 20: Trends in International Air Traffic in India**



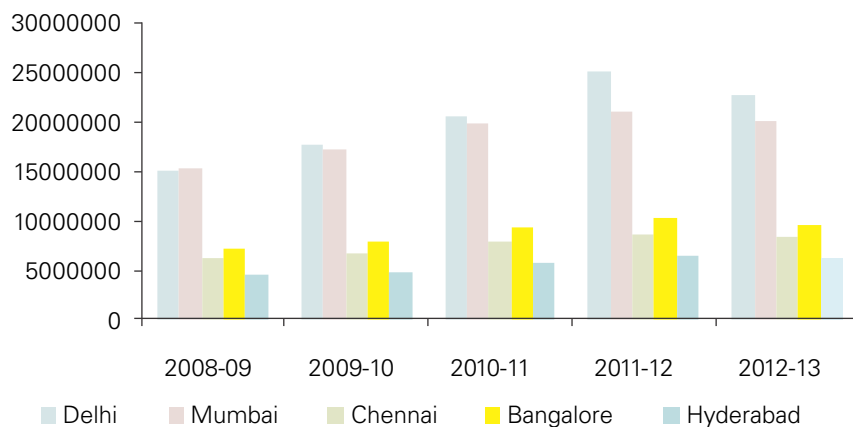
Source: Airports Authority of India; YES BANK Analysis

**Figure 21: Trends in Domestic Freight Traffic in India**



Source: Airports Authority of India; YES BANK Analysis

**Figure 22: Trends in Domestic Air Traffic in India**



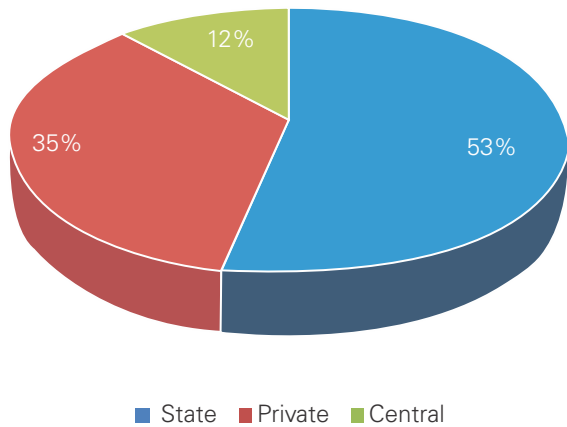
Source: Airports Authority of India; YES BANK Analysis

## Power

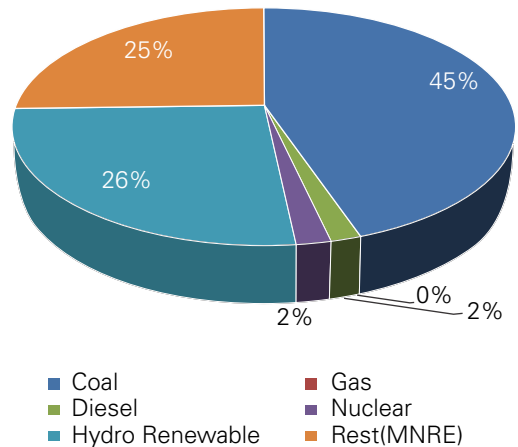
Power is the prime mover of Industrial Growth. The total installed power capacity in Karnataka is 13759.25 MW as of May 2013<sup>15</sup>. Coal, Hydro and Renewable energy form the major sources of Power in the state. It is also pertinent to note that around 35% of the power is supplied by the private sector in Karnataka. The Karnataka electricity Regulatory Commission is the principal authority on power sector in Karnataka. Karnataka Power Corporation and Karnataka Power Transmission Corporation are the state power producer and Transmission entities. The state also has five power supply companies with Bengaluru Electricity Supply Company (BESCOM) being the largest.

<sup>15</sup> [http://www.cea.nic.in/reports/monthly/executive\\_rep/may13.pdf](http://www.cea.nic.in/reports/monthly/executive_rep/may13.pdf)

**Figure 23: Ownership-wise Break – up of Installed Power Capacity in Karnataka as of May 2013**



**Figure 24: Sector-wise Break – up of Installed Power Capacity in Karnataka as of May 2013**

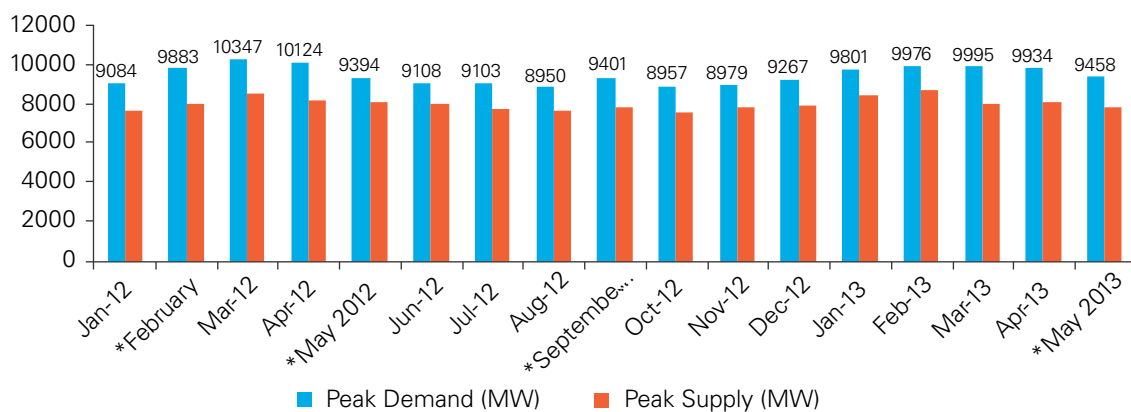


Source: Central Electricity Authority; YES BANK Analysis; \*Provisional Data

Karnataka has historically been a power deficit state with an average deficit of about 13% over the past three years. The average Peak Demand has been around 10,124 MW while the average Peak supply has been 8,761 MW. The state generally has depended either on the supply from central sources or Load Shedding to tide over the deficit. Availability of adequate and constant power has been a major issue for Industries as it impacts production directly and alternative sources of power, especially from captive diesel generators are economically unviable.

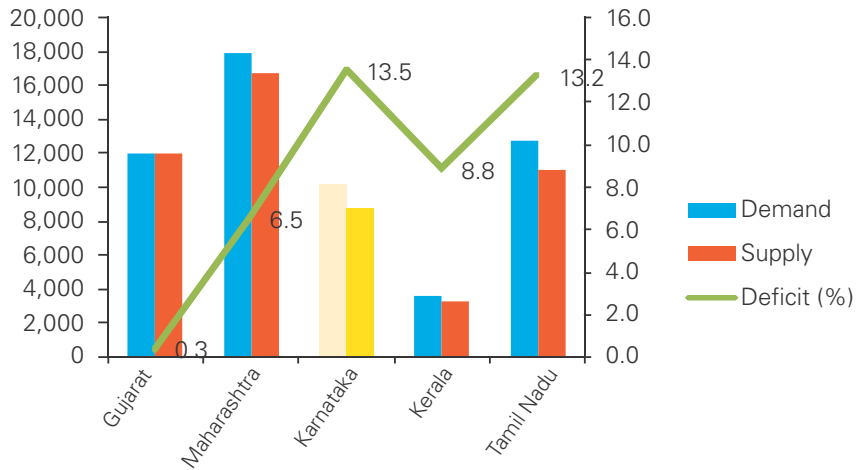
Currently Karnataka is in the bottom 8 states facing power deficit at 13.5% for 2012-13. Therefore addressing the Power situation is an important priority for the state.

**Figure 25: Trends in Peak Demand and Peak Supply of Power in Karnataka**



Source: Central Electricity Authority; YES BANK Analysis; \*Provisional Data

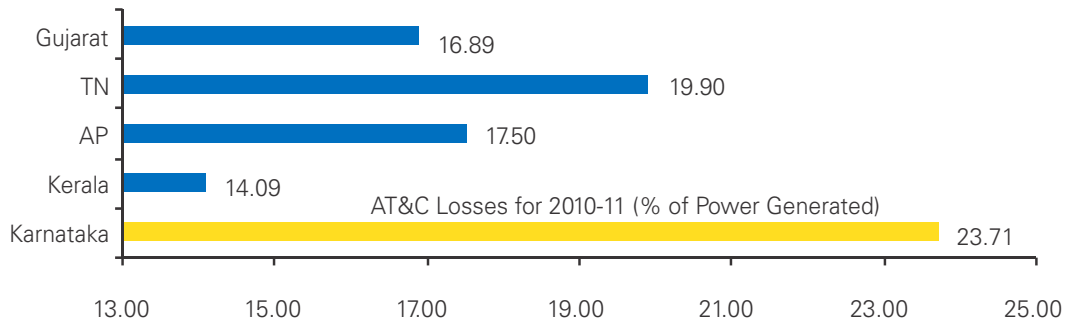
**Figure 26: State-wise Power Demand-Supply & Deficit (%)**



Source Crisil Research, YES Bank Analysis

Transmission & distribution losses / Aggregate Technical & Commercial (AT&C) losses in Karnataka are also on the higher side among developing states in the country. As per CRISIL data & YES Bank analysis, AT&C losses for Karnataka for 2010-11 were 23.7% that is a loss of close to 1/4th of the entire power generated.

**Figure 27: AT&C Losses**



Source Crisil Research, YES Bank Analysis

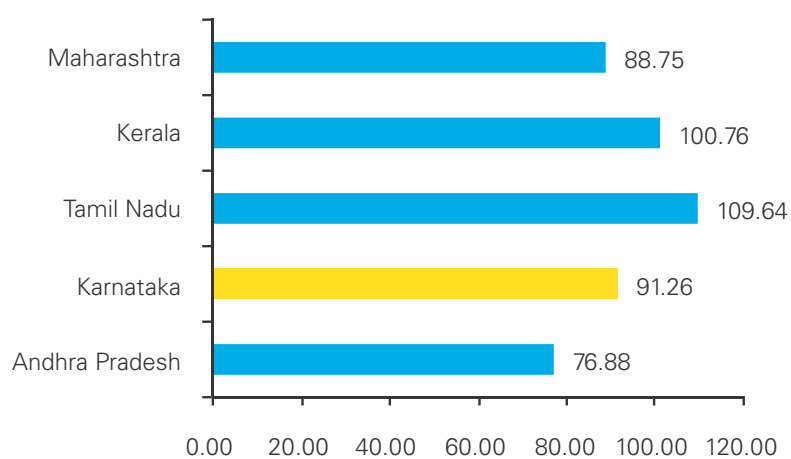
Power is the life line of any industry and lack of adequate and consistent power will not only hold back the manufacturing sector but also discourages entrepreneurs and industrialists to setup new factories & establishments in the state.

While ramping-up the implementation of power projects in the state can be an immediate focus, introduction of investor friendly policies specially in the Renewable Energy sector, improving the financial conditions of distribution companies and prompt action in curbing Aggregated Technical & Commercial (AT&C) losses to best possible extent will encourage private participation & attract fresh investments in the Power sector.

## Telecommunications

Karnataka has good telephonic connectivity with a Wireless Subscriber base of 52.78 Million (as on December 2012) and Wireline subscriber base of 2.7 Million (as on December 2012). Most of the leading operators including BSNL, Bharti Airtel, Tata Teleservices, Reliance and Vodafone offer fixed wire line connections in the state.

**Figure 28: Comparative Analysis of Tele Density**



Source: Ministry of Telecommunication; Govt. of India; YES BANK Analysis; \*Provisional Data, TRAI - Telecom Regulatory Authority of India.

Karnataka enjoys a Tele-Density (no of connections per 100 people) of 91.26.

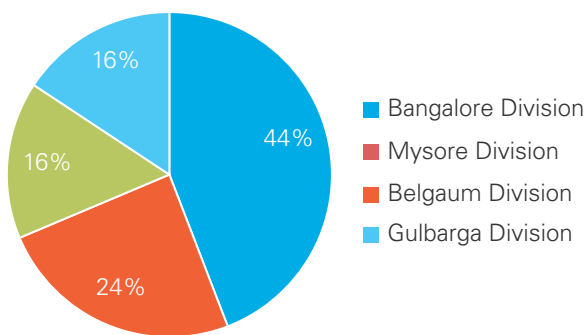
**Table 5: Karnataka Telecom Statistics**

State	Wireless Subscriber base, Dec 2012 (in millions)	Overall Tele-density, Dec 2012
Maharashtra	66.85	88.75
Karnataka	52.78	91.26
Kerala	32.25	100.76
Tamil Nadu	73.28	109.64
Andhra Pradesh	63.93	76.88

## Industrial Areas

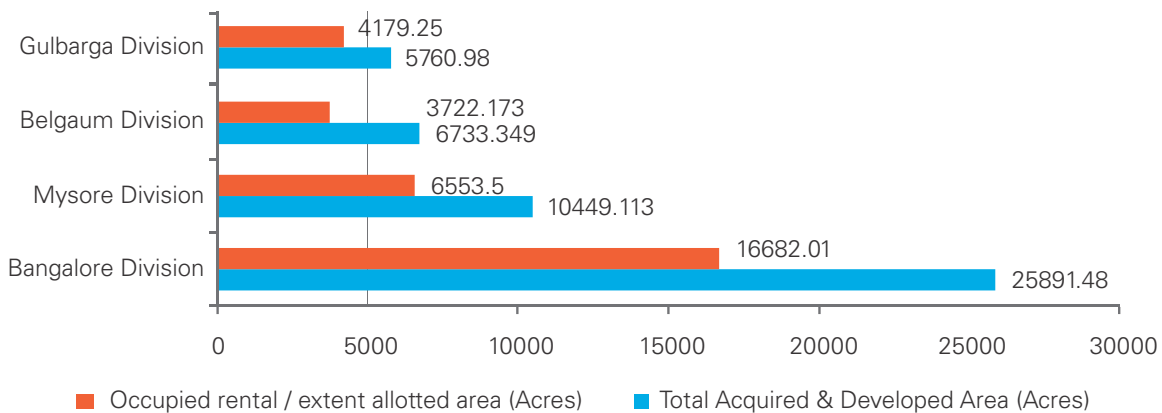
Industrial Infrastructure projects require land available at the earliest. Therefore Government of Karnataka Constituted the Karnataka Industrial Areas Development Board (KIADB) to proactively identify land for industrial development. We have analyzed the Industrial Areas in Karnataka bifurcated in terms of the four divisions to showcase the geographic spread of industrial area development in the state.

**Figure 29: Distribution of Industrial Estates**



Bengaluru Division leads in terms of Industrial estates as well as total area. This is clearly in line with our earlier inference on geography-wise GSDP distribution in the state. Bengaluru division also shares the maximum area in terms of total industrial area developed & occupied in Karnataka.

**Figure 30: Status of Industrial Areas in Karnataka**

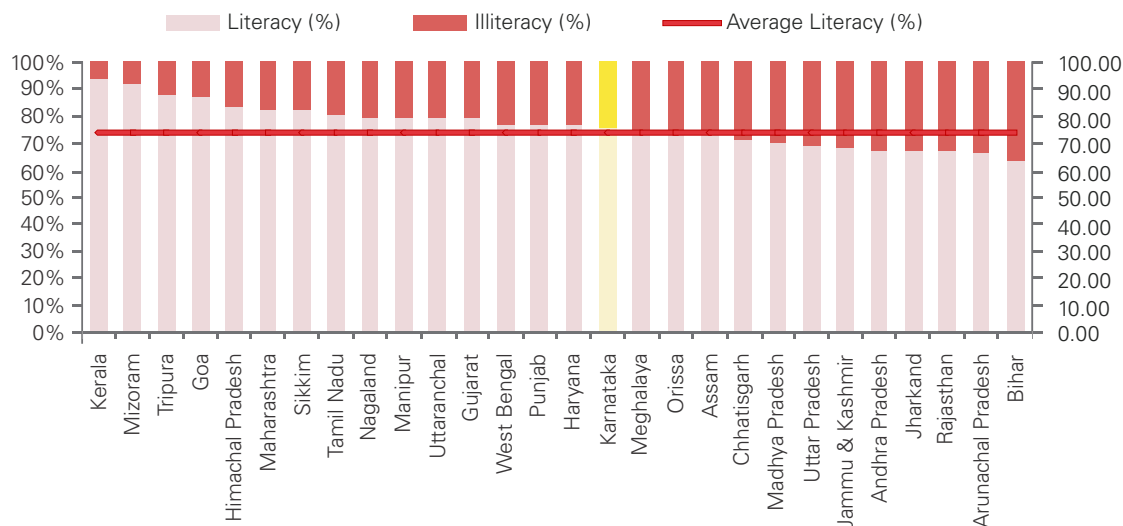


Source: Government of Karnataka; YES BANK Analysis

## Human Resource Development

Human resources play an important role in the development of an industry. Skilled manpower is needed to fuel growth. Karnataka's literacy rates are on par with the national average at about 74.04%, which stands at 16th place in the country of 28 states.

**Figure 31: Distribution of Literacy in India**



Source: CRISIL; YES BANK Analysis

As per the 2011 report of Planning Commission, Karnataka's Human Development Index is 0.519 ranking 12th in the country and about 25% of the state's population living below the poverty line. The incidence of poverty is even higher in urban areas compared to rural areas. From a social development perspective this anomaly represents the inadequacy of the urban systems to provide quality living standards and opportunities to people. On the other hand, this may also be interpreted as lack of employable skill among the Urban Poor. The National Skill Development Council<sup>16</sup> reports indicate that between 2012 and 2022, an incremental demand of 8.47 million people across the spectrum of minimally skilled to highly skilled will be generated in Karnataka. However on the supply side, about 8.16 million people are expected to join the workforce representing a gap of 0.31 million.

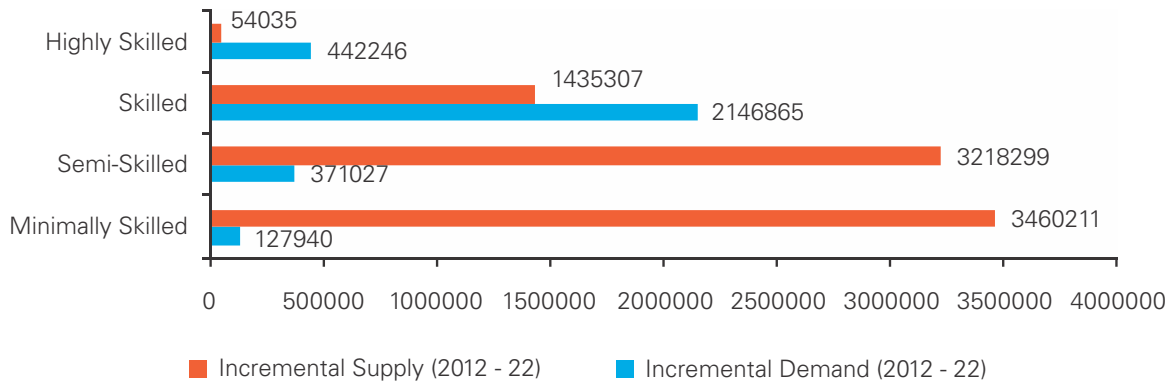
Further, the skill gap report project a wider skill gap in the "Skilled" & "Highly skilled" categories, implying that the demand for people with these skills is far more than the supply. On the other hand there is a huge supply of "minimally skilled" and "Semi skilled" people with a corresponding lesser demand than supply. Such scenario can lead to high degree of unemployment in the "Semi skilled" & "Minimally skilled" categories and result in unfilled jobs in the "Skilled" and "Highly skilled" categories.

Planning for capacity building at this stage can help us address such anomalies at a later date. Providing the right momentum for skill development through special state programs over a 5-7 year period for all skills categories, but with special focus on "Skilled" and "Highly skilled" categories can ensure that the economic growth in Karnataka does not starve for appropriately skilled manpower.

<sup>16</sup> <http://www.nsdcindia.org/pdf/karnataka-sg.pdf>



**Figure 32: Skill Demand – Supply Gap Analysis for Karnataka**



Source: National Skill Development Council Report

## 4 Way Forward

Karnataka is undoubtedly one of the leading states in the country in terms of growth and the availability of the right ingredients needed to support it. But certain challenges that lay in its path needs attention and resolution, which could help the state position itself on a faster & more efficient growth trajectory.

Based on the data & analysis presented, the report identifies few suggestions that broadly can align with the government's objectives in developing the Industrial Eco-system in the state. These suggestions also aspire towards a balanced socio-economic development in the state.

### 1. Infrastructure focus

- a. A basket of important PPP projects in the state can be studied, listed and prioritized based on developmental requirements of the state and bankability of the projects, creating a healthy pipeline of projects.
- b. Focus on 4/6 laning of existing road network, for improving road connectivity
- c. Fast tracking implementation of Power projects with special thrust on promoting Renewable energy by introducing innovative investment friendly schemes
- d. Improving the Transmission & Distribution of Power (T&D) efficiency in the state to optimize AT&C losses.
- e. Developing solution for improving Port Connectivity & developing other minor ports
- f. Study the feasibility of a dedicated freight corridor through the state

### 2. Thrust on developing Manufacturing sector

- a. Time bound execution & special monitoring mechanism for implementing National Manufacturing Policy in the state.
- b. Fast tracking of any clearances, approvals relating to Manufacturing sector and projects in it.

### 3. Fast Pacing of Implementation of Schemes/ Projects

Time is one of the most crucial resources, which often is also the deciding factor in maintaining investor interest. Some pointers that could facilitate faster implementation of schemes & projects include -

- a. Having time-bound targets for each milestone in the implementation process. All clearances, facilities and infrastructure (incl. land) can be facilitated within a specific time frame. Escalation mechanism can be triggered in case the milestones are missed, ensuring faster resolution.
- b. For projects, all the necessary clearances and approvals, including a rating on its bankability can be obtained prior to initiating the bidding process. This would save a lot of time and resources resulting in faster implementation and time-bound commissioning.
- c. A special dispute resolution mechanism with ability to fast track resolution of disputes that hamper project progress can be formed, aiding in faster decisions and dispute resolution.
- d. A special team that can advise investors and help them at each step from conceptualizing a project to commissioning and operating it can be formed. Such a team would be effective in disseminating accurate information to the investors and ensure faster compliances. The same team can also advocate issues and concerns on behalf of investors within the government and pursue them till resolution.

### 4. Balanced Regional Growth

To increase development in other regions of Karnataka, non-Bengaluru divisions, i.e. Gulbarga & Belgaum can be focal points for fresh developments. The latent potential & inherent strengths of these regions can be studied in detail. Basis their potential, these regions can be developed as strategic clusters for sector specific development. Improving the connectivity in the regions can also boost their acceptance.

### 5. Balanced Sector Focus

The Economy of Karnataka needs to plan their journey back from Service driven economy towards a more balanced configuration of Primary, Secondary & Tertiary sectors. The next five year can lay emphasis on promoting the Manufacturing, Construction, Agriculture and allied sectors. This could be supported by time-bound implementation of National Manufacturing Policy and a special focus on Capital Good industry which has the potential for creating a multiplier effect on sector's growth and its job-creation ability

## 6. Generating Skilled Manpower

- a. Initiatives in addressing skill gaps with special focus on addressing the skill gaps in “Skilled” & “Highly-skilled” categories can be introduced.
- b. Industry can be actively engaged in addressing skill gap in the state by framing innovative schemes & incentives to attract them.

## 7. Supporting Sustainable Development –

- a. Special incentive packages can be awarded to project in any sector that have low carbon foot-print & high sustainability quotient. This would encourage investors to comply with Sustainable goals

## 8. Fast pacing the development of growth corridors

Bengaluru Mumbai Industrial Corridor (BMIC)

- a. Developing a detail concept & conducting pre-feasibility study on the BMIC corridor, initiating discussions to form an appropriate institutional framework, setting key developmental goals & milestones for the corridor to achieve and working towards financial adequacy for financing the projects in the corridor, will help fast-tracking this visionary growth project.

5

## Bengaluru Mumbai Industrial Corridor – *a concept*

In the current phase of development that the world is experiencing due the rapid advancement in technology, improvements in efficiencies and increasing competition among economies, it is imperative to grow & lead the economic race. For a country like India, ranking 132<sup>nd</sup> in the recent World Bank survey on “Ease of Doing Business”, the race is no less than a marathon. Five of the eight countries in South Asia fair better than India, with only Bhutan & Afghanistan lagging. However a resource rich nation like India can surely script a stupendous growth story. India is one of the largest economies in the world with one of the largest working population base being educated from one of the most competitive education system and with a natural history of enterprising people. It is imperative now to PLAN OUR GROWTH. Envisioning corridors of growth is one huge leap in this direction.

The vision of BENGALURU-MUMBAI INDUSTRIAL CORRIDOR is one testimony towards our planned growth. Predicting its socio-economic impact at this point is unlikely, but considering the magnitude of investments possible, resource availability and the fact that it passes through two of the largest & most resourceful states of India, namely, Karnataka & Maharashtra, it can be estimated to contribute to over 10-12% of the country's GDP and employing about 7-10% of India's working population, contributing to about 12-15% of India's export revenues. This socio-economic boom can also be planned to lay on principles of Sustainability, thus impacting positively on improving environmental & ecological balance with more planned cities, townships, infrastructure and growth clusters.

Bengaluru Mumbai Industrial Corridor will help develop an action plan to address growth related challenges including these. Broadly, the goals that the corridor can broadly align with the state's growth agenda to include

- Achieve balanced growth across key sectors
- Promote niche growth sectors like Electronics System Design & Manufacturing (ESDM) & lateral sectors like Education, Research & Development, Healthcare
- Balanced development across the state
- Prioritize creation & development of infrastructures – Connectivity, Communications, Power, Water
- Prioritize Manufacturing with special focus on Capital Goods industry

- Create over 50 Lakh employment opportunities by 2023 by special focus on employment demanding sectors

It can also set certain economy milestones and frame a plan to achieve them -

- Karnataka GSDP to touch USD 250 Billion by 2023
- Contribute to 15% of country's GDP by 2023
- Contribute to over 18% of country's export revenue

The corridor can largely be focused along the national highway network in Karnataka. NH 4 is the longest and one of the most important national highways in Karnataka. It connects 9 districts from the northern most Belgaum district to southern eastern tip of Karnataka, Bengaluru. Most of 14 other national highways with a total length of 4396 Kms in the state connect NH4, naturally positioning as the back bone of the corridor. The Mangalore port is connected to Bengaluru by NH48 and it is also connected to other parts of the state by NH13 & NH17.

**Figure 33: Map of NH4 in Karnataka**

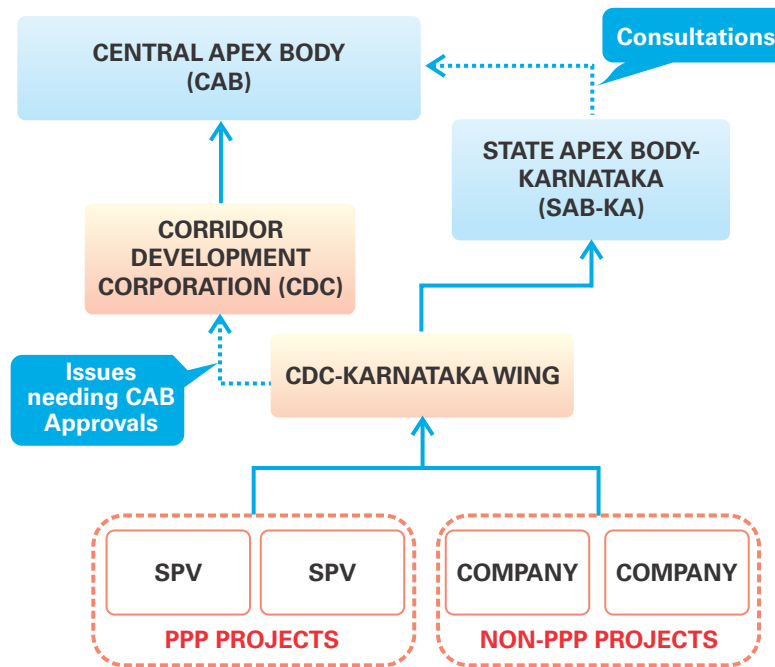


The stretch also NH4 also hosts 3 important airports, one of the most important broad gauge railway line connecting Bengaluru to Mumbai/ Pune via Belgaum and also synergizes broadly with other developments planned in the state. This zone currently hosts close to 50% of all industrial areas developed by KIADB in Karnataka.

Drawing from the learning of the Delhi-Mumbai Industrial Corridor, it would be imperative for key stakeholders to collaboration and form the appropriate institutional framework needed for planning, executing & monitoring activities of this magnitude and impact. An indicative institutional structure could be headed by Central Apex Body (CAB), headed by a key central minister & constituted by important ministries from central government, Chief

Minister of Karnataka & Maharashtra. A relevant State Apex Body (SAB) would be formed for each state headed by the relevant state Chief Minister. SAB would coordinate with CAB for relevant clearance, approval and discussions/ guidance. An executing body equivalent to a Corridor Development Corporation (CDC) shall be formed with a state focused wing operating in each state. The state focused wing would coordinate with SAB for necessary approvals, clearance, requirements and provide operational updates. State specific CDC would coordinate with Central CDC for any operational approvals and coordination necessary at the central level. State CDCs would coordinate the implementation of all projects in the state, both on a Public-Private-Partnership (PPP) basis and non-PPP/ EPC/ Other projects, which would need Government's intervention.

**Figure 34: Indicative Representation of BMIC Institutional Framework**



From a financing perspective, an Industrial corridor is an Ultra – Mega project encompassing various Industrial parks, townships and utilities. Each of these projects is large on its own scale. It would be too early to estimate the scale of investment requirements and therefore evolving a structure would be impossible without understanding the plans & project.

Without a mention on Sustainability, the idea of developing a mammoth corridor would be incomplete, more so, when Sustainable Development is one of the key issues facing governments today. While growth increases the economic activity it also impacts the environmental diversity. A fine balance needs to be followed in achieving growth. This requires considerable introspection and developing a Program Management framework for monitoring project implementation at all levels.

# 6 Annexures

## Annexure1: Roadways of Karnataka



Source: [indiamapsonline.com](http://indiamapsonline.com)



## Annexure 2: Karnataka Railway Map



Source: indiamapsonline.com

## Annexure 3: Key Policies

Some of the Government's Key Policies are enumerated as under.

### A. Industrial Policy of the Government of Karnataka – 2009-2014

A brief overview of some of the key features of the present industrial policy of Karnataka is as follows

- a. Streamlining Land Acquisition Process
  - Primary objective is to provide investors with readily available land to setup industries with minimal delays and bottlenecks
  - Only dry land and single crop land will be acquired for industrial purposes.
  - The relief and rehabilitation packages will be evolved to compensate land owners. This includes monetary payouts, equity participation in project etc.,
- b. Management of Industrial Estates
  - Self management of industrial estates will be encouraged by expediting the formation of Industrial Township Authority in consultation with respective departments.
- c. Quality Infrastructure
  - Infrastructure, being an essential component of development, the government had promised to take numerous steps including developing the Suvarna Karnataka Industrial Corridor, geography and sector focused industrial parks, Food Parks and Aerospace parks etc.,
- d. Development of Special economic Zones
  - The State government will facilitate the development of SEZs by providing single point of clearance for all SEZ proposals in addition to providing attractive fiscal benefits to the developer
- e. Skill Development
  - Emphasis will be given for development of skilled manpower to complement industrial growth. Thrust will be on making women skilled for employment

f. Entrepreneurship Development

- Self – Employment of youth through entrepreneurship development will be encouraged through the CEDOK and Guidance Cell of DICs

g. Focus on MSME

- Cluster Development, Market development and Promotion will be supported by the state government through KCTU and DICs
- Further in the new industrial areas developed by KIADB at least 20% of the land will be reserved for MSMEs and a price preference of 15% will be allowed for goods manufactured by MSME units in purchases by Government departments.

h. Boosting Manufacturing Sector

- Manufacturing sector will be the Thrust area for developing the state economy and the government's efforts will be focused on reducing transaction costs for setting up large industries in the state

i. Export Promotion

- The State government through VITC will provide Market Intelligence, Finance, Export documentation and necessary help in certification to encourage and promote foreign exporters

j. Conserving Natural Resources

- Industrial Development of Karnataka will be facilitated with special emphasis on sustainability. Water conservation, Waste management, Non-Conventional sources of Energy will be encouraged.

## **B. Infrastructure Policy**

The Key Features of Karnataka's Infrastructure Policy includes

a. Efficient use of assets and allocation of resources

The government would focus on rationalization of projects and investment based on social need and economic viability

b. Payment for Services

The government recognizes the need for making projects economically viable by inculcation of provider and user charges

c. Contractual Structures

To implement and monitor projects efficiently, the government will set in place a project management structure appropriate for the nature of the project considering the various risks and mitigation measures

d. Procurement Process

Procurement and contract award would be purely on an eligibility & merit basis which is transparent and under the ambit of Karnataka Transparency in Public Procurement Act.

e. Regulatory Framework

The government will setup independent regulatory authorities for sector having monopolistic characteristics

f. Institutional Framework

The Infrastructure Development Department of the Government of Karnataka shall act as a coordinator and facilitator for various Infrastructure Projects in the state.

g. Incentives and Concessions

The Government in order to economize and Incentivize Infrastructure projects will allow under certain conditions subsidies and develop utilitarian services

### **C. Renewable Energy Policy - 2009-2014**

The renewable energy policy of Karnataka is aimed at promoting wind power, Hydro, Co-generation, Bio-mass, Bio-gas, Solar, Municipal Solid waste, and Tidal Wave energy projects. The policy aims to achieve 6600MW capacity by 2014. To promote the renewable energy, the government has endorsed various means such as energy cess, Green energy fund, providing land etc.

### **D. Tourism Policy – 2009-2014**

The tourism policy of Karnataka provides for various means of promoting through the following key elements 1. Road Connectivity 2. Tourist Destinations and circuit development 3. Promoting new tourism products 4. Cost effective accommodation for tourists 5. Diversifying principal source market and Streamlining.

## E. SEZ Policy

The SEZ policy of Karnataka focuses on the following points,

- Single point clearance - The state high level clearance committee will act as the single point of contact for all SEZ projects
- Land for SEZs - KIADB/Revenue Department may allot land subject to the approval of SHLCC especially dedicated towards SEZs
- Infrastructural facilities - The government will construct, and manage infra facilities including, roads, Power, Water, Port, Gas, Communication, Waste water and other services
- Labour related issues - All industrial units and establishments will be declared public utility service under the provisions of Industrial Dispute Act 1947.
- Fiscal Benefits.- Various benefits including stamp exemption, Electricity duty exemption, Labour welfare cess etc.,

Apart from the above government also has sector focused policies on Textile, Electronics Hardware, Information & Communications Technology, IT, Semiconductor, Fisheries, Grape processing, Bio Technology, Aerospace, Agribusiness, Animation & Gaming etc.,

## **Annexure 4: Key Government Initiatives Key for improving Investment Ecosystem**

### **a. Global Investors Meet (GIM)**

GIM is a biennial global summit organized by Government of Karnataka in Bengaluru aimed at bringing together Investors, business leaders, policy makers and thought leaders with a view towards catalyzing investments into Karnataka. The event is also aimed at being a networking opportunity for Industry captains and acts as a forum of change. So far the government has conducted two editions, one in 2010 and in 2012 successfully. It is pertinent to note that the GIM organized in 2012 saw total value of Investment MOUs/ Rols/ Eols signed at around 7.2 Lakh Crore with a potential to create around 12 Lakh jobs.

### **b. Suvarna Karnataka Development Corridor (SKDC)**

The SKDC is an effort by the state government to facilitate growth of focus sectors in high potential geographies by providing suitable infrastructure facilities. The Corridor proposes to cover 11 District headquarters and 20 major towns in Karnataka. According to Directorate of Industries, the following are the key geographies covered under SKDC.

- a. Bidar – Gulbarga – Bellary – Hiriyyur
- b. Tumkur – Honnavar via Shimoga
- c. Chitradurga – Mangalore via Shimoga – Udupi
- d. Chitradurga – Hospet – Koppal – Raichur
- e. Chitradurga – Hospet – Bagalkot – Bijapur

### **c. Cluster Development Initiatives**

The cluster development initiative of the Karnataka government is based on the positioning of related industries in close quarter geographies to achieve production and supply chain efficiencies. The initiatives are especially useful for MSME industries to achieve economies of scale. For large industries cluster development initiative can be useful in placing its vendors and subsidiaries close to the mother plant. The MSMEs can also make use of common facilities at the clusters thus reducing their cost of manufacturing.

The Karnataka council for Technological Upgradation (KCTU) is the principal authority for implementation and monitoring of the Cluster Development Initiative. Karnataka has about 26 MSME clusters in the state.

#### **d. Key Industrial Zones**

The Government of Karnataka keeping in mind the long term growth potential of various geographies in the state proposes to develop the following six sector specific industrial zones

1. Steel - Bellary, Koppal, Raichur, Bagalkot, Haveri
2. Cement - Gulbarga, Bagalkot, Chitradurga, Belgaum
3. Food Processing - Bengaluru Rural, Kolar, Shimoga, Bagalkot, Bijapur, Davanagere
4. IT/BT - Mysore, Mangalore, Hubli-Dharwad, Belgaum, Shimoga and Gulbarga
5. Automobile - Ramanagara, Shimoga and Hubli-Dharwad
6. Garment - Bengaluru Rural, Tumkur, Kolar, Mandya, Belgaum, Bidar, Dharwad

The Government of Karnataka proposes to develop the related infrastructure including roads, rail, power projects etc., along these industrial zones. Karnataka also has around 20 operational SEZs in the state with 15 more under implementation and about 7 more awaiting GOI clearance as on 2011.

## Annexure 5: Organizational Structure & approval process

Government is a key driver as well as stake holder in overall development. In the context of economic development, a Government's key task is to act as an intermediary and an enabler for industry to flourish in a steady and sustainable manner. The **Industries and Commerce (I&C) Department is the face of Government of Karnataka** focused on industrial and economic development in the state. The I&C Dept. encourages development through various Policy Initiatives, Institutionalization and Advocacy actions focused on facilitating investment and Trade in the state.

At the state level, the Directorate of Industries and Commerce functioning under I&C department is the nodal agency in formulating policy, program management of developmental schemes, Industrial promotion, and in implementing governmental orders. At the district level, it functions through district industrial centers and the industrial wing of the Zilla Panchayat. The directorate also functions through various boards and corporations under its control.

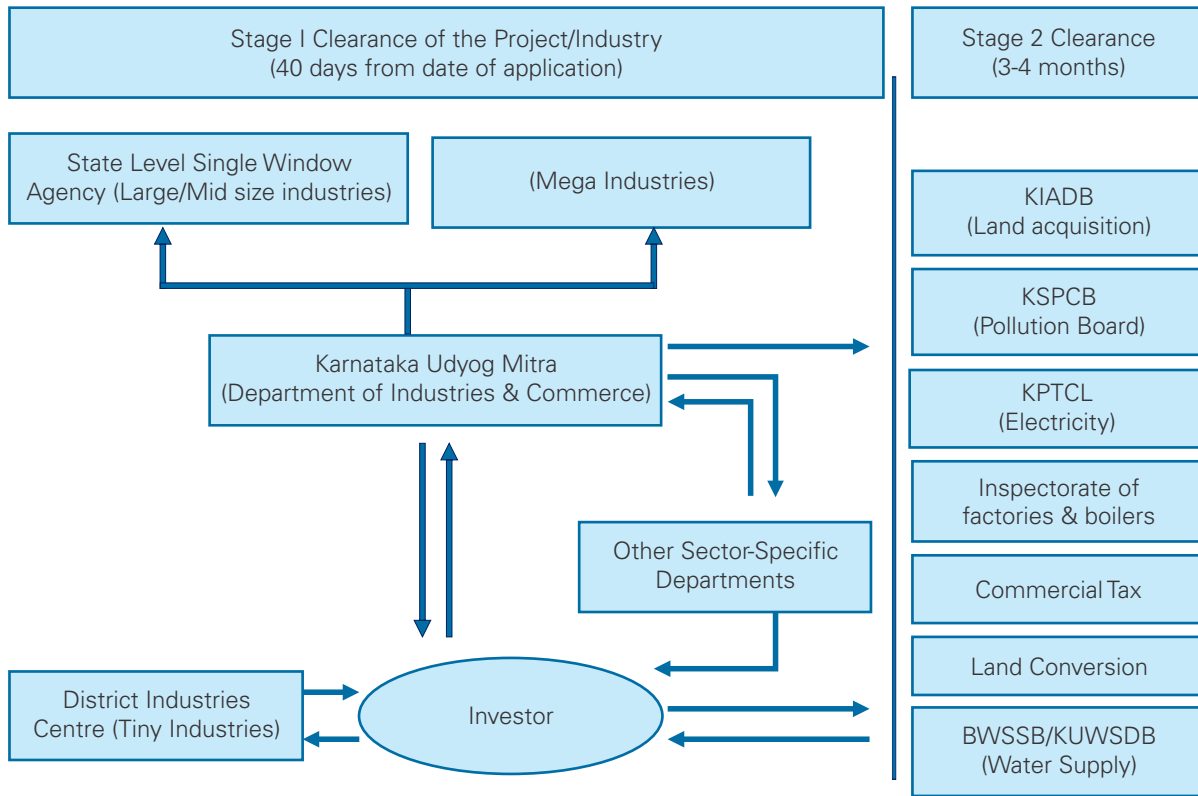
To better understand the working of the various governmental department towards setting up a business in Karnataka the below charts give the step by step process flow.



## List of Approvals and Clearances & Concerned Departments

List of Approvals & Clearances Required	Departments to be Consulted
<b>Prior to setting up the unit</b>	
Registration	Department of Industries and Commerce Department, Karnataka Udyog Mitra (SWA)
Allotment of Land/Shed	Karnataka Industrial Areas Development Board
Permission for Land Use	District Authorities
No objection certificate under Water and Air Act	Karnataka State Pollution Control Board
Approval for Construction activity and Building Plan	Development Authority/ Urban Local Body
No objection Certificate	Fire Department and Directorate of Factories and Boilers
Provisional Trade Tax Registrations	Central and State Excise Departments
Registration under Central Sales Tax Act	Central and State Excise Departments
<b>Before Commencement of Production</b>	
No objection certificate under Water and Air Act	State Pollution Control Board
No objection certificate	Fire Department and Directorate of Factories and Boilers
Permanent trade tax registration	Central and State Excise Departments
Registration under Central Sales Tax Act 1956	Central and State Excise Departments
<b>After commencement of production/ activity</b>	
Registration	Department of Industries and Commerce and respective sector departments such as IT/BT/Tourism etc

The approval process for setting up a business in Karnataka is captured in the figure below



Source: Kumbangalore.com; <http://www.kumbangalore.com/resourcepopup.aspx?pk=18>



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