

An Empirical Analysis of Sustainable Development and Economic Growth in Tumkur District In Karnataka.

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Abstract

India's economy will grow 7.5% in fiscal year (FY) 2022 and 8% in FY2023, supported by increased public investment in infrastructure and a pickup in private investment, (The Asian Development Bank (ADB) forecasts). 9.2 percent growth expected in real terms in 2021-22 GDP projected to grow 8.0-8.5 percent in 2022-23. At current prices, Karnataka's gross state domestic product (GSDP) is projected to be ~Rs. 18.85 trillion (US\$ 243.56 billion) in 2022-23. The state's GSDP increased at a CAGR of 8.79% between 2015-16 and 2022-23. In FY22 (until February 2022), the state's total exports has recorded US\$ 22.83 billion. In overall exports, key contributors were the sectors such as petroleum products, iron & steel and organic chemicals. Karnataka has vibrant automobile, agro, aerospace, textile and garment, biotech, and heavy engineering industries. The state has sector specific Special Economic Zone (SEZs) for key industries such as IT, biotechnology, engineering, food processing and aerospace. Karnataka is the IT hub of India & home to the fourth-largest technology cluster in the world. It has 34 operational SEZs, as of October 2020. Tumakuru is now a middle class majority city, with a literacy rate of 80%, mainly traders, government employees, small and medium industrialists, self-employed individuals etc. The GDP of Tumkur is around 6045184 Rs lakh (2019-20) and the total collection of income tax in the last financial year was approximately 800 million. Being an agrarian economy, the major plantation crops of Tumkur are coconuts and areca nuts. The major crops grown are paddy, ragi and groundnuts. Iron ore, manganese and granite are the major minerals found in Tumkur District. The Indian budget for 2014-2015 held on 10 July 2014 had announced that Tumkur is one of the cities in south India to be developed as an "Industrial Smart" city. The city was selected as one among the 100 in the country shortlisted for the Smart City project. Tumkur is competing now to be one among the 20 to be taken up for development. The government of India has promised 1 billion each as a matching grant for five years and the local Body with assistance from the state government has to match another 1 billion. The Research Methodology: Major objective of the study is to examine the sustainable development and economic growth in the economy of Tumkur district, Karnataka and Indian Economy.

Statement of the Problem

Tumkur district in Karnataka is having more number of Micro, Small, Medium and Large scale enterprises. Tumkur district is having emerging issues related to sustainable development and economic growth in Karnataka.

Researchable Questions

What are the emerging trends of the sustainable development and economic growth in the economy of Tumkur district, Karnataka and Indian Economy.

Research Gap

There has been studies conducted on sustainable development and economic growth in India. But none of the study systematically focused the emerging trends of the sustainable development and economic growth in the economy of Tumkur district, Karnataka.

Nature and source of data: The study conducted with the help of secondary as well as primary data. Implications of the study: With the help of this study it is possible to know about the emerging trends of sustainable development and economic growth specially in the economy of Tumkur district in Karnataka in Indian Economy .

Limitation of the Study: The study conducted only in Tumkur district in Karnataka. Hence, the results are more applicable to those areas where similar conditions prevail.

Conclusion: Karnataka has vibrant automobile, agro, aerospace, textile and garment, biotech, and heavy engineering industries. The state has sector specific Special Economic Zone (SEZs) for key industries such as IT, biotechnology, engineering, food processing and aerospace. . It is evident that in five years development to the tune of 10 billion will happen in Smart City. The Tumkur District Chamber of Commerce and Industry under the leadership of Surendra Shah, President 2014–16 is striving for the district to be developed as a knowledge industry new destination city (kind). Speciality of the district is the aspirational level of the citizens is very high.

Keywords: *Public investment, GSDP, Aspirational level , Special Economic Zone , Industrial Smart city.*

Introduction

India's economy will grow 7.5% in fiscal year (FY) 2022 and 8% in FY2023, supported by increased public investment in infrastructure and a pickup in private investment, (The Asian Development Bank (ADB) forecasts). 9.2 percent growth expected in real terms in 2021-22 GDP projected to grow 8.0-8.5 percent in 2022-23

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government of India has promised 1 billion each as a matching grant for five years and the local Body with assistance from the state government has to match another 1 billion. The Research Methodology: Major objective of the study is to examine the sustainable development and economic growth in the economy of Tumkur district, Karnataka and Indian Economy.

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Analysis of the Results

The Study examined the feasibility of decentralized energy options for the Tumkur district in India. Decentralized energy planning (DEP) involves scaling down energy planning to subnational or regional scales. The important aspect of the energy planning at decentralized level would be to prepare an area-based DEP to meet energy needs and development of alternate energy sources at least-cost to the economy and environment. The geographical coverage and scale reflects the level at which the analysis takes place, which is an important factor in determining the structure of models. In the present work, DEP modeling under different scenarios has been carried out for Tumkur district of India for the year 2020. DEP model is suitably scaled for obtaining the optimal mix of energy resources and technologies using a computer-based goal programming technique. The rural areas of the Tumkur district have different energy needs. Results show that electricity needs can be met by biomass gasifier technology, using biomass feedstock produced by allocating only 12% of the wasteland in the district at 8 t/ha/yr of biomass productivity. Surplus electricity can be produced by adopting the option of biomass power generation from energy plantations. The surplus electricity generated can be supplied to the grid. The sustainable development scenario is a least cost scenario apart from promoting self-reliance, local employment, and environmental benefits. (2010 American Institute of Chemical Engineers Environ Prog, 2011:N.H.Ravindranath).

Karnataka is among the Top 5 states in India and has demonstrated strong growth over the years. Its per-capita Gross State Domestic Product (GSDP) of INR 3.05 lakhs (estimated for FY 22) is the highest among the Top 5 states. A standout feature of the state economy is it has the highest share of services in the Gross State Value Added (GSVA) of 66.1% in FY 22(E)—the highest among all states, a product of its robust IT services industry and other technology-driven areas. Karnataka is also a major job producer, having produced 10% of the formal jobs in the country while contributing 8.8% to the national Gross Domestic Product) and constituting less than 5% of the population. Karnataka has certainly done well in the past but now, post the COVID-19 pandemic and the resulting recessionary effect, there is a need to re-orient its strategies by studying the particular needs of its citizens, its demographics, and its sectoral composition. Every state must do this now. Karnataka can be a leader to demonstrate to other states how a high-growth strategy can be formulated based on data analysis..

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Advanced estimates of Karnataka’s GSDP in nominal terms for FY 22 is INR 20.5 lakh crore, up from INR 17.31 lakh crore in FY 21. It is contributing 8.8% to the national GDP of INR 232.15 lakh crore in FY 22. The state grew by 7.2% in nominal terms during the pandemic-struck FY 21, compared to -3% recession of the national economy. In FY 22, Karnataka is estimated to grow at a robust growth rate of 18.4%, compared to 17.5% for India.

Table 1.1: Gross State Domestic Product at current prices of Karnataka state, with composition of GSDP and per-capita GSDP from FY 17 to FY 22 Gross State Domestic Product (INR lakh crore)

Product Sector	2016—17	2017-18	2018-19	2019-20(SRE)	2020-21 (FRE)	2021-22 (AE)	5-year CAGR FY 17-22
Agriculture	1.19	1.50	1.53	1.81	2.24	2.57	16.6
Industry	2.69	2.90	3.19	3.14	3.04	3.61	6.1%
Services	6.96	7.59	8.64	9.76	10.40	12.06	12.06
GSVA	10.83	11.99	13.36	14.71	15.68	18.24	11.0%
Net Taxes	1.24	1.34	1.40	1.44	1.63	2.25	----
GSDP	12.08	13.33	14.76	16.15	17.31	20.49	11.2%
Per-capita GSDP (INR)	1.86	2.05	2.25	2.44	2.60	3.05	10.4%
YoY growth rate	14.3%	10.4%	9.5%	8.4%	6.5%	17.4%	---

Source: Directorate of Economics and Statistics, Govt. of Karnataka

Composition of the Economy

Table 1.2 contains the contribution of each of the three major sectors—agriculture, industry and services, to the state economy. A standout feature of Karnataka’s economy is the significant contribution of the services sectors. Pre-pandemic, in FY 20, the services sector contributed 66.3% to GSVa, followed by 21.3% by the industry sector and 12.3% by the agriculture sector. The pandemic dampened industrial growth more than the other sectors. As a result, in FY 21, industrial share has decreased to 19.4%, while services remains at 66.3% and agriculture has jumped to 14.3%. Agricultural growth has been supported by favourable monsoons, significant budget spends and subsidies. This new composition with dampened industrial contribution has continued in FY 22. (Karnataka Economic Survey 2021-22).

Table 1.1: Composition of Gross State Value Added of Karnataka state over FY 20 and FY 21.

Product Sector %	GSVA 2019-20 %	GSVA 2020-21 %	GSVA 2021-22	5-year CAGR
Agriculture	12.3%	14.3%	14.1%	16.6%
Industry	21.3%	19.4%	19.8%	6.1%
Services	66.3%	66.3%	66.1%	11.6%
GSVA	100.0%	100.0%	100.0%	11.0%

Source: Directorate of Economics and Statistics, Govt. of Karnataka

Services

A significant pillar for Karnataka’s substantial services economy is the IT industry and the accelerating startup ecosystem. Indian software exports in the current FY is pegged to be USD 170 billion, of which Karnataka’s share is an estimated 38%. More than 21 lakh people are employed in the software industry with high paying jobs, centered mostly in Bengaluru city. Further, the state has more than 40 unicorns (companies with valuation of more than USD 1 billion)—42% of India’s total of 95 unicorns. It has 13,000+ startups today, many of whom proved invaluable in the country’s fight against the COVID-19 pandemic. Karnataka received more than USD 16 billion in FDI in the pandemic struck FY 21, signifying the potential of its technology-based growth engines.

Financial Services

The banking and financial services sub-sector under the larger services umbrella is a promising growth driver. Chapter 5 on “Banking and Financial Inclusion” analyses the banking system in Karnataka and makes some very interesting observations. India’s bank credit to GDP went up from 25% in FY 92 to 58% in FY 21. However, Karnataka’s bank credit to GSDP was only 40.5% in FY 21. Karnataka is a high-deposit and -savings state but bank lending is rather low and savings are lent elsewhere across India. This needs to be examined to increase bank lending in the state itself to accelerate growth. Industry The industrial sector in Karnataka has been a laggard, growing at only 6.1% CAGR over the last 5 years in GSVa, as against 16.6% CAGR for agriculture and 11.6% CAGR for services in the same period. This obviously has dragged down the growth rate for Karnataka and the creation of jobs. Industry as a segment of GSVa is 19.4% in Karnataka in FY21, lower than Gujarat at 48.2%, Tamil Nadu at 33%, and Maharashtra at 28.4%, which again shows that despite the high share of services there has been inadequate attention paid to industry.

An exhaustive analysis of industry is undertaken in Chapter 9 on “Industry, Innovation and Infrastructure”. Karnataka leads India in innovation with a score of 42.50 as per the India Innovation Index of NITI Aayog. It has a high share in total FDI into India and an 18%+ share in India’s exports. Karnataka offers reasonable

infrastructure for industry, but power consumption continues to stagnate due to the high cost of power for the industrial sector. In FY 17, power consumption was 54,183 million units (MU) and remained at 54,284 MU in FY 21 with almost stagnant power generation. Industry consumption has remained small at only 7,500+MU while agricultural consumption is nearly 3 times that. This needs a paradigm shift to increase industrial growth. Captive power generations seem to be the preferred source for industry. Karnataka makes up 20% of renewable power generation and has the highest solar installation capacity in India, which can be capitalized to Agriculture.

To accelerate agriculture sector growth, it is necessary to understand the trend of the sub-sectors. The Gross Value Output (GVO) of various crop segments in India is shown in Table 1.3 from FY 12 to FY 19. Cereals, growing at 8.2%, is the largest segment with INR 5.86 lakh crore GVO in FY 19 and consists of nearly half of the entire crop group shown with a GVO of INR 12.6 lakh crore. Most of these crop segments, cereals included, have a Minimum Support Price (MSP) guaranteeing a minimum income for the farmer and protecting their interests—farmers reportedly accrue 80-85% of the total price due to the MSP program which is marked close to the final market price.

Table 1.2: Gross Value Output of different crop groups at current prices in India.
GVO of different crop groups at current prices - India (INR crore)

Crop- group	2011-12	2013-14	2015-16	2017-18	2018-19	CAGR
cereals	3,36,359	4,22,128	4,31,970	5,23,810	5,85,544	8.2%
pulses	52,151	68,129	94,787	1,24,764	1,10,081	11.3%
oilseeds	1,06,654	1,32,506	1,23,411	1,48,484	1,52,730	5.3%
sugars	76,048	93,685	96,138	1,17,417	1,22,035	7.0%
fibres	81,944	87,847	70,845	88,392	84,563	0.5%
other crops	91,975	1,04,961	99,554	99,176	95,551	0.5%
by products	68,855	86,140	89,278	99,854	99,901	5.5%
other crops	91,975	1,04,961	99,554	99,176	95,551	0.5%
kitchen garden	5,107	7,295	8,123	9,673	9,579	9.4%
Total crop 12,59,982	8,19,094	10,02,690	10,14,105	12,11,570	12,59,982	6.3%

Source: Ministry of Statistics and Programme Implementation, GoI

It is clear from the above table that, Crops, however, are gradually becoming a smaller segment of the agriculture sector as a whole, as shown in Table 1.2. In FY 12, crops GVO was INR 8.2 lakh crore which amounted to 43% of the agri sector GVO of INR 19.1 lakh crore. This has gradually decreased to 33.8% of the agri sector GVO of INR 37.3 lakh crore in FY 19. Crops also has the lowest CAGR among the major groups—at 6.3%, compared to 11.2% for fruits & vegetables, 13% for condiments & spices, 13% for livestock and 17.6% for fishing & aquaculture. This signifies a shift in the food habits of Indians, and also that a larger share of farmer income is coming from non-cereal and non-crop sectors. These non-crop sub-sectors are growing rapidly, constituted 66.2% of the sector in FY 19, and do not have MSP. Farmers in these segments, reportedly, only accrue 30-35% of the final price. Facilitating better linkages between the farmers and agricultural producers with the markets through agritech startups will enable these fast-growing segments to rapidly increase incomes and value-adds. The scope for policy measure to increase farmer incomes by facilitating market linkages here is tremendous.

**.Table 1.3: Gross Value Output of different crop groups at current prices in Karnataka.
GVO of different crop groups at current prices - Karnataka (INR crore)**

Crop- group	2011-12	2013-14	2015-16	2017-18	2018-19	CAGR
cereals	15,103	17,816	16,436	20,540	20,899	4.7%
pulses	3,279	5,416	6,381	7,906	8,570	14.7%
oilseeds	5,465	6,719	6,443	8,161	8,426	6.4%
sugars	6,045	8,799	12,523	10,306	14,127	12.9%
fibres	2,500	4,600	2,616	4,251	3,801	6.2%
other crops	1,584	2,160	2,174	2,399	2,370	-5.9%
by products	2,729	3,052	3,302	3,118	3,055	1.6%
kitchen garden	284 414	441 540	501 8.4%			

GVO of different crop groups at current prices - Karnataka (INR crore).

It is clear from the above table that compound annual growth rate of cereals has recorded 4.7 per cent, pulses has recorded 14.7 per cent, oilseeds has recorded 6.4 per cent, sugar has recorded 12.9 per cent, fibres has recorded 6.2 per cent, other crops have recorded -5.9 per cent, by bproducts has recorded 1.6 per cent.

Table 1.4: Per-capita development expenditure trends in Karnataka state from FY 18 to FY 22 (BE)

Sl. No.	sSectors	2017-18 (A/Cs)	2018-19 (A/Cs)	2019-20 (A/Cs)	2020-21 (RE)	2021-22 (BE)
D (41% of C)	Weighted Common Development (INR crore)					
1)_	Agri/Rural Sectors	22,173	26,544	21,127	21,261	23,018
2)	E Other Sectors(59% of C)	31,907	38,197	30,403	30,595	33,124
	Development Expenditure (INR crore)					
	Agri/Rural Sectors (A + D)	69,554	87,469	82,957	79,538	81,296
	Other Sectors (Popn. 3.93 crore)	16,093	17,320	17,188	17,031	

Source: Planning Department, GoK

It is clear from the above table that per capita developmental expenditure has increased from 2017-18 to 2021-22.

Table 1.5: Expenditure trends in Karnataka state for education and health sectors in FY 12 & FY 22 (BE)

Year	2011-12	2021-22 (BE)
Education		
Karnataka	14.7%	11.8%
All States	Avg 16.3%	13.9%
Health		
Karnataka	3.9%	5.0%
All States	Avg 4.2%	5.5%

Source: Reserve Bank of India

It is clear from the above table that in Karnataka expenditure on education has decreased and the expenditure on health has increased.

Conclusion: Karnataka has vibrant automobile, agro, aerospace, textile and garment, biotech, and heavy engineering industries. The state has sector specific Special Economic Zone (SEZs) for key industries such as IT, biotechnology, engineering, food processing and aerospace. . It is evident that in five years development to the tune of 10 billion will happen in Smart City. The Tumkur District Chamber of Commerce and Industry under the leadership of Surendra Shah, President 2014–16 is striving for the district to be developed as a knowledge industry new destination city (kind). Speciality of the district is the aspirational level of the citizens is very high. The Tumkur district has showed remarkable progress in terms of education, access to health services, performance of agricultural sector, industrial sector and service sector.

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