

SUSTAINABLE DEVELOPMENT IN GUJARAT: AN OVERVIEW

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ABSTRACT

Sustainable development can be understood as the integration of economic growth, enhancement of social welfare along with protecting and conserving the environment from degradation. This article exemplifies the sustainable development in Gujarat. It has recorded an extraordinary economic performance in the past decade yet its industry nor agriculture has its position completely changed. The only vivid difference has been the materialization of import dependent and export-oriented petroleum refining, which has few connections with the state economy. While in the past decades, the social development of Gujarat continues to lag behind its economic development. But in terms of infant mortality rate, literacy rate and life expectancy its performance has only been modest. Its place in social development is only slightly better than that of the India's average, ranking seventh in PQLI among the major states in 2001 and 2011. The study suggests that the state should develop in a way that preserves its environmental resources for the next generation. It should preserve its air quality, its water quality, its soil quality and its forests. To manage air quality it should use both command and control as well as emission charge policies with possibilities of offsets and trade.

Keywords: Sustainable Development, Social Sustainability, Economic Sustainability, Environmental Sustainability, Physical Quality of life Index.

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1. INTRODUCTION

"You have to decide whether development means affluence or whether development means peace, prosperity, and happiness." (Sunderlal Bahuguna, 1973)

Sustainable Development, along with its growing significance on national and international level has emerged as the latest development axiom. It has been embraced by myriad economists, environmentalists, ecologists and business professionals as a new paradigm of development. However concerns regarding sustainable development are often traced back to economists like Thomas Robert Malthus (1766-1834) and William Stanley Jevons (1835-1882) who were anxious regarding resources inadequacy, especially in the face of population rise (Malthus) and energy (Coal) shortage (Jevons). In the year 1972, Club of Rome Report *'The Limits to Growth'* was published (Meadows, 1972), that concluded the current trend in growth, food production, resources used and pollution continues, the carrying capacity of the earth would be exceeded within successive a hundred years. The result would be ecosystem collapse, famine and war. These were the great challenges and concern altogether over the globe. The conception was also taken by Herman Daly (1977), who propounded his *'Steady State Economics'* on the recognition of the absolute limits to economic growth.

The term Sustainable Development was first used when the International Union for Conservation of Nature and Natural Resources *'The World Conservation Strategy'* was held in Stockholm, (IUCN, 1980). The concept of sustainable development is of recent origin, but an acknowledgement for originating the sustainable development concept is generally given to the 1987 report of the *World Commission on Environment and Development* (WCED, 1987); that was created in the year 1983; popularly known as the *Brundtland Commission*,(1983); to discourse the problems related to depletion of natural resources continuously and unsustainable development. The commission's report, *'Our Common Future: From One Earth to One World'*, called for encourage and dramatically new conceptions of development that advanced the material wants of the present generation without depriving future generations of the resources needed to satisfy their wants. Therefore, the commission conceptualized "*Sustainable Development*" in a very simple way, as *sustainable development refers to the development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs* (WCED, 1987).

In the year 1992, the representatives of various nations set out the principles of sustainable Development at Rio de Janeiro of Brazil well known to as the *World Summit*. Generally, it's accepted that sustainable development incorporate a convergence between the three fundamental pillars *i.e.* social and economic development coupled with environmental preservation and protection. Hence sustainable development implies economic growth beside with the protection of environmental damage and of its quality, each reinforcing the other. Sustainable Development is maintaining a proper balance between the human need to improve lifestyles and feeling of well-being, and protecting natural resources and ecosystems, on which we have a tendency to and our future generations rely.

Gujarat has recorded an extraordinary economic performance in the past decade. Although a vigilant analysis has proved that Gujarat, one of the prosperous states, has done no better than before. In neither industrial nor agricultural has its position drastically changed. But the only vivid difference has been the emergence of import-dependent and export-oriented petroleum refining, which has only some links with the state economy. Since in the past decades, the social development of Gujarat persists to lag behind its economic development. The present study exemplifies the overall development in the state and suggest the policy makers to make policies and took decisions for achieving sustainability in the state.

2. A BRIEF PROFILE OF GUJARAT

Gujarat, the state of the father of the nation Mahatma Gandhi is one of India's most rapidly progressing states in recent times. Gujarat is one of the richest states in the country. It contributes to about 8 percent of the total domestic output of all states. The state has seen tremendous growth both in infrastructure and revenue from different fields like agriculture and technology. It is one of the prosperous states in terms of per capita income of the country.

Table No 1 Gujarat's Share in India

S. No.	Particulars	Percent
1	Population	5%
2	Geog. Areal	6%
3	No.of Factories	10.50%
4	Net Value (Manufacturing)	12.70%
5	Value of output	17.25%

6	Fixed capital Investment	16.92%
7	Export	24.60%

Source : CMIE, ASI 2010-11 & Economic survey 2011-12.

Gujarat's per capita income was Rs. 89668 in 2011-12 is above the all-India average. With a decadal growth rate of more than 10 percent during 2001-2011, the state of Gujarat has come to establish itself as a strong growth engine for the country. Gujarat is very much urbanised with 42.6 percent of its people living in towns and cities, whereas the national average is only 31.2 percent. Table 1 shows that Gujarat includes in its accounting for about 5 percent of the country's population and occupies 6 percent of geographical area, the state has transformed into one of the fast growing state economies, overwhelming its limitations in resource base and its climatic constraints. The state now contributes more than 7 percent to India's GDP; in particular, it for 12.70 percent of manufactured and 11 percent of primary sector output of the country. Also, at the micro-level, the state records a per capita income of Rs 89,668 as on 2011-12, which is above the level of national average of Rs 61,564 for the same year, indicates that benefits of growth are reaching at the individual level. This update broadly covers the current economic scenario in the state of Gujarat along with the government's performance in terms of fiscal management; the state recently having announced its budget for 2013-14. It also shows that state has 10.5 percent of total no of factories and about 17 percent of total fixed capital investments are made in the state.

Table No 2 Gujarat's Contribution to the Nation

S. No.	Particulars	Percent	S. No.	Particulars	Percent
1	Soda Ash	98%	6	Chemicals	51%
2	Diamond Export	80%	7	Groundnut	37%
3	Salt	75%	8	Cargo Handling	35%
4	Petroch-emical	62%	9	Cotton	31%
5	Crude oil (Onshore)	53%	10	Natural Gas (onshore)	30%

Source : CMIE, Socio-Economic Review-2011-12

Table 2 shows that Gujarat state has 24.6 percent contribution in terms of export oriented activities in the country especially diamond export, its contribution to the nation is 98 percent in terms of soda ash, 80 percent in diamond export, 75 percent salt, 62 percent petrochemical, 53 percent in terms of crude oil onshore etc. It also contribute 51 percent chemical production, 37

percent in groundnuts production, 35 percent in cargo handling 31 percent in cotton production along with 30 percent in natural gas onshore production. Hence it plays a vital role in the contribution to the nation among the states of the country.

3. SUSTAINABLE DEVELOPMENT IN GUJARAT: AN OVERVIEW

3.1 ECONOMIC SUSTAINABILITY IN GUJARAT

Registering an annualized growth rate of 9.1 percent (in constant terms, CAGR for the period 2008-11, Gujarat has realized a growth rate well above the national level growth rate of 8.2 percent for the same period. At current prices, GDP growth in the state has been shoot up, touching nearly 23.0 percent in FY11 and 15.3 percent in FY12 (against a high base of the previous year). While, budget estimates for 2013-14 suggest lower growth rates of 14.0 percent in FY13 and 14.5 percent in FY14, it reflects the impact of slowdown in overall economic activity in India rather than a weakening of fundamentals of the Gujarat economy, (Sabnavis and Subramanian, 2013).

Table No 3 GSDP by broad Sectors, Sectoral Contribution (in percent)

S. No	Industry	At Current Prices			At Constant Prices (2004-05)	
		2004-05	2010-11	2011-12	2010-11	2011-12
1	Primary	19.5	21.8	21.8	15.1	14.7
1.1	Agriculture	13.2	17.9	18.3	11.4	11.3
2	Secondary	36.5	36.8	36.8	40.4	39.3
2.1	Manufacturing	27.3	27.3	26.7	29.4	28.2
3	Tertiary	44.0	41.4	42.1	44.5	46.0
4	Total GSDP	100.00	100.00	100.00	100.00	100.00

Source: Socio- Economic Review, Gujarat State, 2012-13

Table 3 shows that Gujarat is being one of the major industrial and trade hub as well as a fast growing consumption state, it is bound to be impacted by such macro-economic constraints. Sectorally speaking, Gujarat has attained a balanced economic structure, along with the secondary and tertiary sectors together accounting for 78.2% as of 2011-12. Both these sectors have been supported by a strong infrastructure network in the state. It is noteworthy, that this drought-prone state has significantly improved its agricultural production. Share of primary sector in GSDP has risen to 21.8% in 2011-12 (19.5% in 2004-05). The state approach to

continues efforts, such as increasing reliable irrigation coverage, towards making agriculture self-sustaining as it has grown from 13.2 percent in 2004-05 to 18.3 percent in the year 2011-12. The contribution of secondary and tertiary sector shows stagnant during the period of 2004-05 to 2011-12. Table 4 shows that Gujarat has proved a tremendous growth in its GSDP during 2000-01 to 2004-05 from 1.16 to 21 percent respectively. But afterward it reveals that decrease in the growth continuously up to 11.73 percent in the year 2008-09. Further it increases up to level of 20.03 percent in 2010-11.

Table No: 4 Gross State Domestic Product (Rs. in Crore)

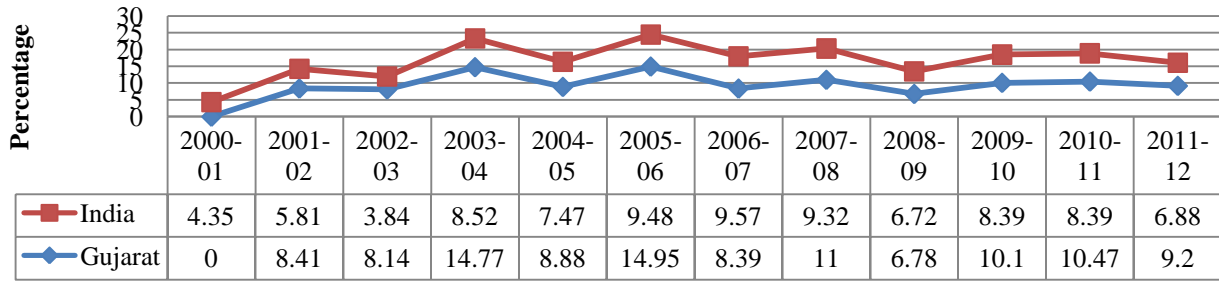
Year	Gujarat (in Crore)				India (in Crore)			
	GSDP at Current Price	% Growth	GSDP at Const. Price (2004-05)	% Growth over Prev. Yr	GDP at Current Price	% Growth	GDP at Const. Price (2004-05)	% Growth over Prev. Yr.
2000-01	111139	1.16	104494	(-4.89)	1925017	7.75	1864300	4.35
2001-02	123573	11.19	113277	8.41	2097726	8.97	1972606	5.81
2002-03	141534	14.53	122500	8.14	2261415	7.8	2048287	3.84
2003-04	168080	18.76	140598	14.77	2538170	12.24	2222758	8.52
2004-05	203373	21.00	203373	8.88	2971464	17.07	2971464	7.47
2005-06	244736	20.34	233776	14.95	3390503	14.1	3253073	9.48
2006-07	283693	15.92	253393	8.39	3953276	16.6	3564364	9.57
2007-08	329285	16.07	281273	11.00	4582086	15.91	3896636	9.32
2008-09	367912	11.73	300341	6.78	5303567	15.75	4158676	6.72
2009-10	427555	16.21	330671	10.10	6091485	14.86	4507637	8.39
2010-11	513173	20.03	365296	10.47	7157412	17.5	4885954	8.39
2011-12	611767 (Q)	19.21	398884	9.20	8279976	15.68	5222027	6.88

Source: Planning Commission, Government of India, 2012, and Socio-Economic Review of Gujarat State 2012-2013, (Q) = Quick Estimates

While the Gross Domestic Product of India shows a great fluctuation in its percentage change of growth. The GDP of India varies from 7.75 to 17.5 percent during 2000-01 to 2010-11.

Figure 1 Percentage Growth of GDP over Previous Year during 2000- 12 at Constant Price (2004-05)

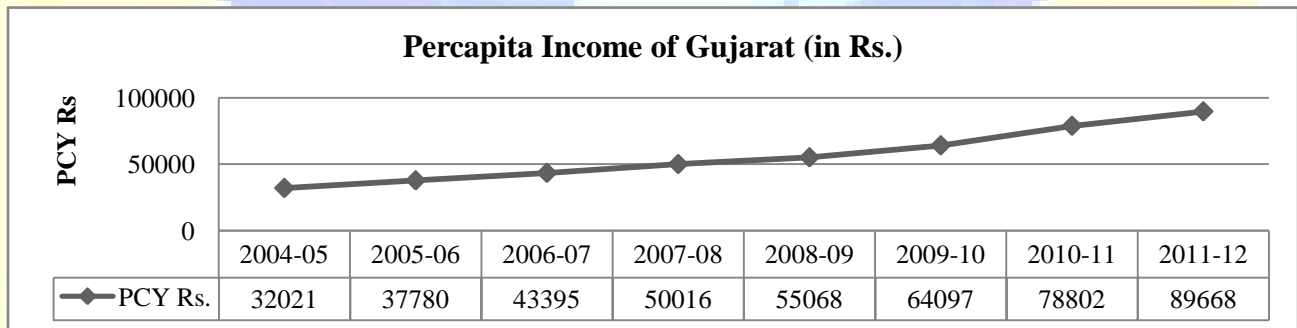
Percentage Growth of GDP over Previous Year during 2000-01 to 2011-12



Source: Based on Table No 4, Percentage growth of GDP over Previous year during 2000-01 to 2011-12 on the basis of Constant prices (2004-05)

The percentage change over previous year was lowest in the year 7.75 percent during 2000-01 whereas it was highest 17.5 percent in 2010-11. Similarly it increases first up to 17.07 in 2004-05 then after starts decreasing upto the level of 14.86 in 2009-10. It has been shown highest percentage change in growth over previous year i.e. 17.5 during 2010-11. The Per Capita Income (i.e. Per Capita NSDP) at current prices has been estimated at Rs. 89668 in the year 2011-12 as compared to Rs. 78802 in 2010-11, showing an increase of 13.8 percent over the previous year, clearly shows in figure 2.

Figure 2 Percapita Income at Current Prices of Gujarat (in Rs.)

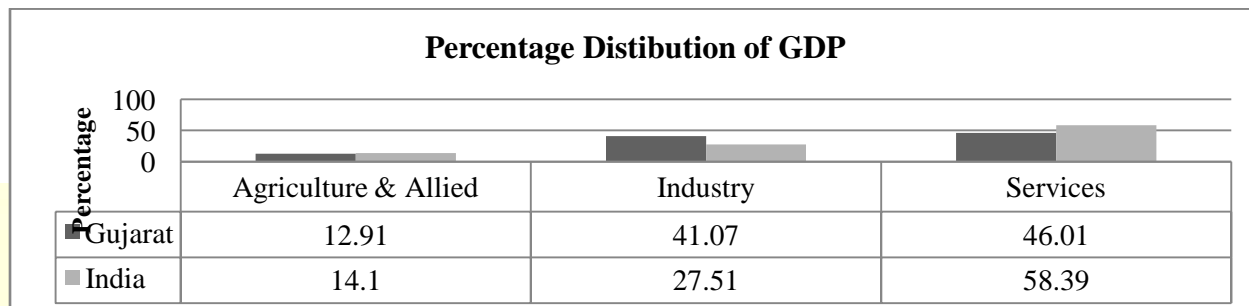


Source : CMIE, Socio-Economic Review-2012-13

Sectoral Composition in GSDP of Gujarat represented by figure 3, which shows the primary, secondary and tertiary sectors' share has been estimated at 12.91 percent, 41.0 percent and 46.01 percent respectively to the total Gross States Domestic Product (Rs. 398884 crore) in 2011- 12 at constant (2004-05) prices. Whereas the share of primary, secondary and tertiary sectors has been estimated at 14.1 percent, 27.51 percent and 58.39 percent respectively to the

nation's total Gross Domestic Product (Rs. 5222027 crore) in 2011-12 at constant (2004-05) prices.

Figure 3 Sector wise Percentage Distribution of GDP



Sources: Socio-Economic Review, Gujarat State, 2012-13; (P) = Provisional, (Q) = Quick Estimates

3.2 SOCIAL DEVELOPMENT IN GUJARAT

Social development of Gujarat can be measured by physical quality of life Index (PQLI), which has been calculated by Sample Registration System (SRS), Office of the Registrar General India, Ministry of Home Affairs. PQLI is a simple average of the literacy rate, life expectancy and infant mortality at age 1.

Table No 6 PQLI Ranking of the Major States in 2001 and 2011

S.No	States	PQLI Ranking in 2001 and 2011	
		2001	2011
1	Andhra Pradesh	11	11
2	Assam	14	15
3	Bihar	13	13
4	Gujarat	7	7
5	Haryana	8	10
6	Himachal Pradesh	2	4
7	Jammu & Kashmir	10	9
8	Karnataka	9	8
9	Kerala	1	1
10	Madhya Pradesh	15	17
11	Maharashtra	3	2
12	Orissa	16	14
13	Punjab	4	5
14	Rajasthan	12	12
15	Tamil Nadu	5	3
16	Uttar Pradesh	17	16
17	West Bengal	6	6

Source: R Nagaraj, Shruti Pandey, 2013.

To ascertain the position of the states in relation to the national average, an indexed value of PQLI is reported in Table 5. It is clearly shown that Gujarat has well maintained a slightly better

status than the national average. Gujarat occupied 7th rank among 17 major states of India in 2001 as well as in 2011 (Table 6). In other words, Gujarat has been failure to improved its position in terms of social development as compred to other states. It is also shown that Bihar was well below the national average, though it has lessened the gap during the last three decades. Even as it ranks 13th among 17 major states in 2001 (as well as in 2011).

Table 5 Index of PQLI for Gujarat

S. No.	Year	Gujarat	India
1	1981	103.4	100
2	1991	109.9	100
4	2001	105.6	100
5	2011	104.3	100

Source: Same as Table 5

Thus it has been prove from overall discussion that a divergence between Gujarat's economic performance, which is almost at the top of the table and its social development, which is close to the national average, (Nagaraj; Pandey, 2013). In the words of late Raj Krishna: The fact that Gujarat had a low PQLI illustrates a general opinion. Economic backwardness is generally associated with a low level of welfare services rendered by state for its social development, but it is possible for particular regions to be economically better off and socially backward, or vice versa. Gujarat has a high industrial development status but remains backward in social service development (1980, pp.50).

3.3 ENVIRONMENTAL SUSTAINABILITY IN GUJARAT

As we know that sustainable development maintained proper balance between socio-economic development along with environmental quality and natural resources protection. But in the pace of rapid development of very high industrialization and urbanization as a result of continuous increase in the percentage change in geographical area under forest cover due to heavy deforestation in Gujarat. Table 7 shows that during last decade in 2001 the total geographical area under forest cover was 7.73 percent (i.e 15152 square kilometer) of total geographical area in the state, which has been decreased up to the level of 7.45 percent (i.e 14619 square kilometer) of total geographical area in 2011. This figure indicates that about 533 squre kilometer area has been deforested.

Table No 7 Situation of Forest Cover in the State

Year	Gujarat (Area in Square Km.)		
	Geog. Area	Forest Cover	% of Geog. Area
2001	196022	15152	7.7297
2003	196022	14814	7.5573
2005	196022	14604	7.4502
2007	196022	14620	7.4583
2009	196022	14620	7.4583
2011	196022	14619	7.4578

Source: State of Forest Report (2001-2011), forest survey of India, Ministry of Environment and Forest,

To analyse the environmental performance planning commission with the help of ministry of environment and forest create an Environmental Performance Index and give the ranks to the states of india on the basis of their environmental quality improvement and natural resources protection.

Table No 8 Environment Performance Index Score for State Gujarat 2012

INDICATORS	SCORE	RANK
Air Pollution	0.89	17
Water	0.69	8
Forest	0.53	15
Waste Management	0.83	9
Climate Change	0.52	4
Final EPI 2011	0.58	16
Final EPI 2012	0.69	7

Source: Planning Commission Environment Performance Index June 2012,

The EPI includes the determinants such as air pollution, water cleanliness or water contamination, protection of deforestation, waste management both minuscule and domestic, climate change due to various gases released by the states in the atmosphere. Table 8 shows the state along with their score in EPI and ranks which they occupied among the states of India. It has been seen that most of the north eastern states are performing better than that of other states. However, the overall Environmental performance of Gujarat is concerned it occupied rank 16th with a score of 0.58 (i.e. total of 1) in the year 2011 whereas a tremendous improvement has been seen in on Gujarat's environment performance index. Now in the year 2012, Gujarat has its rank 7th among the states in india with its score of 0.69. Thus it has been proved that the state is more concern to manage environmental quality and natural resources conservation to get its sustainable development in every pillars of growth i.e. Social development, economic

development a coupled with environmental protection and conservation of its natural resources base.

4. CONCLUSION AND SUGGESTIONS

Sustainable Development is the integration between socio-economic and environmental development. It implies economic growth coupled with the protection of environmental quality and improves lifestyles, standard of living and feeling of well-being. But from the above discussion it has examined that the economic performance of Gujarat as compared to the national average is better for the period 2001-01 to 2011-12. It has also found that there has been no change in their national ranking as it has remained on the ninth position among the states of India. After Maharashtra, Its manufacturing sector got the second largest position in India. Though its share in national manufacturing value added has progressively gone up in the last two decades. However, the incremental output has come mainly from export-oriented petroleum refining. This implies that the contribution of the other industries to Gujarat's industrial output has been declined. Even Its position in social development is only marginally better than that of the country's average, ranking seventh in PQLI among the major states in 2001 and 2011 respectively. It is true to say that development has got no meaning if there is unsustainable development. The dynamic growth is no doubt good for short term but with the carpet of dynamism if we ignore environmental damage and overall development of human beings then that growth is just a myth. Thus, Gujarat should develop in a way that preserves its environmental resources for the next generation. It should preserve its air quality, its water quality, its soil quality and its forests. To manage air quality it should use both command and control as well as emission charge policies with possibilities of offsets and trade. Government should encourage panchayat to undertake such works by providing matching grants, village waste lands can be planted, protected and turned into lush forests in just a few years. In all there we need understanding participation of people. People with some measure of self-confidence are more likely to co-operate. Education can create such self-confidence. Thus, we need above all an educated population. This is needed for giving the poor an opportunity to better their lot. Skills could be distributed with some degree of equity without a violent revolution. So we need education, for skills, for equity, for health and for reducing fertility. Thus, Sustainable

development is a dream which everyone wants to fulfill for our present and future generations. In the words of Lakota:

“We do not inherit the Earth from our ancestors; we borrow it from our children”

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- Quality of Life Index = (Literacy Rate + INDEXED Infant Mortality Rate + INDEXED Life Expectancy) /3 Source: Sample Registration System (SRS), Office of the Registrar General India, Ministry of Home Affairs, in their article on Have Gujarat and Bihar Outperformed the Rest of India? A Statistical Note, published in Economic and Political Weekly (28 Sept 2013), Volume No XLVIII, Issues No 39, pp. 39-41
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