Chapter Five

FINDINGS

AND

CONCLUSIONS
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This is the final chapter of the thesis devoted to findings and conclusions of the study. This chapter also covers some of the suggestions to improve the infrastructure in the state of Gujarat. Major findings of the study are as follow;

1. At all India level it is planned to invest around 8.2 percentage of GDP in infrastructure. Considering the importance of infrastructure for developing countries like India, it is necessary to increase these percentages.

2. The passenger service yield in India is very low compared to other countries while freight yields are on higher side. There is an urgent need to rationalist the passenger fare and freight rates to make Indian railways self sustained and profitable.

3. Total route kilometers as well as route electrified have not increased much after 2008-09. Total route kilometers have increased only about 20 percent since 1950-51. If we take post reform period that total route kilometer has increased only by about 3.53 percent. Similarly route electrified have increased by about 102.8 percent after new economic reforms.

4. Earnings of Railways from goods have increased at a rate faster than that of passengers. Major shift in earnings can be seen after new economic policy.

5. The modal growth rates have varied with road transport growing at a much higher rate compared to other competing modes like inland water, railways and air transport despite significant barriers to inter-State movement of freight and passenger by road.

6. Revenue of transport department both at the center and state has increased drastically after new economic policy i.e. 1990-91. Further center revenue has increased at a rate faster that the state revenue.
7. Resources currently allocated to energy supply are not sufficient for narrowing the gap between energy needs and energy availability. Indeed, this may widen as the economy moves to a higher growth trajectory.

8. Gujarat is probably the only state of the country which has recorded double-digit growth in the economy continuously for ten years. Because of the exemplary growth that the state has witnessed since 2001-02, Gujarat is rightly characterized as the growth engine of the country. The higher growth in the economy during the year 2011-12 can be mainly attributed to construction, Trade, Hotel & Restaurants, Transports by Other means, Storage, Communication, Banking & insurance and other service sectors.

9. Gujarat has accorded very high priority to industrialization as part of its development strategy since its inception in 1960. The development strategy through focus on the secondary sector can be clearly seen from the plan documents of the state governments as well as the socio-economic review of the Government of Gujarat. The manufacturing sector was promoted in the state of Gujarat as when compared to the agriculture and service sector. The impact of such strategy can be seen from the sectoral contribution of different sectors in state domestic product.

10. The development strategy of government of Gujarat has accorded high priority to physical infrastructure when compared to human capital resulting in to the situation where state stands behind several states in the country in terms of human capital and related indicators.

11. The year 1995-96 witnessed major power sector reforms. Major reforms in the power sector were initiated around 1995-96 though not in the right sequence. The Government of Gujarat (GoG) initiated an ambitious policy of inviting private sector participation (PSP) in the power sector. But the desired PSP did not materialize because the revenues generated by the sector were insufficient to service the large inflow of capital that was required.
12. To create the road map for infrastructure development in the state, Gujarat Infrastructure Development Board (GIDB) was set up in 1995 which acts as catalyst for hard as well as soft Development sectors focusing on planning, coordination, etc.

13. The policy of Build-Operate-Transfer (BOT) is followed by Gujarat in other infrastructural sectors like ports and roads. Private participation is encouraged to help the state government in development of infrastructure sector.

14. The government of Gujarat also encourages private sector participation in the irrigation management by involving local bodies and non-governmental organizations (NGOs). In spite of all these, Gujarat is still far from introducing volumetric basis for water charges.

15. There are serious weaknesses of the state’s secondary and tertiary education system. The students of the state lag behind in communication in English language, a serious handicap in the modern IT and globalised environment.

16. Against all India average of 940 female per 1000 male population, Gujarat registered only 918 female per 1000 male population. This certainly is not the good sign of social development. There is urgent need to take up the issue at Government level for necessary actions to improve the sex ratio.

17. Gujarat has accorded very high priority to industrialization as part of its development strategy since its inception in 1960. The development strategy through focus on the secondary sector can be clearly seen from the plan documents of the state governments as well as the socio-economic review of the Government of Gujarat. The manufacturing sector was promoted in the state of Gujarat as when compared to the agriculture and service sector.

18. Gujarat has followed “an open door” policy with regard to the factor mobility – particularly the labour mobility in and out of the state irrespective of the political party in power. The endeavour of the Gujarat
government has all along been to provide as far as possible the most conducive environment to promote business and industry in the state irrespective of who provide and own them. In this sense, Gujarat did not have to make any major shift in its basic strategy in the wake of liberalization and policy reforms at the central level.

19. Gujarat has the least disturbance in industrial peace among all states though the average industrial wage rate in Gujarat is lower than many states in the country. The state has a low crime rate relative to the comparable state and very often it is considered very safe and liveable state socially and culturally.

20. The state of Gujarat is on second position (after Maharashtra) with 26,126 MW of installed electricity generation capacity followed by Tamil Nadu, Andhra Pradesh and Uttar Pradesh.

21. The state of Gujarat is at the top position in per capita installed electricity generation capacity followed by Maharashtra, Tamil Nadu, Andhra Pradesh and Uttar Pradesh.

22. Increasing power generation capacity in each year along with the growing share of Renewable energy in its total energy mix has made Gujarat a prominent destination for investment.

23. Installed capacity of electricity generation has increased by 119.55 percentages in the decade of 1980-90. This growth rate in installed capacity declined to 72.97 percentages during the decade of 1990-2000 and further to 43.93 percentages during the decade of 2000-2010.

24. Electricity generation in Gujarat has increased by 143.87 percentages during the decade of 1980-1990. This growth in electricity generation declined to 139.35 percentages during the decade of 1990-2000 which increased again to 150.26 percentages during 2000-2010.

25. The decadal growth in the electricity consumption shows growth of 163.63 percentages during the decade of 1980-90. During the decade of 1990-
2000, electricity consumption in Gujarat has increased by 166.72 percentages which further increased to 191.36 percentages during the decade of 2000-2010.

26. The installed capacity of electricity generation in Gujarat has increased from 2197 MW in 1980 to 4823.5 MV in 1990 which further increased to 8343 MW in 2000 and 12008 MW in 2010. Data on annual growth in installed capacity show variation from marginal negative growth of 0.52 percentage in 2003 to highest growth on 21.74 percentages registered during 2010.

27. Electricity generation in Gujarat has increased from 9363 MW in 1980 to 69883 MW thus showing the growth of 643.37 percentages during three decade i.e. 1980-2010. On yearly basis electricity generation has increased from 9363 MW in 1980 to 22834 MW in 1990, which further increased to 49379 MW in 2000 and to 69883 MW in 2010. The computation of yearly growth in electricity generation shows variations from as low as negative growth by 0.87 percentages in 2002 to highest growth of 17.33 percentage registered in 1987.

28. Consumption of electricity shows increase from 7566 MW in 1980 to 19946 MW in 1990. Electricity consumption further increased to 33829 MW in 2000 and to 55005 MW in 2010. Thus electricity consumption has increased by 627 percentages during the three decade i.e. 1980-2010. The data on annual growth in electricity consumption show variation from negative growth (declining consumption) of 20.99 percentages in 1990 to highest ever growth of 49.11 percentages registered in 2008.

29. There has been remarkable 200 percent growth in the installed capacity from 5094 MV in 1991 to 15306 MV in 2012. Along with this growth in installed capacity, another remarkable thing was in terms of shift in share in installed capacity from Gujarat State Electricity Corp. Ltd to Private sector IPPs. Gujarat State Electricity Corp. Ltd was leading with 76.13 percent
share in total electricity generation in the state during 1991 which declined to 32.64 percent in 2012. Against this the share of private sector IPPs has increased from 9.46 percent in 1991 to 38.64 percent in 2012. The centre sector share has increased from 13.78 percent in 1991 to 20.78 percent in 2012.

30. The proportion of electricity used in agriculture has declined from 26.26 percentages of total consumption in 1991 to 21.90 percentages of total consumption in 2012 while that of industrial usages increased from 35.56 percentages to 43.33 percentages.

31. The proportion of electricity consumed for different purposes indicates that among various uses of electricity, largest proportion (43.33 percentages) goes to industries followed by agriculture (21.90 percentages). Nearly 4 percentages of electricity consumption is by commercial usages while less than two percentages goes to public lighting (0.43 percentages), Public works (2.08 percentages), and railway traction (1.11 percentages).

32. The per capita consumption of electricity has increased by 352 percentages during the period 1991 to 2012. The per capita electricity consumption was 363 KWH in 1990 which increased to 953 KWH in 2001 and further increased to 1642 KWH in 2012.

33. According to the National Highway Authority of India about 65% of freight and 80% passenger traffic is carried by the roads. National Highways constitute only about 1.7% of the road network but carry about 40% of the total road traffic.

34. Gujarat, the state has a road network of more than 77thousand kilometers. Among the all available roads, almost 97 percent roads in state are surfaced and are all weather roads.

35. There seems not much improvement in total railway network in the state of Gujarat. Total broad gauge railway network which was 903 kilometer during the year 1961 has increased to 1711 kilometer in 1991 and further to
3382 kilometer in the year 2011 under the gauge conversion process. During the same period meter gauge route length kilometer has declined from 3338 kilometer to 2713 kilometer and further to 1205 kilometer in 2011. The route length of narrow gauge has declined from 1155 kilometer in 1961 to 921 kilometer in 1991 and further to 684 kilometer in 2011.

36. Total length of roads in the state of Gujarat has increased from as low as 47426 kilometer in the year 1980-81 to 67065 kilometer in the year 1990-91, increase of nearly 20000 kilometer in a decade. The length of roads has further increased to 77265 by the year 2009-10 showing an increase of nearly 10000 kilometer.

37. The decadal growth data about the length of roads in Gujarat shows growth of 41 percentages during the decade 1980 to 1990. This percentage has declined to nearly 10 percent for the decade 1990-2000 which further declined to less than 5 percent for the decade 2000-2010.

38. The comparison of different category of roads over decade shows major improvement in national highways and village roads. Comparison of growth or roads since 1980-81 shows highest growth of 129 percent in national highways followed by 101 percent growth in state highways and nearly 93 percent in major district highways. Other district roads shows decline of nearly 6 percent during the same period because of conversion to major district roads. The length of village roads in Gujarat has increased by nearly 63 percent since 1980-81.

39. The length of national highway has increased by 10.39 percent during 1980-90 which accelerated to 33.02 percent during 1990-2000 and further to 56 percent during 2001-2010. As compared to national highways, state highways shows declining growth trend from 79.41 percent during 1980-90 to 17.95 percent during 1990-2000 and further to -4.94 percent during 2001-2010. The declining trend is also observed in the case of major district highways and other district highways.
40. It can be seen from the data that over a period of time the total length of roads has increased from 47426 kilometer to 77265 kilometer shown increase of nearly 63 percent in the span of 30 years. During the same period the availability of surfaced roads has increased by nearly 123 percent where as the availability of un-surfaced roads has declined by 83 percent.

41. The annual growth rates of surfaced road in Gujarat shows declining trend since 1980-81. Surfaced roads where increasing at the rate of 11 percent during 1981-82 which declined to 1.79 percent in 1989-90, 1.28 percent in 2000-01. The annual growth rate of surfaced road for the year 2009-10 was 4.55 % percent after near stagnant for nearly a decade.

42. Among various categories of roads, black top road are the prominent one where the decadal growth of nearly 70 percent was registered during the decade of 1981-90 which declined to 51.66 percent during 1999-00 and further to 22.66 percent during the decade of 2001-10. In the case of water bound macadam roads, increase of more than 80 percent was registered during the decade 1981-90. After such an increase to decadal growth registered a negative number of 45.56 (1990-00) and 77.91 (2001-10).

43. Along the 1600 Kms. of coastline of Gujarat, there are 41 ports, of which Kandla is a major port. Out of remaining 40 ports, 11 are intermediate ports and 29 are minor ports under the control of Gujarat Maritime Board.

44. Nevertheless, Gujarat ports handle about 16 million tonnes of cargo, which account for 70% of the total cargo handled by all minor ports of India.

45. Total cargo handled by all the ports in Gujarat has increased from 115.96 lakh tonnes in 1980-81 to 272.39 lakh tonnes in 1990-91 and further to 3415.30 lakh tonne in 2011-12. The annual growth in cargo handled by ports in Gujarat shows wide fluctuations over time. The annual growth in cargo handled by ports in Gujarat ranges between negative growth (-2.70) percentage in 1986-87 to highest ever growth 44.71 percentages achieved during 1999-2000.
46. The decadal growth in the cargo handled by ports in Gujarat shows growth of 124.32 percentages during the decade 1980-90 which increased to 249.14 percentages during 1990-2000 but declined to 199.72 percentage during 2000-2010.

47. Total cargo handled by major ports in terms of handling imports has been higher than that of exports. Further both imports and export cargo has increased after 1990 as a result of impact of new economic policy of liberalization, privatisation and globalization.

48. In terms of annual growth the percentage growth in import cargo handled by major ports shows wide fluctuations ranging from as low as (-22.01 percentages) observed during 2000-01 to highest ever growth of 36.26 percentages observed during 1982-83. Similarly annual growth in export cargo handled fluctuated between lowest figure of (-22.23 percentages) observed during 1988-89 to highest annual growth of 60.94 percentages observed during 2001-02.

49. Total cargo handled in terms of exports and imports shows considerable improvement over a period of time. The difference between export cargo and import cargo was not much till 1996-97 but increased after that. Import cargo has increased at a rate faster than export cargo at minor and intermediate ports in Gujarat. It can be seen from the data that cargo handled by intermediate and minor ports in Gujarat has increased from 27.80 lakh tonnes in 1980-81 to 75.54 lakh tonnes in 1990-91 representing the growth of 171.73 percentages. It increased to 488 lakh tonne in 1999-2000 representing the growth by 546.01 percentages and further increased to 2309.07 lakh tonnes during 2010-11 representing the growth by 373.17 percentages.

50. The import cargo handled by intermediate and minor ports in Gujarat has increased from 14.92 lakh tonnes in 1980-81 to 41.53 lakh tonne in 1990-91 represents the decadal growth of 178.35 percentages. It increased by 711
percentages to 337.06 lakh tonnes by 1999-2000 and further increased by 421.88 percentages to 1759.04 lakh tonne by 2011-12.

51. Similarly export cargo handled by intermediate and minor port in Gujarat has increased from 12.88 lakh tonnes in 1980-81 to 34.01 lakh tonne representing the decadal growth of 164 percentages. The export cargo handled by intermediate and minor port increased to 150.94 lakh tonne in 1999-2000 representing the growth by 343.81 percentages in decade which further increased to 831.25 lakh tonnes representing the growth by 450 percentages during the period 2000-2012.

52. Annual growth in cargo handled by intermediate and minor port shows wide variations from year to year basis. Annual growth in import cargo handled by intermediate and minor ports in Gujarat shows negative growth of 26.48 percentages observed during 1987-88 and highest growth of 98.86 percentages observed during 1999-2000. Similarly export cargo handled varies from as low as -20.08 percentages observed during 1998-99 to highest growth of 85.59 percentages observed during 1999-2000.

Conclusion:

Gujarat has been one of the prominent state in India in terms of infrastructure development. Policies adopted by the government of Gujarat, especially for encouragement of private participation in development has resulted in huge investment in this sector. Still the achievements are not matching with the full potentials of the state. There is an urgent need to redefine the policy initiative to boost the sector and achieve the desired growth target. The infrastructure policies should be redesigned in the light of present requirement and with adequate consideration of the demand supply situation.