Chapter-3

Research Methodology

3.0.0 Review of Literature

3.1.0 Clark (1961) is of the view that the number of countries, their export capacity and relative power, the ways they compete and the rate of growth of imports have to be considered for deciding on its attractiveness. Depending on the prospects of the industry in the importing countries and its growth / profit potential an industry may be attractive to a country and it may be that only a few firms are likely to initiate fresh strategic moves and this may not even be often.

3.1.1 Porter (1980) has examined the competitive strategy for industries, the general analytical techniques, the competitive strategy to be adopted in fragmented industries, in emerging industries, in mature industries, in declining industries and in global industries. He has also discussed the portfolio techniques in competitor analysis and how to conduct an industry analysis.

3.1.2 Thompson (1980) has concluded that each rival tries to formulate a winning strategy. i.e. one that will gain it some sort of attractive competitive edge over its rivals and that this determines the nature and structure of the industry i.e. the number of firms, their sizes and relative power, the rate of growth of the industry and the ways they compete. He is of the view that sustaining competitive advantage rather than creating it initially for a short period and then loosing it is the real challenge.

3.1.3 Tyler (1981) has done a study on the Brazilian Industrial Economy.

3.1.4 Porter (1983) has analysed various cases in competitive advantage in detail.
3.1.5 Baker (1984) has discussed the colonial trade of the Madras presidency along with the country-wise distribution (with 18 countries) of foreign trade of the Madras Presidency from 1886-7 to 1955-6 every 5 years.

3.1.6 The World Bank has done a series of studies on China from 1984 onwards including *China-Socialist Economic Development*, *China-Foreign Trade Reform*(1994), *China Engaged*(1998), etc. and on Brazil including *Brazil- Industrial Policies and Manufactured Exports*(1983), *Brazil: an agenda for stabilization* (1994) and on India, including *India Macroeconomic update*(1998) and on the development and diversification in their exports.

3.1.7 Porter(1985) discusses how superior performance is created and sustained and competitive advantage gained and maintained by firms.

3.1.8 Chakravarty (1987) has discussed the foreign trade, performance and prospects and made a comparison between the economic performance of Korea vis-à-vis India.

3.1.9 Agarwal (1988) has analysed India's export performance in the above period by decomposing changes in India's share of world exports into the competitive and market growth effects. He finds that the decline in India's share of World exports of all commodities, agricultural goods, non-oil raw materials and manufactures was due to lack of competitiveness. He also emphasizes the role of the automobile industry as an engine of growth for the national economy from the point of view of employment generation, revenue to the government, national defence and industrialisation. He has also analysed the reasons for the sickness and stagnancy of the industry.
3.1.10 Kumar (1988) and Momaya (forthcoming book) have analysed various industries where India has comparative/ competitive advantage but nothing on the competitive advantage of Indian states.

3.1.11 Anderson (1990) has done a study on changing comparative advantages in China - effects on food, feed and fibre markets.

3.1.12 Blackwell (1990) has discussed India’s economic environment, the structure and performance of the Indian manufacturing sector, industry branch profiles, resources for industrial development, etc.

3.1.13 McNamee (1990) has included an introduction on competitive advantage and the development of strategic planning, a part on landmark techniques in the form of a series questions and answers followed by a part on case histories in various areas of business as part of the series on the best of long range planning.

3.1.14 Porter (1990) has investigated why nations gain competitive advantage in particular industries and the implications for firm strategy and for national economies. As part of this he conducted a four year study of ten important trading nations viz. the United States, Japan, Germany, Denmark, Italy, Korea, Singapore, Sweden, Switzerland and the United Kingdom which together accounted for around 50 percent of the total world exports in 1985. He focussed on the process of gaining and sustaining competitive advantage in relatively sophisticated industries and industry segments, holding the key to high and rising productivity in a nation.

3.1.15 In addition to Porter’s individual works on Competitiveness there are his joint works with Crocombe and Enright (“Upgrading New Zealand’s Competitive
Advantage”(1991)), with Solvell and Zander (on Sweden(1991)), with Schultz(on Denmark(1991)), with Borner, Weder and Enright(on Switzerland(1991))), on the state of Massachusetts in the U.S.A.(1991), on Germany and Korea(1992), with Monitor Company(on Canada(1992)), with Euskadi(1992) and on Norway(1993), on Portugal(1994)), with Armstrong (on Canada (August and September 1997)) and with Sakakibara(which has analysed the competitiveness/ competitive advantage of countries, with the focus on Japan/ Japanese industry(1997)).

3.1.16 Ahluwalia (1991) has made an international comparison of trends in productivity and total factor productivity growth.

3.1.17 Singh and Khan (1991) have discussed the performance of the India automobile industry in terms of production and sales.

3.1.18 Aksoy and Tang (1992) have discussed India’s policy change from regulation to liberalisation, its effects on exports, imports and manufacturing output, the behaviour of relative prices, the trend growth rates, the investment growth rates, the capital-output ratios in registered manufacturing and the structure of Indian trade.


3.1.20. Easton, Burrel, Rothschild and Shearman-Blackwell(1993) have discussed the competitiveness and regeneration of British industry.

3.1.21 Chatterji and Mohan (1993) have made a study of Indian Garment Export an area in which India enjoys competitive advantage over developing countries.
3.1.22 Nair, Anil Kumar and Sunny (1994 and earlier issues) of the research Division of
the National Productivity Council (NPC) have provided a comparative picture of the
competitiveness of Indian states based on 12 indicators/parameters (four indicators of
physical infrastructure, two indicators of human and social development and six other
indicators).

3.1.23 Williamson and Hu (1994) have discussed securing competitive advantage for the
future.

3.1.24 Chugan (1995) in his study reveals that success and competitiveness depend upon
several other factors and the latest generation's capital equipment and technology are not
optimal for Indian conditions.

3.1.25 Bhalla (1995) has analysed the alternative development strategies adopted by India
and China their uneven development, etc.

3.1.26 Bhat and Sethuraman (1995) have examined the effects of technology transfer on
export performance of automobile firms. Their paper also explains the determinant of
export performance of automobile firms.

3.1.27 Gokhale and Katti (1995) give an overview of Indian textiles.

3.1.28 Taneja and Sharma (1995) have analysed the world market in handicrafts an
industry where India has a competitive advantage.

3.1.29 The Centre for the Monitoring of the Indian Economy (CMIE) (1996 and later
issues) publishes regular reports giving the basic statistics of the Indian economy and a
comparison with other economies.
3.1.30 Currie (1996) gives the annual growth rates of major sectors of Indian industry, its foreign trade, etc.

3.1.31 Dunning and Narula (1996) have discussed the case of Mexico-foreign investment as a source of competitiveness, India’s industrialization, liberalization and inward and outward foreign direct investment and China-rapid changes in the investment development path.

3.1.32 Kathuria (1996) gives an overview of the world auto industry; and the Indian commercial vehicle industry, competitiveness in the domestic market, the position of Indian firms in the international market.

3.1.33 The database and the Production year book (1997) of the National Horticulture Board, Government of India, the website of the Ministry of Agriculture, Government of India, Krishi Bhawan, New Delhi and the website of the Agricultural Produce Export Development Authority (APEDA), Government of India, Bhikaji Cama Place, New Delhi give a picture of the state wise production of fruits, vegetables and agricultural commodities and overall Indian exports from which this researcher has attempted to draw conclusions with regard to agricultural exports and competitiveness of states in this sector.

3.1.34 The Profile of States published by the Centre for the Monitoring of the Indian Economy (CMIE) (March 1997) gives a comparative picture of the states in terms of industrial development, infrastructure, etc.

3.1.35 Christensen (1997) provides a summary historical perspective on how the theory of competitive advantage evolved amongst firms. He also shows that many of, what
historically have been, the most valued sources of competitive advantage viz. resources, assets and market positions - have proven to be transitory, rather than sustainable.

3.1.36 The United Nations Fund for Population Activities (UNFPA) (1997) has published a book on *towards population and development goals* which also gives a measure of the state wise HDI.

3.1.37 Abdul Kalam and Rajan (1998) have also examined the sectors where India has and is likely to gain competitive advantage.

3.1.38. The All India Management Association (AIMA) (1998) organized a seminar on "Building national competitiveness - options for India".

3.1.39. Gulate (1998) gives details of the software industry in which India enjoys competitive advantage. It gives the production, exports and type of service of the industry.

3.1.40 Kavlekar (1998) has done an industry analysis of the textile industry in which India has competitive advantage giving details of direction of exports, count wise exports of yarn trend cotton yarn prices and key financials of select companies.

3.1.41 Krishnamurthy (1998) analyses the Information Technology training industry where India has a competitive advantage. He has also given a portfolio perspective of selected companies.

3.1.42 Porter (1998) is of the view that competitiveness is primarily a private sector phenomenon, but the government and chance do have a clear and crucial role to play as additions to the four key components of the Diamond.
3.1.43 The Business Intelligence Unit, Chennai (1999) has conducted a study on the role of the state governments in the total investment made in a state.

3.1.44 According to Emmerij (1999) the origin of the verb ‘to compete’ is ‘cum petere’, which means searching together. Which is a far cry from what it has become in the era of globalisation. In fact it has become an arm to wipe out one’s adversary (competitor). This is further aggravated with the development of indexes to measure competitiveness (such as the ones developed and published every year by the World Economic Forum (WEF) and the International Institute of Management Development (IMD) of countries) due to which the countries concerned are under ever increasing pressure to improve their performance.

3.1.45 Jenster and Rubin (1999) have given details of how to compute the relative standings in each component of competitiveness by transforming the raw data for each country to comparable data by subtracting the sample mean and dividing the resulting quantity by the sample standard deviation.

3.1.46 The Maharashtra Economic Development Council (MEDC) (1999) has also held a national conference on the Indian Economy: Challenges of the 21st Century which included a paper on the sectors where India has competitive advantage.

3.1.47 The Handbook of Statistics of the Reserve Bank of India (RBI) (1999) and subsequent issues provide a comparative picture of the constituent states of India and an overall average picture of India. This provides information on growth rates of states based on the erstwhile series of State domestic Products (SDPs) which were in use till the financial year 1993-94 in most of the states.
3.1.48 Using the comparative figures given in the RBI’s “Handbook of Statistics, 1999” Brahmananda (2000) has analysed the performance of major states in hierarchical order, vis-à-vis the overall growth rate in the 1990s. He has estimated the growth rates of states through a log linear approach deeming growth to be a continuous process.

3.1.49 Sachs and Bajpai (1999) have done comparative studies of the Comparative Advantage of India vis-à-vis China.

3.1.50. Macmillan and Tampoe (2000) have taken into account other factors enumerated by Grove (1996) and added several factors such as lobby groups, complementors and fashion and fickleness to those given by Porter.

3.1.51 The Confederation of Indian Industry (CII) and the Yashwantrao Chavan Pratishthan (2000) have published Four decades of Maharashtra- a profile, i.e. Maharashtra at a glance which gives a comparative picture of the state of Maharashtra with other states in terms of total and per capita income.

3.1.52 The Rajiv Gandhi Institute of Contemporary Studies, New Delhi has done a study for the Confederation of Indian Industry on how the states are doing (September 2000). This gives a comparative picture on the general achievement of states (which includes the per Capita state SGDP, Fiscal Deficit / SGDP (in Rs. Crores), annual average growth of GSDP (percentage) in the 1990s), the investment climate, the efficiency of infrastructure penetration, the finances, the labour situation, social sector indicators, the environment, the law, order and justice situation, affluence, mass media penetration, etc.

3.1.52 Brown (2001) has written about the devising of a Competitiveness Index for the United Kingdom developed with government backing through the Economic and Social
Research Council by Robert Huggins, a former regional policy academic. It measures factors including gross domestic product, productivity, economic activity and the spread of knowledge-based industries. This shows the growing north-south gap in competitiveness within the country.

3.1.53 The census figures viz. the Census of India 1991, Series-1, India, Paper-2 1992 and for the census of 2001 *the preliminary census figures: Census of India 2001* issued by Registrar General and Census Commissioner, Government of India, New Delhi give a comparative state wise position of the growth in population, literacy, etc. over the previous decade.

3.1.54 The IMD (2001) uses economic performance, government efficiency, business efficiency and infrastructure as the input factors for determining the competitiveness of countries while framing their World Competitiveness Yearbook (WCY) (2001) every year.

3.1.55 The per capita central investment in each state plan (which has a bearing on total investment and hence enhancing the competitive advantage of a state) was given in reply to Lok Sabha Unstarred Question No. 1448 (Ministry of Planning & Programme Implementation, Government of India) (as reported in The Hindu Business Line of March 15, 2001).

3.1.56 Sachs (7 November 2001) has given details of how the WEF and the Harvard Centre for International Development (HCID) have calculated the rankings for 75 countries while preparing the Global Competitiveness Report 2001. Competitiveness has been defined as a country’s capacity to achieve sustained economic growth in the
medium term. i.e. five years time. Since countries compete for internationally mobile capital the more one country reaps in foreign direct investment (FDI) the less investment another country can attract (this is important in the context of Indian states since the amount of FDI into India is limited i.e. the more one state/group of states reap in FDI the less FDI another state/group of states can attract).

3.1.57 For the 2001 rankings the HCID has determined a country’s competitiveness (i.e. its capacity to grow) according to three broad criteria. viz. Technology, Public Institutions, and macroeconomic stability.

3.1.58 Saeki (2001), says that the Global Competitiveness Report is correct to focus on the openness of the economy as it is an important criterion for determining competitiveness and economic development. However, he questions the rankings and comparisons between large and small countries and says that there is a tremendous imbalance between regions as far as large economies are concerned and factors vital to small countries may be insignificant to large countries. This is important in the Indian context where there is tremendous imbalance between states in the south and west and those in the north and east (and even regions within large states).

3.1.59 The WEF and the HCID (2001) have compiled the National Competitiveness balance sheet (2001) under which three major groups of criteria have been used for judging the competitiveness of the USA and other countries.

3.1.60 These criteria are growth competitiveness, current competitiveness and economic creativity. The first measures the factors that contribute to the future growth of an economy. They explain why one country is growing faster than others. The second
identifies factors that underpin high current productivity (and hence current economic performance) measured by the gross domestic product (GDP) per person. The third index on which their report focuses and which is critical is - economic creativity – where an important factor is openness of the economy.

3.1.61 Yip (2001) has defined the different types of international competition viz. multi-country competition and global competition, when these work best, their drawbacks and the industries which typically represent the type of competition. He has also discussed the linkage between global strategy and competitive advantage.

3.1.62 Gopinath (2002) is of the view that the competitiveness of a state is contingent on the competitiveness of the institutions and people that occupy it, that the notion of competitiveness of a state needs to be carried through to the micro foundations of competitiveness i.e. the individuals and institutions in that state. He has given details of the criteria used by the Beacon Hill Institute.

3.1.63. Goswami, Arun, Gantakolla, More and Mookherjee of the CII and Dollar, Mengistae, Hallward-Driemier and Iarossi of the World Bank (January 2002) have conducted a study on the best states to invest in, which has a bearing on their competitive advantage.

3.1.64 The United Nations University (UNU) and the World Institute of Development Economic Research (WIDER) associated with it have noted that many developing and transition countries have considerable regional variation in average household income, poverty, health and educational status. National human development indicators (which represent averages) can therefore mislead policy-makers when large regional disparities
exist. Therefore they had chosen Regional Disparities in Human Development as one of the areas for giving priority in research for the year 2002-03.

3.1.65. The website of the India Investment Centre, the personal communication dated 19\textsuperscript{th} March 2001 from Shri S.K. Mitra, Senior Adviser, India Investment Centre the Secretariat for Industrial Approvals, the study (July 2000) by the Punjab, Haryana and Delhi Chamber of Commerce and Industry International Affairs Division on foreign direct investment (FDI) in India: impact of liberalization, Majumdar’s article (22\textsuperscript{nd} December 2000) and other tables published from time to time in the Business line and Indian Express, Mumbai (August 23, 2003) all describe the state wise FDI over the period after the liberalization of the Indian economy from 1991 and the state wise FDI in the last three years.

3.1.66. The Economic Surveys of Maharashtra 2002-03 and earlier issues published by the MEDC gives details of the salient features of the economy of Maharashtra and the statistical tables give a comparative state wise picture of various parameters.

3.1.67 Datt and Ravallion (2002) have analysed the trend rates of poverty reduction by states and observed that the trend rates of poverty reduction have varied greatly across states. With Kerala having the highest rate of poverty reduction (both in numbers and in percentage points per year) and Assam the lowest, with Bihar and Jammu & Kashmir close behind. Kerala’s performance relative to Bihar is notable. Around 1960, Kerala had one of the highest poverty rates, along with Bihar. By the mid-1990s, Kerala’s poverty rate was almost half that of Bihar.


3.1.70 The Economic surveys published every year by the Government of India, Ministry of Finance give detailed statistics on exports and imports commodity-wise (both in quantity and value), the index numbers for the unit value of exports and imports, the volume indices of exports and imports and the gross, net and income terms of trade but not much of analysis or state wise data.

3.1.71 The Directorate General of Commercial Intelligence and Statistics, Calcutta (DGCI&S) regularly publishes detailed monthly statistics on exports, imports, etc. for the whole of India but not as yet state wise statistics (they have started the collection of export statistics state wise from 2002 but the final picture is still not public).

3.1.72 The reports appearing from time to time in the *Economic and Political Weekly* (EPW), *Business Today* (BT) and the Centre for the Monitoring of the Indian Economy (CMIE) and studies by the Reserve Bank of India (RBI), the World Bank and
other institutions do give some comparative statistics on Indian states. However, the data is not sufficient to reach any conclusions on the competitive advantage of Indian states.

3.1.73 The World Trade Centre in their executive development certificate programme on export management has made estimates of the commodity wise exports from Maharashtra.

3.1.74 The websites of the State Governments and their Corporations also give substantial information on the economic development, production and exports from the concerned state.

3.1.75 The Indian Institute of Foreign Trade (IIFT) has from time to time published a number of books/papers on the competitiveness of various sectors of the Indian economy. In addition as part of its country studies it has also published a series of monographs on the Indian economy including its competitiveness.

3.1.76 The website of the Monash University, www.buseco.monash.edu.au/Subjects/MKX/MKX3141 has a series of lecture notes on "issues in competitive advantage".

3.1.77 The 73rd and 74th Amendments to the Constitution of India have resulted in a large delegation of powers and funds to local governments and authorities and this has to be factored into the model proposed by Porter (1990) and modified by Macmillan and Tampoe (1996 and 2000) to measure the competitive advantage of states.

3.1.78 The United Nations Development Programme (UNDP)(2003) has calculated an index of human development in its "Human Development Report".
3.1.79 *Business Today* (BT) along with Gallup (a polling organisation) conducted in 2003 as a follow up of their three earlier studies of 1995, 1997 and 1999 on the competitive advantage of Indian states. The results of this survey, which have been summarized in the *Business Today* issue of September 28, 2003 show that as in the earlier surveys the rank of Maharashtra continues to be No. 1. However, there has been plenty of movement among the top states. Nine out of the top fifteen have moved at least one notch up in the rankings from 1999; the rest, except Maharashtra and Tamil Nadu have dipped. Hard incentives such as tax reliefs and subsidies are important for moving MP, HP and Rajasthan up. Maharashtra has a clear edge on all infrastructural metrics such as power and proximity to markets, but it is AP which is perceived to be more industry friendly in terms of policy making, implementation and quality of administration. Karnataka scores high on labour availability, infrastructure like telecommunications and advanced banking facilities. HP and Haryana which figure in the top ten states, enjoy better perception than factual data should allow. WB and Kerala are low on perception even though on factual rank they are among the top 10. Even Bihar the factual rank of 13 is much higher than the perception of last.

3.2.0 **Research gap**

3.2.1 Analysis of the literature on the subject of the competitiveness/ competitive advantage of states shows that even though substantial literature is there on the subject still all the literature shows is that in order to develop faster, increase their per capita income (PCI) and thereby advance the welfare of their residents nations/states/provinces/firms must exploit their existing competitive advantages or
create competitive advantage by encouraging investment (particularly FDI), going up the value chain and changing their economy from being reliant on the primary sector for the major part of their net state domestic product (NSDP) to becoming reliant on the manufacturing, secondary and services tertiary sector production for the major part of their NSDP. With the exception of Porter's study on the state of Massachusetts in the U.S.A (1991) all these studies are of countries. Most of the other work on competitive advantage is either about how individual firms may obtain or countries have obtained competitive advantage.

3.2.2 India is a large developing country which in the fifty years since independence has developed a large diversified industrial base. The Indian Institute of Foreign Trade has published a number of books/papers on the competitiveness of various sectors of the Indian economy. In addition the world Bank (1992 and 2000) as part of its country studies has also published a series of monographs on the Indian economy including its competitiveness. The MEDC has also held a national conference on February 13, 1999 which included a paper on the sectors where India has competitive advantage. Abdul Kalam and Rajan (1998) have also examined the sectors where India has and is likely to gain competitive advantage. Many seminars have been held on and other studies are there of the Competitive advantage, enjoyed by India in various sectors of manufacture and services e.g. Kumar (1988) and Momaya (forthcoming book).

3.2.3 Shaogung and Angang (1999) and Sheehan (1999) have tabulated the large variations in the human development indicators between the best and worst provinces in China, Sheehan and Grewal (2000) have tabulated the share of total manufacturing sales
and exports by states in Australia and shown the divide between the two states of Victoria and New South Wales in the south-west and the rest of states. Pei (2002) has utilized the data of Shaogung and Angang (1999) and Sheehan (1999) to show the large divide between the coastal provinces in the East and the rest of China. Recognising the importance of regional disparities in arriving at correct conclusions with regard to deciding on the detailed plan of development of a country/state the UNU WIDER had for the academic year 2002-03 taken up the subject of Regional Disparities in Human Development as a subject for research.

3.2.4 This researcher was also of the view that like other large countries India is a very large and diverse country with large variations in indicators as well as the factors determining competitiveness between states. It was felt that as in the cases of other countries the larger (and more important) states of the Indian Union would contribute to the bulk of the competitiveness of the Indian economy. It was also felt that the states in the south and west were developing and growing very fast in terms of NSDP, PCI and other indicators of competitiveness whereas the other states in the north and east were lagging behind and in the process the already large difference in PCI and other indicators of development between these two groups of states was getting increased further. Resulting in a further imbalance in favour of the states in the south and west of India. It was found that no study seems to have been done on the competitive advantage of Indian states.
3.2.5 Hence it was felt by this researcher that there was a need for a study on the competitiveness/competitive advantage of Indian states and this was also accepted by both his internal and external advisers.

3.3.0 Objectives

3.3.1 The study of the competitive advantage of Indian States was conducted with reference to all the Indian states. However, emphasis is being placed on the competitiveness of the larger (and more important) states of India (because it seemed that only a few important states contributed to the bulk of the competitive advantage enjoyed by the Indian economy) because it was felt that even though India in the fifty years since independence has developed a large diversified industrial base, still the development was very uneven with a south-west north-east line running along the border between Rajasthan and Gujarat, between Maharashtra and Madhya Pradesh and between Orissa and Andhra Pradesh (with the exception of Delhi, Haryana and Punjab and Chandigarh) dividing the country into two parts, one giving the bulk of the competitive advantage to the Indian economy viz. being the Sixth largest Economy in the world at Purchasing Power Parity (as per the calculations of the World Bank); having a relatively stable (even though the Central and many of the State Governments are coalitions), democratic and secular polity; courts which are independent and free; a vibrant and relatively free Press; an abundance of natural resources; availability of skilled manpower at extremely competitive costs; a vast pool of technical, scientific and managerial talent; having English as the language of business, administration (of the central and some state governments) and research; companies using international business methods; high class
Research and Development Institutes (many under the Council of Scientific and Industrial Research); proven capabilities in High Technology areas such as supercomputers, space, nuclear energy, etc.; a large domestic market; an expanding middle class (comprising of approximately 250-300 million people); growing purchasing power in rural areas; self-sufficiency in food production; having a broad industrial manufacturing base; dynamic and extensive Financial Infrastructure (including a large and vibrant capital market); etc. all of which make it a low cost, strategic manufacturing and service provisioning base in Asia for the huge domestic and the export markets.

3.3.2 One in the south and west developing and growing very fast in terms of NSDP and PCI and the other to the north and east of this line lagging behind and in the process the already large difference in PCI would get further increased. Resulting in a further imbalance in favour of the states in the south and west of India.

3.3.3 The first objective was to do a comparative review of these developments and to the policies (and the institutions, if any) related to this at the macro, meso and micro levels.

3.3.4 The second objective was to assess the potential of the rate growth in the NSDP and exports and the competitive advantage of the individual states in increasing the well being (in terms of PCI) of their residents.

Propositions

3.4.0 At the time of India’s independence in 1947 the states in the south and west had a competitive advantage vis-à-vis the states in the north and east. Thereafter despite the industrial licensing and location policy of the Government of India as per the Industrial Policy Resolutions of 1948 and 1956 they continued to gain due to the concentration of
industries in clusters such as the pharmaceutical cluster in Thane, the electronics cluster in Bangalore, etc.

3.4.1 Thereafter with the liberalization of the Indian economy starting from 1991 these states (with the exception of Delhi, Haryana and Punjab and Chandigarh) once again did the correct thing in systematically improving the already excellent infrastructure they had, diversifying their industrial base and exports, taking advantage of their location near the best infrastructure and the coast to reduce their transportation and other costs and hence enhanced the competitive advantage already enjoyed by them earlier.

3.4.2 This difference in competitiveness/ competitive advantage and the experience of these states vis-à-vis the experience of the states to the north and east will be examined statistically and a index of competitiveness will be attempted to give a comparative quantitative picture. Differences between the states will also be examined to try to find out the changes in competitive advantage which are now occurring in a significant number of goods and services in the favour of states in the south and west of India and whether this will widening of differences and whether this will continue or not.

3.5.0 Methodology of Research

Collection of data

3.5.1 In this study the researcher has collected data from the following primary and secondary sources.

3.5.2 The earlier study of Nair, Anil Kumar and Sunny (1994 and earlier issues) of the research Division of the National Productivity Council (NPC) providing a comparative
picture of the competitiveness of Indian states using four indicators of physical infrastructure, two indicators of human and social development and six other indicators.

3.5.3 The detailed statistics on exports and imports commodity-wise (both in quantity and value), the index numbers for the unit value of exports and imports, the volume indices of exports and imports and the gross, net and income terms of trade contained in the economic surveys published every year by the Government of India, Ministry of Finance and by the State Governments which give some comparative state wise data.

3.5.4 The detailed monthly statistics on exports, imports published by the Directorate General of Commercial Intelligence and Statistics, Calcutta (DGCI&S) regularly.

3.5.5 The comparative figures given in the Reserve Bank of India’s publications to analyse the performance of major states vis-à-vis the average for India on various parameters.

3.5.6 The reports, articles and statistics appearing from time to time in the Economic and Political Weekly (EPW), Business Today (BT) and other financial magazines, the Hindu Business Line, the Business Standard, the Times of India and the studies of the Centre for the Monitoring of the Indian Economy (CMIE) which give some comparative statistics on Indian states.

3.5.8 The report of the seminar on "Building national competitiveness - options for India" organised by the All India Management Association (AIMA) (1998).

3.5.9 The data in the study done by the Rajiv Gandhi Institute of Contemporary Studies, New Delhi (RGICS)(2000) for the Confederation of Indian Industry (CII) on How the States are doing.

3.5.10 The data in the study done by the Business Intelligence Unit, Chennai (1999) on the role of the state governments in the total investment in a state.

3.5.11. The data in the study done by Goswami, Arun, Gantakolla, More and Mookherjee of the CII and Dollar, Mengistae, Hallward-Driemier and Iarossi of the World Bank (January 2002) on The best states to invest in.

3.5.12 The replies given to Lok Sabha and Rajya Sabha Questions on the per capita central investment in each state plan and various other state wise economic data (which have a bearing on total investment and the competitive advantage of a state).

3.5.13. The personal communication dated 19th March 2001 from S.K. Mitra, Senior Adviser, India Investment Centre, the study (July 2000) by the Punjab, Haryana and Delhi Chamber of Commerce and Industry International Affairs Division on foreign direct investment (FDI) in India: impact of liberalization, Majumdar’s (2000) article, various statistics published in the Business Line(2002) and Indian Express(2003) all of which describe the state wise FDI over the time period after the liberalization of the Indian economy from 1991 and in the last three years.

3.5.14 The data in the studies done by Maharashtra at a glance, CII (2000) and the Yashwantrao Chavan Pratishthan (2000) Four decades of Maharashtra- a profile, which
gives a comparative picture of the state of Maharashtra with other states in terms of total and per capita income.

3.5.15 The data in the study/opinion poll conducted by Business Today along with Gallup (2003) on the best states in India to invest in.

3.5.16 The data contained in the census figures: Census of India 1991, Series-1, India, Paper-2 1992 and the preliminary census figures: Census of India 2001 issued by Registrar General and Census Commissioner, Government of India, New Delhi which give a comparative state wise position of the growth in population, literacy, etc. over the previous decade.

3.5.17 The data contained in the Profile of States published by the CMIE (March 1997) which gives a comparative picture of the states in terms of industrial development, infrastructure, etc (all of which have a bearing on relative investment attractiveness and the competitive advantage of a state).

3.5.18 The data in the database and the Production year book (1997) of the National Horticulture Board, Government of India, the website of the Ministry of Agriculture, Government of India, Krishi Bhawan, New Delhi and the website of the Agricultural Produce Export Development Authority (APEDA), Government of India, Bhikaji Cama Place, New Delhi which give a picture of the state wise production of fruits, vegetables and agricultural commodities and overall Indian exports from which this researcher has attempted to draw conclusions with regard to agricultural exports from states.

3.5.19 The figures given by the World Trade Centre in their executive development certificate programme on export management which gives estimates of the commodity
wise exports from Maharashtra.

3.5.20 The data on the websites of the State Governments and their Corporations which also give substantial information on the economic development, production and exports from the concerned state.


3.5.22 The data available in the United Nations Fund for Population Activities (UNFPA) (1997) book on *towards population and development goals* which gives a measure of the state wise HDI.

**Selection of sample of states**

3.6.0 The above data will be used to determine the grouping of criteria to compare states in terms of economic efficiency, government efficiency and infrastructure. For calculating an overall quantitative ranking, the NPC/UNDP methodology of computation will be used to get an overall idea of the competitiveness of a state vis-à-vis others.
3.6.1 Thereafter based on the availability of data and the comparative position of each of
the states vis-à-vis the others the states would be grouped into the following four
groupings:

(1) The advanced states of the West viz. Maharashtra, Gujarat (for some criteria Goa);
(2) The close competitor states of the South viz. Andhra Pradesh, Tamil Nadu,
Karnataka, Pondicherry and Kerala;
(3) The fairly advanced states of the North close to the Indian capital of Delhi viz.
Punjab, Haryana, Chandigarh and Delhi; and
(4) The remaining BOMARU states of the North and East viz. Bihar (earlier including
Jharkhand), Orissa, Madhya Pradesh (earlier including Chattisgarh), Jharkhand,
Chattisgarh, Rajasthan, Uttar Pradesh (earlier including Uttaranchal), Uttaranchal, West
Bengal and the States in the north-east (i.e. Assam, Meghalaya, Tripura, Manipur,
Nagaland, Arunachal Pradesh and Mizoram).

3.6.2 However, even within these groupings data and meaningful comparisons may not
be possible for many of the smaller states so as part of the final calculation only 18-20 of
the major states will be shown for which detailed data are available.

3.6.3 The States to be selected for comparison of their competitiveness/ competitive
advantage would have to be reasonably comparable in size, as large states with
significant rural and backward areas could not be fairly compared with small highly
developed city/urban states like Chandigarh and Delhi which would show an
overwhelming competitive advantage.
3.6.4 Further even though recognising the importance of regional disparities in arriving at correct conclusions with regard to deciding on the competitiveness/competitive advantage of a state (as has also been accepted by the UNU WIDER who for the academic year 2002-03 have taken up the subject of Regional Disparities in Human Development as a subject for research) this researcher will try to draw conclusions on regional disparities in industrialization, etc. from areas such as Vidarbha and Marathwada in Maharashtra wherever regional data within a state are available, otherwise the danger of the overwhelming competitiveness/competitive advantage of the highly developed areas in some of these advanced states overshadowing the backwardness of the backward areas of these very states is very much there.

3.6.5 Taking into consideration the above position the states to be selected for the study would be the advanced states of the west and their close competitors in the south viz. Maharashtra, Gujarat, Andhra Pradesh, Tamil Nadu, Karnataka and Kerala; the fairly advanced states of the north close to the Indian capital of Delhi viz. Punjab, Haryana, and Delhi; and the remaining states of the north and east viz. Bihar (earlier including Jharkhand), Orissa, Madhya Pradesh (before 2000 including Chattisgarh), Jharkhand, Chattisgarh, Uttar Pradesh (before 2000 including Uttaranchal), Uttaranchal, West Bengal and Assam.

**Checklist for comparison of competitive advantage**

3.7.0 After examining the data available state wise and considering the criteria used by the WEF, HCID, IMD, the Beacon Hill study and the NPC study and adapting them to give a representative picture of Indian states) viz. availability of infrastructure, relative
economic performance and government efficiency and using the figures for investment which they have been able to make themselves (through their small savings loans, surplus available with them after Government final consumption expenditure) the checklist for comparison of competitive advantage would consider:

- the ability to attract business sector investment including foreign direct investment (FDI) as a proportion of GDP;
- criteria to measure the productivity of the people in the state;
- since the value added in the tertiary (services) sector is the maximum assuming that the state with the maximum growth/proportion in this sector would be having the maximum value added, using this as a criterion to measure relative economic performance;
- taking the proportion of educated population which has passed middle school instead of the proportion of population qualified to high school level (10th and equivalent) to measure availability of a skilled workforce i.e. infrastructure;
- since the urban areas in all developing countries are generally more developed using overall urbanization, road development, railways, electricity as a rough and ready index of the availability of infrastructure (this is slightly different from the criterion used in the study by Nair, Anil Kumar and Sunny (1994) of the research Division of the NPC).

3.7.1 In addition to the above there are some other criteria which give rise to greater competitiveness/competitive advantage, etc. which have not been enumerated earlier.

3.7.2 Data on exports from a state (wherever available) will only be used as a measure of confirmation of the relative competitiveness/competitive advantage of a state.
3.7.3 Details of the exact criteria to be used for determining the competitive advantage of each of the states will be discussed in Chapter 7.

**Data analysis and interpretation**

3.8.0 Analysis of the data, making it comparative by bringing it to a common base will require calculations in the same manner as done in the study by Nair, Anil Kumar and Sunny (1994) of the NPC and by the UNDP(1997) to calculate the HDI.

3.8.1 Before the relative competitiveness/competitive advantage of a state can be calculated, an index needs to be created specifying the minimum and maximum values (these will be the figures for the two states having the parameter at the extremes) for each of these criteria/indicators. The performance of each state in each indicator will be expressed as a value between 0 and 1 by applying the following general formula:

\[
\text{Criterion index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}}
\]

3.8.2 The relative competitiveness/competitive advantage of a state will then be calculated as a simple average of the criterion indices.

3.8.3 Interpretation of the results will also have to be done taking into consideration all the factors which are critical in arriving at the relative competitiveness/competitive advantage of a state with a view to making recommendations on the action to be taken by the concerned states on how to improve its relative competitiveness/competitive advantage and the areas on which they should concentrate in order to improve the well-being of their residents.
References

1. Abdul Kalam, A.P.J. and Rajan, Y.S. India 2020 - A vision for the new millennium (1998), wherein they have also examined the sectors where India has and is likely to gain competitive advantage.
3. The website of the Ministry of Agriculture, Government of India, Krishi Bhawan, New Delhi.
8. The website of the Agricultural Produce Export Development Authority (APEDA), Government of India, Bhikaji Cama Place, New Delhi which gives a picture of the statewise production of fruits, vegetables and agricultural commodities and overall Indian exports from which this researcher has attempted to draw conclusions with regard to agricultural exports from states.
14. The report of the Business Intelligence Unit, Chennai (1999) on the role of the state governments in the total investment in a state.
15. The reports, articles and statistics appearing from time to time in the publications of the Centre for the Monitoring of the Indian Economy (CMIE).
16. The reports, articles and statistics appearing from time to time in the publications of the Confederation of Indian Industries (CII), New Delhi.
27. The reports, articles and statistics appearing from time to time in the Economic and Political Weekly(EPW).
28. The Economic Survey of Maharashtra (various years), Planning Department, Government of Maharashtra and the MEDC, Mumbai.
32. Goswami, Omkar; Arun,A.K.; Gantakolla, Srivastava; More, Vishal; Mookherjee, Arindam of the Confederation of Indian Industry (CII) and Dollar, David; Mengistae, Taye; Hallward-Driemier, Mary and Iarossi, Giuseppe of the World Bank “The best states to invest in”, study conducted in January 2002 (report in the Economic Times, Mumbai of 9 January 2002) and copy obtained from the CII.

36. Jenster, Per V. and Rubin, Geoffrey M. "Assessment of National Competitiveness: A European Example" (Chapter 9 of *Competitor Intelligence- Turning Analysis into success*) by Hussey, David and Jenster, Per V. (John Wiley 1999)).


43. The Maharashtra Economic Development Council national conference on-*The Indian Economy-Challenges of the 21st century* held at the Y.B.Chavan centre, Mumbai on February 13, 1999 which included a paper on the sectors where India has competitive advantage.


47. Nair, N.K., Anil Kumar, V., and Sunny, K.P. (Productivity-Vol. 33, No. 3).


60. Porter, M.E. ‘Canada At the Crossroads’ (still to be completed).
61. The data in the study done by the Rajiv Gandhi Institute of Contemporary Studies, New Delhi (RGICS)(September 2000) for the Confederation of Indian Industry (CII) on- “How the States are doing”.
64. Sachs, Jeffrey D. Professor of Economics and Director of the Center for International Development, Harvard University, USA (HCID)- article in the Economic Times (Mumbai edition dated 7 November 2001 ) “How Competitive are we?”
74. The United Nations University (UNU) and the World Institute of Development Economic Research (WIDER) “Regional Disparities in Human Development” one of the areas for giving priority in research in 2002-03 (source website of UNU-WIDER).
78. The World Bank has also issued a TradeCAN (August 1999). This gives the trade and competitiveness data of various/groups of countries from which one can draw conclusions on the competitive advantage of India.
79. The National Competitiveness balance sheet (2001), World Economic Forum (WEF) Davos, Switzerland and Harvard University (Source the website of the WEF).
80. The figures given by the World Trade Centre, Mumbai in their executive development certificate programme on export management which gives estimates of the commodity wise exports from Maharashtra.
81. Yip (“From comparative advantage to competitive advantage .htm”). Article downloaded from the internet on 26-12-2001