CHAPTER - II

Research Design
Research designs are concerned with turning the research question into a testing project. The best design depends on the theoretical framework. Every design has its positive and negative sides. The research design has been considered as a "blueprint" for research, dealing with at least four problems: what questions to study, what data are relevant, what data to collect, and how to analyze the results. Research design can be divided into fixed and flexible research designs. However, fixed designs need not be quantitative, and flexible design need not be qualitative. In fixed designs the design of the study is fixed before the main stage of data collection takes place. Fixed designs are normally theory-driven; otherwise it's impossible to know in advance which variables need to be controlled and measured. Often these variables are quantitative. Flexible designs allow for more freedom during the data collection. One reason for using a flexible research design can be that the variable of interest is not quantitatively measurable, such as culture. In other cases, theory might not be available before one starts the research.

2.1 REVIEW OF LITERATURE

A literature review aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. The existing studies regarding various aspects of Sino Indian relations have been analysed to get a insight of the current scenario.

Sanjay Ambatker1 (1995) studied the foreign investment during eighties and nineties was instrumental in bringing in rapid economic development of some of the Asian countries; on the contrary until 1991 it was almost elusive in the Indian economy. The announcement of economic reforms in July 1991 generated the hope in India that foreign investment would assume front burner position in accelerating the pace of the development process. To give impetus to the economic reforms, the Indian govt. unveiled the "look-east policy" in early 1992
to revitalize economic ties with Asian made since 1992 to forge concrete investment partnership with Asian countries India could gain moderate response and success mainly because Asian investors link their investment with the host countries trade region.

DN²(2001) studied that the absence of a land market, production for export, an educated labour force and a greater identification of labourers in a large number of enterprises (the township and village enterprises) with the result of their labour are some of the factors accounting for china’s higher productivity and thus competitiveness in the world market. The Chinese internal market is very competitive. China is justifiable wary about opening up all of its markets to free imports, but internally newer units come up to challenge older established ones. In the Chinese market domestic manufacturers of appliances, motorcycles and TVS, to name a few goods, have been able to successfully compete with those from Japan, Korea etc. The Korean and Japanese brands that now dot the Indian market in these areas will surely soon face competition from Chinese brands like Haire and Konka in domestic appliances and TVS respectively.

Anil Kuruwala³ (2001) in his paper highlighted the process of economic reforms and its potential gains in agriculture using the time series. The estimated elasticity coefficient for testing outward oriented works out to 0.84 of the period between 1971-72 and 1984-85 and 0.87 for the period from 1985-86 to 1996-97 confirming that India adopted outward oriented agricultural trade policies to boost agricultural exports. The result also reveals that EXIM policies of Indian do not discriminate between production for domestic market and exports. These was decline in elasticity of exports with respect to per capita income implying that the benefits from international trade thought export of agricultural commodities has not brought out substantial reach down effect. Under the proved trade-development nexus the empirical result suggested that 10% increase in agricultural
exports increase terms of trade at the rate of 4.6% emphasizing the need for adopting wider liberalization trade policies to exploit the scale effects.

Dr. Aristotle Emami and Shah. M. Tarzi⁴ (2002) tried to shed light on the role of trade liberalization in promoting economic globalization and growth. This study provides a theoretical expose and presents empirical data regarding trade liberalization and its consequences, finding that the net effect of higher tariffs is to transfer wealth from consumers to producers and government among other related insight emerging from the empirical data presented one - as a result of trade liberalization policies, the world economy is integrated more intensively and the trade liberalization increases the overall size of labour participation an enhances labour productivity the study also highlights trade inhibiting structural reforms particularly efficacious in promoting sustained economic growth.

Suhan Palshikar (2002)⁵ compared china's economy with the Indian economy. He was of the view that compared with India; china's industrial growth record has been superior mainly because china could create a large market base through its equalitarian policies in the pre- reforms period. In the Indian case, income inequalities produced a narrow and segmented market. In short he suggests that pre- reform structures and policies are crucial in determining the success of reforms.

Manoranjan Mohantay⁶ (2004) studied that despite the economic successes during the 25 years of economic reforms, recording an average of over 7% annual rate of growth and achieving US $1,000 per capita income, China is facing many serious challenges. Recently the development and reforms commission of China's state council asked 98 well known Chinese and foreign experts to name the risk factors which should be kept in mind while preparing the eleventh Five-years plans for 2006-2010. They listed 10
major problem 1) unemployment 2) problems relating to farmers, and agriculture. 3) Financial sector adversely affecting capital flow. 4) Rich-poor gap having crossed the international ‘red-line’. 5) Environment problem etc.

T.T Ram Mohan (2004) in his paper examines China’s record of privatization to assess whether it accords with popular perception in India of that country proceeded vigorously with such a program. The record shows that China has moved continuously in its privatization efforts. It has privatized only the smaller state-owned enterprises, and the state retains control over the larger ones. Over a period, China has also pushed through reforms of sots, and the empirical evidence is that their performance has improved consequent to such reforms. It could be argued that full blooded privatization might have produced even better result. However, given the possible implications in terms of job losses as well as the absence of effective governance mechanisms in China’s underdeveloped capital market, its rulers may well have been justified in hastening slowly with privatization.

D.N Ghosh (2004) in his paper focuses that china and India must behave as responsible players in the global market and reform and restructure their economies in ways that meet their expectations. The central issue facing the global community today is that in the decision-market bodies that deal with cross-border flows of trade, investment and finance, there is a basic asymmetry between power and responsibility, between those who take decisions and those who are affected by it. It the responsibility for ensuring growth and stability of global economy has to be shared by all, the configuration of power structure that dominates the global decision-market bodies has to change fundamentally. The inter-dependent world needs a new architecture for global economic cooperation in which china and India must be effective participants.
Sunanda Sen⁹ (2005) studies that State directives to banks in China on the disbursement of credit and incentives offered by the state to provide facilities for industry have worked as an incentive for foreign investors. A large part of these FDI inflows is related to the success of China in having a ‘guided financial market’. The benefits of these inflows, in the process, are reaped by both industry and finance, as opposed to a situation of finance-led growth alone, where speculation dominates the financial flows. In China’s regulatory institutions in the area of banking, securities and issuance are given wide-ranging power’s thus keeping a close vigil on the functioning of both finance and industry.

Subramaniam Swamy¹⁰ (2005) has studied that political compulsions have, in the past, been the main drives of economic reforms in China and India. In the decade ahead, political constraints will be the main stumbling block to reforms that are necessary to avert a financial crisis. The consequences of not attending to the political constraints in the two countries are serious. Indeed by current international standards, both China and India have impressive macroeconomic fundamentals such as a high growth rate in the range of 6 to 8 % per year, a relatively low inflation rate, a foreign exchange resources level exceeding 10 months of imports, and a declining hard count ratio of poor people. Perception today is thus that both economics are going stronger will fuel global growth in the future.

Ajay Patnaik¹¹ (2005) is of the view that any global strategy against a unipolar world system is necessarily going to have Russia, India and China as regional strategic partners. This would mean not just stronger military-defence ties, but mutual strengthening of economic relations as well. All the three countries have stronger military defence ties, but mutual strengthening of economic relations as well. All the three countries have a number of converging interests that could add substance to trilateral cooperation. All the three countries have a number of converging interests that could add the
substance to trilateral co-operation. Apart from opposing civilateral aggression, they back the primacy of U Nations in solving crises.

Alka Acharya\textsuperscript{12} (2005) is of the view that the bilateral trade between India and China shows a very high growth rate in the economic and commercial field, the advances have been quite remarkable, A mere \$3 billion at the end of 2000, bilateral trade registered a historic peak, amounted to over \$13 billion in 2004, representing a jump of 79\% over the trade volume of 2003. Prove importantly India has a surplus of \$1.78 billion. Indian exports rose by 77.2\%. It was estimated that if such trends continue, China is likely to become India's largest trading partner.

Shang Quangoi\textsuperscript{13} (2005) focuses on Sino-Indian relations in the early Nehru era, i.e. the friendly relations between China and India from 1947 to 1958. He reveals that in the early part of Nehru's Period, China and India has intimate bilateral relation characterized by mutual support and cooperation in many decisive national, regional and international issues, such as establishment of diplomatic relations, admission of PRC to the United Nations, the Korean crisis, friendly exchange in the initiations phase from 1947 to 1953 and the Panchsheel agreement, Indo-China issue, Asian-African conversance, Taiwan and Goa questions, and mutual visits of high ranking leaders in the Honeymoon phase from 1954 to 1958. Furthermore, he discusses the factor contributing to the intimacy and cordiality of Sino-Indian relations in the early years of the Nehru era. These include the internal context, external context and personal factor. The internal context comprises both the historical conditions and the existing realistic situation that China and India faced. The external context was contributed by the circumstances of the global cold war, marked by the American-Pakistani alliance, American-Chinese enmity, and Indo-Pakistani hostility, whereby Sino-Indian friendship came into being logically. The personal factor stemmed from Nehru's ideas and his stand on Sino-Indian friendship.
Cell Harral & Jit Sondhi\textsuperscript{14} (2005) are of the view that while many difference between the situation the two countries India & china are recognized, it is argued that the extraordinary economic growth in china created a dynamic momentum a "Juggernaut" in fact that broke bounds of inertia and overcome may impediments similar to those of India. In India is to overcome its transportation bottlenecks and sustain its future economic growth, it, too will have break the bounds of inertia and rise new levels of performance in the creator, and utilization of transport infrastructure. Several of the political and institutional constructs used china can be adapted to India circumstances and purposes. At the same time, there are also lessons in china as to potential pitfalls to avoided, particularly in the pricing financing of road infrastructure.

R. Nagaraj\textsuperscript{15} (2005) used independent estimates of china’s industrial output for comparing the performance of the manufacturing sector in china an India over the past half century at a disaggregated level. He found that china’s industrial growth rate is close to one and half times that of India’s over the entire period, with the gap widening gradually. But Indian growth has been more stable. China’s superior performance seems understandable in terms of its faster agricultural and exports growth. China seems to suffer from huge excess capacity, misallocation of resources and a gross wastage of capital- as evident the high capital output ratio. China’s impressive industrial edifice seems to be built on somewhat shaky microeconomic and institutional foundations. In comparison, India’s relatively strong foundations and domestic entrepreneurial capital seem to have the potential to improve performance, with a sounder macroeconomic environment, a step up in fixed investment to arrangement infrastructure supply and agricultural productivity, revival of long term finance to boost industrialization, and easier credit delivery to small and medium enterprises.
Cheng\textsuperscript{16} (2005) Apart from responding to the contention of the "china threat", in his paper analyses china's role in the process of Asian economic integration. The author argues that china's active participation in the Asian economic unification process will enhance the country's political and democratic reforms and help it become a solid pier in building a secure foundation for peace in Asia and the world.

Nagesh Kumar\textsuperscript{17} (2005) studied that there is now a growing recognition of the importance of regional economic integration in Asia for generating growth impulse from within, especially in the wake of the East Asian crisis. Voices emanating from different parts of the region support pan-Asian cooperation and integration. Against this background, the paper examines the relevance of a border approach and outlines a roadmap for regional cooperation in Asia. India's economic integration with East Asia in the emerging east, Asia community would also fits the look last policy pursued by India since 1991 as a part of which India become a dialogue Partner of ASEAN. The Indian economy is rapidly integrating with the East Asia production networks especially in critical knowledge-based parts of the value chain. The enterprises are also developing their own production networks incorporating East Asian countries. With rapid growth of intra-regional trade, East Asia has emerged India's largest value partner surpassing the US or EU accounting for nearly 40% of her global trade.

Perkins and Rawskai\textsuperscript{18} (2005) studied the future productivity and GDP growth in China over the coming two decades depends primarily on what happened to growth in output and productivity in industry and services. These new sources of reform and productivity growth are likely to come in a continuous stream of important but smaller, less volatile steps that raise efficiency and upgrade technology year after year. Productivity increase will remain important drivers of China's growth but will not match the gains of the last 30
years. Continuing reforms particularly of China’s financial and legal systems will be essentially to maintain rapid economic growth. Growth will slow to 6 to 8% over the next two decades.

Gautam Das (2007) in The ICS research project ‘Border trade and border people: marginalized livelihood at the civilization interface’ aims to look at trade and livelihood issues at selected sites of historical and contemporary trans-Himalayan trade along India’s long and incompletely demarcated border with China. The project is being conducted incrementally in modules, in Arunachal Pradesh, Uttarakhand, H.P. and Ladakh. The field research trip to Tawang, an important town and District headquarters in Arunachal Pradesh, known for its large monastery of the Gelugpa or ‘yellow hat’ sect of Tibetan Lamaistic, was the first module to be conducted.

Jayanta Kumar Malik (2005) tried to observe a positive association between exchange rate movements and exports, which define the conventional wisdom. He gives stress on the need for critical evaluation of the export strategy of India. He is of the view that the excessive dependence on the import-linked schemes has implications for the sustainability of export growth for lasting gains in the competitiveness of exports, it would be prudent to replace there indirect schemes by permissible direct methods such as marketing assistance, transport subsidy and other forms of support bemp extended to select agricultural products. It could make the incentive system transparent and predictable.

Jehanger S. Pocha (2006), found that for decade consumer in China were closed from the world. But he is of the view that now China could become the No. 1 in luxury goods market. In 2001, the top ten brands in China were all American but in 2005 Coke was the only one of them to retain its place. Local brands are catching up a fast pace. Chinese entrepreneur are benchmarking their quality and style-power against western fashion companies and seeking to match global
brands even in rarefied areas such as high-end hi-fi, Chinese companies such as Shanling Audio and Aurum Cantus are giving foreign companies a run for their money by creating world class products featuring true innovations. A large part of the success of Chinese luxury marketers is their ability to know their clients.

Amit Gupta\(^2\) (2006) studied the rise of India and China to Potential great power status, there is now talked of the United States, India & China being the three Poles in the international system of 2050. This article argues that the countries are on different power trajectories and that two of these trajectories – those of the United States and China will lead to a strategic rivalry on the other hand, India’s Power trajectory, while faced with conflict at the South Asian Level of Analysis, may well allow it to play the role of a ‘Swing State’. As a swing state, India could work as a facilitator to get China to work in a corporative security arrangement to secure energy supplies, maintain freedom of navigation on the high sea, and Play according to the rules that make it a status 900 power in the international system. In return, India would expect China to settle the border dispute to India’s advantage, delink from Pakistan, and be more considerate of India’s own quest for securing energy resources.

Anjani\(^2\) (2006) tried to study the various dimensions in which development has taken place in India & China. Her analysis of human development in China and India suggests that, though China has achieved significant economic Progress, it has not been without cost. The large and growing interpersonal inequalities, inter-regional inequalities and intergenerational inequalities are likely to lead to social tensions, which will stall the process of economic development. To ensure sustainable development, greater emphasis has to be placed on conservation of the environment and the redistribution of the gains of growth to the poorer people and backward regions through appropriate govt. policies. The Western Region Development Programme and the antipoverty programmes of China are steps in the
right direction. China also needs to improve the availability of safe drinking water for its population. Though India’s growth has been much slower than China’s it has a better spread in terms of Population and regions. Living in one of the largest democracies in the world, Indians enjoy much greater political and economic freedom than do the Chinese. However, India needs to invest much more in health and education, especially adult literacy, to take advantage of its large labour force and leapfrog into the twenty-first century to become a dominant economic power in South Asia.

Sudha Vasan24 (2006) studied the Trade along the Indo-Tibetan boarder in H.P and found that it has a long history with the first state intervention in trade recorded over three hind-red years ago. Colonial mercantile interests, the Political interests of independent India and China, infrastructure, economic development and cultured transformations have all affected this trade and transformed communities living on either side of the border. A memorandum on the resumption of border trade between India and Chinese Tibet was signed at New Delhi on 13th October 1991, and Shipki la in H.P. was one of the two designated trade routes. This article discusses the historical transformation in trade and in the lives of communities. Living along this border on the Indian side the two major trade routes along shipki la and the Kaurik pass are desorbed. Current practices, attitudes and aspirations of traders and villagers along these routes and the quantum and quality of current and potential trade are analyzed. Based on this, the potential impact of encouraging legal trade along these traditional routes and the impediments to improvement in trade are discussed.

Brandt and Rawask25 (2006) studied that China’s economy has abandoned its farmer isolation in favour of deep engagement with world markets. The trade ratio, which measure the combined value of exports and imports as a share of gross domestic product jumped from under 10% prior to reforms to 22.9% in 1985, 38.7% in 1995,
and 63.9% in 2005 a level for higher than comparable figures for any other large and populous notions. China has also become a major player in the global market for foreign direct investment, receiving inflows in the neighbourhood of $70 billion 2004-06 and generating moderate, but rapidly increasing, outflows of direct overseas investment ($16.1 billion in 2006).

Dilip K. Das (2006) is of the view that as ancient civilizations China and India had drifted apart after eleventh century until the mid-twentieth century. In the 1990's the two emerging market economies once again began to interest and become economically close. The bilateral relationship was strengthened by political initiatives and determination from both sides. Their mutual trade and investment are on the rise and their new relationship has been evolving in accordance with the new diplomatic stance of conciliation. The bilateral economic bonds are likely to involve both competitive and collaborative dimensions. The two neighbours have determined to develop more extensive cooperation in regional and international affairs.

Swargajyoti (2006) found that Border livelihood is a concern of new perspective which looks at borders not as peripheries or margins of a national state, but as entities in their own right. This paper is an attempt to look at India's border along Arunachal Pradesh from this perspective. It is not so much a full-fledged study as a preliminary report, which seeks to raise, more than answer questions about a small portion of India's eastern border and its inhabitants by looking at both the history and the lived reality of a border people, how they without the imposition of a national border in the past-Independence period, and how they are facing the challenge of a new global order where trans border trade and exchange are seeking to connect people across borders in new ways. This paper tries to highlight the topical concerns and encounter of a border land people at the interface of powerful global forces by addressing one particular issue- he contemporary moves on the part of the Indian government to reopen
trans border routes, and how such a move is being viewed by local people of the border regions in terms of ways in which it will affect their livelihoods and lifestyles.

Suk Hadev Thunat & Sheneg Gen Fan\textsuperscript{28} (2007) tried to study growth in agricultural productivity, the rural non-farm sector, and rural wages, which are the main sources of poverty reduction in both China and India, have been made possible by public investments in R&D, such as roads, power, irrigation, communication, and education and antipoverty programs. However, returns on these public investments. The tradeoff between agricultural growth and poverty reduction is generally small among different types of investments a different region. Agricultural research, education, and infrastructure development have a significant growth impact as well as a large poverty reduction impact.

Leong and harry\textsuperscript{29} (2007) studied that the renminbi rate of return per US dollar of export is a crucial economic indicator that influences exchange rate policy in China. They have shown how the exchange rate and subsidies were used to vary the renminbi rate of return per US dollar of exports to influence exports when there was a serious imbalance in China’s balance of trade, especially when it posted large deficits. Among the factors that explain China’s exports, they find two that were more important that the renminbi exchange rate. These were the relocation of global production to China that was reflected in large FDI flows and machinery and material imports to China, and subsidies and export rebates.

Chengsi Zhang, Hong Pang\textsuperscript{30} (2008) studied the surge in international capital inflows and the remarkable excess liquidity in China between 1997 and 2007. It is shown that China’s improved position in terms of foreign exchange purchase, ignited by huge foreign capital inflows, has effectively induced excess liquidity in China. More importantly, by developing an econometric model for
inflation and excess liquidity, his study demonstrates that excess liquidity has imposed significant pressure on inflation in China over the post 10 years. His finding suggests that excess liquidity in China has not only contributed to the rise in stock price and the real estate market bloom, but also affected the consumer goods market. The potential transmission mechanism of liquidity-driven inflation and policy implication of the finding of this study were discussed.

2.2 NEED OF THE STUDY

From the review of existing literature it has been found that various research studies, publications, reports and articles were available on the various aspects of bilateral ties such as social political or economic etc. But no proper study of Sino-Indian trade relation has been made so far. The two countries are emerging as superpowers. The bilateral trade between two countries is increasing at a greater pace. The two countries are looking towards great business relationships. Opening up of trade routes have given a new dimension as well as direction to Sino-Indian trade relations and hence opened new areas of research.

2.3 SCOPE OF THE STUDY

The present study is based on both conceptual as well empirical in nature. Under the study an attempt has been made to cover bilateral commercial relations including trade relations, trade policies, composition, direction etc. The major focus of the study is on contemporary issues relating to trade between India and China. On the basis of the available data, projections for future have also been worked out. Besides this, the non economic problems related with India China trade have also been discussed. Moreover, a study of trade routes has been done to find out the possible new avenues of trade. The study is mainly applied in nature.
2.4 OBJECTIVES OF THE STUDY

The pin pointed objectives of the present study are as under:

1. To study various trade policies of India and China.
2. To study the growth and structure of Sino-Indian trade.
3. To study the composition of trade between India and China.
4. To study the growth and potential of land trade between two countries.
5. To study the contemporary bilateral issues in Sino-Indian relations affecting trade.

2.5 METHODOLOGY

In the present study, both secondary as well as primary sources have been used. The desk work was carried out in various libraries namely; institute of Chinese studies New Delhi, Indian Institute of Foreign Trade New Delhi, Indian Investment Centre New Delhi, Jawaharlal Nehru University New Delhi, FICCI New Delhi, CII Chandigarh, Punjab University Chandigarh, H.P. University Shimla, Indian Institute of Advanced Studies etc.

Other Secondary Sources:

Secondary sources are the main sources of data, collected from published or unpublished reports. Relevant information has been compiled from the following sources:

- The economic survey (Annual Issues), Govt. of India, New Delhi.
- RBI, monthly bulletins, Bombay.
- Reports on currency & finance, RBI, New Delhi.
• Basic statistics relating to Indian economy, CMIE, Bombay.

• Focus WTO, IIFT, New Delhi.

• Foreign Trade Review, IIFT, New Delhi.

• Economic & Political Weekly, Smeeksha Trust publication, Mumbai.

• SIA, newsletter, Govt. of India, Ministry of commerce & Industry, New Delhi.

• The Europa, a world year book London.

• India today, New Delhi.

• Business India, New Delhi.

• Frontline, from Publishers of Hindu.

• Business World, New Delhi.

• Fortune, Mumbai.

• Finance India, The quarterly journal of Indian institute of finance, Delhi.

• Hand Book for NRI’s, Nabhi publications, New Delhi.

• The Economic Times.

• The Business Standard.

• The Financial Express.

• The Times of India.

Apart from books, journals and news papers, various sites available on the internet have also been surfed. Other than official websites of Indian and Chinese government, other sites have also been visited.
The Primary sources:

The source has been used to seek the opinions of academicians, experts of IIFT, CII and officials of Chinese embassy. The desired information pertaining to various aspects of India China trade relations have been asked for. For this purpose, questionnaire, discussion and observation methods have been used.

Development of Questionnaire:

Questionnaire refers to a device for securing answers to question by using form which the respondent fills in himself. Questionnaire containing 10 open ended questions were developed after consulting various colleagues, friends, academicians and literature regarding the nature of the study. Then it was circulated among various academicians and a marked questionnaire was also sent to exports and officials of IIFT, CII, Institute of Chinese studies, Chinese embassy etc.

Interview:

Under this method of collecting data, there is a face to face contact with the persons from whom the information is to be obtained. The interviewer asks them questions pertaining to the survey and collects desired information. So under this method a lot of desired information relating to the various aspects of bilateral trade has been collected from few experts from selected institutes.

Observation:

In social sciences, observation plays a more important part then experiment. It consists in collecting facts in the direct knowledge of the investigators. It is the fact looking closely and purposively of the situation as a whole and at the same time taking in the results without losing oneself in the situation. During the present study observation method has been used through out.
**Analysis and Interpretation:**

Analysis of data is a process of inspecting, transforming and modelling data with the goal of highlighting useful information, suggesting conclusions and supporting decision making. In the present study, the various quantitative and qualitative information's have been compiled from various sources. The quantitative part has been analysed with the help of various statistical techniques. While the qualitative information have been analysed with the help of descriptive methods.

**Ratio Analysis:**

A ratio is a simple arithmetical expression of the relationship of one number to another. Ratio has been worked out through dividing exports by imports in order to see their changing share in the overall trade.

The ratio calculated has been interpreted as proportion to know the balance of trade. Excess of exports over imports indicates favourable balance of trade and vice-versa.

**Least square method:**

The least square method of two series analysis is lived to fit a straight line trend and to work out projections for the future period about 10 years. The straight line trend is represented by the equation:-

\[ Y_c=a+bx \]

Where \( y_c \) is used to designate the trend values to distinguish them from actual \( y \) values (exports, imports from China), \( a \) is the \( y \) intercept or the computed trend figure of the \( y \) variable when \( X=0 \), represents the stops of the trend line or the amount of change in \( y \) variable that is associated with a change of one unit in \( X \) variable. The
X variable in time series analysis represents time. In order to determine the value of the constants a & b. the following two normal equations are solved:-

\[ \sum Y = Na + b \sum X \]  
\[ \sum XY = a \sum X + b \sum X^2 \]

Where, \( N \) represents the number of years.

With the help these trend equations an attempt has been made to forecast the growth of Sino-Indian exports and imports.

**Graphic Method:** - The method is applied to give a bird's eye view of various statistical tables.

**DESCRIPTIVE TECHNIQUES**

Descriptive research also known as statistical research, describes data and characteristics about the population or phenomenon being studied. Descriptive research generally precedes explanatory research. In the present study it is analysed that India China relations are not only affected by quantitative factors but there are some non-quantitative i.e. qualitative factors also which are affecting the trade relations of the two countries. An attempt has been made to analyse these factors by descriptive methods.

**2.6 LIMITATIONS OF THE STUDY**

The major limitations of the present study are as under:-

1. The biggest limitation of the present study is that it has been conducted in India. The perception of Chinese officials needs primary investigation.
2. In number of cases data in time series was not available.
3. Number of officials of the Chinese embassy and academicians failed to respond.
4. Because of the tough topography, time and financial constraints it was not feasible to have the first hand information of the land routes between India and China.

5. Comprehensive quantitative models could not be used because of the non-availability of the data of both countries in similar fashion because the reporting pattern of both the countries is different.
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