A research methodology is a systematic plan for conducting research, it gives the answer to a number of questions related to what, when, why and how the research has been carried out. The researcher has used a number of steps in studying his research problem and to achieve the research objectives. This chapter will discuss the Research problem, objectives of the study, hypotheses, scope and relevance of study, a detailed research methodology used to achieve the set objectives, significance of the study, and limitations of the study and organization of the study.

3.1 PROBLEM STATEMENT

A Study of Indo-China Trade Relations

3.2 RESEARCH OBJECTIVES

Following are the objectives of the study:

1. To understand the complex political, economic and trade relations between India and China.

2. To analyze the reasons behind skewed/imbalance bilateral pattern between India and China.

3. To suggest strategies to correct the rising trade asymmetry between India and China.

4. To explore the scope of mutual economic collaboration between India and China in the context of BRICS, SCO, APEC, ASEAN and EAS.

5. To examine sectorial complementaries of the economies of India and China and strategies for harnessing synergy of bilateral trade and economic interest.

3.3 FORMULATION AND TESTING RESEARCH HYPOTHESES

The Research Instrument (Questionnaire) comprises of 35 key research statements eliciting critical information from the respondents (apart from relevant demographic information having a bearing on their psychographic attitudes, interests and opinions) and has been divided into five sections covering the five broad research objectives. Separate Research Hypothesis has been formulated from different Research Statements which are as following:
(A) Understanding the Complex Political, Economic and Trade Relations

The following hypotheses were taken and tested to realize the first objective:

\( \text{H}_01: \) There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding the assumption that only exports are desirable (and should be maximized), while imports are undesirable (and should be minimized) is fallacious on economic grounds.

\( \text{H}_02: \) There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding the basis of International Trade is a country exports what it has a surplus of and imports what is locally scarce (which by imperative of economic necessity becomes more valuable than what is in abundance).

\( \text{H}_03: \) There is no significant difference among respondent opinion (gender-wise, organization-wise, education-wise, experience-wise) regarding the main benefit of International Trade being, to end scarcities by importing what a country doesn’t have and exports are thus a secondary aim, required to pay for imports.

\( \text{H}_04: \) There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding running Trade Surplus with relatively uncompetitive countries and a Trade Deficit with highly competitive countries is normal in International Trade.

\( \text{H}_05: \) There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding International Trade, the more competitive the trading partner, the more a country like India would buy from it and the bigger would be the bilateral Trade Deficit.

\( \text{H}_06: \) There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding India’s ever-rising and highly skewed trade imbalance with China, being economically unsustainable in the long-run, needs to be addressed for the long-term health of the bilateral relationship.

\( \text{H}_07: \) There is no significant difference among respondent opinion (gender-wise,
education-wise, experience-wise and organization-wise) regarding the widespread suspicion that China gives huge export subsidies to its exporters is wrong because of its economic unavailability in the long-run.

(B) Reasons behind skewed/imbalanced bilateral trade patterns

H_{08}: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding that one of the most important reasons of India running its biggest trade deficit with China is because it is the most competitive exporter among all countries.

H_{09}: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding that on the positive side, running a huge trade deficit with China is an indicator that India is sensibly getting its imports needs met from one of the cheapest sources of goods.

H_{10}: There is no significant difference among respondent opinion (gender-wise, education-wise and organization-wise), regarding trade deficit is not just beneficial to the Chinese exporters of goods but also Indian Consumers who get it cheap compared to other exporting nations, making it a win-win situation for both China and India.

H_{11}: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding China causes huge trade imbalances in its favour by artificially keeping its interest rates low and preventing its currency from appreciating.

H_{12}: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding India trade with China is highly imbalanced because it primarily exports non-value-added commodities and imports high value-added manufactured goods.

H_{13}: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding Chinese non-tariff barriers and informal restrictions (such as customs, standards and quantitative restrictions) to Indian exports are high making Chinese markets difficult to access, leading to imbalance in trade.

H_{14}: There is no significant difference among respondent opinion (gender-wise,
education-wise, experience-wise and organization-wise) regarding the structural shift in China’s exports from primary products to technologically-intensive machinery has resulted in China capturing a huge chunk of Indian market.

(C) Strategies to Correct the Rising Trade Asymmetry

H$_{15}$: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding ad vocation for Yuan appreciation, India should join hands with China’s major trade partners like the U.S, Japan and EU etc.

H$_{16}$: There is no significant difference among respondent opinion (gender-wise, education-wise and experience-wise) regarding rising trade deficit with China despite imposition of need-based anti-dumping duties represents Gap in Productivity between the two countries, especially in manufacturing.

H$_{17}$: There is no significant difference among respondent opinion (gender-wise, experience-wise) regarding whether India should target improvements in its own productivity and competitiveness to balance trade with China by making Indian exports more competitive in the international market.

H$_{18}$: There is no significant difference among respondent opinion (gender-wise) regarding whether to bridge the rising trade gap India should focus on export-competitive products not being currently exported to China despite the demand.

H$_{19}$: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding if in the short-term, India could focus on Products that do not require intensive technology to manufacture to win significant Chinese market share, lowering the trade deficit.

H$_{20}$: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise), regarding if export-oriented FDI has the potential to turn India into a major Industrial economy and will significantly help in addressing its trade deficit with China.

H$_{21}$: There is no significant difference among respondent opinion (gender-wise, education-wise and experience-wise) regarding a closer dialogue between the officials and leaders of both countries is essential to negotiate the vexed issues
of trade barriers and restricted market accessibility to Indian exports, making for a more balance trade between the two Nations.

(D) **Explore the Scope of Mutual Economic Collaboration**

**H22**: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding whether Indian governments have not been able to make the best use of India’s comparative advantages with China in order to tap into the under-exploited Chinese market.

**H23**: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding if India requires immediate investment in its manufacturing sector to improve output, employment opportunities and in resolving the supply-side issues, another way to overcome the trade deficit is by attracting large sums of Foreign Direct Investment (FDI) from China.

**H24**: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding if cumbersome business environment, bottlenecks in Infrastructure, archaic labour laws and poor environmental standards have discouraged Foreign Investment and consequently affected the growth of the Manufacturing sector in India.

**H25**: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding whether India needs to solve internal structural issues (like fiscal policy, macroeconomic instability, retarded growth, incentives to exporters etc.) if it is to attract greater Investment from abroad.

**H26**: There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding excessive security review process, complicated land acquisition procedures and administrative inefficiencies are some of the issues that Chinese Investors face in trying to invest in India.

**H27**: There is no significant difference among respondent opinion (gender-wise, education-wise and experience-wise) regarding if by prioritizing expansion of
its manufacturing sector (through policies like ‘Make in India’), India can harness its huge trade potential with China, gaining a lot from export diversification and greater investment from abroad.

**H28:** There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding if India and China should deepen their collaboration in various trade and economic formations and global bodies like the UN and WTO in order to promote converging politico-economic interests.

**(E) Examine Sectorial Complementarities of the Economies**

**H29:** There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding is China has a distinct cost advantage in most products, India too is very competitive in some sectors (like pharmaceutical, textile and services) where it needs better access to Chinese markets to correct the widening trade imbalance.

**H30:** There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding economic Liberalization beginning much earlier in China than India resulted in India missing out on some big advantages in Trade and Investment opportunities that catalyzed China’s Manufacturing boom.

**H31:** There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise), regarding with continued slowing down of the Chinese economy and India emerging as the fastest growing economy in the world, India could hope to close down the gap with China in Industrialization and Manufacturing supremacy in years to come.

**H32:** There is no significant difference among respondent opinion (gender-wise and experience-wise) regarding if India needs to seriously examine why the Chinese companies (while they have been great at peddling their products in India) have been surprisingly reluctant to invest here in comparison to other ‘less attractive’ countries.

**H33:** There is no significant difference among respondent opinion (gender-wise, organization-wise, education-wise, experience-wise) regarding if unresolved border dispute between India and China leads to a serious problem of trust
Deficit and related Security issues affecting Trade and Investment and is a major impediment to remove for harmonious political and economic relations between the two Nations.

**H34:** There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding greater Chinese Investments in India’s Infrastructure could be mutually beneficial to both the countries and help reduce the Trust deficit.

**H35:** There is no significant difference among respondent opinion (gender-wise, education-wise, experience-wise and organization-wise) regarding if India and China need to reduce their Trust deficit by overriding current diplomatic irritants (which are ‘a baggage of history’) through deeper engagement on the political and economic front.

### 3.4 RESEARCH METHODOLOGY

#### 3.4.1 Research Design and Sampling Plan

The present research being exploratory cum descriptive in nature, primary data has been collected from a sample of 305 participants related to international trade including Government officials handling foreign trade, Indian Institute Of Foreign Trade faculty (IIFT), Trade bodies, IIFT students and Management Consultants having diverse educational and professional experience from the National Capital Region using judgmental sampling technique through a structured questionnaire. A 5-interval Likert scale from Strongly Disagree (measuring 1) to Strongly Agree (measuring 5) has been employed to measure the psychographics (attitudes, interests and opinion) of respondents. Secondary data has been collected from diverse offline and online national/international research publications. The Research Instrument (Questionnaire) comprises of 35 key research statements eliciting critical information from the respondents (apart from relevant demographic information having a bearing on their psychographic attitudes, interests and opinions) and has been divided into five sections covering the five broad research objectives.

#### 3.4.2 Profile of Respondents

Table 3.1 shows that the gender profile of the respondents, the majority of the respondents i.e. 85.2 percent is male and 14.8 percent respondents are female in the study. According to Qualification of the respondents, 37.4 percent are post-graduate,
56.4 percent respondents are graduate, 6.2 percent respondents are doctorate. Most of the respondents (64.3 percent) have less than and equal to 5 years of professional experience followed by 28.2 percent having more than 5 year and less than or equal to 10 years of experience. 7.5 percent respondents have experience more than 10 years.

According to the organization to which respondents belong, 40 percent respondents are from trade bodies, 33.4 percent respondents are Indian Institute of Foreign Trade students. 12.1 percent respondents belong to Management Consultancy. 8.5 percent respondents are from Directorate General of Foreign Trade and the rest 5.9 percent from IIFT faculty.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>260</td>
<td>85.2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45</td>
<td>14.8</td>
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<tr>
<td>Qualification</td>
<td>Graduate</td>
<td>172</td>
<td>56.4</td>
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<tr>
<td></td>
<td>Post Graduate</td>
<td>114</td>
<td>37.4</td>
</tr>
<tr>
<td></td>
<td>Doctorate</td>
<td>19</td>
<td>6.2</td>
</tr>
<tr>
<td>Experience</td>
<td>Less than or equal to 5 years</td>
<td>196</td>
<td>64.3</td>
</tr>
<tr>
<td></td>
<td>More than 5 years and less than or equal to 10 years</td>
<td>86</td>
<td>28.2</td>
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<tr>
<td></td>
<td>More than 10 years</td>
<td>23</td>
<td>7.5</td>
</tr>
<tr>
<td>Organization</td>
<td>DGFT</td>
<td>26</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td>IIFT Faculty</td>
<td>18</td>
<td>5.9</td>
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<td></td>
<td>Trade Bodies</td>
<td>122</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>IIFT Students</td>
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<tr>
<td></td>
<td>Management Consultancy</td>
<td>37</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Source: Primary Data

3.5 RESEARCH TOOLS

Analysis of data has been done using various descriptive and inferential statistical tools like Frequency distribution, Percentage, Arithmetic Mean, ANOVA,
Reliability Analysis (Cronbach’s Alpha). For hypothesis testing and analyzing significant difference Analysis of Variance test using General Linear Model (Univariate Analysis) was applied employing SPSS 20.

3.6 AN OVERVIEW OF GENERAL LINEAR MODEL (UNIVARIATE)

The GLM Univariate procedure provides regression analysis and analysis of variance for one dependent variable by one or more factors and/or variables. The factor variables divide the population into groups. Using this General Linear Model procedure, we can test null hypotheses about the effects of other variables on the means of various groupings of a single dependent variable. We can investigate interactions between factors as well as the effects of individual factors, some of which may be random. In addition, the effects of covariates and covariate interactions with factors can be included. For regression analysis, the independent (predictor) variables are specified as covariates.

Both balanced and unbalanced models can be tested. A design is balanced if each cell in the model contains the same number of cases. In addition to testing hypotheses, GLM Univariate produces estimates of parameters. Commonly used a priori contrasts are available to perform hypothesis testing. Additionally, after an overall F test has shown significance, we can use post hoc tests to evaluate differences among specific means. Estimated marginal means give estimates of predicted mean values for the cells in the model, and profile plots (interaction plots) of these means allow you to easily visualize some of the relationships.

The factors/variables classified into two categories dependent variables (all the research statements) and Independent variable/fixed factors (all the demographic variables).

3.7 RELIABILITY OF INSTRUMENT

Reliability is a concern every time a single observer is the source of data, because we have no certain guard against the impact of that observer’s subjectivity (Babbie, 2010, p.158). According to Wilson (2010) reliability issues are most of the time closely associated with subjectivity and once a researcher adopts a subjective approach towards the study, then the level of reliability of the work is going to be compromised.
Tale 3.2: Reliability Analysis

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Objectives</th>
<th>Cronbach’s Alpha Co-efficient</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To understand the complex political, economic and trade relations between India and China.</td>
<td>0.72</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>To analyze the reasons behind skewed/imbalance bilateral pattern between India and China.</td>
<td>0.70</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Suggest Strategies to correct the rising trade asymmetry between India and China.</td>
<td>0.75</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>To explore the scope of mutual economic collaboration between India and China in the context of BRICS, SCO, APEC, ASEAN and EAS.</td>
<td>0.73</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>To examine sectorial complementaries of the economies of India and China and strategies for harnessing synergy of bilateral trade and economic interest.</td>
<td>0.76</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Overall Total Instruments</td>
<td>0.72</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: Primary Data

To examine the internal reliability of the tool, Cronbach’s alpha has been applied. The combine value of Cronbach’s Alpha is 0.72 which is more than standard value of 0.70 (Normally, 1978 and Sattar 2014). On the basis of standard value, it can be said that the instrument is reliable.

3.8 ORGANIZATION OF THE STUDY

The proposed study has been divided into following five chapters:

Chapter 1: An Overview of Political, Economic & Trade Relation

The chapter presents an overview of Political, Economic & Trade Relation between India & China since ancient times. The Silk route not only served as a major trade route but also facilitated interaction of people and cultures. However, from fourteenth century onwards it lost its importance and European nations established sea routes to these countries which eventually led to their colonization. Economic exploitation of the two nations under imperial rule Opium war and boxer rebellion in China, Indian war for Independence in 1857, and subsequent struggle culminating in
freedom of the two countries in 1940’s. History of Indian and Chinese economies along with comparative analysis with other nations. Relations post independence, Present demographic, trade and economical statistical comparison.

It provides holistic view of bilateral trade relationship between India and China. It includes Bilateral trade between the two countries, China’s export to India, India’s Export to china, sectorial trade analysis , Trade composition, challenges to India’s export , India’s export potential , Global Value Chain, Export Led Growth and Domestic Demand Led Growth Strategy. Trade Deficit Between both countries. India and China approach towards regional trading agreements. Relationship with BRICS, ASEAN, East Asia Summit (EAS) Shanghai Cooperation Organization (SCO) and APEC

Chapter 2: Review of Literature

This chapter comprises of collection of literature in the selected area of research in which the scholar has limited experience. In the past a few studies or research articles relating to Indo-China trade relations have been conducted by researchers, academicians and think tanks. In addition EXIM Bank and Asian Development Bank (ADB) have also conducted few studies. Few reviews on the previous researches were taken into account and here few of them are included.

Chapter 3: Research Methodology

This chapter includes the research methodology opted for the present study with define of research problem of the study, research objective and research hypothesis of the study, scope of study, data base and sources, tools of analysis, methodology to study the trade relations, asymmetry of bilateral trade, scope of mutual collaborations, sectorial complementariness of economies, strategies for harnessing synergy of bilateral trade, organization of study, importance and limitations of the study, further research in the study and references.

Chapter 4: Data Analysis and Interpretation

The chapter describes the descriptive statistics, profile of viewers, and testing the hypothesis through using General Linear Model (Univatiate) and brings out the analysis and interpretation of the aspects pertaining to viewer satisfaction and marketers’ media planning towards cable digitization. The statements were examined on the basis of demographic variables.
Chapter 5: Summary, Conclusions and Recommendations

The chapter provides a summary of major findings related to Trade deficit, competitiveness, investments, market access, knowledge and information mismatch, security challenges, structural problems and lack of coordination, trade agreements, market collaboration, changing investment pattern, environmental and domestic entrepreneurs challenges. Recommendations to revitalize relations through changes in trade policies, public-private collaboration, government support, overcapacity and market slowdown, economic interdependence, cultural exchange, tourism, e-commerce, knowledge economy, infrastructure investment, institutional gap, impact of globalization and supply chain management, engagements at international level and multilateral forums.

3.9 SIGNIFICANCE OF THE STUDY

Though India and China are two global major economies and share many commonalities. Together they represent 36.4 percent of the world population and hence have a huge domestic market themselves. The study analyzed the role of both the nations in their bilateral relations. Their respective trade policies played a major role in contributing to their growth as economic powerhouses. The Export-Import variation in trade as impacted by trade policies and bilateral relations on the global stage with context to aspiration of major economies of the world have an immediate effect on more than one third of the world population. As china emerges as the largest trading partner of India, there are many bilateral issues that require close monitoring. There is urgency to study various important factors causing huge trade imbalance and corrective measures to overcome on this deficit. Despite their current slowdown India and china continued to maintain their attractiveness supported by a host of factors such domestic demand, foreign investment, large working population base. China will dominate the political landscape only by increasing engagements with its neighbors and increasing their incentive for mutual cooperation. The converse by India, i.e. engagement of regional trade to gain enhanced fraction in the ambit of trading leverage vis-à-vis China is also an important factor. This topic is significant and relevant to arrive at a clear understanding of multifarious relationship between India and China. This will further assist to shape strategies to suggest and apply due course for alleviation of India-China trade asymmetry, if it comes to fore.
3.10 LIMITATIONS OF THE STUDY

The present study took a small sample of respondents which could be broadened to make it more representative to draw more meaningful inferences. The coverage area was also restricted to the National Capital Region which could be broadened to cover vast region of the India, study which was beyond the means of the scholar. An important fact of bilateral trade being extension and impact of foreign relations and policy on the same. This cannot be suitably followed on real time basis. Thus any such development may add or alter the output of the study in wake of major shift in Indo-China relations.