Chapter Three

Research Methodology

This chapter concerns the methodology adopted for the study. The methodology for any study forms an important background on which the findings of the study rest. This chapter opens up with a discussion on the Indian steel industry. Further, the parameters based on the selection of the firms for the study is dealt with. Finally, the last section of this chapter would include enumerating the research design adopted for the study. Apart from the various tools and techniques used for data collection it would also provide detail on the data analysis aspects.

3.1 An overview of the Indian steel industry

The Steel industry in India forms an important part of the manufacturing sector constituting two per cent of the national GDP\(^48\) (Gross domestic product). Particular importance of this industry lies in the fact of its usefulness in nation building. With growing infrastructural needs of a developing economy, the demand for steel is constantly on the rise. Currently, India is the third largest consumer of steel in the world (ibid.). With the increase in demand there is also an increase in the supply of steel with numerous steel firms being set up. Increase in production has risen to the level of India becoming the largest producer of sponge iron\(^49\) and fourth largest producer of crude steel in the world (Ministry of Steel\(^50\)). This rise in the suppliers of steel also emanates from the fact that the steel industry was delicensed and decontrolled during the 41liberalization period of the early 1990s (ibid.). It was also apparently the first industry to be deregulated. Pre 1990s the regulatory environment in which the industry functioned-distribution and price controls, restriction of competition by government etc. were choking the productive capacities of the industry. Post 1992 and following subsequent policy formulations allowed the industry to expand. Export duty has been made nil; import duty has been in the range of 5-7.5% and several barriers are lifted by way of FDI (foreign direct investment) increase by 100% through automatic route for foreign players.

\(^{48}\) See Joint Plant Committee (http://www.jpcindiansteel.nic.in/pages/display/19).
\(^{49}\) Sponge iron is an ingredient used in the manufacture of steel and hence a crucial part of the industry.
\(^{50}\) See http://steel.gov.in/overview.htm.
like Arcelor Mittal, POSCO etc. to invest in the country (Joint Plant Committee). A look into the production figures of the Indian steel industry, as shown in table 2, would be apt at this juncture.

Table 2: Indian Steel industry production

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<tbody>
<tr>
<td>Pig Iron</td>
<td>5.88</td>
<td>5.68</td>
<td>5.371</td>
<td>6.870</td>
<td>7.950</td>
<td>6.081 (5.868)</td>
</tr>
<tr>
<td>Total Finished Steel</td>
<td>60.62</td>
<td>68.62</td>
<td>75.70</td>
<td>81.68</td>
<td>87.67</td>
<td>65.197 (64.190)</td>
</tr>
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Source: Joint Plant Committee; *provisional; figure in parenthesis is value in same period of last year

The National Steel policy of 2005 remained highly successful and even outperformed its own projection estimates with annual production rate climbing to 7.8% and steel consumption by 10% p.a. in the period 2005-06 to 2011-12. However, due to this uneven development, India became a net importer of steel since 2007-08. The National Steel policy 2012, currently in its draft stage, attempts to redress these issues (Ministry of Steel).

Steel production belongs to an industry which is highly dependent on infrastructure. Although government interventions have waned out from its controls over the industry, few impositions over the industry is need worthy in order to control the oligopolistic characteristics of the industry. Such tendencies of the industry have been more attuned by way of spontaneity than purposeful design. A key feature of the major players in the industry has been the ease of supply of raw materials by way of captive mines. For example, the large firms have large iron ore captive mines that prove to be their significant competitive advantage. The selected firms have captive iron ore and coal mines. This has reduced a significant supply side bottlenecks for these firms. In a nutshell, given these characteristics of the external environment this industry presents a potential for high growth.
3.2 Choice of the firms

The firms selected for the study are located within the same geographic boundaries having captive mines within their stride. One firm represents a large firm and the other is a medium sized firm, however they are both leaders in their segments. They also share a long period of existence in this business thereby having sailed through some of the most challenging business environments in India. Both these firms are also part of a business conglomerate and has a brand name attached to it. Apart from having a dominant national presence, its operations and products are manufactured as well as sold in the foreign markets which itself speaks of the depth of institutional capital. The firms have unions and collective bargaining as a method which appeal to the democratic fundamentals of the firm. Both these firms have not seen any major conflicts for the past few decades. Perhaps this trend reverberates with the existing industrial mood. Thus, the choice of the firms in this manner was expected to fetch variability amid homogeneity in the analysis.

3.3 Research design

The research strategy adopted for the study is mixed method design which envisages collection of data by adopting different strategies in a way that they act as complementary to each other. Such kind of a design definitely has an upper hand towards a mere quantitative or qualitative data collection framework (Johnson & Turner, 2003). Of the various research designs used in the mixed methods approach, more specifically, this study has used a sequential transformative strategy as mentioned by Creswell (2009). This strategy is employed when data collection takes place in a sequential manner guided by a theoretical framework. In this study, quantitative data has been collected in the first phase of the study followed by qualitative data collection in the second phase. The qualitative data collected builds on the findings of the first phase of data collection. This kind of research design also finds itself useful because it corroborates data from various sources thereby attempting to offset weaknesses associated with just one form of data. Moreover a sequential transformative design serves the theoretical perspective of the researcher. It can be a good research strategy to study organisational and managerial processes that take place within a firm, the idea being not to come out and provide a generalised solution but to attempt to understand the phenomenon in its entirety.
Secondary data for the study is collected from various sources that enhance the understanding of the industry. These variables relate to position of the industry, the available labour market, wages, provident fund, bonus, welfare expenses and social security benefits. Primary data is then collected from the firms selected for the analysis. Such kind of an analysis is important since matters pertaining to wages of the workers have for a long time been a domain discussed at the national level. Also important to mention, the research design would also include some degree of archival analysis since a historical account of formation and development of a particular organisational culture is sought after. The study is both descriptive and explanatory in nature.

In the firm, the different units of analysis would be the management, trade union and the workers. These units are selected as they form the main stakeholders in the labour transactions that take place within any firm. Also important to mention here that the workers here are taken as a separate unit of analysis from the trade union as usually the voices or opinions of the workers are not reflected in the trade union objective and this phenomenon has emerged more so since competition has increased sharply and businesses have strived to remain strategic in terms of attempting to align human resource objectives with that of the organisational objectives\(^{51}\). Finally assimilating information collected from these different units of analysis the study would bring out a holistic account of the firm.

### 3.3.1 Tools and manner of data collection

For the purpose of the research, the various tools used in data collection are semi-structured interviews and secondary sources like annual reports, wage agreements, newspaper clippings etc. The researcher started by reviewing the secondary sources relating to World Bank (WB), International Monetary Fund (IMF), International Labour Organization (ILO). This gave a country wise scenario of the manufacturing sector as a whole. The competitive advantages related to technological efficiency, capacity utilisation, policy measures etc. that henceforth converted to competitiveness of the economies ensued. Further, the researcher also gauged on data from Capitaline Corporate

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\(^{51}\) Ashenfelter and Johnson (1969) also employ this kind of analysis differentiating between union and the rank and file of workers.
Databases, ASI and Ministry of Steel, Ministry of Labour and Employment and Central Statistics Office (CSO) and National Sample survey (NSS) 68th round to gain knowledge about the steel industry in the country. This formed the first phase of the data collection process.

The secondary phase of data collection consisted of collecting primary data in the form of semi-structured interviews. For the two firms in the study, two phases of data collection was adopted. The first phase was undertaken during the months April to August, 2014. During this period the large sized firm, known as firm A was probed. The second phase took place from April to July 2016 and it looked into the medium sized firm, hereafter known as firm B.

The first phase of data collection for firm A started off with two union members of the subsidiary company of the firm. One of them was the President of the union as well as the INTUC secretary of the region. The other was the General Secretary of the union. The researcher had prior experience in the field which helped in shaping the interview questions. However, care was taken that the interviews were taken in such a manner with the participants so as to not let the knowledge of the researcher obstruct in the path of their narrative. They were maintained as key respondents in the study and time to time were consulted as and during the process of data collection. This process strengthened knowledge about the firm with regard to the labour transactions. Further, the researcher to know the technicalities of employment relations from the perspective of the management also interviewed few HR managers. As the topic to be studied involved data which might be sensitive to the firm, preliminary permissions were sought from the Vice President (HRM) through an email. It was only after that the interviews were conducted with the Chiefs (HRM), Head (IR) and the key office bearers of the trade union. Upon insistence by the researcher, the Chief (Group IR) himself directed the researcher towards the key office bearers of the union who are present in the wage negotiations of the firm. Similarly permission from the Vice President (HRM) and the Chief was enough for the union to respond. These persons were also the source of secondary documents related to the wage negotiations of the firm. Few documents were made available to the researcher which was meant for internal circulation only.
Semi-structured interviews were further done with HR/IR managers, workers and some other union committee members (UCMs). Further, the researcher also interviewed the members of the left wing union of the firm, one of them in a telephonic conversation. Although this union is not recognised by the management, it is existent albeit with minimal membership. It may be mentioned that it has no influence over the functioning of the firm in any manner however, the researcher thought it was essential to take the views of the left wing unionists.

The second phase of data collection for firm B took into account a worker who has been working in the firm for more than three decades. The worker introduced to the researcher the HR manager and after taking a suitable time from the person was interviewed within the firm. The manager gave the researcher useful insights of the firm. A constant comparison was also being done by the manager with firm A. For matters related to unions and bargaining, he referred to another HR manager whom the researcher met after taking an appointment. The researcher also requested for talking to the union. The manager finally gave permission after initial reluctance. Firm B is relatively smaller firm and the number of HR managers is also limited. Then the researcher interviewed the worker and compared the data given by the managers. The worker also gave few names regarding whom the researcher can interview. The researcher met eleven workers in the firm who fell in the category of target respondents. Finally the researcher met the general secretary of the union to take in his view points on the matter.

Most interviews conducted were recorded using a voice recorder which were later transcribed and taken up for analysis. Prior permission for recording were taken from the participants and done only with the consent of the participant. In few cases, particularly the HR managers of firm B did not allow the researcher to take the interview. The interviews related to the workers and the few office bearers were done in Hindi which was later translated into English by the researcher. During the course of data collection the researcher also prepared memos from the field notes. Memo writing from the field was an important part of the process of data collection. It included the various timelines

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52 Firm A happens to be the largest firm in the area.
during which bargaining took place in the firm which acted as pointers towards basing a trajectory of the bargaining arrangements and how they changed over a period of time.

Data collection was taken place only after getting approval from the respective authorities. Issues of confidentiality regarding the respondents have also been maintained. Care had been taken that the place of interview was selected in the manner most suitable to the respondent. After the data collection, the form of the study envisaged in a written manner had been discussed with the concerned managers and got approved.

### 3.3.2 Sampling procedure

Primary data collection was done through a non-probabilistic purposive sampling technique. In this technique, the researcher deliberately ensures that particular cases (people) are only selected that fit the criteria (Neuman, 2007). This sampling technique was used because the know-how of firm wage bargaining had been limited to only a select few people in the firm. Also, for gaining knowledge about the experiences of the workers, specifically those workers were selected who have worked in the firm during the 1990s period. This also involved few workers who were retired. The researcher was henceforth directed only to those people who had knowledge about the issue to be studied. Further, interviews of some of the HR/IR managers who were aware of the issue were also taken. The interview schedule for these participants was also changed owing to the enquiries pointed out in the initial data collection and analysis. These interviews were done with the purpose of closing the gaps which were encountered during the initial process. The researcher also interviewed the left wing union party members of the firm. Although the people interviewed were not the workers of the firm but had knowledge about the proceedings with regard to the wage negotiations. The researcher thought it is imperative to include these narratives in the research enquiry.

The cadre of all three including workers, managers and unionists were interviewed for the study using a theoretical sampling procedure. In the case of firm A, few persons were also interviewed who belonged to the subsidiary companies. A total of thirty one participants from both firms were included in the study. Some of the key aforementioned

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participants of the study were interviewed more than once. In this connection the researcher also paid a return visit to the field. Thereafter, during this process when the researcher experienced theoretical saturation in the categories probed, the researcher decided to end the data collection.

### 3.3.3 Data analysis

Data analysis was done for both primary as well as secondary data. Data from Capitaline Corporate Databases, Annual Survey of Industries and National Sample Survey were used to map various trends that were further put into a spreadsheet and ratios were calculated. Tables and figures were constructed using secondary data. Basically this helped formulate the preliminary analysis of industries.

The interviews collected from the field were transcribed during the course of data collection. Thematic analysis of the interview transcripts was done and specific themes were identified using the coding procedures. Themes, as Boyatzis (1998) describe, “is a pattern found in the information that at minimum describes and organizes the possible observations and at maximum interprets aspects of the phenomenon” [sic] (p. 4). The themes were developed in relation to both through prior research and also inductively through raw data. A constant revising process was adopted to narrow down the identified themes further. The researcher did this analysis of the interview transcripts manually.

### 3.4 Summary

This chapter details the research methodology employed for the study. It starts with a generic overview of the Indian steel industry which is then narrowed down to the details on the firms selected for the study. The rationale for choosing the industry and the firms is also provided in the discussion. Further, the study explicates the research design for the study which follows a sequential transformative strategy, enumerated by Creswell (2009). Data collection happened in a sequential manner, guided by both quantitative and qualitative modes of data collection. Secondary data and semi-structured interviews were relied on to gather data about the field. Purposive sampling technique was utilised to suit the kind of data required for the study. Further, thematic analysis of the interview data was done to corroborate the findings.