3.1 The concept of Research

The Webster’s Dictionary defines research as a studious, systematic investigation or enquiry to ascertain, uncover or assemble facts used as a basis for conclusions or formulation of theory. The word ‘research’ is a combination of two words 're' and 'search', which literally mean to search again or to search afresh. The search may be for new facts or new set of facts per se and the new facts may be such which may alter, modify or challenge existing beliefs or conclusions in any area of human knowledge or activity. Dr. Gupta, S. (2001, p.1) defines research as “any scholarly investigation in search for truths, for facts, for certainties”. To Kothari, C.R. (1990, p.1) it is a “voyage of discovery”. He further elaborates that “we all possess the vital instinct of inquisitiveness…. This inquisitiveness is the mother of all knowledge”. In the celebrated Encyclopedia of Social Sciences, Slesinger, D. and Stevenson, M. (1930) look upon research as the “manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge whether that knowledge aids in construction of theory or in the practice of an art”. In this context, the names of research scholars like Lundberg, J.W. Best,
P.M. Cook, C.C. Crawford, J. Francis Rummel, Clifford Woody, R.M. Hutchins and Rusk come to mind. In a multi-faceted observation, Michael, V.P. (2000, p.2) records that “Research is the process of systematic and in-depth study or search for any particular topic, subject or areas of investigation, backed by collection, compilation, presentation and interpretation of relevant details or data. It is careful search or inquiry into any subject or subject-matter which is an endeavor to discover or find out valuable facts which would be useful for further application or utilization. Research may involve a scientific study or experimentation, and result in discovery or invention, which would aid either scientific development or decision making. It may be concerned with general, abstract or concrete subjects. There cannot be any research which does not increase knowledge or improve scientific knowledge. A research that involves scientific analysis would result in the formulation of theories, discover of new ideas or techniques, modification of old concepts or knocking-off an existing theory, concept or technique. It may develop hypothesis and test it. It may also establish relationships between variables and identify the ways and means for problem solving”. In conclusion, we agree with Kothari (ibid) that the term “research” encompasses a “systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and reaching certain conclusions either in the form
of solutions towards the concerned problem or in certain generalizations for some theoretical formulation.”

3.2 Research in Natural Sciences Vs Research in Social Sciences

In the literature, we have come across only two broad classifications of research which are as given below:

i) Research in Natural Sciences like Physics, Chemistry, Astronomy, etc.

ii) Research in Social Sciences

In the context of Natural Sciences, various phenomena can be studied in a laboratory under controlled conditions. The work of Sir Isaac Newton relating to Laws of Motion (in Physics), Lavoisier in Chemistry and Galileo in Astronomy fall in this category. However, in Social Sciences, the studies are focused on human behaviour in a social setting. But one cannot bring a piece of society to the laboratory and study its behaviour in the controlled environment of a laboratory. Human behaviour in a social setting can be studied only in the wide open world. Further, human behaviour is a complex phenomenon born out of interaction between social, economic, psychological, temperamental, genetic and physical factors. Research in Social Sciences or Social Research is that body of Research which analyses human behaviour as a part of society. The famous social researcher,
Young, Pauline V. (1960) looks upon social research “as a scientific undertaking which by means of logical and systematized techniques aims to discover new facts or verify and test old facts, analyse their sequences, interrelationship and causal explanation which were derived within an appropriate theoretical frame of reference, develop new scientific tools, concepts and theories which would facilitate reliable and valid study of human behaviour. A researcher’s primary goal is to explore and gain an understanding of human behaviour and social life and thereby gain greater control overtime.”

Gupta, S. (2001, pp 7-8), in unison with Young, avers that social research is “that part of research which studies human behaviour as a part of society. Social research is to find explanation to unexplained social phenomena, to clarify doubts and correct the misconceived facts of social life”. Kothari, C. R. (ibid, p.8) has highlighted the dual role of research in social sciences in as much as it advances the frontiers of human knowledge in comprehension of complex social phenomena and the whole range of human interactions, and , also promotes knowledge for its own sake.

3.3 Characteristics of Research in Social Sciences

In tune with Young’s assertion that social research is a scientific undertaking, research in social sciences partakes of the characteristics
of scientific research as applicable to social phenomena or human behaviour with reliability, validity and objectivity as its guiding principles. Accordingly, important characteristics of research in social sciences are indicated below:

1. Social Research is undertaken both for discovery of new facts and verification of old facts. The verification of old facts in social sciences is as relevant as the discovery of new facts, new relationships and new laws underlying the social phenomena as social sciences are highly dynamic in nature. This dynamic aspect of social sciences springs forth from the dynamic nature of feelings, responses and attitudes of human beings under different circumstances and different social settings. Thus, if the phenomena under scrutiny display significant variations over a period of time, the validity of old concepts becomes questionable and verification of old facts becomes essential to ensure relevance in a dynamic context. Additionally, verifications also dictated by notable advances in the area of research methodology and the latest techniques ought to be deployed to examine the validity of old concepts.

2. The researcher in social sciences must be imbued with the rigorous mental discipline of the laboratory approach as applicable to natural sciences to ensure objectivity and freedom from personal bias in data collection, analysis and interpretation.
3. Research in social sciences is of an inter-disciplinary nature and embraces deep scrutiny of complex social phenomena involving an active interface between political, socio-economic, educational, organizational, bureaucratic and all relevant aspects of social life of human beings. Because of its inter-disciplinary nature, it is difficult to classify social research as purely political, sociological or economic research.

4. As the social phenomena or human behaviour is the subject matter of study in social sciences research, experimentation on the laboratory pattern is not feasible. Yet, the device of control groups or controlled experimentation has been used by some of the researchers.

5. Social Sciences research normally requires, as a preliminary step, a hypothesis or a set of hypotheses focused on a provisional elucidation of a social phenomenon or the tentative solution of a social problem. However, the variable in the social research are not capable of being measured precisely and only an approximate estimation of the values of the variables is feasible.

6. The underlying process of research in social sciences is designed to ensure objectivity of a high order. In that context, all
care is taken to define every term or expression used and to
document all references. All inferences drawn are laced with
cautions on account of the inherent limitations of methodology
deployed, data collection and errors of human interpretation.

7. The dynamic nature/context of social research is paramount.
   Accordingly, what is true of a social phenomenon in the past
   may not be true in the present.

8. In the context of effectiveness of human interaction in a social
   setting, there is a marked complimentarily and synergy between
   research in physical sciences and research in social sciences
   and both branches of human knowledge reinforce each other
   and pave the way to progress (S. Gupta, ibid)

3.4 Research Methods and Research Methodology

Saunders et. Al (2003, pp 2, 481) lament that in research literature, the
terms “research methods” and “research methodology” have been
used rather interchangeably. According to them, it appears that the
term ‘methodology’ has been employed as a “more verbose way of
saying method”. They have sought to caution the researcher in social
sciences to observe precision in the use of these terms. According to
them, the expression ‘research method’ refers to the tools and
techniques used to obtain and analyse research data including, for example, questionnaires, observation, interviews and statistical and non-statistical techniques. In contrast, the term “research methodology” refers to “the theory of how research should be undertaken including the theoretical and philosophical assumptions upon which research is based and the implications of these for the method or the methods adopted”. Similarly, Kothari, C.R. (ibid, pp 9-11) holds forth the view that the sweep of “research methodology” is much wider than that of “research methods”. He has elaborated that ‘research methods’ “may be understood as all those methods or techniques that are used for the conduct of research. Research Methods or techniques, thus, refer to the methods the researchers use in performing research operations. In other words, all these methods which are used by the researcher during the course of studying his research problem are termed as research methods”. Kothari (ibid) goes on to elucidate that research methodology is multi-dimensional and research methods do constitute a part of research methodology. To him, “Research Methodology” is a way of finding the solution to a research problem in a systematic manner. It may be understood “as a science of studying how research is done scientifically. In it, we study the various steps that are generally adopted by a researcher I studying his research problem along with the logic behind them. It is necessary for the researcher to know not only the research methods / techniques but also the methodology. Researchers not only need to know how to develop certain indices of tests, how to calculate the mean, mode, median or the standard
deviation or chi-square, how to apply particular research techniques, but they also need to know which of these methods or techniques are relevant and which are not, and what would they mean and indicate and why. Researchers also need to understand the assumptions underlying various techniques and they need to know the criteria by which they can decide that certain techniques and procedures will be applicable to certain problems and others will not. In the context of research methodology, he likens the researcher to “an architect who designs a building, has to consciously evaluate the basis of his decisions, i.e. he has to evaluate why and on what basis he selects particular size, number and location of doors, windows and ventilators, uses particular materials and not others and the like. Similarly, in research, the scientist has to expose the research decisions to evaluation before they are implemented”. In conclusion, Kothari (ibid) observes that “when we talk of research methodology, we not only talk of the research methods but also consider the logic behind the methods we use in the context of our research study and explain why we are using a particular method or technique and why we are not using others so that research results are capable of being evaluated either by the researcher himself or by others”. Thus, to be valid, reliable and objective, research in social sciences must be in conformity with the scientific approach as outlined in the preceding paras and be suffused with the characteristics of research in social sciences. Simultaneously, the researcher in social sciences ought to remember
that a sound research methodology is the sine qua non of soundness
of inferences drawn as a result of research.

3.5 Types of Research

In the research literature, research is stated to be of various types
depending on the purpose of the research, the process of the research,
the logic of the research, the outcome of the research, etc. (see
Hussey and Hussey, 1997, pp 9-13) Accordingly, research is classified
as under:

i) Exploratory Research

ii) Descriptive Research

iii) Analytical Research or Explanatory Research

iv) Predictive Research

v) Quantitative Research

vi) Qualitative Research

vii) Basic Research (Pure Research or Fundamental Research)

viii) Applied Research

ix) Deductive Research

x) Inductive Research
Exploratory Research

Exploratory research aims to seek new insights into phenomena, to ask questions and to assess the phenomenon in a new light (Robson, 2002). Exploratory research has kinship with the “activities of the traveler or explorer” (Adams & Schaneveldt, 1991). Its principal merit lies in the fact that it is flexible and adaptable to change; yet Adams & Schaneveldt (ibid) argue that flexibility inherent in the exploratory research does not imply any absence of direction. On the contrary, the focus is initially broad and becomes progressively narrower as the enquiry advances. Gupta, S. (ibid, p. 95), in this context, draws on the analogy of a doctor who examines a patient in his clinic when a patient approaches the doctor with his/her ailment. From the doctor’s perspective, he is “systematically exploring the complaints of the patient and is striving to categorize” the symptoms of the patient. Pursuant to such exploration, he will come to a conclusion, at least tentatively, about the disease. Thereafter, he may call for a pathological report. On this basis, Gupta (ibid) infers that “all these steps, starting with the exploratory questions will help him to arrive at a correct diagnosis. This example will, while making the meaning of exploratory research clear, also point out the inevitability and universality of the exploratory approach, which cuts across the barrier of the natural and social sciences. At this stage, one may be tempted to conclude that the moment one envisions his study as exploratory, the investigator has the absolute freedom for random and endless activity. The social scientist has freedom to follow interesting leads and
to utilize his own ingenuity in obtaining information. Yet, the social
sicentist should exercise judicious temperance in this approach”. In the
context of exploratory research studies, Michael, V.P. (ibid, p.48) has
indicated that “a specific problem is formulated for precise investigation
or a specific hypothesis is formulated from an operational observation.
Such studies are therefore known as formulative studies as well.
Generally, flexible research designs are popular for exploratory
research studies because discovery of ideas and new insights are
emphasized. Analyzing relevant examples and cases to stimulate
insight, literature survey and evaluating the past experience, etc.; are
generally associated with such designs”. While affirming the basic
strands of the preceding discussions, Hussey & Hussey (ibid, p.10)
observe that “in exploratory research the focus is on gaining insights
and familiarity with the subject area for more rigorous investigations at
a later stage. Typical techniques used in exploratory research include
case studies, observations and historical analysis which can provide
both quantitative and qualitative data. Such techniques are very flexible
since there are few constraints on the nature of activities employed or
on the type of data collected. The research will assess which existing
theories and concepts can be applied to the problem or whether new
ones should be developed. The approach to the research is usually
very open and concentrates on gathering a wide range of data and
impressions”. To Gupta, S. (ibid), the principal advantage of the
exploratory method “lies in its ability to generate many ideas that could
be further explored in more controlled conditions, apart form
overcoming the most difficult portion of an enquiry, which is its initiation. The concluding observations of the authoress are indeed very significant when she holds that “it can be said that no research proposal be aborted for want of methodology, as long as we have the exploratory method, a method which is flexible enough to permit the consideration of many different aspects of a phenomenon. This method attempts to see what there is rather than to predict the relationship that will be found”. Even the need for a working hypothesis has been discounted by Kothari (ibid, p.17) in the case of exploratory or formulative researches as these do not aim at testing the hypothesis.

**Descriptive Research**

is research which describes phenomena as they exist; it identifies and obtains information on the characteristics of a particular problem or issue (Hussey & Hussey; ibid). However, Saunders et. Al (ibid) defines descriptive research as a type of research the purpose of which is “to produce an accurate representation of persons, events or situations”. According to the authors, it may be an extension of, or a forerunner to, a piece of exploratory research. To Kothari, C.R. (ibid, p.3) descriptive research includes “surveys and fact finding enquiries of different kinds. In social science and business research, we often use the term Ex post facto research for descriptive research studies. The main characteristics of this method are that the researcher has no control over the variables; he can only report what has happened or what is happening. Most ex post facto projects are used for descriptive studies
in which the researcher seeks to measure such items as, for example, frequency of shopping, preferences of people or similar data. Ex post facto studies also include attempts by researchers to discover causes even when they cannot control the variables. The methods of research utilized in descriptive research are survey methods of all kinds, including comparative and correlational methods.” However, Hussey & Hussey (ibid, pp 10-11) are of the view that descriptive research “may answer such questions as:

- What is the absentee rate in particular offices?
- What are the feelings of workers faced with redundancy?
- What are the qualifications of different groups of employees?

The data collected is often quantitative and statistical techniques are usually used to summarize the information. Descriptive research goes further in examining a problem than exploratory research, since it is undertaken to ascertain and describe the characteristics of the pertinent issues”. According to Saunders et. al (ibid, p. 97), one of the earliest well known examples of a descriptive survey is the Domesday Book which described the population of England in 1085. They have also placed on record their observation that very often “project tutors are rather wary of work that is too descriptive. They will want you to go further and draw conclusions from your data. They will encourage you to develop the skills of evaluating data and synthesizing ideas. These are higher order skills than those of accurate description. Description in
management and business research has a very clear space. However, it should be thought of as a means to an end rather than an end in itself."

**Analytical or Explanatory Research**

This type of research is a continuation of descriptive research. Analytical / explanatory research encompasses all studies which aim to understand phenomena by discovering and measuring causal relations among them. Thus, the researcher travels beyond a mere description of the characteristics, to analysis and explanation of why or how it is happening. For example, information may be collected on the size of companies and the levels of labour turnover. Analytical research seeks to answer such questions as:

- How can we reduce the number of complaints made by customers?
- How can we improve the delivery time of our products?
- How can we expand the range of our services?

A significant element of explanatory research is identification and / or probable control over the variable in a research project, since it enables the researcher to attempt a better explanation of the critical variables or the causal links between the characteristics. (see Hussey & Hussey, ibid) in the same context, Saunders et. al (ibid, pp 97-98) draw attention to the illustrative example that “a cursory analysis of
quantitative data on manufacturing scrap rates shows a relationship between scrap rates and the age of the machine being operated. You could go ahead and subject the data to statistical tests such as correlation in order to get a clearer view of the relationship.” Kothari, C.R. (ibid, p.3) looks at analytical research in juxta-position with descriptive research thereby implying that descriptive research does not include analysis of existing quantitative data or establishment of causal relationships between the underlying variables as in the case of analytical research.

**Predictive Research**

Predictive Research, in terms of the exposition of Hussey & Hussey (ibid), has a more extensive reach than the exploratory research. The latter seeks to establish an explanation for what is happening in a given situation, whereas the former attempts to forecast the likelihood of similar situation occurring elsewhere. Predictive research is credited with the potential to generalize from the analysis by predicting certain phenomena on the basis of hypothesized, general relationships. In the context of functional area of financial management, predictive research can also be used to build up a sensitivity analysis of the profitability of projected industrial projects in order to arrive at a sustainable range of variation in the values of variables like cost of capital, cost of production, product pricing, market potential, etc.; Hussey & Hussey (ibid) have sought to illustrate predictive research by referring to
solution of research problems in relevant business related areas such as:

- In which city would it be most profitable to open a new retail outlet?
- Will the introduction of an employee bonus scheme lead to higher levels of productivity?
- What type of packaging will improve the sales of our products?
- How would an increase in interest rates affect our profit margins?

Thus, according to the authors, the solution to a problem in a specific study will be applicable to similar problems elsewhere if the predictive research can provide a valid, robust solution based on a clear understanding of the relevant causes. Predictive research, subject to the aforesaid qualifications, can yield answers to queries like ‘how’, ‘why’, and ‘where’ in the context of current events and similar events in the future. It is also relevant in situations involving questions of ‘what if’ variety. However, the authors have struck a note of caution against excessive increase in the levels of sophistication in research as the higher the level of sophistication in research, the higher the level of complexity and refinements in details. In this context, they have raised the spectre of failure or non-completion of research.
Quantitative and Qualitative Research

The differentiation between the quantitative and qualitative research is based on the approach or research process chosen by the researcher. Kothari (ibid, p.4) holds forth that Quantitative Research is applicable to phenomena where the underlying variables are capable of measurement and can be expressed in terms of numerical values. In contrast, Qualitative Research is concerned with qualitative phenomena i.e. phenomena relating to or involving quality or kind and by definition are incapable of precise measurement. Whereas a quantitative approach involves collection and analysis of numerical data and application of statistical tests, et, a qualitative approach, being more subjective in nature, involves examination and reflection on perceptions in order to gain an understanding of social and human activities. The same research problem can be tackled, depending on the inclination of the researcher, from the standpoint of quantitative or qualitative approach. As illustrated by Hussey & Hussey (1997, pp 12-13), if the research problem requires a study into stress caused by working night shifts and the researcher adopts a quantitative approach, he may want to collect “objective numerical data such as absentee rates, productivity levels, etc.;” However, if the researcher chooses a qualitative approach, he may “want to collect subjective data about how stress is experienced by night workers in terms of their perceptions, health, social problems and so on”. Kothari, C.R. (ibid p.4) emphasizes that qualitative approach is highly relevant in the behavioural sciences “where the aim is to discover the underlying motives of human
behaviour. Through such research, we can analyse the various factors which motivate people to behave in a particular manner or which make people like or dislike a particular things”. Motivation research, attitude or opinion researches are also examples of qualitative research, which draws heavily on behavioural school of social sciences.

3.6 Research Process: A Brief Overview

The research process is comprised of several steps. Kothari, C.R. (ibid, pp 13-15) has, with several qualifications, suggested the following procedural guideline for the following steps in the research process:

1. Formulation of the research problem
2. Extensive Literature Survey
3. Development of the Hypothesis
4. Preparation of the Research Design
5. Determination of Sample Design
6. Data Collection
7. Execution of the Project
8. Analysis of Data
9. Hypothesis Testing
10. Generalization and interpretation
11. Preparation of the report or presentation of the result.

However, several steps in the research process are not “mutually exclusive” nor are they separate and distinct. They do not necessarily
follow each other in any specific order and the researcher has to be constantly anticipating at each step in the research process the requirements of the subsequent steps. As a detailed exposition of the steps delineated above is outside the scope of this study, only a brief overview has been presented here. However, it is proposed to examine in detail the significance of the hypothesis per se and the principal features of the various sampling techniques deployed in the context of data collection and data analysis.

3.7 Significance of the Hypothesis

Hypothesis can be defined as a set of assumptions provisionally accepted as a basis of reasoning, experiment or investigation. In this context, Kothari, C.R. (ibid, p.17) observes as under:

“The role of the hypothesis is to guide the researcher by delimiting the area of research and to keep him on the right track. It sharpens his thinking and focuses attention on more important facets of the problem. It also indicates the type of data required and the type of methods of data analysis to be used”. Thus, it can be said with impunity that the guiding power of the hypothesis is immanent in the entire research process. S. Gupta (ibid, p.66) goes a step further when she observes that “hypothesis has a very important place in research although it occupies a very small place in the body of thesis.” It is clear that the
power and significance of the hypothesis lies in its subtlety. The author sets out the importance of the hypothesis as under:

1. It provides direction to research. It defines what is relevant and what is not. Thus, economy of time and effort is assured since recourse to irrelevant literature and collection of useless or excess data is avoided.

2. It makes the researcher acutely aware of certain features of investigations found to be relevant from the viewpoint of the research problem under consideration.

3. It stands between ‘precision and haphazardness; between fruitful and fruitless research’

4. It is “a guide to the thinking process and the process of discovery. It is the investigator’s eye – a sort of guiding light in the world of darkness.

5. It sensitizes the researcher to facts and conditions that might otherwise be overlooked.

6. It seeks to focus research. Without it, research would be akin to random and aimless wandering.

7. It makes the research goals clear and specific. Such clarity and specificity of goals provides the researcher with valid criteria “for selecting samples and research procedures to meet these goals”.

8. It integrates the entire research process and performs admirably the function of liking together related facts and
information and organizing them into one comprehensible whole.

9. It ensures that the researcher is enabled to clarify the procedures and methods to be used in solving his problem and to rule out methods which are incapable of providing the necessary data.

10. It provides a framework for drawing conclusions. It functions as reference point for data interpretation.

3.8 Sampling and Sampling Techniques

The objective of investigation in social sciences research is to ascertain / discover something about a ‘general class of events, subjects, phenomena or variables’. (Walizer, M.H. and Wienir, P.L.; 1978, pp 423-426) For example, if we are looking into the causes of socially deviant behaviour of delinquency, we will be interested to know about all delinquents and not only a few. Similarly, if we want to know about the relationship between social class and educational attainment, it will be desirable to comprehend these variables ‘for all people for all time’ and not merely a few people at one point of time. It cannot be overemphasized that the need for data collection of fundamental importance irrespective of the research questions and objectives of a research project. The centrality of data collection is indisputable.
In social sciences researches, there are broadly two methods of data collection:

a) Census Method or Complete Enumeration Survey

b) Sampling Method or Sampling Techniques.

Saunders et. al (ibid, p 474) have defined ‘census’ as the collection and analysis of data from every possible case or group member in a population. Here the term population is ‘a complete set of cases or group members’, which are the subject matter of a research study or a research project. In that context, it can as well be described as the ‘target population’ or ‘research population’ or ‘a universe comprised on all the units of analysis’.

The census method requires data collection and analysis of the entire target population or of each and every unit of the universe. This method yields more accurate and precise information as no unit of analysis or element of the universe is left out. However, where a researcher selects a small group as the ‘representative of the whole universe’, such a small group is known as the sample or the research sample and the method deployed for selecting the sample is known as the sampling method. In the words of P. V. Young (ibid), “a statistical sample is a miniature picture or cross-section of the entire group or aggregate from which the sample is taken”. Gupta, S. (ibid, p.100), in unison and with great precision, holds forth that a sample is a reflection of the universe and bears all the characteristics of the universe”. Using
the “set” terminology, sample is a subset of a population”. In other words, a truly representative sample is a microcosm of the universe in all respects.

3.8.1 Census Method Vs. Sampling Method

However, the census method involving enumeration of all the elements in the universe is preferable for researcher if the size of the universe is small. When the sample size ceases to be manageable or, in other words, becomes large, it will be nearly “impossible for a researcher either to collect or to analyse all the data available owing to restriction of time, money, and often access”. Only Governments / big organizations are in a position to afford the amount of time, money, manpower and administrative support which a census method requires when the size of the universe / sample size is large. Sampling technique furnish a “range of methods” that enable the researcher to reduce, to a manageable size, the amount of data he/she needs to collect by considering only data from a representative subgroup rather than all possible cases of elements in the universe. Even the Central Statistical Organization (CSO) of the Government of India carries out National Sample Surveys both in the population Sector and the Factory Sector and the NSS Estimates have not been very different from the census counts. Where it would be impracticable for a researcher to survey the whole population, he needs to select sample. Sampling will
be relevant irrespective of whether is planning to use a “predominantly qualitative or quantitative research strategy”.

3.9 Problem Formulation

Indian Industry has come of age; it has seen huge changes in pre-independence and post-Independence era. Pre-Independence era was more a controlled era economy in the hands of few, poor working conditions, bonded labour, no social security measures to works. Undefined and unregulated conditions of employment were prevalent. Workers right protection act like Trade Union Act was in place but its implementation was in question. A lot was desired but not feasible to realize due to lack of independence and absence of a robust machinery to regulate the available system, hence labour was deprived of many of their rights.

Post independence, State took the role of being more of a socialistic kind of employer in view of past experience of exploitation happened to the working class in pre-independence era. Constitution of India came into existence giving many rights to the citizens of India. To protect the interest of workers and regulate their employment many acts came into existence. To name a few:

1. Factories Act - 1948
2. Industrial Disputes Act - 1947
3. Employees State Insurance Act - 1948
4. Employees Provident Fund Act - 1952
5. Model Standing Orders Act – 1946
6. Payment of Minimum Wages Act - 1948
7. Payment of Bonus Act – 1965
8. Payment of Gratuity Act – 1972

Besides these Central Acts, each state made its own rules basis these acts to make them applicable. Each five-year plan had special provisions and financial provisions were made to ensure that Indian industry and industrial workers interest are protected. However, despite all these efforts, Indian industry experienced huge industrial relations (IR) challenges leading to many strikes and loss of man-days. Central unions played a key role during this IR phase taking up workers causes and raising their voice in favour of them. 1970 and 1980 witnessed huge industrial unrest and business suffered a lot in the process. Late eighties recession in the Indian market made huge impact to Indian Industry. Many people lost their jobs, campus hiring was going dry and new budding professionals were finding it difficult to find a job. This recession was not only in India, rather in large part of the world. It was an introspection time for Indian Government to make changes to stay up in the market and ensure growth of Indian Economy.

Hence, in came the era of liberalization, it opened the gates for the whole of the world to invest in India. It was a big shift for the Indian
Industry; many MNCs came to India and opened their shops here. Job market went up, employees and workers salaries saw a steep unprecedented increase year after year. Indian Economy was bullish during this phase. Industrial scenario was better, besides manufacturing, sectors like aviation, hospitality, health and insurance have shown marked improvements in their business expansions and a rise in job market were evident.

Industrial Relations paradigm in India had dramatically changed following the adaptation of free market policy in the early nineties. With the dawn of liberalization, privatization and globalization (LPG), the country is, by and large, able to preserve a sound and positive industrial relations climate. This is apparent from the statistical figures of Union Government’s Labour Bureau, which exhibits drastic decline of industrial disputes from 3049 in 1979 to 391 (P) in 2009. The following graph shows the reducing trend in Industrial disputes from 1980 to 2010.
Declining trend in the number of disputes and ‘Liberalization’ introduced change of business environment and increased competition among industries for survival in the global market economy. Globalization, potential market capacity and availability of workforce led many MNC’s, representing the best brands of the world, to set up their manufacturing bases in India, giving a tough competition to their Indian counterparts. These MNCs prefer managing labour relations through ‘work committees’, which have representatives from various departments in the company, eventually reducing trade union activism. The rise of IT industry and the emergence of knowledge workers contributed further to decline of workers union. Part of the reason was that workers’ issues and concerns had changed and change of functional models of industry reduced the area of confrontations.
However, after a decade and a half of liberalization and free market economy - from 2007-2008 onwards - there is sudden increase in labour unrest in certain industry pockets which came at a time when strikes have actually been on the decline in the country. While strikes and protests are common global phenomena, in the recent years, India is facing an alarming situation with the increase in number of unrest, leading to violence and killings which reminds us of the trade union militancy period of 1970s and 80s. This surge in industrial unrest has become a concerning situation for all. On September 22, 2008 the CEO of Graziano Transmission India, the Indian unit of an Italian auto component maker, was clubbed to death by a group of 200 workers. In another incident, in March 2011, a Deputy General Manager (Operations) of Powlmex Steel, a unit of Graphite India Ltd. was killed after his vehicle was set afire by irate workers; in November 2010 an Assistant General Manager of Allied Nippon, an auto parts maker, was stoned to death by angry workers and in September 2009 the Vice-President (HR) of Pricol was beaten to death by agitating workers. These surging incidents of industrial unrests are for sure denting investor’s confidence in the country being a safe investment destination and a preferred global investment hub. It has also led to production and financial losses to companies operating in the country. If left unchecked, this ongoing turmoil will surely send wrong signals to foreign and domestic investors, which will directly affect the country’s economy and employment generation targets. Today, industrial relation needs more detailed understanding of the needs and mindsets of
workers and management, to foster harmonious functioning of enterprises to promote growth.

One would agree that there is resurgence of Industrial Relations in Indian Industry. There are violent demonstrations and agitation across the country. All this caused many companies close down the businesses and many people lost their lives in these agitations. People patience is running short and they are resorting to direct actions which is impacting not only the business prospects of a company, rather brand image of India as a country. One may argue that number of disputes may have come down from that of 1980s or 1970s but if one looks at the severity of these disputes and brand reputations loss it has caused to India, then the loss due to these agitations is huge in today’s hyper connected world.

**Necessity of the Study**

On this background, it is clear that IR will continue to be a serious issue and success or failure of IR in a company would have a direct impact on the fortune of the business and its growth. A company’s brand reputation would largely depend not only on the kind of money it makes, but also how it handles its workforce, protects their human rights and deals with people issues. Like businesses going global, IR is also no longer a local issue pertaining to a local company or a localized business, rather IR is also global and global unions are taking up local labour issues in global forums.
Therefore, in view of resurgence of IR in Indian industry, it was necessary to undertake this study of Industrial relations in this changing business scenario to find out the areas and issue impacting IR in Industry. It was necessary to know what is causing this resurgence of IR in the Indian Industry. Also as part of the study it is worth studying the work done so far in IR and getting the perspective of all those who contributed to IR and also try to find out in the process, what are other aspects of IR which are changing and causing the resurgence of IR.

3.10 Objectives of the Study

The basic purpose of this study was:

(1) To delineate the indicators of quality of Industrial Relations.

(2) To identify the factors contributing to quality of Industrial Relations with special reference to several enterprise level factors categorized as -

   (a) Organization related: HRM/IR policies and practices relating to joint consultation/participation, grievance handling and reward system.

   (b) External environmental factors: government policies, political stability/instability, level of unionization in the region, etc.

(3) To study the strategies adopted by different actors of IR in the changing business environment.
(4) To suggest a framework of IR that is more productive and enriching for Companies in future.

3.11 Hypotheses

The Hypothesis has been so designed to understand and validate a given premise, which can lead to healthy Industrial Relations in an organization. In order to guide the study, following five hypotheses have been chosen.

**Hypothesis 1**: There is an association between Management & Union co-operation AND stability in operating in plant.

**Null Hypothesis \( H_0 \)**: There is no association between Management & Union co-operation AND stability in operating in plant.

**Hypothesis 2**: There is positive correlation between Management & Union co-operation AND Mutual Regard in the Organization

**Null Hypothesis \( H_0 \)**: There is no correlation between Management & Union co-operation AND Mutual Regard in the Organization

**Hypothesis 3**: There is a positive association of Management and Union co-operation with joint participation of employee

**Null Hypothesis \( H_0 \)**: There is no association of Management and Union co-operation with joint participation of employee
Hypothesis 4: There is an association between employee involvement and progress achievement by the plant
Null Hypothesis $H_0$: There is no association between Employee Involvement and Progress achievement by the plant

Hypothesis 5: There is correlation between Management & Union co-operation AND trust of employee on management & union in the organization.
Null Hypothesis $H_0$: There is no correlation between Management & Union co-operation AND trust of employee on management & union in the organization.

3.12 Scope of the Study
The study of industrial relations has been conducted in total 17 companies across the country, selected based on convenience and willingness of the top management to participate in the study. All the companies selected for the study were having atleast 500 or more workers employed in the company. These workers come under the definition given in the Industrial Disputes Act, 1947 under sec.2(s) of the Act. The company may be an Indian company or it can be a MNC company. This may a standalone one plant company or multi location plants company. The IR study was done in the selected plants. The companies which were studied were in – manufacturing, engineering or FMCG. The company may have one or more unions in the plant; however it was necessary to have atleast one recognized union in the
plant to qualify for inclusion in the study. The plant must have been in operations for more than five years.

For the purpose of data collection and study, initially it was proposed that, the company must be operating before the process of liberalization started in India, however later during the course of study, it was considered that even plants which commenced operations post liberalization be considered for carrying the study. Considering technology innovation and up-gradation, new product launches post liberalization with new workforce with increased high aspirations considered to get a perspective of older and newer workforce because both are equally relevant and impact the IR in the Indian context.

Literature, published or unpublished, during last twenty years on the subject has been reviewed. Wherever necessary, a reference has been made about the history of the phenomenon and the data and information has been referred to.

The present study is carried out with a special reference to IR scenario in India. The main purpose of the study is to study the phenomenon in Indian context. Hence for the purpose of the study, companies/plants were visited and data collection was done with reference to India. However, over all data and study material pertaining to IR referred to has international references as well. The purpose of the study is to go into the depth of IR issues and study the strategies adopted by companies. The focus was on what’s causing the current IR scenario in
India, in the current business context. The study also attempts to provide guidelines for the future for the development of harmonious IR in India by analyzing the data on the past and present situation on the Industrial Relations trends.

3.13 Research Design

The present study is descriptive cum diagnostic in nature. Appropriate data has been collected from 284 respondents at six different levels in the 17 respondent companies as follows –

1. Shop floor workers. \((N=187, \text{ responded to a questionnaire only})\)

2. Union Office Bearers namely the President, Vice President, Treasurer and General Secretary. \((N=16, \text{ were part of the Guided Discussions held one on one\& responded to a questionnaire})\)

3. Union Committee Members. \((N=26, \text{ were part of the Focus Group Discussions\& responded to a questionnaire})\)

4. Frontline officers on the shop floor. \((N=27, \text{ responded to a questionnaire only})\)

5. Senior Managers responsible for Company Level IR, Business Head and Plant Head. \((N=13, \text{ Guided discussions were held one on one with them\& responded to a questionnaire})\)
6. Plant Head of Departments who work on the shopfloor. \( N=15, \) 
were part of the Focus Group Discussion & responded to a questionnaire

A sample survey has been conducted of 284 respondents selected through stratified convenience sampling method, using structured questionnaire to collect primary data regarding the IR dynamics in the targeted companies. This also followed structured interviews/guided focus group discussions with the selective respondents, personal observations during the shop floor round and observing different groups of people interacting in the working business hours.

Secondary data has been collected from the available publications, journals, news bulletins of the universities/research institutions and records of the concerned government departments pertaining to Industrial matters, different IR related news and developments in the Indian industry.

Apart from these, unstructured interviews of the knowledgeable people in the industry operating in the area of IR and HR have been conducted to know more about the aspects of the industrial relations. These professionals included HR practitioners, HR leaders in the industry and HR academicians teaching the subjects at different levels.

Data Collection Tools & Methods
A sample survey has been conducted for data collection from different industrial units, a structured questionnaire was used. Questionnaires
were constructed based on the general conception and literature review. Initially a pilot survey was conducted to test the questionnaire by contacting 10 respondents in the vicinity. This pilot survey was the replica and rehearsal of the main survey. Subsequent to analysis of their difficulties and responses, based on the experience gained, the questionnaire was modified.

The questionnaire was carefully constructed believing that it was the heart of the survey operation. It was a structured questionnaire consisting of both close ended and open ended questions. The closed ended questions were either of Yes/No type or with multiple-choice and a 7point rating scale was used. Open ended questions were to invite free response of the respondents on various issues, basically to have qualitative data. The questions were presented with exactly the same wording and in the same order to all respondents.

Initially mail questionnaires were sent to the respondents with self addressed envelopes included for returning the completed questionnaire. However, considering the resultant attitude of employees and companies to respond to it was decided to visit some of the companies to collect the data. During the personal visits, every effort was made to capture all the relevant information quoted by the respondents and through personal observations. However the reluctance of the respondents as well as the leaders in the companies was evident in the response to the questions. The reluctance was
reflected in terms of reply to questions and availability of time from the respondents.

Personal and telephonic unstructured interviews of experts and knowledgeable people in the industry were conducted for greater insight into the subject. This sort of interviews was in the form of personal investigation. Flexibility of the approach was ensured as every category of respondent was having a different specialty and different background.

Data Analysis & Interpretation
The collected quantitative and attribute type data was processed through series of data analysis operations like editing, coding, classification and tabulation. Errors and omissions were removed and appropriate corrections were done wherever possible. Editing involved a careful scrutiny of the completed questionnaires. Through editing, it was ensured that the data are accurate, consistent with other facts gathered, uniformly entered, as complete as possible and have been well arranged to facilitate coding and tabulation.

During classification, the raw data was reduced into homogeneous groups to get meaningful relationship. The data was arranged based on common characteristics. Raw data was summarized and displayed in the form of tables during tabulation. In order to facilitate the work, a tally sheet was used with frequency counts.
Analysis of the quantitative type data was done using measures of central tendency like mean, mode and median. In case of multivariate data, cross tabulation was preferred. For analysis of questions where respondents were required to give preferences, weighted preferential indices were used to ascertain the exact significance of an alternative. Hypotheses were tested relevant statistical tests using SPSS.

Presentation of the findings was done using bar graphs, pie charts and other forms of presentation including line charts for indication of trend.

3.14 Limitations of the Study

1. Industrial relations is a very complex and diverse topic. It deals with people and all people are different and unique at the same time and when they behave in groups the complexity further gets multiplied. There are thousands of industrial units, low scale, medium scale, large scale, organized and unorganized operating in India. Each one of them contributes to India’s business and Industrial scenario. It was not feasible to reach out to all of them and incorporate their responses.

2. The reliability of the study may depend on the authenticity of the information supplied by the respondents. The respondents consist of normal shop floor workers, union leaders, counter/opposition union
leaders and management staff members. As said in the earlier chapter that the researcher experienced reluctance from many respondents to share information hence reliability of the study depends on these responses.

3. As some of the respondents were highly placed executives in different companies and independent HR practitioners operating in the Indian industry. Interactions with them were governed by the time constraint factor. However, every effort was made by the researcher to secure their time and cooperation to get the best possible information for the study.

4. As the study required data from all over the country, which involves visiting different places, seeking appointments from different set of respondents across the categories. Hence cost and time constraints may affect the effectiveness of the study though every attempt has been made to keep the spirit of the objectives and research methodology.

5. All the facts gathered during the course of the study could not be reported in this thesis due to space constraints.

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