CHAPTER 2-REVIEW OF LITERATURE
The present chapter focuses on the literature on industrial disputes in the context of developed and developing economies including India. The studies on industrial disputes can be divided into three sub-heads and these are discussed in detail below:

- Studies related to the conceptual dimensions, incidence and impact of disputes
- Studies related to the determinants of disputes
- Micro level studies.

2.1 STUDIES RELATED TO THE CONCEPTUAL DIMENSIONS, INCIDENCE AND IMPACT OF DISPUTES

Bosanquet (1897) has explained the industrial conflict in U.K. This is a theoretical study. He has examined the Coal Strike and the New Trades Combination Movement of 1893. From this analysis he has concluded that the industrial conflict between the capital and the labor class is replaced by the conflict between the different classes of producers. This is because workers and employers have realized that the profits are to be shared between both of them and if profits are low then their respective shares would also be low. Thus, the two sides agreed to support each other. The producers have also agreed that no producer would sell without profits and minimum profits are to be fixed and no one is allowed to take less than the same. However, if any producer violates this then the other producers with the support of their workers would oppose this.

Ross and Hartman (1960) have covered the empirical aspects of strikes. They have covered 15 countries (Denmark, Netherlands, U.K., Germany, Norway, Sweden, France, Italy, Japan, India, Australia, Finland, South Africa, Canada, and U.S.A.). The time period covered is from 1900 to 1956. The analysis is done by calculating ratios and the results reveal a decline in the duration of strikes and in the membership involvement ratio in most of the economies including India. This trend has been named as withering away of strikes and the reasons cited for this have been the changes in employer’s policies, dispute settlement techniques, etc.
Dubin (1965) has done a study about conflict in U.S.A. He has made an attempt to verify the predictions of two models which were given earlier by him with the actual data. The variables used in the study are length of strikes and the intensity of strikes measured through the number of disputes, number of workers involved and the proportion of working days lost due to strikes. The data are from secondary sources. In this model two time periods have been taken (1945 to 1953 and 1954 to 1963) and in both these periods the least squares linear trend line is fitted. The author concludes that the predictions are accurate and industrial conflict is affected by the power of the trade unions and company.

Further, Jackson (1972) has explored the wage policy of India as the researcher regards it as one of the factors for the discontentment among the workers. He has analyzed the wage policy formed and followed by the Government of India and the resultant increases in disputes. The time period of the study is from 1951 to 1968. The researcher has discussed in detail the process of wage fixation in India and the different legislations adopted by the Government. It is concluded that the Government has been intentionally keeping the wages on the lower levels and this has led to industrial disputes in India particularly during the rise in prices.

Khurana (1972) has explored the industrial relations in the private and public sectors in India. The study covers all the establishments in public sector and the non-agricultural establishments in mining and manufacturing, construction, electricity, trade and commerce, transport and communications and services. The time period covered is from 1961 to 1968. He has compared the two sectors on the grounds of industrial conflict with the employee involvement ratio (the ratio between the number of workers involved in industrial disputes and the volume of employment), duration of disputes (number of mandays lost per worker involved in disputes), employee loss ratio, dispute coverage ratio and time loss ratios. The study concludes that there is deterioration in the industrial relations in both the sectors from 1962 to 1968 but relatively, the performance of the public sector was better than the private sector.

Pandey and Pathak (1972) have studied the inter industry differences in conflict proneness in 14 Indian industries (manufacturing, mining and quarrying) at two digit level. The frequency of conflicts is measured by number of mandays lost due to conflicts per worker employed in that industry and duration of conflicts is measured
by the number of mandays lost due to conflicts per worker involved in each industry. The participation in conflicts is measured by the number of workers involved per one hundred workers employed in each industry. The time period of the study is divided into four groups (1959-1961), (1962-1964), (1965-1967) and (1959-1967). The authors have used the percentage method in order to find the variations and then they have ranked the industries as per the conflict proneness. The results of the study show that inter-industry differentials are huge with regard to the measures. Further, rubber and rubber products, metal products and non-metallic mineral products are ranked higher with regard to all the four measures whereas basic metals, food and beverages, transport equipment and plantations industries are ranked lower in terms of all the four measures.

Reddy (1981) has critically analyzed the conclusions of Ross and Hartman’s study that strikes have decreased in fifteen countries including India. He has put forward various lacunas in the methodology of the study in context to India as it does not cover frequency of strikes, which has been regarded as one of the reliable measures. He has also argued that the years of the study for India include the period of freedom struggle which could have affected the industrial action. Reddy also dismisses the claims of Ross and Hartman that the proportion of white collar employees is increasing and these have lesser inclination towards strikes. He says that there is no evidence in India to prove this point. Further, he tests the hypothesis that Ross and Hartman’s conclusion that strikes are declining in India is not true. The data are for the period 1951 to 1977 and six ratios have been calculated. These are: number of strikes per 1000 employees, number of workers involved per 1000 employees, number of workers involved per dispute, number of mandays lost per 1000 employees, number of mandays lost per strike and number of mandays lost per worker involved. The data are from secondary sources. Reddy also measures trend by fitting the mathematical equations and the results reveal an increasing trend particularly after 1963. Thus, he has concluded that in India strikes have increased from 1951 to 1977.

Singh (1983) has covered the state of Maharashtra and the time period is from 1974 to 1980. The data are from secondary sources and it covers both strikes and lockouts as part of industrial disputes. The author compares the trends in Maharashtra with the trends in all India and the variables are number of disputes, mandays lost and workers
involved in disputes. The study concludes that the trend in the disputes in Maharashtra and All India moved together and 1974 is the most disturbing year in terms of industrial relations. The author also compares the trends of disputes in Maharashtra with the other states and it is revealed that most of the times Maharashtra ranked first.

Prakash and Chandar (1985) have examined disputes in the state of Punjab covering the time period from 1966 to 1981. The incidence of disputes is studied through mandays lost, wage and production loss. The researchers have also focused on the settlement of industrial disputes through conciliation, arbitration and adjudication. The analysis reveals that as the industrial activity picked up in Punjab from 1966 to 1981, there has been an increase in industrial disputes, number of workers involved and mandays lost. Disputes were high in cotton textiles, wool, silk, synthetic fiber and basic metal and alloys industries. Conciliation and adjudication have been proved to be unsatisfactory as these are time consuming. Thus, arbitration is the most preferred option. In the end, the authors suggest that efforts should be made to encourage collective bargaining.

Ramaswamy (1985) has given a different approach to the problems of disputes. The author argues that usually disputes are explained by strikes and lockouts but in this paper he has explained conflict by the process of setting norms in India. He has categorized norms into the following categories: norms by consent, conciliation, arbitration, adjudication and legislation. He has examined each norm in detail and given various case studies to support his argument. The author concludes that the bilateral regulation is the most effective measure as compared to the other measures.

Sahab (1986) has examined industrial conflict in India from 1970 to 1983. The analysis is done through the calculations of different ratios and averages. It is revealed that strike frequency rates have largely been constant but there is a persistent increase in mandays lost and this indicates the worsening of industrial relations. The study also shows that wages and bonuses are the major reasons for industrial disputes.

Further, Zechariah (1991) has done a comparison of the industrial relations systems in India and Japan. The author finds that in India labour and management relations are damaged and the Indian worker is less committed towards his job as compared to the Japanese worker. The researcher suggests that the Japanese industrial relations system
needs to be more welfare oriented and the discrimination between the regular workers and part time workers should be immediately checked. In the end the author concludes that India should study the model of the Japanese industrial relations.

Sharma (1992) has covered both strikes and lockouts in India. The analysis is done at the all India level. The study highlights the severity of the occurrence of industrial disputes in India. For 1961 to 1986 and 1987 to 1991 the study has classified industrial disputes by strikes and lockouts. In 1961 to 1986 the number of strikes shows a fluctuating trend but the number of lockouts shows a constant upward trend. In the latter time period there is a constant decline in lockouts and strikes registered constant increase. A considerable wage and production loss has been caused by strikes and lockouts in both the time periods. Wages and indiscipline are found to be the major reasons for strikes and lockouts respectively.

Singh and Singh (1992) have taken the time period from 1976 to 1989 for Indian economy. The data are from primary sources. Different ratios have been calculated in order to assess the incidence of strikes and lockouts. The study reveals that the ratios have increased in all the years except in 1976 (emergency period). Further, the trends in time loss due to strikes and lockouts reveal that the share of strikes in total time loss has decreased and that of lockouts have increased. Thus, the author concludes that the employer’s militancy has increased.

Somers, et.al. (1993) have investigated if the length of a dispute (strike) affects the duration of the ensuing peace. The study covers the American economy. The data have been accessed from the reports of large organizations from 1946 to 1987 on the number of days of strikes and the days between the end of one strike and beginning of another. The empirical exercise reveals that the immediate strike significantly determines the duration of normal working hours in current negotiations as compared to the earlier strikes.

Sundar (1994) has explored the conceptual dimensions of strikes. The author has compared the literature available in the west and in India on strikes. However, he finds that there is a dearth of literature in India on strikes. He has also discussed the different measures of strikes. The researcher has explained that the number of strikes measure has various methodological and operational problems as the smaller, shorter
and less publicized disputes do not enter into this measure. Secondly, there are problems related to the unit of measurement (plant, establishment, firm or the dispute). He has further explained that the number of workers involved which measures the breadth, size or involvement, does not cover those workers which are working in the other establishments and are still affected by it. Secondly, different parties give different estimates of the workers involved and it also suffers from double counting. The researcher finds that the number of working days lost as the most comprehensive measure; however, this measure also has its own problems. In the end he has also discussed the issues related with the collection of data by the different agencies.

Sodhi (1995) has studied the industrial relations in India and in other South Asian countries (Pakistan, Bangladesh, and Sri Lanka). Initially he discusses the growth patterns in these countries and then discusses each economy in detail. In the context of the Indian economy the author finds that because of the economic crisis of 1991 and the changes introduced thereof in the economy, India witnessed surge in strikes in the initial two years of the implementation of reforms. However, gradually disputes declined but strikes have increased in duration and more workers were involved in the same. The author then explores the reasons for this and finds that since the private sector wants skilled labour force and the middle aged labour force is not ready to acquire new skills, therefore, retrenchment increased in the economy which has lead to discontentment. Further, the retrenchment of the workers from the public sector also aggravated disputes. The author concludes that in India employment related issues are more responsible for disputes than the wages.

Datt (2000) has taken data for the period 1980 to 1997 for India, which is sub-divided into pre-liberalization (1986-1991) and post-liberalization (1991-1997) phases. The study covers both strikes and lockouts and the estimation is done at the regional level. Different percentages have been calculated. The study reveals that in the second phase there is a decline in the number of both strikes and lockouts but the share of lockouts in mandays lost has increased. Thus, in the post-liberalization period incidence of lockouts has increased. This phenomenon has been observed in states like Andhra Pradesh, Kerala, Rajasthan, Assam, Himachal Pradesh, U.P., Haryana, Bihar and Tamil Nadu. It has been found to be maximum in Assam but an altogether different
phenomenon was observed in Punjab and Haryana as in these states share of strikes in total mandays lost has increased in the post-reform period. After this, a detailed analysis of individual states is done. Then a regression analysis is also done to know how the employers respond to increase in strikes i.e. whether they take a defensive approach and reduce lockouts or they retaliate by increasing lockouts. The independent variable is mandays lost in strikes and the dependent variable is mandays lost in lockouts. The regression analysis was done for pre and post-liberalization periods and for 18 states. The correlation coefficient has been found to be positive and significant for Tamil Nadu and Madhya Pradesh whereas it is negative and significant for 7 states. The all India value was positive but insignificant. Further pooled regression analysis is done using least square dummy variable model (fixed effect model). The results reveal that the relationship of lockouts to strikes is positive and significant. Effect of liberalization is also found to be significant.

Giles (2000) has done a theoretical study explaining the development of industrial relations. In this paper the gradual growth and emergence of industrial relations as a subject has been discussed. The author finds that industrial relations has evolved as a mid-path between the views of neo-classicals and the Marxian views. Then the author has explored the transformation of industrial relations into employment relations and also puts forward the different weaknesses of this approach and advocates the replacement of industrial relations by work relations.

Ram and Ahluwalia (2000) have compared the trends of industrial disputes in India for 1990 and 1994-1998 and the data are from the different reports of Labour Bureau. The variables covered are number of disputes, mandays lost and workers involved. The study concludes that there has been a decline in the number of disputes but the mandays lost and workers involved in disputes have increased. The wage loss and production loss has also increased. Apart from this the authors have also explained the gaps in the data collection. The authors suggest that data should also be calculated for disputes involving less than 10 workers.

Sundar (2000) has examined the regional variations in work stoppages by covering both strikes and lockouts in India. Data are from Labour Bureau and other regional sources. The time period of the study is from 1967 to 1995. It has been revealed that lockouts have increased since 1985. Work stoppages have been found to be high in
West-Bengal, Maharashtra, Tamil Nadu, and Kerala. Andhra Pradesh also experienced the same trend after the reforms. In these states stoppages have taken place in cotton or jute textiles, engineering and chemical industries. A breakdown of work stoppages into strikes and lockouts across the states reveals that only a few states are lockout prone. In the end, he suggests that if only a few states and regions are conflict prone then changes must be introduced in the institutional framework of these states/regions only.

Datt (2003) has also covered the analysis of lockouts. The time period of the study is from 1961 to 1997. The variables covered are number, workers involved, and mandays lost. Different percentages and ratios have been calculated. The first chapter explains the trends in lockouts at the all India level. The state wise analysis of the lockouts has also been done and the last chapter focuses exclusively on the state of West Bengal. Pooled regression analysis of 17 states has been done to study the relationship between the changes in mandays lost due to strikes and the changes in mandays lost due to lockouts. Fixed effect model has been used. And the results show that the lockouts have a positive and significant relationship with strikes. Further, forty two case studies have been done to study the intensity and causes of lockouts in West Bengal. These case studies reveal downsizing, increase in casual labour and workload of the labour force, etc. as the major causes of disputes in the state of West Bengal.

Giri and Das (2003) have covered the state of Orissa. The data are from the primary and secondary sources. The authors have discussed the industrial relations scenario of Orissa and the growth of trade unions in detail. The study further covers the social dialogue in Orissa by discussing some case studies and also discusses the disposal of the disputes. Results of the study indicate the weakening of the trade unions and of the social dialogue in the state. The study also concludes that the parties involved in disputes show reluctance in approaching the state for resolving the disputes.

Sundar (2003) has explored the trends in industrial disputes after the reforms in India. This is done with the help of secondary data for the time period 1961 to 2001 and specifically for 1991 to 2002. Different ratios and percentages have been calculated to study the trends at the all India level, regional level and sectoral level. The analysis also includes manufacturing industries at two digit levels. The author concludes that
after the implementation of reforms though the frequency of disputes has decreased but the extent or magnitude of the disputes has increased.

In another study Sundar (2004) has done an exclusive analysis of lockouts in India from 1961 to 2001. The author first discusses the theoretical framework on lockouts. Then the trends in lockouts are discussed through various percentages and ratios at the all India level and sectoral level for manufacturing industries at two digit and also for selected states. He concludes that the incidence and duration of lockouts has increased but these are less frequent and the involvement of the workers is less as compared to strikes.

Moorthy (2005) has explored the impact of economic reforms on the incidence of disputes and also examines the working of the dispute settlement machinery in the state of Tamil Nadu. The time period of the study is from 1989 to 2003. The study is based on the secondary data and the author has calculated percentages and mean averages. The variables covered are number of disputes, workers involved and mandays lost in all disputes. The results show that the number of disputes and number of workers involved have declined but the mandays lost in strikes and lockouts have increased. Further, the study finds that with the reforms, disputes in textiles industry have reduced and the efficiency of adjudication machinery has improved after the steps taken by the Government of Tamil Nadu.

Wolcott (2008) has investigated the strikes that occurred in colonial India. She has compared the strikes in India with the strikes in America and England. The time period of the study is from 1921 to 1938 and it covers the cotton textiles industry. Means and medians of strikes participation and strike lengths in India have been calculated. The results reveal high strike frequency in India as compared to America and England. The author explains such high strikes in less unionized India to the social norms of cooperation in supporting combined action.

In other work by Sundar (2010), the conceptual dimensions of the strikes and the industrial relations scenario in India are explained. The author has also examined the cases of automobile industry, jute industry, airline industry etc, and also the strikes in the public sector. The current trends in the disputes at the all India level are also explained through the different variables like work stoppages, work days lost, and
workers involved. He has also discussed the segregated analysis of strikes and lockouts from 1991-2008. The results of the study reveal that strikes involved more workers but lockouts have a major share in workdays lost and the average duration and the average size of both strikes and lockouts have increased.

The Federation of Indian Chamber of Commerce and Industry (2012) has examined the recent resurgence of industrial disputes in India. The study covers the post-reform period and a special focus is on the disputes from 2008 to 2010. The data are from the different publications of Labour Bureau. The study concludes that the number of disputes has declined in the post reform period but the mandays lost and workers involved have increased in the same time period. The study also concludes that a sharp rise has been witnessed in the number, mandays lost and workers involved in disputes from 2008 to 2010.

2.II STUDIES RELATED TO THE DETERMINANTS OF DISPUTES

Cannan (1917) in a theoretical paper explores the industrial unrest in U.K. during and after the First World War. An exhaustive search is made in the causes of the discontentment among the labour. This is done through the enquiry reports of the different commissions. Trade unions, rise in prices, differences in wages to the workers, conditions of work have been highlighted as the major reasons of the discontentment.

Kuhn (1956) has explored the nature and determinants of strikes in Australia from 1920 to 1953. The data are from the secondary sources. From the data Kuhn comes to the conclusion that in Australia the workers received sufficient increases in wages. The workers also received reduction in the hours of work, increase in leaves etc. Because of these measures long strikes have declined but short strikes have increased in Australia during this period of time. The chief reason highlighted for the rapid increase in short strikes is the weak nature of unions and less attention paid by these unions to the lower level workers. The author suggests that the employers and the
unions must adopt quick and flexible procedures so that the problems of the local workers can be properly attended.

Ashenfelter and Johnson (1969) (as cited in Franzosi, R., 1989) covered the U.S.A. economy for the time period 1952 to 1967. In this study the authors through an econometric model have investigated the determinants of the strikes. The results of the study show that real wages, unemployment and prices are the important determinants of the strikes. This work still remains one of the remarkable works in the literature on industrial disputes.

Wolkinson and Sahab (1972) have studied the role played by Indian National Trade Union Congress (INTUC) in India’s industrial relations. The time period of the study is from 1959-1964. The authors have analyzed the approach of INTUC towards strikes and the factors affecting it. While studying the organization, the authors have found that INTUC first preferred conciliation then arbitration and lastly, Governmental adjudication of labour disputes. If these failed then INTUC opted for strikes. Also, during the wars with China and Pakistan INTUC promised to the Government to reduce strikes. However, the authors have shown through the data that during this period there has been an increase in the strike activity of INTUC. This clearly reflects that a union cannot remain passive to the demands of the workers and thus, have to act under the pressures of the workers. Another reason highlighted by the authors is that many times INTUC had to join strikes as the majority of the workers (who were represented by the rival trade unions) joined the strikes. Thus, the pressure of the rival trade unions led INTUC to join the strike.

Further, Thakur (1976) has done an extensive survey of the research in the area of trade unions in India. The study first discusses the nature of trade unions in India, their political affiliations, their influence on the economic decisions related to workers. Then the study covers the research on trade unions and groups it into historical studies, studies of leadership and studies relating to unionism at the area, industry and enterprise level. The author concludes that the maximum studies are in the area of historical research. The author recommends more research by professionals regarding variables like: wages and benefits, cost, prices etc.
Sahab (1978) has covered the time period from 1950 to 1975. He has explored the reasons for disputes in Indian economy. Rising prices and the constant real wages are identified as the major reasons for disputes and for the deteriorating conditions of the workers. Further, statutory bonus and need based minimum wages have been identified as the other major reasons for the disputes. The author concludes that the Bonus Act has failed to address the real problem and also urges for the setting up of the need based minimum wage.

Tulpule (1978) has explored the theoretical aspects of the industrial relations in India. This study covers the legislations set for industrial relations. The author reveals that in order to make the process of collective bargaining a success, both the parties in the disputes must have some bargaining power. Since the bargaining power of the workers is represented through the trade unions, therefore, the author discusses at length the legal provisions related with the formation and working of trade unions. He then recommends that the role of the Government should be of a regulator only.

Reder and Neumann (1980) have done an empirical study pertaining to strikes in United States. The time period of the study is from 1953 to 1973. The objective is to find out the relationship of incidence of strikes with the costs of strikes and also to ascertain the role of the experience of the bargainers in determining the frequency of strikes. The study covers the manufacturing units only and OLS and GLS are applied. The authors have concluded that strikes have an inverse relationship with cost of strikes and experienced bargainers do face fewer strikes as compared to the less experienced bargainers.

Further, Haas and Stack (1983) have investigated the relationship between the level of economic development and strikes. The authors have taken 71 nations for 1976 to 1978 including India and a polynomial regression analysis is applied. The data are from the different reports of ILO and World Bank. Strikes are measured by strike volume (total number of persons days lost/ size of the labour force) whereas the level of economic development is estimated through GNP per capita. The other variables are the degree of prosperity (average annual rate of change in GNP per capita), rate of monetary inflation (percent change in the consumer price index), degree of unionization (number of union members as a proportion of labour force), degree of ethnic fractionalization (Atlas Narodov Mira Scale), rate of rural to urban migration.

23
(changes in urban population from 1960 to 1970), degree of mass media (number of television receivers per 1000 inhabitants in 1977) and degree of democracy (Jackman’s Democratic Performance Index). The results of the study reveal that the effect of economic development follows a parabolic curve.

Hayes (1984) has done an extensive investigation to find if strikes are a result of the rational behavior by firms and unions. A short run econometric model is framed. The results of the study reveal that strikes occur when a firm is experiencing less profits rather than high profits. Thus, the author concludes that when the general economy is doing well (but the firm is in low profit state) then the workers will strike to get more wages.

Grant II and Wallace (1991) have explored the reasons for the occurrence of violent strikes among groups like trade unions. This is an empirical study about Ontario in Canada. The time period of the study is from 1958 to 1967. The dependent variable is strike violence and the independent variables are politico-institutional factors (percentage of liberal party seats), economic factors (unemployment, changes in earnings), class organizations (percentage unionized, strikes frequency), strikes situation (legal status of strike, strike issues), skill mix of workers, workers strategies, and employers strategies. OLS method is used and the results of the study reveal that the strike violence was found to be related to political factors, legal framework, the skill mix of workers and the strategies used by the workers and the counter strategies used by the employers.

Bean and Holden (1992) have examined the major determinants of variations in annual number of strikes in India. The time period of the study is from 1952 to 1990. The authors have used the method of ordinary least squares. The dependent variable is number of strikes and the independent variables are: real earnings, trade union density, and one dummy variable is included for election years and another dummy is included for emergency year. They have also included the dependent variable in lagged form. Initially the model is estimated for 1952 to 1977 period and the results are: union density is positively associated with strike frequency and is significant (if instrumental variables approach is used, it loses its significance), real wages are negatively related with strike frequency but are insignificant, election year increased the number of strikes and emergency has reduced the same. Then the model is further
extended to 1990. Trade union density has been found to be significant (but if instrumental variables are used as the estimating technique then it loses its significance). Real wages are again insignificant and emergency is significant but election year is insignificant. Thus, Bean and Holden conclude that no consistent and statistically significant relationship can be found between strike frequency and real wages. Political factors have also explained the dependent variable particularly in the earlier part of the study. In the latter years political factors have become relatively insignificant.

Ratman (1993) has studied the impact of trade unions on industrial relations and also the impact of economic reforms on role of the trade unions in India. This is a theoretical study. The author finds that poverty and unemployment in India have increased in post-reform period which has adversely affected the workers. With reforms the privatization and segmentation of the labour markets has taken place that has resulted in the casualization of the labour force and decline in the job security. The author concludes that the trade unions are facing great challenge due to the above factors and because of the increase in the employer’s rights and the changes in technology. The author sums up that the trade unions should rethink about their role and focus on internal democracy and ways to increase their membership, rotation of the leaders etc.

Chaudhuri and Bhattacherjee (1994) have countered the studies done by Bean and Holden (1992) and Saha and Pan (1994). The authors question how it is that in both the models, wages are found to be insignificant in India. They have covered the time period from 1960 to 1986 for the Indian economy. The authors reveal that both these studies preclude the possibility of a simultaneous relationship between wages and strikes. Thus, a simultaneous equation model is developed by the authors. It also includes wage indexation and structural shift variables. The results indicate that strikes affected wages whereas strikes are not affected by wages. The structural variable has a significant negative effect on both wages and strikes.

Langford (1994) has examined if a strike leads to a change in the orientations and perceptions of the workers. For this purpose the author has done the case study of the strike by postal workers in Hamilton, Ontario which lasted from September 30 to October 17, 1987. It is based on a sample of 45 workers. He has analyzed the
behavior of the workers before and after the strike. The author finds that the 40 percent workers felt that their perception changed after participating in the strike. It is also revealed that 30 percent workers felt an increase in their self-confidence. The author has also explored if every worker has participated in strike in the same way and if the political consciousness of the workers was affected by their participation in strike. The results reveal that the involvement of the workers is quantitative as well as qualitative. It is revealed that majority of the workers regularly participated in strike. However, there were variations in the qualitative participation of the workers. The author also finds that only 18 percent of the workers fostered solidarity and there has been a further decline in it after the strike. The reason for the same is the pressures of family. Thus, the author asserts that Marxists need to develop such organizations that strengthen the solidarity of the workers.

Saha and Pan (1994) have empirically explored the determinants of disputes in manufacturing industries. The time period of the study is from 1980 to 1986. This study includes both strikes and lockouts. The data on disputes are for 19 industries. The data are from Pocket book of Labour Statistics, Labour Yearbook and ASI. The dependent variable of the model is industry wise mandays lost per employee from disputes. The independent variables are the degree of trade unionization, average factory size and average monthly earnings of an employee. A dummy variable has also been included for 1981 to 1984 period to incorporate the impact of historic textile strike and for similar other disputes. The results of the study have revealed a negative relationship between mandays lost and trade unionization, positive relationship between mandays lost and factory size and insignificant relationship between employee’s earnings and mandays lost.

Further, Karan and Sarkar (2000) have done an empirical study which explores the density of unionism in different states of India and in different industries. The authors have also investigated the role played by the size of employment and flexibility. A logit model is constructed in which the dependent variable is the probability of the firm having a union. The independent variables are the flexibility of the workforce, degree of unionization and intensity of work protests. The study concludes that the firms in Gujarat, Madhya Pradesh and Tamil Nadu have shown high flexibility in workforce, and have low unionization and less intensity of workers protest. In the end
the authors conclude that the old institutions of industrial relations system are not capable of dealing with the changed conflict.

Bhattacharjee and Ghosh (2003) have covered the time period from 1961 to 1996 and it is an all India based study. The authors have analyzed the duration and incidence of strikes and a linear regression model is constructed in order to find out the causes of strikes. The results show that business cycles, real wages and rate of inflation significantly affect the duration and incidence of strikes. The degree of trade unionization has been found to have a minimum impact.

Dhal and Srivastava (2003) have done a study of Orissa and a comparison of the workers of public sector and the private sector manufacturing organizations have been done. The objective is to evaluate the difference in union effectiveness and industrial relations in the private and public sector. The data are collected from primary sources (interview schedule). The study concludes that neither the industrial relations climate nor the union effectiveness is found to be significantly varying between the public and private sectors. It has been revealed that in both the companies, unions have not met the demands of the labour force.

Jacob (2003) has done an empirical study to find out the manifestations, causes of industrial disputes and bargaining power of the unions in the public sector units in Kerala. The period of the study is 2002. Through the secondary data the study has revealed that the common form of disputes in Kerala are strikes and within strikes the most preferred form is token strike. The reasons are: wages, bonus, service and working conditions. The study has revealed that the bargaining power of the trade unions in these units is also strong. However, lockouts are very rare.

Keil (2003) has examined if the determinants of strikes that are included in the models of western countries are also applicable to less developed countries. He has also examined if the differences and changes in national data of different countries affects the findings of the study. For this purpose the author has taken the data for 563 countries including India. The time period of the study is from 1975 to 1990 with certain variations in years depending on the availability of the data in different countries. The dependent variable is the strike volume and the independent variables are unemployment, earnings, inflation, unionization and democracy. The data set are
pooled cross sectional time series. The analysis reveals that the economic and political variables of strikes that are used in the strike models of western countries are also applicable in India. Earnings, unemployment, and unionization have been found to be significantly affecting strikes. Further, the researcher has conducted a sensitivity analysis to know if the changes in the data collection of the different countries affect the results of the study. The findings reveal that the differences both over time and cross nationally do not affect the findings. Lastly, no significant changes have been observed for countries that changed their reporting pattern overtime.

Azam and Salmon (2004) have developed a theoretical model which explains the role of political factors on the activity of trade unions in Bangladesh. The authors have then empirically tested their model. The time period of the study is from 1988 to 1992. The econometric exercise reveals that the political factors significantly affected strikes. Thus, the authors have concluded that in developing countries the role of political factors cannot be ignored.

Balbona, Iglesias, et.al. (2008) have covered the empirical aspects of strikes in Spain. The time period of the study is from 1987 to 2006. The authors have constructed a regression model. This model has explored the impact of the rate of unemployment, regional pacts and the political awareness of the population of the Spain on the frequency of strikes, magnitude of strikes and volume of strikes. The study has revealed that all these variables had a significant impact on the frequency, magnitude, and volume of strikes in Spain.

Chan (2011) has done a comparison of strikes in China and Vietnam. The study has covered footwear industries in both the countries. In order to avoid variations, the author has selected only those factories in both the countries that are managed by Taiwanese companies. The time period covered is from 2006 to 2010. First the incidence of strikes is compared across the two countries and then the author has explored determinants of strikes in the two countries. The study reveals the following as the determinants of strikes in the two countries: historical experiences, relationship between the local Governments and factory owners, the relationship between the Government and trade unions, labour laws and dispute resolution system.
The Federation of Indian Chamber of Commerce and Industry (2012) has examined the impact of contract labourers on the recent labour disputes in Indian markets. The report focuses on the growth of the contract workers from 2005 to 2009 in different industries. The legal framework related with the contract workers is also analyzed. Some of the recommendations are: setting up of Central and State Contract Labour Boards, treating contract workers as a separate establishment and issuing smart cards to contract workers.

2. III MICRO LEVEL STUDIES

Subramanian (1980) has studied the 88 day long strike at the Motor Industries Company, Bangalore. This strike started in 1979 and ended on January 1, 1980. The analysis of the strike reveals that the real reason for the strike has been the use of motion studies and scientific application of the time in the company which ignores fatigue. However, this issue has been relegated to the background by some other minor issues. The strike was prolonged and the talks between the management and the workers failed. Thus, Subramanian concludes that the presence of a strong leader is a major factor in strikes.

Chellappa and Jhuraney (1982) have examined the industrial relations in a public sector unit in which no disputes have taken place from the last 25 years. The researchers have studied the dispute resolving mechanism of the unit and identified the causes of these harmonious relationships. Primary data are collected through interviews with the top management, office bearers, representatives of the management involved in the bipartite talks, company records, workers etc. The authors have revealed the following major reasons of the cordial relations: trust built up through effective communication, positive and fair attitude of the management, involvement of the workers in joint decision making and role of the leaders.

Giri, et.al. (1992) have done a study of Paradip port. The objective of the study is to find out how the port can improve the productive efficiency. The data are for 1991 and collected from the various reports of the port. The study reveals that the
productive efficiency of the port can be easily improved if the management resorts to cooperation from the unions.

Jyoti and Sidhu (2003) have studied 5 textile units in Punjab. The study has examined the causes of strikes in these units. The data are collected from primary sources (interview method) and the sample size is 300. The authors have applied the tool of factor analysis to the data. The results show that the threat of lockouts and retrenchment, aggressive attitude of the management, and fear of closures are regarded as the main determinants of strikes in these units.

Panda (2004) has explored the differences in the industrial relations in a private and a public sector undertaking of the same industry in India. The sample of the study covers 212 employees of the public sector company and 145 employees of the private sector company. This is a primary study (questionnaires, interviews and personal observations). The results show that the public sector unit needs to address the issues related to the union management relationship. In both the units the issues of conflict between the workers and management are being resolved through the legal and administrative set up. However, the author recommends the settlement of the disputes through mutual collaboration in both the units.

Thus, the review of literature has revealed that the conflict between the employers and the employees has been in existence since a long time not only in India but also in other parts of the world. To sum up, different researchers have put forward different criteria for the definition and measurement of the trends and causes of the disputes. The studies that were done before 1990s have revealed that the economies (particularly India) faced the challenging task of countering the frequently occurring disputes. During this period the most common form of disputes were strikes and as a result most of the studies done during this time have covered either strikes or have covered disputes which includes both strikes and lockouts. On the other hand the studies that were done after the 1990 have revealed a declining trend in the frequency of disputes but the impact of the disputes widened. During this period, the share of strikes in disputes declined and the share of lockouts increased. Therefore, the studies done during this time have focused on the lockouts.
The review has revealed that there are various variables to measure disputes/strikes/lockouts. Initially the researchers relied on number of disputes/strikes/lockouts which is an indicator of the frequency of disputes. Gradually the economists started to use mandays lost and workers involved in disputes. Though these variables also have their problems but most of the researchers after 1975 have used mandays lost and workers involved along with the frequency measure. The researchers have also intensely analyzed the determinants of disputes. Wages, trade unionization, factory size, economic development etc are found to be the main reasons. Though many studies have empirically supported the role played by the trade unions but the empirical evidence related with wages has shown mixed results. In fact, in economic literature the role played by wages in determining disputes has remained a debatable issue. Further, a number of researchers have done the analysis at the macro level and various others have done the analysis of disputes at the level of firms. In micro level studies the role played by the trade unions has been identified as the major determinant and mixed results have been obtained regarding wages.

Hence, the researchers have undoubtedly covered the various facets of disputes and also established the gravity of the problem of industrial disputes but many gaps are yet to be filled which are highlighted in the next section.

2.IV GAPS IN LITERATURE

The following gaps in literature have been identified:

1. Most of the studies have analyzed industrial disputes which include both strikes and lockouts. Some other studies have analyzed strikes. However, strikes and lockouts have not been analyzed separately in detail. And the review of literature has revealed that after 1990’s the share of lockouts have increased and hence, it is imperative to study strikes and lockouts separately.

2. Most of the researchers have focused on the analysis of the disputes at the all India level or at the regional level and some others have covered the manufacturing industries at two digit level. However, the analysis of disputes,
strikes and lockouts in manufacturing industries is not done in detail. Since manufacturing sector is one of the important sectors of the economy, therefore, a comprehensive study is needed to know the causes of the occurrence of strikes and lockouts in this sector in detail at 3 digit level.

3. Further, the time period covered under these studies is largely till the end of 1990s whereas the latest trends in disputes, strikes and lockouts and the causes of the same are not explained.

4. Lastly, in recent years there have been many changes in the Indian economy. Therefore, there is a need to study the reasons for such disputes, strikes and lockouts over a long period of time and also to study the changes in the relationship of disputes, strikes and lockouts with their determinants in pre and post-reform periods.

Thus, there are certain issues which are left either unanswered or need detailed analysis and hence make a case for a study which covers the incidence, impact and causes of industrial disputes, strikes and lockouts in manufacturing sector.