CHAPTER 3

THE DATA

The present chapter deals with nature and sources of data, methods of data collection, their limitations and methods of analysis of data (vide: A Synoptic View at the end of the chapter). It describes the development of operational concepts on the basis of which the effectiveness and efficiency of the dispute settlement machinery is evaluated.

3.1 Nature of the Data

Industrial disputes, and the functioning of the settlement machinery, thereof, in Punjab with special reference to Textile industry on the one hand, and the assessment of the effectiveness of the said machinery as reflected in the objective criteria and in the feelings of the 'actors' involved on the other represent the two broad categories in terms of the nature of the data required for the conduct of the present study. Both secondary and primary data were collected for the purpose.

The relevant aspects of secondary data relating to industrial disputes were: industrial disputes raised before the industrial relations machinery constituted by the state, strikes, number of registered and working factories, employment, workers' earnings, prices, industrial production, trade unions, etc. The relevant aspects of secondary data relating to settlement machinery were, mainly, disputes referred to the machinery, settled in collective bargaining, conciliation,
Vountary arbitration and Adjudication. Also relevant were the institutions evolved preceding the settlement, namely, complaints filed with and redressed by the Government Labour machinery, Works Committees, Joint Management Councils, etc.

Assessment of the effectiveness of the machinery were attempted at two standpoints. First, through objective criteria as reflected in the secondary data, secondly through the subjective criterion as reflected in the opinions of the 'actors' involved. The latter, i.e., the subjective criterion consisted of the primary data.

3.2 The Sample

Textile industry in Punjab as explained in Chapter I has been selected to survey the opinions of the disputants about the different aspects of industrial disputes and the working of the dispute settlement machinery. After selecting the industry, the next step was to select the units from where the disputant respondents were to be taken. For the purpose, a brief information schedule (appended to Appendix 1) was mailed to all the 564 registered working textile factories in Punjab during 1977. This was done with a view to eliciting information about those units which had recorded a sizeable number of industrial disputes. Out of these 564 units, only 10 units sent back the schedules, duly filled. Since the response was very low, strike statistics in Textile industry contained in Strike Registers was
it was found that the strides have occurred more frequently (average percentage for 1967-78 = 22%) in large units which employed 500 or more workers. Besides, it was also found that the number of mandays lost in these large units was on an average 75 percent of total mandays lost in Textile industry during the period 1967-78 (Refer to Annexure 19 in Appendix 3). Based on the above two criteria, eleven units were identified as highly dispute prone. These were selected for an intensive analysis for the present study. The units, thus, selected represented about 34 per cent of the total employment in Textile industry in 1978.

The selection of the respondents from these selected units were made as follows:

It was attempted to take a sample of workers on the basis of some scientific sampling procedure but it could not be done because of lack of cooperation on the part of the organisation to provide basic information about the workers on the basis of which a scientific sample could be drawn. Therefore, a total of 130 workers were interviewed, according to convenience, from the eleven selected units. The office bearers of the different trade unions of all the selected units were interviewed in order to find their viewpoints. Efforts were made to interview the Factory Manager, the Personnel Officer, Labour Officer, and Labour Welfare Officer, of each of the selected units.
Besides these respondents, 60 workers, according to their convenience and availability, from those who came to attend to their own cases in Labour-cum-Conciliation offices, all the Presidents and/or Secretaries of (of Punjab Branch) different central trade union organisations like INTUC, AITUC, BMS, CITU, HAM, and also Presidents and/or Secretaries of the Textile Employers' Associations were interviewed. The Joint Labour Commissioners, Deputy Labour Commissioners, Labour-cum-Conciliation Officers and Presiding Officers of the Labour Courts and Industrial Tribunal were also interviewed.

3.3 Sources of Data

Much of the secondary data were collected from the office of the Labour Commissioner, Punjab, situated in Chandigarh. The data on industrial disputes and on the operations of the dispute settlement machinery are presented regularly in the Punjab Labour Department Journal, Punjab Labour News (Monthly), and also in the Annual Reports on the Working of the Industrial Disputes, Act, 1947, published by the Labour Commissioner, Punjab. Since these did not contain the detailed data as required for the present study, the records of the Labour Commissioner's office, Punjab, had to be gone through. Almost whole of the secondary data for Textile industry were collected from the files and registers of the office of the Labour Commissioner, Punjab. The unpublished sources for secondary were: the disputes registers, the strike registers, the trade union registers, the monthly
reports of the labour-cum-conciliation officers, the Memorandum of settlements, failures and withdrawal reports of the Labour-cum-conciliation officers, Arbitration files, Awards' registers, Factories Registers, Payment of Wages Registers, Referred cases Registers of the office of the Industrial Tribunal, Punjab, annual reports on the working of the Large and Medium Scale Units in Punjab, available in the office of the Directorate of Industries, Punjab, etc.

Besides, this, certain other published sources like Gazettes of Punjab, Indian Labour Statistics, Pocket Book of Labour Statistics, India, and Punjab were also referred to.

Sources for the primary data were the respondents. These included employers and/or their representatives, workers, trade unionists, Government Labour officials, President and/or Secretaries of Employers' Associations, Labour Lawyers, etc.

3.4 Methods of Data Collection

Secondary data were collected from various published and unpublished sources as already mentioned. However, the present researcher had to make an adjustment particularly with regard to data on strikes. Data on strikes in Annual Reports of the Punjab Labour Department for 1967, 1968 and 1969 included the sympathetic and political strikes also. But as per the practice followed by the Labour Bureau, Government of India, sympathetic and political strikes are excluded in the main strike data. Accordingly, the present researcher had excluded sympathetic and political strikes.
from the strike data of Punjab for the years 1967-69. Thus, the data on strikes given in this study differs from published data to that extent.

The primary data were obtained from the respondents through mailed questionnaire and personal interviews. First, a preliminary questionnaire was prepared and it was pretested in one of the selected units. On the basis of the information received, a complete full fledged questionnaire was prepared. It consisted of two parts; Part I and Part II. Part I contained general questions on disputes and its prevention and settlement. It was meant for all respondents, excluding workers. Part II of the questionnaire consisted of different sets of questions for employers and/or their representatives, trade unionists, Labour-cum-Conciliation officers, etc.

The questionnaires were mailed to employers of the selected units, State level trade union leaders, Labour-cum-Conciliation Officers and Presiding Officers. But the response was very poor in that only two respondents finally replied back. Therefore, it was thought to conduct personal interviews with the respondents with the same questionnaire as base.

Views of the workers and unit level trade union leaders were sought by having personal interviews with the help of an interview guide.

The primary data were also collected by way of non-participant observation by the present researcher of conciliation meetings and proceedings of Labour Courts and Industrial Tribunal.
3.5 **Limitations**

3.5.1 **Secondary Data**

Almost whole of the secondary data collected for the present study originated from the office of the Labour Commissioner, Punjab, whose function is to collect, process, and publish the labour statistics relating to the State of Punjab. A great reliance, thus, was to be placed upon official Government Statistics, both published and unpublished. General limitation of the kind of secondary data originating from Government offices are well known. Specifically, however, incompleteness and inaccuracy appear as two most important limitations of the secondary data collected for the present study.

As for the incompleteness of the secondary data, year 1973 (in respect of Textile industry, particularly) has been more conspicuous, since dispute registers and other records for this year were not traceable in the Labour Commissioner's office. Monthly reports of the Labour-cum-Conciliation Officers were available only for 1975 to 1978. This resulted in the availability of incomplete data relating specifically to collective agreements. Also, information relating to subject-matter of collective agreements signed, time-period and implementation, etc. of collective agreements signed were not available either in published or unpublished form.

---

Data on implementation of settlements in Textile industry, and awards of arbitrators for All Punjab and Textile industry, and awards of adjudicators in respect of Textile industry were not available. Reasons for non-implementation of settlements and awards were not at all available.

The figures for trade union membership in the present study refer to claimed membership. The Punjab Labour Department does not have any practice of verifying the union membership. As is well-known, claimed union membership figures are always exaggerated. The data on union membership may be inaccurate to that extent.

3.52 Primary Data

The general limitations of primary data related to the partial and non-response of the respondents owing to factors like unwillingness to disclose certain information, etc., which might have occurred inspite of the best efforts of the present researcher.

A synoptic view of nature, source and methods of data collection and limitations of data thereof has been presented in a chart appended to the end of this chapter.

3.6 Methods of Analysis

The statistical methods adopted in this study are well-known methods which are used in the analysis of time-series data, namely, correlation and regression, index number, etc. Summary statistics like mean, standard deviation,
coefficient variation, correlation coefficient have been calculated and tests of significance have been used wherever found suitable.

An attempt has been made to analyse the situation regarding various variables included in this study, firstly for the state of Punjab as a whole, and then for the Textile industry. The analysis is supplemented by the information collected through interviews of the various respondents. In view of the procedure adopted for the selection of the respondents, it was not possible to use any tests of significance in the analysis of primary data.

The analysis is fabricated around certain operational concepts either developed by the present researcher or adapted from the existing literature. A brief description of these operational concepts is given below:

3.61 Operational Concepts

3.611 Measures of Strikes

Strike measures have been used by a number of writers mainly to see the strike-proneness. Strike proneness means the relative propensity of workers/employers to resort to strike/lockout action. In the context of the present study, the following three measures have been calculated

2. For example -
   ii. Kerr, Clark and Siegal, Abraham, "The Inter-industry propensity to strike - An international comparison" in *Industrial Conflict*, op. cit., Ch. 14.
   iv. *Industrial Relations Statistical Series -V4: Industrial Disputes in India*, Shri Ram centre for Industrial Relations, New Delhi.
since these come closest, as per Ross and Hartman\textsuperscript{3}, to show the relative impact of strikes on economy and reflect most sensitively the institutional and historical forces at work.

1. Frequency: This is measured by the number of strikes per factory.

2. Breadth: This is calculated by workers involved in strikes as a percentage of employment in the organised sector.

3. Duration: This is measured by mandays lost divided by workers involved.

3.612 Measures of Disputes

Though strike measures have been used to study strike proneness, no such measures have been used to study disputes. The present researcher has attempted to measure the intensity of the disputes on the lines of the measures of strikes. The measures adapted are:

- Frequency: Calculated as dispute per working factory.
- Breadth: Calculated as the number of disputes per one thousand non-agricultural labour force.
- Membership Involvement: Calculated as dispute per 100 union membership.

3.613 Measures of Effectiveness of Dispute Settlement Machinery

The main objective of the present study is evaluation of the performance of the dispute settlement methods. There

---

are two dimensions of evaluation of performance, one is effectiveness, and the other is efficiency. The former relates to the degree to which objectives are achieved, and the latter is the ratio of output to input.

The difficulty in measuring performance, however, develops because performance consists of two inseparable components; quantity and quality. To cope with this, it has been tried here to measure the performance by quantitative data in conjunction with qualitative data. Effectiveness which is a broader term than efficiency has to be seen in terms of attainment of objectives for which the institutions for dispute settlements like conciliation, voluntary arbitration and adjudication have been created, are stated in the preamble of the Industrial Disputes Act. Preamble has stated the main objectives of the Act and these were: the settlement of industrial disputes in a manner which results in industrial peace and harmonious relations between labour and capital. Thus, effectiveness of institutions of disputes settlement created under the Act, have to be measured in terms of settlements alone. To maintain industrial peace and establish industrial harmony, settlements should be effective, and to be effective, it should not only settle the surfacial issues but should also result in eliminating the source of dispute.

3.6131 Quantitative Measures of Effectiveness

Although effectiveness is something which cannot be exactly measured yet several measures which are not mutually exclusive have been developed here. Settlements, instead of
Disputes, have been taken as key criterion because disposals mean just putting the case out from the file. Therefore, disposals may or may not be the settlement of the dispute, and hence may not help in establishing industrial peace and harmony. From disputants and others – concerned point of view, only that disposal will be meaningful which results in settlement. Moreover, disposals just indicate the administrative action. For these reasons, 'settlements' has been considered as the main criterion for judging effectiveness.

Settlements in respect of collective agreement would mean the mutual agreement signed, in conciliation would mean disputes settled, in voluntary arbitration and adjudication would be the disputes dismissed as settled and regular awards.

Further, percentage of settlements to total number of cases available for consideration have been calculated from the point of disputants and general public.

The objective indices of effectiveness have been considered in conjunction with the views and opinions of disputants and others concerned.

Efficiency as mentioned earlier is a relationship between output and input. The present study uses one dimension of this relationship, that is, settlements and/or disposals in relation to time taken as measure of efficiency.

4. The other measures which may be considered are failures, withdrawals and pendency. Our main criterion concerning 'settlements' is expected to take care of these also. Since, for example, a low rate of settlements would mean a high rate of failures, etc.
**3.61311 Effectiveness of the Industrial Relations Machinery of the State - Break-down Rate.**

Break-down rate, as used by Johri, has been adopted in the present study to see the effectiveness of the industrial relations machinery in the state as a whole in averting strikes. This has been done by calculating strikes as a percentage of disputes referred to the machinery. It would indicate as per Johri, "... the extent of failure of the industrial relations machinery in fulfilling its stated legal obligations. It might not fully be interpreted as a failure of the Government alone."

**3.61312 Effectiveness of Conciliation**

Effectiveness of conciliation in terms of settlements has been attempted to be measured at three levels which are:

\[
\begin{align*}
\frac{S}{N-W-P} & = \text{Upper limit} \\
\frac{S}{N-W} & = \text{Reasonable value} \\
\frac{S}{N} & = \text{Lower limit}
\end{align*}
\]

where

- \( S \) = Total number of disputes available for conciliation in a year
- \( N \) = Total number of disputes
- \( W \) = Withdrawals either made by the parties on their own or at the request of the Conciliator
- \( P \) = Number of cases pending at the end of the year

---


6. Ibid.
A brief description of these three are undertaken below:

i. \( \frac{S}{N} \) = It represents settlements as a percentage of total number of cases available for conciliation. It sets the lower limit of effectiveness in terms of percentage of settlements because \( N \) includes all those cases where conciliator might not have exercised the action for dealing with the case, e.g., withdrawals done by the parties on their own, or those withdrawals which might have been done at the persuasion of the conciliation officer and for which conciliator might deserve credit for results (settlements) obtained. \( N \) also includes those cases where conciliation officer did not have chance to act, e.g., cases received at the fag end of the year. These two, i.e., withdrawals and pendency, thus increase the value of \( N \), the denominator, and higher the denominator the lower will be the value of \( S \). However, it may be considered as the lower limit for the effectiveness, in the sense that the conciliation could be effective at least to this extent.

ii. \( \frac{S}{N-W-P} \) = This represents settlements as a percentage of total available for conciliation minus pendency and withdrawals. This measure tries to remove the above mentioned two problems of pendency and withdrawals. However, in its attempt in removing the genuine cases of withdrawals (like withdrawals done at the persuasion of the conciliator, and pendency-like the cases received at the fag end of the year), it \( (N) \) might exclude those cases of withdrawals (like withdrawals done by the disputants themselves on their own) and
those cases of pendency which remained pending because of very slow process of handling the cases by the conciliator. Thus the exclusion of \( W \) (withdrawals) and \( P \) (Pendency) will lower the value of \( N \), thereby inflating the value of \( S \).

Thus, these two measures, namely \( \frac{S}{N} \) and \( \frac{S}{N-W-P} \), provide lower and upper limits of effectiveness, respectively. The true value of effectiveness would lie between these two limits. And this may be provided by \( \frac{S}{N-W} \).

iii. \( \frac{S}{N-W} \): This represents settlement as a percentage of total available \( (N) \) minus withdrawals. This measure excludes those cases from \( N \) which were withdrawn by the disputants, either on their own or at the persuasion of the conciliation officer. The logic is that the cases which were withdrawn by the disputants and thereby the conciliator either did not exercise his consideration of the case or was successful in his persuasive efforts in bringing an end to the case should not be included in the measure — either with numerator or denominator. It is obvious mathematically that \( \frac{S}{N-W} \) lies between two limits provided by \( \frac{S}{N} \) and \( \frac{S}{N-P-W} \). Therefore, this is expected to provide a reasonable measure for judging effectiveness of the Conciliation machinery. It will be called a reasonable measure although it is well understood that it is not foolproof since it includes those genuine pendency cases also in the denominator which might have been received by the conciliator at the fag end of the
year. W instead of P has been considered for the reasonable value since pendency does reflect the inefficiency of the conciliator in handling the disputes.

Efficiency: Time-taken to settle the disputes have been calculated to measure the efficiency of the conciliator.

3.61313 Effectiveness of Arbitration and Adjudication

The measures $\frac{S}{N}$ and $\frac{S}{N-W}$ explained above, have been taken to judge the effectiveness of arbitration and adjudication machinery. By definition, $\frac{S}{N-W-P}$ is equal to hundred in arbitration and adjudication because W consists of all those cases where arbitrators and adjudicators could not consider the cases on their merits and hence were dismissed by them, e.g., cases dismissed as withdrawn, dismissed for want of prosecution, dismissed as out of jurisdiction or invalid preference, etc. Hence this upper limit, i.e., $\frac{S}{N-W-P}$ although mathematically correct, does not have operational significance for the evaluation of arbitration and adjudication. This measure is, therefore, dropped.

Efficiency: Arbitration and Adjudication:

This has been measured by calculating the time-taken to dispose of disputes by the arbitrators and adjudicators.