PART - II
CHAPTER-IV

Research objectives of the present study
RESEARCH OBJECTIVE OF THE PRESENT STUDIES

After independence, the importance of 'work-commitment' in any work-organization was seriously felt in India. A series of studies were conducted, thereafter, on this topic to explore the factors responsible for commitment to work. The present study is also an attempt in this direction.

On the basis of the previous discussion five dimensions have been chosen for further inquiry in the present study. Broadly, these dimensions of research are as follows:

1. Social background of the workers and commitment to work.
2. Job background & organizational structure and commitment to work.
3. Job-Satisfaction and commitment to work.
4. Social alienation of the employees and their commitment to work.
5. Organizational commitment and work-commitment.

On the basis of the above five dimensions of inquiry, the present research-work has been conducted with the following objectives:
(1) SOCIAL BACKGROUND OF THE WORKERS AND COMMITMENT TO WORK

(1) Individual characteristics such as age, family orientation, education and rural-urban background have been taken as factors which can influence the degree of commitment to work of the factory employees. It has been planned to find out the relationship between these factors and commitment to work on the following basis:

(a) Becker (1960), Sheth (1968), Gupta (1982), Fukani and Larsen (1984) etc. have revealed that there is relatively intimate relationship between age and degree of commitment to work. Becker (1960) has found positive relationship between the two while Ritzer and Trice (1969) have found that there is no relationship between age and work-commitment.

Here it has been assumed that workers of younger age groups are less committed than the older age groups. The rationale behind this assumption is that at the time of appointment younger people remain more committed than their older counterparts due to high morale. But, after some period of employment, commitment level goes down rapidly because of uncertainty, lack of seniority, security, and job-satisfaction.

Therefore, in this context it is an objective of the present study to find out the relationship between employees age and commitment to work.
(b) Family is the most universal and important agency of Socialization. It inculcates among its members the work-culture also. Many studies have been conducted on the basis of the structure of family, but, no significant study has been conducted on the basis of family orientation and work-commitment. In this respect, the hypothesis has been formulated that there is no difference in commitment scores of worker of traditional and modernity oriented families. And thus, the present study plans to find out the relationship between family orientation and commitment to work.

(c) Studies on work-commitment have also been conducted on the basis of educational background of the workers. In their studies Ritzer (1970) and Sharma (1974) found that education has positive relationship with the worker's commitment. Similarly Vaid (1968) explored the fact that the more educated a workers is, the better adjusted he is.

But, in the present study the hypothesis has been advanced that formal education does not influence work-commitment. It is rather influenced by cultural ethos and socialization of the individuals.

Thus, the objective of the present study is to explore the relationship between different levels of education of workers and their commitment to work.
The major studies on work-commitment have been done on the basis of workers' rural-urban background. Researchers have held those workers to be committed who have severed their major village ties and have completely adapted themselves to urban-industrial life. Myers (1950), Moore and Feldman (1960), Morris (1960), Lembert (1963), Sheth (1963), etc. are important sociologists who developed their commitment theory on this background. But, Sharma (1974) found that rural-urban background has very little influence over work-commitment.

In the present study, to discern the relationship between rural-urban background and work-commitment, it has been hypothesised that rural-urban background does not influence commitment to work. In fact social and cultural values inculcates among the people from the childhood actually influence the work-commitment and not the place of living.

II. FACTORS RELATED TO JOB-BACKGROUND AND ORGANIZATIONAL STRUCTURE & COMMITMENT TO WORK.

Factors related to the job-background and organizational structure of the employees such as income, occupational status, span of service, promotion, physical working condition are also considered as important factors determining commitment to work and hence, these factors have been considered separately to find out relationship between
them and work commitment. In this regard following hypothesis and objectives have been propounded:–

(a) Income is considered to be very important factor determining commitment to work as it is a highly accepted fact that man’s total attention is centred around economic gains or loss while doing any occupation. Researches by Vaid (1968), Srivastava (1977), Ritzer (1970), Gupta (1982) have shown significant relationship between employees income and commitment to work. On the contrary, Becker (1960) & Sharma (1974) have found no significant relationship between the two. In fact, the importance of income can vary considerably from job to job. The major difficulty in assessing its relation with work-commitment is confounded with other factors such as age, occupational level and education.

In this context the hypothesis has been formulated that employees who are in higher income groups are more committed to their work than those who are in lower income group. The logic behind this assumption is that those who are economically at higher level feel lesser economic strain. This leads to better attention to work and hence their work commitment is high.

Thus, the objective of the present study is to find out relationship between work-commitment and the income of the employees.

In this context it has been hypothesized that workers with high occupational status are more committed to their work because of much responsibility rested on them than those with low occupational status.

Hence, the objective of the present study is to determine the relationship between occupational status and work commitment.

(c) Span of service is an important factor determining employees' work-commitment.

It has been hypothesized that the employees who have comparatively longer tenure of service are more committed than the newly appointed workers. Job security, promotion and better facilities may be reason behind this. Yogendra Singh (1978) has reported similar finding in a study on teacher's commitment, he is of the view that senior teachers tend to be high and junior teachers tend to be low on commitment.

(d) Promotion can also be taken as a vital factor determining work-commitment.

It is expected that the employees who have
sufficient promotional avenues and are being promoted from time to time are more committed than the workers having no or very meager promotional avenues.

Thus, one important objective of the present study remains to find out relationship between promotion and work commitment.

(e) Physical working condition is considered to be very important factor determining work commitment. It includes place of work, work-environment and work technology.

According to Singh and Das (1978) place of work influences employees' commitment to work to a great extent. In steel production, the production process undergoes through several plants such as coke oven, sintering plant, blast furnace, steel melting shop, cold-rolling mill and hot-rolling mill. These plants, although interrelated and interdependent in production process, differ sharply in matters of physical working conditions in work environment, work-technology and product. Workers in some of these shops or plants are exposed either to large intensity of heat or to huge density of dust or both depending on the nature of the paint or shop. But, interestingly enough, there are also such plants and working place which are neither exposed very much to fire nor to dust. In steel production, work-technology also differs from plant to plant. In some plants there is greater degree of automation whereas in some manual labour is more required.
In some production plant such as steel melting shop, a great and higher degree of technical skill is involved than the others. It would be useful to refer Sharma (1974) and Groenon (1976) here who found significant relationship between work-technology and work-commitment.

Thus, in this circumstance due to such differing physical conditions of work, it is assumed that person working in different plants also differ on commitment level. Those who have conducive working conditions are more committed than those who lack this.

Hence, it is our objective to find out the relationship between physical working conditions and commitment to work.

III. JOB-SATISFACTION AND COMMITMENT TO WORK

Job-Satisfaction is evaluvative reaction of an employee towards his work and is subjectively positive attitude towards work. It is considered an important factor influencing work commitment.

It is assumed that higher job-satisfaction among employees has positively influenced the production in any plant. Similarly it can be assumed that job-satisfaction influences work commitment.

Therefore, the objective of the present study is to determine relationship between job-satisfaction and commitment to work.
IV. SOCIAL ALIENATION AND COMMITMENT TO WORK

Alienation has most often been regarded as reverse to work commitment. According to Sharma S.L. (1971) alienation refers to the subjective side of the problem of work-commitment. Although Van Groenon (1976) did not find alienation among the respondents, Sharma (1971), A.K. Sinha (1981) have found a negative relationship between alienation and work-commitment.

In the present study, the social environment of the steel-employees outside the job-context has been measured in terms of powerlessness, isolation and normlessness, the totality of which has been termed as alienation from society. It may be assumed that persons who do not feel integrated with their social environment rather feel alienated, will be less committed to their job.

Thus it has been hypothesized that alienation will be negatively related to work-commitment.

In this context, the objective of the present study is to find out relationship between alienation and work-commitment.

V. ORGANIZATIONAL COMMITMENT AND COMMITMENT TO WORK

Study on work-commitment is incomplete unless organizational commitment has also been examined. Oommen (1978) sees commitment in terms of the tendency on the part
of persons to stick to an organization. Sheth (1968) also found high organizational commitment with the factory. Lambert (1963) also found high organizational commitment among its respondents. Mayer and Allen (1984) found significant relationship between work-commitment and factory commitment. Fukani and Larson (1984) have found that service experience has no relationship with company commitment but personal characteristic such as age, company tenure and educational level are significantly related with company commitment. Ritzer and Trice (1969) have found inverse relationship with education and organizational commitment.

In this context it has been assumed that factory commitment differs upon age the level of education, income promotion, etc. Regarding its relationship with work-commitment, it has been hypothesized that it is positively related.

Thus, the objective of the present study is to explore the degree of factory commitment among various categories of employees and also to find out its relationship with commitment to work.
CHAPTER V

Research Methodology
The importance and significance of any scientific research lies in its method. As pointed out by Rose (1965), "Facts do not simply lie around waiting to be picked up. Facts must be carved out of the continuous web of ongoing reality, must be observed within a specified frame of reference, must be measured with precision, must be observed where they can be related to other relevant facts. All of this involves methods". Thus, the true sign of science is a certain type of approach, or method towards the field which is to be investigated.

Therefore, careful selection of an appropriate methodology occupies a very important place in planning a scientific social research. In fact, methodology of a study is a corner stone on which the edifice of scientific research is built up.

As is obvious from Chapter No-IV the present study is basically a survey-research and it contemplates to analyse the phenomenon of commitment to work in terms of the responses and reactions provided by the employees working in Bokaro Steel Plant. Since the focus of this study is to discern the dynamics of commitment to work, it was but natural to look for primary data provided by the employees (respondents). Therefore, for all practical and academic
purpose, the employees working in Bokaro Steel Plant constitute the universe of the present study. A few words, to clarify the reasons for selection of Bokaro Steel Plant for the present study, will be relevant.

The planners and the policy makers of India while drawing several five year plans for economic development of India realised that in order to accelerate the speed of economic development of India, it should concentrate more to the development of heavy industries. As such in first five year plan where they were more concerned about agriculture, in subsequent five year plans they started paying more attention to the need for having iron and steel industries. Which is prerequisite for any industrial development. Even before independence India was producing steel and iron but it was largely confined to private sector. For example, Tata Iron and Steel Company (TISCO) was founded at Sakchi (Bihar) in 1907 and it started producing iron from 1911. Its initial capacity was one lakh tonnes of ingots a year. After world war-I, which created demand for more and better steel, TISCO plants was expanded to raise to the capacity of 4.5 lakhs tonnes of steel ingots a year which was doubled by the beginning of world war-II and finally it acquired the status of becoming one of the largest mills in the British empire. In terms of cost of production it was the lowest in the world. This was followed by the erection of steel industry in other parts of India.
like Indian Iron and Steel company (IISCO, at Burnpur, West Bengal, Mysore Iron Steel Limited (MISL) in 1918 at Mysore, even ignoring the very principle of industrial locations.

A detailed history of the development of steel industry will clearly reveal that Indian steel industry developed only in private sector for more than six decades since the beginning of the present century.

Thus, there was need to bring this industry under the purview of public sector. For this reason and for overall economic development in India, Bhilai Steel Plants in M.P., Rourkela steel plant in Orissa and Durgapur Steel Plants in W.B. were established. Bokaro Steel Plant was established on the initiative of the then Prime Minister, Pt. Jawaharlal Nehru with active collaboration of Russian government to fulfill this need. A detailed description of its inception will not be desirable here, but, it must be made clear that Bokaro Steel Plant, being the largest steel company of India, was great adventure under taken by government in a public sector. This plant has therefore very wide horizon to expand and to prove the feasibility of running huge industry even union public sector organizational structure and it definitely provides a fertile and uncovered area for study like this.

Further, like other public sector steel plants i.e. Bhilai steel plant, Rourkela steel plant, Durgapur steel plant, Bokaro steel plant is also run and
controlled by steel authority of India limited (SAIL) under the terms of public sector Iron and Steel companies, restructuring and miscellaneous provisions Act, 1978, Which follows a uniform recruitment policy. While recruiting the different grades of employees, there is preference for sons of the soil for unskilled workers only. All employees of other grades are recruited on the basis of the competitive examinations conducted by either SAIL or by Bokaro steel limited. All citizens of India with requisite qualifications are eligible of take this examination. This has resulted in drawing people from different corners of the country on its pay roll. The composition of the employees of Bokaro gives a Cosmopolitan look.

And, thirdly the present investigator is more conversant with the land, people and the organizational structure of Bokaro steel plant which combined together facilitated the task of data collection.

And last but not the least, the phenomenon of work-culture has acquired great importance in view of India's resolve to go for rapid industrialization. Needless to say that industrialization demands a different kind of work-culture where the employees coming from agriculture rural background have to readjust themselves to a new work-culture. His final adjustment with the new social system which is the industrial system requires his successful readjustment and restructuring of work values.
Further, it is also said that Indians lack proper work-culture, they have weak commitment to work, etc. But, very few studies have been conducted to prove or disprove such hypotheses being suggested from different corners of the society from time to time.

For the above reasons, the present author decided to study the employees' commitment to work and its other related factors of the employees of Bokaro steel plant.

The word employees, 'worker' and 'labour' have been used in this study as synonyms. Although conventionally by the term employee is meant menial and clerical staff. According to Lestr (1964), "employee is a general term meaning any person who works for an employer and in return receives compensation—wages, salary or other types of value". Further, in the present study the term 'worker' will be used for all categories of employees—manual, supervisory and managerial.

Feldman and Moore (1960), Sheth (1968) and Srivastava (1982) have also used this term in the same sense. Sheth (1968) writes, "the term 'worker' and 'labour' should be used in relation to the concept of commitment to cover all level of workers similarity including the management". To Feldman and Moore (1960), "the term worker includes not only the manual workers in factory operations but also the whole range of occupations appropriate to an
industrialised economy—clerical, managerial and professional".

A brief description of Bokaro Steel plant and its organization will help in the analysis of the data given by the employees of Bokaro steel plant.

LAND AND PEOPLE OF BOKARO STEEL PLANT:

Bokaro Steel City is located in idyllic surroundings on the southern bank of the river Damodar with Ganga, one of its tributaries, meandering along the southern and eastern outskirts of the city on 10,114 acres of land. On the north, the city is flanked by the high ranges of Parasnath Hills and on the south, just beyond the river Garga, it is enveloped by the Satanpur Hillocks. The vast rolling topography of the city is interspersed by graded valleys and winding rivulets typical of Chotanagpur Plateau, where it is situated. In this setting within a short period of two decades a new city, with a strong multidimensional economic base, has blossomed into an urban centre of more than 3,00,000 people drawn from different parts of the country, thus making the city a MINI BHARAT. Bokaro is located on the Gomoh-Muri-Ranchi Railway line. Dhanbad, which is on Delhi-Howrah railway line, is only 50 kms. away and can be reached by road and rail easily. Ranchi and Jamshedpur are about 140 kms. away and are well connected by Road and Rail.
The Bokaro Steel plant was conceived as the country's first "Swadeshi" Steel plant to be built with maximum indigenisation going into the equipments, materials and know-how. Thus this project has been a radical shift from the earlier dependence on foreign sources for know-how and consultancy, design and equipment, supervision. Its first phase of 1.7 million tonne of steel commenced on 3rd October, 1972 with the commissioning of the first blast furnace and completed on 26th February 1978 with the commissioning of the third blast furnace. Many units of 4 million tonne stage have already been commissioned as on date. The 4 million tonne stage was expected to be completed by 1988 at the time of data collection and additional oxygen facilities. 3 x 60 M W. captive power plant units also were slated for completion in 1988.

Bokaro is designed to produce flat products like hot rolled plats, sheets and coils and cold rolled sheets, coils and galvanised sheets. It has already become a byword range, from the precision of its products. Its product range, from the most universal and basic to the most exclusive and sophisticated applications for industry-light and heavy, has won laurels. With further R & D efforts, it is preparing to launch newer and more specialised types of steel.

Bokaro has been the largest industrial project undertaken in the country and there are only a few
of this size in the world. The construction statistics of this plant are really staggering. The volume of concreting involved in construction of first phase i.e. 1.7 million tonne was more than the total concreting involved in Kosi, Nagarjuna, Sagar and Bhakra dams put together and enough to lay a concrete highway of standard specifications from Calcutta to Madras, a distance of 2070 kms. The underground system inside the plant are long enough to link Bokaro with Calcutta. Likewise, the length of railway tracks within the plant perimeter would cover the same distance.

For promoting industrial activity a statutory body has been set up by the Bihar Government. In collaboration with the B.I.A.D.A. a number of small scale industries have sprung up since 1970-71. Out of 1985 S.S.I. units in Bokaro industrial Area, 47 units have been accepted as Ancillary. Materials worth Rs. 20 crores (Approx) per year are procured from BIADA Industries to meet the regular requirements of the plant.

The general plan of Bokaro Steel City covering 10,114 acres approximately provides for about 36,000 residential units. The city has full facilities for education with houses and schools dispersed in various sectors as is the following Table No.-5:1.
Table No.-5:1

Number of educational institutions and their management in Bokaro.

<table>
<thead>
<tr>
<th>Institution</th>
<th>No.</th>
<th>Run and Managed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Middle Schools</td>
<td>24</td>
<td>Bokaro Steel Plant.</td>
</tr>
<tr>
<td>2. Secondary Schools</td>
<td>9</td>
<td>Bokaro Steel Plant.</td>
</tr>
<tr>
<td>3. Plus two Schools</td>
<td>4</td>
<td>Bokaro Steel Plant.</td>
</tr>
<tr>
<td>5. General Nursery School</td>
<td>30</td>
<td>Voluntary Organisations.</td>
</tr>
</tbody>
</table>

In these educational institutions, there are 2044 teachers and 72,000 students.

The township has modern 625 bedded hospital with specialised units like Intensive Coronary Care Unit, Haemodialysis unit, Nuclear Medicine Lab. (usingadio isotopes), Intensive Burns unit, Special Care Baby unit, Psychiatry unit, Physiotherapy unit, Rehabilitation unit, etc. In addition to this hospital, there are also nine health centres located in various sectors of the township which provide health care to the community. This hospital is recognised by the Indian Medical Council for imparting training to housemen and interns and also by the Nursing Council of India for the training of student nurses. Bokaro
General Hospital has the distinction of being recognized by National Board of Examinations, New Delhi as a centre for the examination conducted by the Board.

The Bokaro Ispat Pustakalaya was set up in 1979 to cater to the reading needs of the employees of the Bokaro Steel Plant and their families. The collection of books is wide ranging and includes reading material in several languages and literature. It also has books on varied subjects. The Pustakalaya has a membership of 1953 and the number of books is around 25,000. There is a regular addition to this stock.

Apart from this, sector libraries have also been set up in community centres in Sectors II, III, VI, VIII, IX and XII.

Special mention may also be made of the magnificent City park with a total area of 143 acres. The artificial lake with boating arrangements, toy train, rose garden and the fountain garden are special attractions. Bokaro is famous for its Roses, Dahlias and Chrysanthemus and Annual Rose. Farms and Garden section is planning to provide such parks in every sector for the benefit of the residents of the respective areas. The turf of Mohan Kumar mangalam stadium has been completely renovated where every year sports events of national repute are held. Sapling of tall trees are being planted everywhere in the township to give a green look to the city and also for seaving the city
from air pollution.

A big orchard is developed in the township where tropical fruits will be available in due course. A lot of importance is attached to piggiculture within the Township which will apart from beautifying the City, will meet the demand of fish. Piggiculture wing also saves a large amount of money every year which was an inevitable expenditure for cleaning of water hyacinth from oxidation ponds and aquatic weeds from cooling pond No. I and II by processing the water from piggiculture.

Bihar State Co-operative Milk Federation Limited and the Poultry Farm of the Animal Husbandry Department of the Government of Bihar have a capacity of 25,000 litres of Pasteurised and homogeneous milk in sachets daily and 1,00,000 eggs and 1,000 chickens per month to meet the needs of the city. But, supply being so meager in comparison to demands many private Khatalas (private dairies) and chicken centres have flourished in different parts of the city.

On commercial side, Bokaro Steel City has got well knit shopping centres, city shopping centre in sector IV and a big commercial complex at Chas. besides, a fleet of Gumtis (a small cottage made by wood) can be seen everywhere in the city doing brisk business of daily consumer goods.
The city provides healthy source of entertainments and recreation. It has two clubs managed by the Steel Plant and five Cinema halls run by private parties. Many community centres are there to fulfill and provide a place to have get together programmes. The famous 'Basant Mela' is organised every year in the month of October. This fair exhibits the progress spheres with people from every nook and corner come to visit this mela and get relived from day to day tensions. The human side of Bokaro is equally bright. A number of schemes for employee's welfare are in operation which have few parallels in other industries of the country. To mitigate the hard ships to a family following the untimely death of an employee, Bokaro has the Family benefit Scheme in which each employee contributes to a general fund rs. 7/- per month and a sum of Rs. 36,000/- is paid by the society to each widow/nominee of the deceased member and equal amount is paid to an employee who become permanently and totally disabled to perform his duty during his service. This is in addition to the money admissible under statutory financial benefits. Already rs. 2.65 crores have been disbursed to 700 beneficiaries.

Further, there is a voluntary group personal Accident Insurance Scheme for the supervisory personnel of the plant in which a sum of Rs. 1 lakh is paid by the Insurance Co. against nominal premium of Rs. 40.50 per member per year. Compensation is also payable for
total/partial permanent disablement. Besides every employee cover comprehensive insurance Policy for Rs. 15,000/- irrespective of the cause of death.

Ten co-operative credit societies have been operating since 1978 for the benefit of the employees to help them in their credit needs. These are in essence thrift societies and employees have deposited Rs. 13 crores in savings with them.

Presence of Soviet Engineers with their families add colour to the social milieu of Bokaro. An active Mahila Samiti contributes considerably to fostering of close and friendly relations between the Indian and the Soviet families by organising common cultural functions, get-togethers and similar other activities which have become a part of the life-style of citizens of Bokaro Steel City.

The strength of the employees of Bokaro Steel Limited can be seen in the following Table No.-5:2.

Table No.-5:2

<table>
<thead>
<tr>
<th>Man Power at Bokaro (Number)'</th>
<th>WORK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.03.1974</td>
<td>799</td>
<td>9,492</td>
</tr>
<tr>
<td>31.03.1978</td>
<td>1,295</td>
<td>16,675</td>
</tr>
<tr>
<td>31.03.1988</td>
<td>2,400</td>
<td>31,068</td>
</tr>
</tbody>
</table>

1 Source: Annual Statistics various years, Bokaro Steel plant, Personnel Department, BSL.
In Table No.-5:2 it has been pointed out that the total strength of the employees working in Bokaro Steel Plant is about fortyseven thousand which is too large a universe to be covered by census method by an individual researcher within a stipulated period of time. Further use of suitable sampling technique may ensure a highly representative sample which may lead to same kind of conclusion that may desire on the basis of census study.

Sampling method in this case also will provide more intensive and indepth data. Therefore, it was decided to use sampling method in selecting individual respondents for intensive interview.

PROCEDURE OF SAMPLING:

It has already been mentened that Bokaro Steel Plant is broadly composed of seven major units mainly,

(i) Coke-oven plant.
(ii) Sintering plant.
(iii) Blast furnace.
(iv) Steel Melting Shop.
(v) Hot rolling mill.
(vi) Cold rolling mill.
(vii) Foundaries and others.

These units have inequal number of employees. In respect of number of working employees the S.M.S., Blast furnace and Coke ovan are relatively bigger units.
STATUS & UNITWISE DISTRIBUTION OF SAMPLE

A - SMS & Sint, B - C.Ov & BF, C - CRM & Othr
Therefore, it was decided to select the number of respondents keeping in view the size of the units in the selection of the individual respondents. Systematic regular interval method was used without any bias. The number of respondents selected from different units are given below:

**Table No.-5:3**

<table>
<thead>
<tr>
<th>Plant</th>
<th>Executives</th>
<th>Supervisory</th>
<th>Skilled</th>
<th>Unskilled</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.M.S. &amp; sintering</td>
<td>29</td>
<td>29</td>
<td>21</td>
<td>16</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>(40.84%)</td>
<td>(25.43%)</td>
<td>(25.92%)</td>
<td>(34.09%)</td>
<td>(30.64%)</td>
</tr>
<tr>
<td>Coke oven &amp; B.F.</td>
<td>23</td>
<td>33</td>
<td>29</td>
<td>16</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>(32.39%)</td>
<td>(28.94%)</td>
<td>(35.80%)</td>
<td>(34.09%)</td>
<td>(32.58%)</td>
</tr>
<tr>
<td>C.R.M. &amp; other</td>
<td>19</td>
<td>52</td>
<td>28</td>
<td>12</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>(26.76%)</td>
<td>(45.61%)</td>
<td>(34.56%)</td>
<td>(27.27%)</td>
<td>(36.77%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71</strong></td>
<td><strong>114</strong></td>
<td><strong>81</strong></td>
<td><strong>44</strong></td>
<td><strong>310</strong></td>
</tr>
<tr>
<td></td>
<td><strong>(22.90%)</strong></td>
<td><strong>(36.77%)</strong></td>
<td><strong>(26.12%)</strong></td>
<td><strong>(14.19%)</strong></td>
<td></td>
</tr>
</tbody>
</table>
Table No.-5:4

<table>
<thead>
<tr>
<th>Age groups</th>
<th>No. of workers</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young age (19-31)</td>
<td>113</td>
<td>36.45</td>
</tr>
<tr>
<td>Middle age (32-36)</td>
<td>110</td>
<td>35.48</td>
</tr>
<tr>
<td>Aged workers (37 and above)</td>
<td>87</td>
<td>28.07</td>
</tr>
<tr>
<td>TOTAL</td>
<td>310</td>
<td>100%</td>
</tr>
</tbody>
</table>

It is evident from the above table that a majority of workers in this industry belong to the younger age group. It appears that newly started industries even in large public sector especially those demanding technical specialization are attracting comparatively younger age-workers.

All the employees in the sample were male. As no female is employed in the works section of the plant, data were collected only from male workers.

In spite of heavy industrialization and fast growth of urban centres, India still remains predominantly to be a rural country. Even in the Metropolies and cities the majority of the population have rural socialization background at early stage. The table no.-5:5 explains the urban rural background of the sample more clearly.
Due to lower literacy rate in India and lack of specialised training, it is expected that the factory workers will generally constitute of uneducated or moderately educated people. This becomes more inevitable also because of the dependence of work force supply from rural area. But the analysis of the present data doesn't reveal this state. There might have been a shortage of educated workers in the past but now it appears that industries at times have workers with high education than most of the industrial units are prepared to use. The Table no.-5:6 clarifies this contention more clearly.

Table No.-5:6

The Educational level of the respondents

<table>
<thead>
<tr>
<th>Educational level</th>
<th>No. of Workers</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowly educated</td>
<td>140</td>
<td>45.16</td>
</tr>
<tr>
<td>Highly educated</td>
<td>170</td>
<td>54.84</td>
</tr>
<tr>
<td>TOTAL</td>
<td>310</td>
<td>100</td>
</tr>
</tbody>
</table>
From the above Table No.-5:6 it becomes evident that there is no dearth of educated people in the sample. 54.84% of the respondents are highly educated while 45.16% are lowly educated. The data shows one basic fact that no respondent is illiterate in the present sample. It is generally seen that workers who are displaced and doing menial jobs are mostly illiterate (Dasgupta: 41). But the present sample negates this fact and shows that factory workers are fairly educated. In other words, factory work is able to attract workers from a fairly educated stratum of society.

When analysed on the basis of the span of service it was found that out of 310 respondents 103 (33.23%) are serving the plant since 1-6 years, 138 (44.52%) since 7-12 years and 69 (22.25%) since 13-18 years. Thus, the maximum number of respondents 44.52% have a moderate span of service.

METHOD OF DATA COLLECTION:

A bird's eye view of the objectives of the present study (see chapter-IV) reveals that the main concern by this study is to discern the commitment to work as a dependent variable. Obviously the dependent variable has certain independent variables. In this case, age, demographic factors, rural-urban differences, etc. have been treated as independent variables. Therefore, in this kind of
study it is imperative that the study be so planned that one can establish relationship between independent and dependent variables. In order to achieve this end two things must be fulfilled; first, that the method of data collection should be such which may allow the researcher to penetrate into the respondents' mind regarding his views on the given problem. And secondly, that the researcher must have appropriate tools to measure the given phenomenon quantitatively, inorder to explore the underlying relationships between different aspects of the given phenomenon keeping these two major considerations in mind, it was logical to decide in favour of using structured interviewing which has been considered very appropriate method for collecting primary data in a face-to-face situation. Although interviewing is a time consuming process of data collection, it was preferred to other methods because it provides rich and reliable data. Since the data are collected in a face-to-face situation, the respondents are less likely to evade the questions and are more sincere and are generally found more co-operative and attentive in recording their reactions and views. Thus individual structured interviewing was used for data collection from the workers selected in the sample. The researcher used to approach the respondents preferably in the morning at their residences. Since the workers had to rush to the work shop most of them could not give time in the plant it self. The researcher met them in the plant and
also at their residences as per their convenience. However, majority of the respondents have given their interview in the plant. Normally the interview was conducted individually and at the time of interview none else than the researcher and the concerned respondent used to remain present. This was necessary in order to ensure free and frank conversation on the topic.

On average it look one hour time in completing the interview with one respondent. In most of the case, the interview was completed in one sitting but in some cases the interview was interrupted by occasional interruptions made by the supervisor of the worker. Some times the interviewees (workers) had to goto attend more urgent work and in such cases the investigator had to postpone the interview either for next day or for few hours on the same day. In such cases the interview used to take longer time in its completion.

The respondents used to have some kind of reservations with regard to the purpose of interviewing. Some used to have doubts regarding confidentiality of their responses and therefore hesitatingly responded to the request for interview. Such situations were tackled by the investigators by giving ample evidences that the investigator is actually a teacher-scholar associated with Patna and Bhagalpur University. He had nothing to do with the management of Bokaro Steel Plant and assured the
respondents that the data supplied by them were to be used for academic purpose alone. In order to ensure anonymity, the personal names, etc. Which were likely to divulge their identity were not asked for. The strategy used to work effectively and in most cases the respondents appeared to be honestly cooperating with the investigator in completing the interview.

As is obvious from the sample the interviewer interviewed the male respondents only.

The interview was conducted with a printed interview - schedule consisting of several scales to measure different aspects of commitment, etc. Quantitatively.

The interview schedule was broadly divided into three parts. The first part consists of nominal scale to measure the demographic and background variables of the respondents. These variables were treated as independent variables at the time of analysis.

The second part consisted of scales to measure the respondent's commitment to work, job satisfaction, alienation and their organizational commitment.

The third part included items and statements to explore the family culture of the respondents. Attempt was made to record the details of their absenteeism and the number of accidents they have met but one could not record satisfactory informations on these two points.
SCALES USED:

JOB-SATISFACTION SCALE:

One of the important objectives of this study is to reveal the underlying relation between job-satisfaction and commitment to work. Sinha's (1974) job satisfaction scale was used to measure respondents job-satisfaction.

This scale has been constructed on a similar population and is available in Hindi version besides the reliability coefficient of the scale being 0.905 is satisfactorily high. A.K. Sinha has used this scale in the study of job-satisfaction of the bank employees and found it to be suitable.

The original job-satisfaction scale constructed by Sinha consists of 30-items. But, 17-items out of thirty only have been used in the present study.

The shortening of the scale was necessitated because the use of the job-satisfaction scale in its full form in addition to other scales could have made the interview schedule lengthy and tiresome to the respondents. The present investigator, therefore, dropped such items which were very much similar to each other. Items having high power of discrimination were retained. (For details, cf. Sinha, 1984)
MEASUREMENT OF COMMITMENT TO WORK:

Probably no suitable scale in Hindi is available to measure the commitment to work.

In view of the limited time available to the present investigator it was not advisable to construct a scale to measure commitment to work. Therefore, it was decided to use a bunch of suitable items to measure commitment to work in consultation with ten sociologists working in the field of measurement. Ten items were used to measure work-commitment. All items were in Hindi for the sake of clear understanding. (See Appendix).

Of the ten, seven are positive and three are negative items. Each item has five alternative responses from highly agree to highly disagree. The items were read one by one to the respondent and he was asked to respond to the item from highly agree to highly disagree. For example, if he is highly in agreement with the statement he has to say highly agreed and so and so forth. The responses were scored from 1 to 5. The respondents total score was obtained by summatting the scores on individual items. Thus the possible scores ranged from 10 to 50. Through in strict sense these 10-items don't constitute a scale, however, there is no harm in quantifying the responses relating to work-commitment.
MEASUREMENT OF SOCIAL ALIENATION:

In order to measure the social alienation of the respondents, 18-items (See Appendix) were used. These items consisted of the three dimensions of alienation ie powerlessness, isolation and normlessness. The items were in Hindi and were given in random order. Of the eighteen items, six consisted of isolation items, six powerlessness items and six worklessness items. Responses were given in a five point continuum category ranging from highly agree to highly disagree. For positive items the scoring was done by giving 5 points to highly agree response, 4 to agree response, 3 to neutral response, 2 to disagree response and 1 to highly disagree response. For negative-items the scoring was done in reverse order. The respondents total score was obtained by summating the scores on individual items. Thus the possible scores ranged from 18 to 90. These eighteen items were originally developed by Sinha, G.S. (1982) and were used by Sinha, A.K. (1984) in his study of job-satisfaction. In his study the reported reliability of the total alienation scale was 78 when corrected.

MEASUREMENT OF COMMITMENT TO ORGANIZATION:

5-closed end items were used to measure commitment towards the organization. Five alternative responses were given to each of the respondent to select one appropriate response for each item. Of five items one was
negative and four were each item separately postim. The scoring was done for each items separately.