

BIHAR

Labour Enquiry Committee

V. 2 Pt A & B

**REPORT**  
**OF THE**  
**BIHAR LABOUR ENQUIRY**  
**COMMITTEE**

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**VOLUME II**

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**PARTS A & B**

**(Reports on the basis of the Family Budget Enquiry  
and the memoranda submitted by the  
Investigators.)**



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## FOREWORD.

This volume consists of the reports of investigations made by the special Investigators appointed by the Bihar Labour Enquiry Committee to collect family budgets at different industrial centres in this province. It also embodies the memoranda submitted by these Investigators based on their personal and first-hand observations of the labour conditions in the areas they visited. Though family budgets were collected by four Investigators, the actual reports were prepared by Mr. Harnandan Prasad, M.A., and Dr. Balraj Seth, M.A., Ph. D. for Jamshedpur, Jamalpur and Rohtas centres, and Jharia, Bokaro and Giridih centres respectively.

One of the memoranda, i.e., submitted by Mr. Rameshwar Dayal, M.A., B.L., has been abridged but care has been taken to maintain the original language.

VIDYABHUSHAN SHUKLA.

**VOLUME II**  
**PART A**  
**REPORTS ON THE BASIS OF THE FAMILY**  
**BUDGET ENQUIRY**  
**BY**  
**The Investigators, Bihar Labour Enquiry Committee.**

# REPORTS ON THE BASIS OF THE FAMILY BUDGET ENQUIRY

(Jamshedpur, Jamalpur and Rohtas Centres)

BY

Mr. HARNANDAN PRASAD, M.A.,  
Investigator, Bihar Labour Enquiry Committee.

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## GENERAL PREFACE.

The Investigation Reports—of which those on Jamshedpur, Jamalpur and Rohtas centres are the ones I am responsible for, do not attempt a general picture of the work, wealth and happiness of labour engaged in the organised industries of Bihar. That would have been too comprehensive a task to be adequately performed within the short space of time at the disposal of the Labour Enquiry Committee. Our task was to bring out the way the poorer sections of industrial labour earn and spend their incomes. Even this aim was limited in more ways than one. Only four industrial centres were selected, viz., Jamshedpur, Jamalpur, Rohtas and Jharia. These by no means cover all the industries even south of the Ganges. Thus Mica mine labour has not been considered at all presumably because it is not distinguishable from the rural labour in the neighbourhood. So also has railway labour been left out except for those engaged in railway workshops. North Bihar, of course, was left out with some justification.

Of the concerns considered, only workers living with families at their place of work have been examined. This has resulted in the exclusion of a large volume of labour, forced to lead an artificial life of compulsory celibacy and deserving, if anything, larger share of social attention than the classes of labour included for examination. The worker does not choose to live a celibate life ; he is compelled because his earnings are too meagre to permit a family being supported at the place of work where money secures far less of commodities and services than it would at his village home. We came across numerous instances of workers who retained their ties with their native place solely because they have no reserves to meet the migration

cost of the families. There are, likewise workers who find it cheaper to remit money home for the support of their families than maintaining them at the place of work. But by far the largest number of workers so excluded happens to be the poorest paid and the most exploited class. Such, for example, are the contract labour and the weekly paid cooly labour at Jamshedpur. A worker of this class could barely support himself; it would be absurd to expect him to share his paltry subsistence with others. This class of labour deserves the largest share of the State's attention but has not been considered adequately. An important consideration that scares away families from towns like Jamshedpur, Mosabani and Moubandar is the deplorable inadequacy of housing facilities in these areas. The employers do not provide more than a fraction of the accommodation required by the workers. The private house owners have no other interest than extracting the utmost value for indifferent dwellings they provide. The workers, not being assured of continuous employment, rightly refuse to take the risk of sinking capital on building homes for themselves. Housing consideration, thus, acts as deterrent even to workers willing and able to keep a family with them. The fact, therefore, that workers without families find no mention in our record, does not mean that they do not exist, nor that their unnatural and penurious life deserves lesser social notice, but simply that they have been left out of the present reckoning.

A further limitation was that budgets were collected from families whose total incomes did not materially exceed Rs. 50 a month. The implications of this limiting fact must be clearly appreciated. The economic well being of a family does not depend on the size of the family income alone. It depends on how many people toil in order to earn the family income which when pooled should not materially exceed Rs. 50. It depends again, on how many people share in its consumption. Since no limits have been placed on the number of earners in a family nor on the number of consumers in the family, limiting income alone is theoretically an inappropriate index of economic well-being of the families concerned. Thus of two families with equal total incomes and equal numbers of consumers reduced into standard units, the one whose only toiler secure the given income would be better off than the other, all of whose consumers are also workers. For in the former all but one enjoy vicarious leisure with opportunities for culture and happiness while in the latter all are tired and brutalised by unrelieved toil. Similarly when the number of workers and the size of the total income are the

same for two families, the one with fewer consumers would have greater command over the blessings of life than the other with the larger number of consumers.

These considerations become the more important when we relate them to the innocent looking word "family". The word has almost a double meaning signifying either natural or joint families indiscriminately. Conditions are simpler where the natural family is the economic unit of consumption. But in India joint family is by no means a dead institution. Indeed, the number of dependants rapidly rising with rising incomes indicates simply that the workers' incomes are becoming available for the support of joint families which had been eclipsed during their indigence. Very often dependents living away from wage earners are merely members of the joint family.

Practically, however, the largest number of families of workers is of the natural type and the variations in the number of dependants of natural families are not unpredictable.

In substance, then, the conclusions in these reports are based on data provided by workers in certain industrial concerns whose total family earnings do not exceed Rs. 50 materially.

We have indicated above that our aim has been to give a general idea of the way the poorer sections of labour earn and spend their incomes. As a matter of fact the information contained in the family budgets do not give any adequate idea of the way the workers earn. We have got his total earnings but we have been precluded from taking note of the conditions of his work except when they were voluntarily represented to us by workers in whose mind these appeared to eclipse other facts of their life.

The "Remarks by Investigator" column fairly spacious for such entries gives us some idea of the conditions but as they are mere opinion than fact they would be better incorporated in a separate memorandum. It would thus appear that the conditions of his work—the drudgery of the routined mechanical work, the physical exertion, the heat, the moisture, the obnoxious fumes, the unfeared machinery—we have not portrayed in these reports and that the income and the kind and quantity of work cannot be correlated. An idea of the conditions of work would, of course, be vital but must be sought for elsewhere.

The family budgets which form the basis of these reports were collected by Investigators who went about among the workers, questioned them and recorded their statements. This process was not theoretically very satisfactory. It is difficult

even for a trained house-holder to give a substantially accurate picture of his earnings and expenditure. It was far more so for workers who have had little to do with accounting. Their purchases are elastic and they have often running account with shopkeepers who are often the sole judge of the worker's liability, the worker himself only concerned with making periodical payments to them. Correct details of family expenditure from an overworked head of a family is difficult to obtain, although the totals be substantially correct. Besides, the workers have so many motives to exaggerate their expenditure and under-rate their incomes that absolute accuracy in spite of the most scrupulous care cannot be expected. There was no means of checking the information given by the workers except by cross-examination by the Investigators concerned; and the capacity of the Investigators to apprehend truth varied with their prejudices and biases which were only imperfectly trained. There was no check by reference to witnesses who would either contradict or support or amend the workers' statement. It was in short no judicial enquiry and the extent of error in recording the information supplied cannot be indicated. We, however, tried our best to arrive at truth and record nothing without scrutiny.

Our plan was to collect budgets of about 3 or 4 per cent of the families drawing not more than Rs. 50 or about. The plan was exceeded in some cases and underdone in others. This was because the workers of a particular class were not concentrated at one place nor was each worker we got at willing to give us the information. Thus at Jamshedpur Bihari cooly labour under the Tata Iron and Steel Company could not be got at in the requisite number as also contract labour under the same company.

The fact that we were anxious to record proportionate number of budgets affected our methods of selecting the families whose budgets would be taken. Probably the best method of enumeration and the one involving the least personal bias would be to take the budgets according to residences situated at intervals of say 15 or 20 each. This method, however, although well suited for concentrated industrial population living in rows of houses, could not be applied to our case. As pointed out above, we were working under so many limitations that any uniform method of selection would be impossible to follow up. The 20th house next may house a worker whose income greatly exceeds Rs. 50 or who may not be prepared to disclose information. In many cases the 20th house would be difficult to fix up especially when the cottages be jumbled together or be too

widely spaced. Besides, the proportions we had decided upon might have been defeated by such uniform procedure. We had, therefore, to fall back on the method of least resistance, namely to adopt random selection modified by considerations of the proportion and of the workers' willingness or otherwise to disclose information. There was thus room for some bias in selecting the budget, but since each Investigator had different biases, the resulting budgets would not be seriously unrepresentative.

In sampling, the object kept in view was not only to represent the various concerns but also to give due importance to the provinces and religions of the workers as also their income grades. The greatest difficulty was experienced in classifying labour according to kind based on nature of work. The divisions emerging are only rough and have varied from place to place ; but they have the merit of representing the most salient facts about labour.

The entries require statement of monthly income and expenditure. This has often failed to give as a correct picture of the workers' lives in concrete terms. Thus in respect of clothing and furniture and utensils a list of the family belongings and their valuation would have been more important than the average monthly expenditure on the same. A more vivid picture of the bleak and bare dwellings of workers and their nakedness would have been conveyed by such enumeration than by recording the average monthly expenditure on these items.

For purposes of general expenditure I have treated each boy and girl as half an adult male ; and each man and woman as a full adult. But I have varied the scale in case of Food and Housing. In considering the expenditure on food and the amount of food consumed I have tried to find out the average amount of food available for each person reduced to standard units. For this purpose, to make it conformable to conditions of our enquiry, I have accepted the following food requirements table suggested by the Inter-Allied Scientific Food Commission with some amendments. The Commission's table is as follows :—

			Adult male.
Male 13 years and above ..	..	..	1.00
Female 13 and upwards ..	..	..	.83
Child 10 but not 13 years	..	..	.83
Child 6 but not 10 years	..	..	.60
Child below 6 years ..	..	..	.50

As amended to suit our purpose, the table stands as follows :—

				Adult male.
Male above 15 years .. .. .	..	..	..	1.00
Female above 15 years .. .. .	..	..	..	.83
Child 10 but not 15 years .. .. .	..	..	..	.83
Child 5 but not 10 years .. .. .	..	..	..	.60
Child below 5 years .. .. .	..	..	..	.50

Similarly for housing Bowley's index in his "Livelihood and Poverty" has been adopted with slight modifications as shown below :—

Bowley's Index.		My Index.	
Men and women	100	Men and women	100
Children 14—18 years	75	Children 5—15 years	50
Do. 5—14 years	50	Do. below 5 years	25
Do. below 5 years	25		

The slight modifications in the two indices deserve little comment.

The Jharia Mines Board of Health provide that a minimum floor space of 33 sq. ft. and air-space of 333 cubic feet should be available for each adult. We can fix the proportion for children by reference to the Housing Index we have adopted above.

A study of these reports, therefore, must take note of the reservations above, if false impression is to be avoided.



## I.—JAMSHEDPUR CENTRE.

The report for this centre relates to the labour engaged in the Tata Iron and Steel Works at Jamshedpur, and in a number of other subsidiary concerns there. The latter include: The Tinplate Works, the Indian Cable Company, the Wire and Steel Products; the Tatanagar Foundry; the Hume Pipe Company and the East Indian Railway Works. Outside Jamshedpur, only labour under the Indian Copper Corporation, Limited, engaged in mines in the Mosabani Valley and in their works at Mowbhandar has been considered. It thus happens that the workers range from miners to factory hands; and among the latter include, on the one hand, workers in the well-organised and modern steel works of the Tatas, and on the other, those in the smaller and by comparison, less well-established concerns. Thus although the Tata Steel Works overshadows all others and sets the norm, the variety introduced both by the conditions of work and of earnings in the various concerns makes a study of labour conditions in this area a task of no small complexity.

To be sure, the fact that industries have been established in a virgin region with a sparse original population at a low level of mental development has brought in peculiar problems common to all the concerns in this area. Thus the bulk of labour has had to be imported from outside. The problem of housing these workers from a-far has been common to all the concerns; and the inordinately high prices in this centre where practically every requirement has to be supplied from far off areas, have affected all the industries alike. All this has introduced some uniformity in labour conditions.

These opposite considerations have affected our study and while in considering labour problems *enmasse*, we shall treat the workers together, we shall also treat them separately whenever we deem it proper for an intelligible review.

For this centre 1,101 budgets were collected strictly on proportionate basis i.e. 3 per cent. of all the families being examined. After scrutiny 1,040 were accepted—61 being rejected on grounds of incomplete or exaggerated entries.

The 1,040 families whose budgets have been finally accepted are distributed over the various concerns as follows. The

number of Bihari families in each industry is also shown and their percentage to the total in each concern.

TABLE No. 1.

Place.	Industries.	No. of families.	No. of Biharis.	Percentage of Biharis to total.
1.	2.	3.	4.	5.
Jamshedpur ..	Tata Iron and Steel Works	637	178	27.94
Do. ..	Tinplate Works ..	84	24	28.57
Do. ...	The Wire and Steel Product	56	15	26.79
Do. ..	Tatanagar Foundry Company	36	13	36.11
Do. ..	The Indian Cable Company	32	3	9.37
Do. ..	The East Indian Railway Works.	22	3	13.64
Do. ..	The Hume Pipe Company ..	11	2	18.18
Mowbhandar (Ghatsila).	The Indian Copper Corporation (Works).	48	18	37.50
Mosabani ..	The Indian Copper Corporation (Mines).	114	24	21.05
	Total ..	1,040	280	26.92

It would be noted that Biharis form one-fourth to one-third of the total labour force except in the last 3 concerns at Jamshedpur and at Mosabani.

Jamshedpur alone accounts for 878 or 84.42 per cent of the total number of budgets, all of these being budgets of factory workers. Mowbhandar has 48 or 4.61 per cent also wholly factory workers. Thus the factory workers account for 926 or 89.03 per cent of the total budgets, while the mining workers at Mosabani account for 114 or 10.96 per cent of the total budgets.

## CHAPTER I

## Origin and classification of labour.

The territorial distribution of the working families in each concern is shown in Table no. 2 below.

TABLE No. 2.

Province or states.	Total.	T. I. S. Co.	Tin Pl.	Wire & Steel.	Tata Foundry.	Ind. Cable.	E. I. R. Works.	Hume pipe.	Mosamb.	Mowband.
1	2	3	4	5	6	7	8	9	10	11
Bihar ...	280	178	24	15	13	3	3	2	24	18
Bengal ...	107	71	5	3	3	12	3	1	3	6
Orissa ...	121	73	4	11	8	1	1	1	17	5
United Provinces	97	74	8	5	5	...	2	..	1	2
C. P. and Berar	149	111	18	6	2	12	...	...	...	...
Punjab ...	79	34	10	9	1	1	11	...	6	7
Madras ...	98	51	11	...	...	2	1	...	30	3
N.-W. F. P. ...	10	9	...	..	...	..	1	...	...	...
Bombay ...	7	...	...	..	...	...	...	...	1	2
Assam ...	5	...	...	...	...	1	...	..	3	1
Native States ...	47	31	...	7	4	...	...	4	1	...
Nepal ...	40	1	4	...	...	...	...	3	28	4
Total ...	1,040	637	84	56	36	32	22	11	114	43

Table 2 shows that Bihar leads with a total of 280 or 26.92 per cent. of the families in income grades below and about Rs. 50. This percentage is not too high if we remember that the industries are situated in this province. Bihar workers however, do not form a homogeneous community: the aboriginals number 84, bulk of them being Hinduised animists from the neighbouring areas. They generally form the unskilled class of coolies and *rejas*, the non-aboriginal Biharis being generally outside these classes.

105 out of 280 families belong to the Singhbhum district and have been shown as local. The rest, viz., 175, are distributed over the various districts of Bihar as follows:—

TABLE No. 2(a).

Districts.				Number of working families.
Manbhum	..	..	..	42
Ranchi	..	..	..	30
Saran	..	..	..	19
Monghyr	..	..	..	19
Hazaribagh	..	..	..	17
Gaya	..	..	..	14
Shahabad	..	..	..	11
Patna	..	..	..	8
Muzaffarpur	..	..	..	6
Darbhanga	..	..	..	4
Champaran	..	..	..	3
Bhagalpur	..	..	..	2
			Total	175

Thus local labour forms a considerable percentage of the total labour supplied by Bihar, viz., 37.5 per cent. The next highest quota being exactly two-fifth of that of Singhbhum comes from Manbhum. Ranchi follows at a considerable distance. Saran, Monghyr and Hazaribagh have almost equal importance, each being only a little over half as important as Manbhum. Altogether Chota Nagpur supplies 194 out of 280 families or 69.64 per cent. Among the districts of Bihar proper, Monghyr, Saran, Gaya, Shahabad and Muzaffarpur are the only ones that send any considerable number of workers to this centre.

The figures suggest that by natural economy local labour has taken to industry as opportunity offered itself in the neighbourhood. Workers from other districts of Bihar had to make a decisive breakaway from local life. Naturally, therefore, as we move away from Singhbhum, the contributions

of the district progressively decline. The only serious aberrations from this trend happen to be Saran and Shahabad, both of which are known for the mobility and venturesomeness of their people.

To turn to table 2 above, Bihar is followed by the Central Provinces at a considerable distance, the latter's contribution being only 149 or just a little over half that of the former and only 15.32 per cent of the total number of labour families examined. The distribution of the 149 families over the districts of the Central Provinces is shown in the table below :—

TABLE No. 2(b).

Districts.	Number of families.		
Raipur	..	..	118
Drug	..	..	15
Bilaspur	..	..	12
Chanda	..	..	1
Bhandara	..	..	1
Dhamtari	..	..	1
Jabalpur	..	..	1
			149
		Total	149

Thus Raipur alone accounts for 79.19 per cent of the total contribution of the Central Provinces. The only two other districts which contribute any considerable number are Drug and Bilaspur. These three districts all of Chattisgarh division account for 145 or 97.31 per cent of the total contribution of the Central Provinces. The Central Provinces workers, therefore, are all justifiably known by the term "Chattisgarhias".

The small and compact region from which these workers are drawn has given them a homogeneity not to be found in any other community at Jamshedpur, except probably the Madrasis. One meets whole *bastis* of these workers wherein any other community is practically non-existent.

Crissa comes third in the list as a source of labour for Jamshedpur centre. The Oriyas number 121 or 11.63 per cent

of the total labour force examined. The families are distributed according to districts as follows :—

TABLE No. 2(c).

Districts.				Number of families of workers.
Cuttack	..	..	..	56
Sambalpur	..	..	..	32
Ganjam	..	..	..	19
Puri	..	..	..	11
Balasore	..	..	..	3
			Total	121

The number from Cuttack is the largest, most of it being made of Cuttack Muhammadans who raise the percentage of Muhammadans among Oriya workers considerably higher than what they bear to the general population of Orissa. Sambalpur being nearest to Bihar comes second while the large part of the quota of Ganjam is really of Telugus who are so conspicuous in the labour population of Jamshedpur proper.

Bengal follows as the 4th in the list as a source of supply of labour : the quota of 107 forms 10·28 per cent of the total number of families examined. Distributed according to districts the families are arranged as follows :—

TABLE No. 2(d).

Districts.				Number of families.
Dacca	..	..	..	26
Midnapur	..	..	..	20
Bankura	..	..	..	15
Faridpur	..	..	..	11
Barisal	..	..	..	6
Nadia	..	..	..	6
Chittagong	..	..	..	3
Nowakhali	..	..	..	3
Burdwan	..	..	..	3
Tippera	..	..	..	2
Hoogly	..	..	..	2
Calcutta	..	..	..	2
Birbhum	..	..	..	2
24-Parganas	..	..	..	2
Howrah	..	..	..	1
Darjeeling	..	..	..	1
Khulna	..	..	..	1
Jessore	..	..	..	1
			Total	107

It will appear that Dacca leads with 26 working families 22 of these being Muslims. The Dacca Muslims are a small but distinct community at Jamshedpur proper. Muslim contribution from Faridpur and Nowakhali is important, almost all the Muslims of Bengal being accounted for by these three districts.

The nearness of the border districts of Midnapur and Bankura is reflected in the figures for these districts. Other districts besides Burdwan, which is a border district and Nadia are of only small importance.

Madras with a quota of 98 families comes fifth in the list forming 9.42 per cent of the total labour force. The district figures for Madras are given in the following table:—

TABLE No. 2 (e).

Districts.				Number of families.
Vizagapatam .. .. .	..	..	..	42
Vellore .. .. .	..	..	..	25
Madras .. .. .	..	..	..	11
Godavari .. .. .	..	..	..	5
Chicacole .. .. .	..	..	..	3
Anantpur .. .. .	..	..	..	2
Pulicat .. .. .	..	..	..	2
Bezwada .. .. .	..	..	..	2
Palanpur .. .. .	..	..	..	1
Kastna .. .. .	..	..	..	1
Malabar .. .. .	..	..	..	1
Rajmahandry .. .. .	..	..	..	1
Chittor .. .. .	..	..	..	1
Dindivanam .. .. .	..	..	..	1
				98
			Total ..	98

A perusal of the figures shows two well-defined regions from which workers are drawn to Jamshedpur. One is the region nearest Bihar centring on Vizagapatam, with districts like Chicacole and Godavari, and accounting for 50 or just over half the quota of Madras. The other is the region centring on Madras City which with the district of Vellore accounts for 36 or three-fourth of the rest of the workers of Madras.

Other districts have no great importance as they altogether contribute only 12 or 12.24 per cent of the total immigrants from Madras.

Of the two well-defined regions, the Telugu districts centring on Vizagapatam have an importance over one-third as much again as the Tamil districts centring on Madras City. The Telugus curiously enough form an overwhelming majority of workers at Jamshedpur proper, while at Mosabani and Mowbhandar, they are almost non-existent being wholly replaced by the Tamils.

The United Provinces with its quota of 97 comes sixth in the list having an importance practically equal to that of Madras, as they account for 9.32 per cent of the total labour force at Jamshedpur centre. The district figures are as follows:—

TABLE No. 2(f).

Districts.					Number of families.
Allahabad.	..	..	..	..	17
Basti	..	..	..	..	12
Rai-Bareilly	..	..	..	..	9
Pertabgarh	..	..	..	..	8
Benares	..	..	..	..	8
Ballia	..	..	..	..	7
Fatehpur	..	..	..	..	5
Jannpur	..	..	..	..	5
Gorakhpur	..	..	..	..	4
Banda	..	..	..	..	3
Azamgarh	..	..	..	..	3
Cawnpur	..	..	..	..	2
Mainpuri	..	..	..	..	2
Gazipur	..	..	..	..	2
Sultanpur	..	..	..	..	2
Mirzapur	..	..	..	..	1
Fyzabad	..	..	..	..	1
Saharanpur	..	..	..	..	1
Bulandshahar	..	..	..	..	1
Meerut	..	..	..	..	1
Bijnor	..	..	..	..	1
Lucknow	..	..	..	..	1
Shahjahanpur	..	..	..	..	1
					<hr/>
				Total	97
					<hr/>



It would seem that Allahabad, Basti, Rai-Bareli, Partabgarh, Benares and Ballia, in that order account for 61 or 82·88 per cent of the United Provinces quota. The only other districts of any importance are Fatehpur, Jaunpur, Gorakhpur, Banla and Azamgarh which latter account for 20 out of the remaining 36 or 55·55 per cent of the rest. Twelve other districts account for 16 or 16·49 per cent of the United Provinces quota.

The Punjab follows the United Provinces as the remote 7th with its quota of 79 or 7·59 per cent of all the working families at this centre. Distributed over districts the Punjabi families are as follows :—

TABLE No. 2(g).

Districts.	Number of families.			
Amritsar .. .. .	..	..	..	31
Gurdaspur .. .. .	..	..	..	21
Jullandar .. .. .	..	..	..	9
Campbelpur .. .. .	..	..	..	6
Lahore .. .. .	..	..	..	4
Gurgaon .. .. .	..	..	..	3
Hosiarpur .. .. .	..	..	..	2
Hazara .. .. .	..	..	..	2
Ludhiana .. .. .	..	..	..	1
				79

The overwhelming importance of Amritsar and Gurdaspur is notable as the two districts alone account for 52 or 74·77 of the total of the quota of the Punjab. Of other districts the only ones of any importance are Jullandar, Campbelpur, Lahore and Gurgaon.

Of the British Indian provinces, the North-West Frontier Province, Bombay and Assam are the only three left to consider. Their importance is small. The Frontier people, however, are an important element in the working population, not for their number but for the kind of work they generally do. Of the 10 workers 7 are from Peshawar and 3 from Mardan. Bombay's 7, include 6 people from Surat and one from Poona. The Assamese are negligible, the 5 returned as such are all Muslims from Sylhet which is only formally an Assamese district.

Outside British territory the Native States make an important contribution to the Jamshedpur labour. The Native States supply 47 workers or 4·51 per cent of the total labour of Jamshedpur centre. The Native States sending contingents are given below :—

TABLE No. 2(h).

States.	Number of families.			
Seraikela .. .. .	..	..	..	12
Rajkharsawan .. .. .	..	..	..	10
Mayurbhanj .. .. .	..	..	..	9
Rajnandgaon .. .. .	..	..	..	6
Rewa .. .. .	..	..	..	4
Vizianagram .. .. .	..	..	..	2
Khairagarh .. .. .	..	..	..	2
Dewar .. .. .	..	..	..	1
Punna .. .. .	..	..	..	1
				47
			Total	.. 47

The combined strength of Seraikela, Kharsawan and Mayurbhanj in that order comes to 31 or 65·95 per cent of all the States workers at this centre. Almost all of these are aboriginals and must rank with the local aboriginal labour. These three States are the nearest to this industrial centre and hence they are important.

The State of Rajnandgaon contributes 6 families all of whom are culturally and linguistically identical with the Chattisgarhi workers at this centre.

There remain only the Gurkha workers from Nepal, to be considered. They account for 40 or 3·85 per cent. They are quite widespread as Durwans, etc., but their importance as industrial workers is not great elsewhere. But unaccountably enough the Gurkhas are an important class among the mining families at Mosabani where they number 28 or 70 per cent of all the Gurkhas employed in this centre. In the factories they are negligible.

The distribution of workers according to religion has been shown in Table 3 below :—

TABLE No. 3.

Province or States.	Hindu.		Muslim.	Christian	Sikh.	Buddhist.	No religion.
	Non-aboriginal.	Aboriginal.					
1	2	3	4	5	6	7	8
Bihar ... ..	168	77	27	9	...	...	..
Bengal ... ..	66	...	40	...	...	1	...
Oriasa ... ..	102	...	17	2	...	...	...
United Provinces ... ..	69	...	27	1	...	...	...
Central Provinces and Berar.	149	...	...	...	...	...	...
Punjab ... ..	7	...	16	1	55	...	...
Madras ... ..	77	...	6	10	...	4	1
North-West Frontier Province.	...	...	10	...	...	...	...
Bombay ... ..	6	...	...	1	...	...	...
Assam ... ..	...	...	5	...	...	...	...
Sindh ... ..	...	...	...	...	...	...	...
Central District	...	...	...	...	...	...	...
Native States ... ..	47	...	...	...	...	...	...
Independent States ... ..	40	...	...	...	...	...	...
Total ... ..	731	77	148	23	55	6	1
	808						
Percentage .. ..	77.69	...	14.21	2.21	5.28		

The percentages show the overwhelming importance of Hinduism embracing practically four-fifths of the working population. Hindus include 77 Hinduised aboriginals of Bihar who have returned themselves as Hindus. To treat them as such would be no misdescription as they have so many features

of Hinduism among them. The Muslims are the next considerable group with a percentage of 14.21; but their percentage in the working population is of much less importance than that in the general population of India. The Sikhs have a percentage of 5.28 in the working population of Jamshedpur, it being much greater than that in the total population. Christians have an importance only two-fifth that of the Sikhs. These four major religions account for 99.42 per cent of the total working population. Buddhists have an insignificant percentage being almost all from Madras. Only one family from Madras has returned itself to be of no religion.

The provincial distribution shows that all the Sikhs are from the Punjab. Of the 23 Christians 10 are Madrasis who are not distinguishable from their Hindu brethren, 8 are from Bihar, 7 of these being aboriginal Christians who are not distinguishable from the aboriginal Hindus. The only other important Christian population belongs to Orissa, which has 2 Christians.

The figures reflect greater intensity of missionary activities in Madras and the backward areas of Bihar and Orissa.

The percentage of Muslims among Bihari workers is 9.64 while that of Hindus is 87.5. The non-aboriginal Hindus of Bihar number 168 while the aboriginal Hindus number 77; their percentage in the working population being 60 and 27.5 respectively. Muslims do not figure at all in the native States or in Nepal. The 5 Assamese are all Sylhet Muslims as noted above. In the North-West Frontier Province, all the 10 workers are Muslims. In Bengal Muslim workers form 37.38 per cent while Hindus form 61.68 per cent of all. This shows a lower percentage than the Muslim majority has in the population of Bengal. All the Muslims are practically derived from the districts of Dacca, Faridpur and Noakhali.

Orissa has a considerable minority of Muslim workers mostly from Cuttack although they are negligible in the general population of Orissa. Oriya Hindus form 84.29 per cent and Oriya Muslims 14.04 per cent of all the Oriya workers.

The Central Provinces workers are homogeneous even in religion all of the workers examined being Hindus.

Muslims form a considerable percentage of the United Provinces workers, being 27.83 per cent while Hindus with their quota of 69 make 71.13 per cent of the total.

One would have expected the Punjab Muslims to have the major importance in the Punjab but actually they form only

20.25 per cent of all the workers, the Sikhs accounting for 69.62 per cent and Hindus making up a fair percentage of 8.86 or only a little below half the Muslim percentage.

The Madras Hindus form 78.57 per cent of all the workers, its Muslim percentage of 6.12 is greatly exceeded by its Christian percentage of 10.2.

Grouping of families according to religion, however, does not appear to have much economic significance. Conditions of earnings and wage rates do not vary with the religion of the workers, nor does their consumption scheme vary with religion. The more enlightening classification would be according to territorial communities and in the following pages problems will be considered from the point of view of the major territorial classes alone.

We have yet to consider the classification of the workers according to the kind of work they do. The conventional classification into unskilled, semi-skilled and skilled classes has proved to be a matter of great difficulty. As pointed in the general preface, there has been no single criterion for the division into these groups and the groupings have varied from industry to industry. The classification that has emerged is frankly a matter of opinion and must not be accepted without reservations.

Thus for the Tata Iron and Steel Company, all contract coolies and weekly-paid coolies have been shown as unskilled. Among the monthly-paid workers who have economic privileges like Provident Fund and Bonus, etc., majority of the workers are semi-skilled. These include helpers, hammermen, stokers, cleaners, mates, bricklayers, fire-men, packers, furnace-men, khalasis of departments like sheet-mill, etc., heaters, moulders and so forth. Skilled workers getting higher wages are fitters, masons, machinemen, crane-drivers, bolt-makers, chargemen, gasworkers, oilers, fire-men, turners, drillers, wire-men, sawyers, mistries and similar others. Unskilled workers among the monthly-paid labour includes office-boys, sweepers, Jamadars, sanitary coolies, khalasis generally and others of like nature.

For the Tinsplate works unskilled workers include coolies, sweepers and such other. Semi-skilled workers include khalasis, helpers, apprentices, pickers, packers, plate-carriers and so forth; and skilled workers include pattern-makers, fitters, hammer-men, fire-men and others.

For the Indian Cable Company, machine-men, leadpressmen, tank-men, carpenters, setters, packers, furnace-incharge,

fitters, firemen, and mistries, etc., constitute the skilled class ; the semi-skilled workers being khalasis, rubber-mixers, etc. The weekly paid coolies and *rejas* make up the unskilled class.

For the Wire & Steel Products, coolies, *rejas*, wire-wrappers, chaukidars, havildars, khalasis, sweepers, etc., form the unskilled class ; machine turners, setters, tool-grinders, and such others make up the semi-skilled class and pump-drivers, fitters, machine-setters, drappers, booking-in-charge, etc., form the skilled class.

For Tatanagar Foundry, the skilled class includes workers like time-men, dice-machine-men ; the unskilled class includes coolies and khalasis, and the semi-skilled class includes core-men, sleeper-men, helpers, chippers, electric wire-men and rammers.

The Hume Pipe Works counts coolies as unskilled ; helpers as semi-skilled and fitters as skilled.

For East Indian Railway Works, the skilled class comprises, pattern-carpenters, fitters, painters, assembler, rivetters, machine-men and so forth ; the semi-skilled class is made up of hammer-men, helpers, khalasis, motor-attendants, etc.

The Mowbandar Works of the Indian Cable Company, Limited, counts coolies, sweepers, and *rejas* as unskilled ; khalasis, fitter-helpers, oilers, etc., as semi-skilled, and drivers, moulders, tindels, refitting hands, scrappers, tool-keepers, plant-chargers, rope-way-men, fitters, smelters, etc., as skilled.

In the Mosabani mines weekly male and female coolies have been shown as unskilled all these being surface workers. Other monthly paid surface workers are skilled. Under-ground workers, as drillers, blasters, pump-drivers, machine-men, etc., as skilled and cleaners and sweepers as unskilled. The rest are shown as semi-skilled.

With this explanation we proceed to examine this distribution of works into these classes according to industry. The position is summed up in the table below :—

TABLE No. 4.

Industrial centres.	Skilled.	Semi-skilled.	Unskilled.	Total.
1	2	3	4	5
Tata Iron and Steel Company ..	183	296	158	637
Tinplate works .. .. .	36	30	18	84

TABLE No. 4—concl'd.

Industrial centres.	Skilled.	Semi-skilled.	Unskilled.	Total.
1	2	3	4	5
Wire and Steel Products ..	7	8	41	56
Tatanagar Foundry ..	4	19	13	36
Indian Cable Company ..	17	3	12	32
East Indian Railway Works ..	14	8	..	22
Hume Pipe Company ..	2	1	8	11
Indian Cable Company Works (Mowbandar).	11	15	22	48
Indian Cable Company Mines (Mosabani).	34	47	33	114
Total .. ..	308	427	305	1,040
Percentage .. ..	29.61	41.05	29.32	...

On the whole for this centre unskilled labour is relatively of small importance being only 29.32 per cent of the total labour force. Skilled labour is practically of as much importance being 29.61 per cent of all the workers. The largest number of workers is semi-skilled which accounts for 41.05 per cent. Skilled and semi-skilled labour together make up 70.67 per cent of all, most of these workers being from outside Bihar.

The above table also gives some idea of the character of the various industrial concerns enumerated above. The Tata Iron and Steel Company, the largest single employer of labour, has only 24.8 per cent of its workers as unskilled. The Tinplate Company has even a smaller percentage of unskilled workers, namely 21.42 per cent.

The East Indian Railway works have almost a negligible proportion of unskilled workers. The remaining six concerns

have relatively larger percentages of unskilled workers as shown in the table below :—

TABLE No. 4(a).

Concerns.	Percentage of unskilled workers.
Tatanagar Foundry	36.11
Indian Cable Company	37.5
Mosabani (Mines)	28.94
Mowbhandar Works	45.83
Hume Pipe Company	72.72
Wire and Steel Products	73.21

The larger the percentage of the unskilled workers, the more likely are the workers to be ill off financially. The workers outside Tata Iron and Steel Company, Tinplate Works, and East Indian Railway works are not only more largely unskilled but are also less well paid as will appear from our examination of their income shortly.

It would be interesting to examine the distribution of workers of different territorial communities into these classes. The following table indicates the position :—

TABLE No. 5.

Provinces.	Unskilled.	Semi-skilled.	Skilled.	Total.
1	2	3	4	5
Bihar	133	79	68	280
Bengal	6	55	46	107



TABLE No. 5—concl'd.

Provinces.	Unskilled.	Semi-skilled.	Skilled.	Total.
1	2	3	4	5
Orissa .. .. .	33	47	41	121
Central Provinces .. .. .	68	65	16	149
Madras .. .. .	12	47	39	98
United Provinces .. .. .	17	45	35	97
Punjab .. .. .	4	32	43	79
North-West Frontier Province.. .. .	..	9	1	10
Bombay .. .. .	..	5	2	7
Assam .. .. .	..	3	2	5
Native States .. .. .	27	14	6	47
Nepal .. .. .	5	26	9	40
Total .. .. .	305	427	308	1,040

Among workers from Bihar only 24·28 per cent are skilled and 28·21 per cent semi-skilled, while the unskilled form 47·51 per cent or only a little less than half the total number of workers. Thus the model Bibari worker is unskilled, the population of unskilled workers being raised considerably by the aboriginal populations of Chota Nagpur who make up almost half the unskilled workers of Bihar.

Bengal has only 5·6 per cent of the workers as unskilled, the majority of the workers being semi-skilled which accounts for 51·4 per cent of all the Bengali workers. Oriya workers have an unskilled percentage of 21·27, most of these being aboriginals from Sambalpur and Balasore districts. On the whole, however, Oriya workers are mostly semi-skilled; their percentage being 38·84.

Central Provinces, like Bihar, has the largest number of workers unskilled although the percentage is less than that of Bihar, viz., 65·64. Semi-skilled workers are only slightly less important than the unskilled workers, their percentage being 43·62.

Madras is overwhelmingly semi-skilled with a percentage of 47·97 ; although the skilled percentage of 39·79 is not inconsiderable. Unskilled workers have a percentage of 12·24 only.

United Provinces is very similar to Madras, and has an unskilled percentage of 17·53 only ; while the semi-skilled and the skilled make up 46·39 per cent and 36·08 per cent of the total.

The workers from the Punjab are overwhelmingly skilled, their percentage being 54·43. Unskilled workers form only 5·06 per cent of all the workers.

The North-West Frontier Province has almost all its workers of the semi-skilled class, their percentage being 90 ; so also has Bombay and Assam with the semi-skilled percentages of 71·42 and 60, respectively.

The native states show an overwhelming percentage of unskilled workers, namely 57·44. This is because almost all the workers drawn from the states of Seraikela, Kharsawan and Mayurbhanj are of the same category as the local aboriginal workers of this centre. The Nepali Gurkhas are an important community only in the mining areas of Mosabani. They are overwhelmingly of the semi-skilled class, whose percentage is 65.

Thus communities with larger percentage of unskilled workers happen to be Biharis, Chattisgarhis and the peoples of the native States. These are also the lowest paid groups and are the main sources of supply of the contract labour and weekly-paid cooly labour for Jamshedpur centre.

We have seen that the labour for this centre is overwhelmingly migrant, migrant workers accounting for 935 families or 90 per cent of all the workers. The local labour forming 10 per cent of all the workers has presumably taken to industry as opportunity offered itself in the neighbourhood. They are mostly landless rural workers ; some might have small strips of land and a few still have some land. But certain and regular work yielding cash was apparently preferred to work on uneconomic holdings or to uncertain and casual rural labour.

The migrant labour drawn from long distances deserve special notice as to the urge which drove them to this centre. We have also to examine whether there is any indication of the definite emergence of a proletariat class in India.

What, then, are the causes that drove the workers away from home to the distant centre of Jamshedpur? The question can only be answered roughly. To fix the causes of migration is not too easy. For the workers' answer to the question why they left home, might refer either to the immediate and superficial or distant and more deep-seated causes. Sometimes migration took place so long ago that the causes have been effaced from memory altogether. The workers besides, cannot be expected to analyse the causes too subtly. There might be various motives at work and often the least important one might have proved decisive with the workers. The major causes revealed by the cross-examination of workers, however, though not absolutely accurate are broadly correct, and throw much light on the conditions at the workers' native homes.

The importance of the causes suggested can be gauged from the table below :—

TABLE No. 6.

Causes of migration.	Number of families in which the cause occurs.	Percentages in column II to total number of migrant families, viz., 935.
Individual disability, family dispute..	3	.321
Social disability .. ..	..	..
Economic causes .. ..	932	99.679
(a) To earn living .. ..	301	32.192
(b) Unemployment in the home districts.	223	23.850
(c) Poverty .. ..	156	16.684

TABLE No. 6—*concl'd.*

Causes of migration.	Number of families in which the cause occurs.	Percentage in column II to total number of migrant families, viz., 935.
(d) In search of job .. ..	91	9.732
(e) Lack of resources at home ..	40	4.278
(f) To supplement family income ..	36	3.850
(g) Inadequate resources at home ..	17	1.818
(h) In the wake of members of their families who had migrated earlier.	10	1.069
(i) Came in course of business ..	1	.106
(j) Invited by employers ..	7	.742
(k) Sudden economic calamities ..	20	2.120
(i) Lost family land on account of failure to pay rent due to depression.	9	.954
(ii) Sudden death of main bread winner.	6	.636
(iii) Discharge from old job ..	5	.530
(l) Indebtedness .. ..	26	2.756
(m) Pressure on land ..	4	.424
Total ..	935	..

The Royal Commission on Labour had much to say on social disabilities of the workers at their native homes, like tyranny of caste and so forth as causes of migration. Actually, however, we did not come across a single instance when social disability was suggested to be a cause of migration. There were personal difficulties certainly in three cases like family disputes. But

this category formed only .321 per cent of all the causes suggested. 932 or practically 100 per cent of the causes suggested could be classed as economic. In 864 or 91.762 per cent of all migrant worker examined, the economic causes that were suggested were not specific but were reported to be either need for earning a living (301 or 16.684 per cent) ; unemployment in the home district (223 or 23.850 per cent) ; poverty (156 or 16.684) ; need for job and prospect of getting one at this centre (91 or 9.732 per cent) ; lack of resources at home (40 or 4.278 per cent) ; need for supplementing family income (36 or 3.850 per cent) ; and inadequate resources at home (17 or 1.818 per cent). These causes are certainly too general and overlapping but are of profound importance. They hint at the normal poverty of the Indian home and its utter resourcelessness. They are also an index to the intensity of unemployment not only among educated Indians, who have managed to attract an exaggerated amount of public attention ; but among the vaster mass of the poor and the more helpless illiterates of India.

Indebtedness was shown to be the determining factor in 26 or 2.756 per cent of all the causes suggested ; while pressure on land was reported as a cause of migration in 4 or .424 per cent of all the cases examined. Both the causes, however, may be regarded really as an extension of the other economic causes shown above, namely, poverty, resourcelessness and unemployment.

Sudden economic calamities decided migration in 20 or 2.120 per cent of all the cases of migration. These include nine cases of loss of land due to failure to pay rent and revenue during the depression ; six cases in which the sudden death of the main bread winner left the family to shift for itself, however it could ; and five cases in which discharge from old job made the family seek its fortune elsewhere. These 20 cases are equally an extension of the major economic causes shown above for they indicate only that the economic status of these families was too unstable and brittle to withstand even predictable emergencies. These sudden calamities are an acute symptom of a chronic disease. Only in 18 cases did voluntary choice determine migration. These include 10 cases in which workers moved almost by social inertia in the wake of the other members of their families who had preceded them to this area ; one case in which a worker happened to come to this centre in course of business but found change-over to industry more lucrative, and seven cases in which employers had invited the workers to take up positions in industry on better pay.

What connection do these workers retain with their native homes? Some light is thrown on the question by the frequencies of their visits home and the occasions of the visits. The frequencies of the visits are shown in the table below :—

TABLE No. 7.

Frequency of visits.	Number of families.	Percentage of II to total number of migrant families, viz. 935.
I.	II.	III.
Not visiting at all (i.e. settled) ..	221	23·426
Visiting once in less than a year ..	105	11·130
Visiting once in 1 but not 2 years ..	278	29·448
Visiting once in 2 but not 3 years ..	148	15·688
Visiting once in 3 years and above ..	183	19·398
Total ..	935	..

We notice that 221 or 23·426 per cent of the migrant workers never visit home. They may, therefore, be regarded as permanent acquisition to the industry and as full-fledged proletariates, having no home and no source of support but industry. The 105 local workers are also practically of the same category most of them being landless aboriginals. Thus at least 30 per cent of the workers are full proletariates. The large majority of the families that have never visited home are from Madras, the Punjab and other distant areas of India who find journeys to and from homes prohibitive and have settled at this centre with their natural families, the weakened social tie being kept up in some families by periodical remittances home.

Families visiting home once in three years and above are also practically settled at this centre. Such families number 183 or 19·398 per cent of all the migrant families.

Only families visiting homes in less than a year may be regarded as having vital ties with home. Such families number 105 or 11·130 per cent of all the families.

Families visiting homes once in one but not two years account for 278 or 29·448 per cent ; while those visiting in two but not three years number 148 or 15·688 per cent. These have less vital links with home.

Dates of last visit of the families are shown in Table 8 below :—

TABLE No. 8.

Date of last visit.		Number of families.	Percentage of II to total number of families, viz. 935.
I.	II.		
Within 1 year	.. ..	297	31·572
1 but not 2 years ago	.. ..	214	22·684
2 but not 3 years ago	.. ..	95	10·070
3 years or more ago	.. ..	108	11·448
Never visited	.. ..	221	23·426
Total		935	..

No comment is necessary on this.

Occasions of the last visit, however, are important as they suggest the answer to the question, what connection workers have with their homes.

The position is summed up in table 9, below :—

Occasions of last visit.  I	Frequency.  II	Percentage of II to total number of visiting families, viz., 714.  III
A. Personal or social causes not being social ceremonies.	390	54.990
(a) Holidays .. ..	8	1.128
(b) Meeting relations ...	216	30.656
(c) Change ... ..	20	2.820
(d) Bringing family to place of work.	60	8.460
(e) Reaching family home ..	1	.141
(f) Illness of worker or of members living with him.	40	5.640
(g) Illness of other members of the joint family.	45	6.345
B. Social ceremonies .. ..	210	29.610
(a) Marriage-own or of members of the family residing with the worker.	124	17.484
(b) Marriage of other members of the joint family.	47	6.627
(c) Death of members of the worker's family residing with him.	8	1.128
(d) Death of other members of joint family.	27	3.807
(e) Birth in the joint family ..	2	.282
(f) Upanayan ceremony ..	1	.141
(g) Hair cutting ceremony ..	1	.141



Occasions of last visit. I	Frequency. II	Percentage of II to total number of visiting families, viz., 714. III
C. Religious causes .. ..	20	2-820
(a) Festivals and worship ..	14	1-974
(b) Religious pilgrimage ..	6	.846
D. Economic causes .. ..	94	13-254
(a) To build or repair houses ..	24	3-384
(b) To help in agriculture ..	19	2-679
(c) To settle land for cultivation	6	.846
(d) Disputes regarding property	4	.564
(e) Litigation regarding property	15	2-115
(f) To pay debt .. ..	1	.141
(g) To pay rent ... ..	3	.423
(h) Involuntary un-employment ..	..	..
(i) Company works closed ..	5	.705
(ii) Discharge .. ..	4	.564
(iii) Compulsory leave ..	2	.282
(iv) Temporary loss of job ..	4	.564
(i) Voluntary un-employment strike .. ..	7	.987
Total ..	714	..

The table shows that social ceremonies were the occasions of 210 or 29.610 per cent of all the visits made.

Marriage is the most important of such ceremonies which involved visit home, being the occasion of 171 or 24.111 per cent of all the visits made. Of the 171 marriages, 124 happens to be the marriage of either the worker himself or of some member of his natural family residing with him. The worker being torn from his community, and intermarriage being still rare, marriages have generally to be performed at the native home where the worker is surrounded by members of his own community. Only 47 marriages of relations of joint families or otherwise entailed the workers visiting home. We presume that the worker would not generally undertake long journeys to attend all the marriages that may happen in the joint families but would attend only a diminishing percentage of them.

Death is the only other important social ceremony which involves the workers' visit. Only in 8 cases, however, funerals of members of the worker's natural family, involved going home. The other 27 cases of funerals which workers attended, were those in the joint family. Altogether funerals formed only 4.935 per cent of all the causes which drew the worker home. Birth and confinement, contrary to the opinion of the Royal Commission on Labour, happens to be of negligible importance as occasion of visits home. Other ceremonies are of infinitesimal importance.

Causes personal to the workers like desire for health and change and for keeping up acquaintance with relations were responsible for 390 visits home or 54.99 per cent of all the visits made. Most important of these are need for meeting relations (216 or 30.656), bringing family to place of work (60 or 5.640 per cent) and sickness of workers or other members of the natural family residing with him or of other members of the joint family at the native place. They account for 41 or 5.640 per cent and 45 or 6.345 per cent respectively of all the visits made.

Religious occasions of visits home are peculiar to our country. They were responsible for 20 or 2.820 per cent of all the visits, 14 or 1.974 per cent being to worship the family deity and 6 or .846 per cent being religious pilgrimages.

Causes purely economic were responsible for only 94 or 13.254 per cent of all the visits made. Of these 7 visits were made on account of strike in the industries and 15 visits were made because of involuntary unemployment due to works being closed (5), discharge (4), compulsory leave as a measure to

distribute work (2) and temporary loss of job (4). These two causes account for 3.102 per cent of all the visits.

These visits are interesting as they show that the worker in economic difficulties may fall back on his village in which life is cheaper and can be prolonged with small resources. They show also that the worker may impose himself on the resources of the joint families which provide some sort of pooled security to all the members of the families.

Thus only 72 or 10.152 per cent of all the visits were made for productive purposes or for exploitation of property. These visits include 24 for building and repairing houses; 19 to help in agriculture; and 15 to look to litigation regarding property. Altogether the native home is economically important only as a cheap place where life can be maintained with smaller resources; and as a last resort of the worker when he returns in old age. The support in shape of incomes that it provides is utterly negligible.

Thus we may conclude that about 90 per cent of all the workers at Jamshedpur have to depend on industry and are connected with home only for social or other reasons. This conclusion will be confirmed when we examine the incomes of the workers.

Average duration of stay at home of workers of each industrial concern who visited homes is given below :—

TABLE No. 10.

Industrial concerns.	Average period of stay in days.
Tata Iron and Steel Works .. .. .	22.5
Tinplate Company .. .. .	16
Indian Cable Company .. .. .	20
Tatanagar Foundry .. .. .	25
Wire Steel Products .. .. .	11
East Indian Railway Works .. .. .	21
Hume Pipe Company .. .. .	15
Mosabani Mines .. .. .	28
Mowbandar Works .. .. .	19
Average of all .. .. .	21.5

Average duration of stay at home of workers of various provinces have been calculated separately for the Tata Iron and Steel Works and are given below :—

TABLE No. 11.

Province or State.	Average duration of stay at home in days.
Bihar .. .. .	16
Central Provinces .. .. .	17
Orissa .. .. .	21
Bengal .. .. .	26
Madras .. .. .	28
United Provinces .. .. .	29
Punjab .. .. .	35
North-West Frontier Province .. .. .	30
Bombay .. .. .	39
Native States .. .. .	15.

The tables 10 and 11 are important as they show for what period a worker is likely to remain away from the workplace. We notice that the average period of stay of all workers who visit home is 21.5 days. This period suggests what should be the minimum period of leave with pay that should be reasonably ensured to the workers.

The duration of stay away from work place varies with the provinces of the workers. The Native States of Seraikela, Kharasawan and Mayurbhunj are the nearest to this centre and a worker of these areas remains away for 15 days on average. This is the net period of stay at home after the time taken in transmission is allowed for. The composite period of stay varies from this minimum to 39 days in case of Bombay workers. Thus the longer the distance from which the worker comes the larger should be the permissible period of stay away from the work place on each visit home.

We have yet to classify the families according to income. The appropriate classification will be attempted in the chapter on incomes.

## CHAPTER II.

### Size and Composition of the Family.

1,040 families examined comprise 1,631 men, 1,968 women and 2,292 children. These include dependants living away from the workers. The latter are an indefinite category as we have noted in the general preface. The dependants living away from the wage-earners number 259 men, 327 women, and 251 children.

Thus an average family will consist of 1·569 men, 1·624 women, and 2·205 children or 5·398 persons in all. Reduced into adults, the size of the average family will be 4·296. In the following table, the provincial average has been shown side by side with the general average for comparative study.

TABLE No. 12.

General average.	Men.	Women.	Children below 5.	Children of 5 but not 10.	Children of 10 but not 15.	Total no. of children.	Number of persons in the family.	Number of adults in the family.
1	2	3	4	5	6	7	8	9
General average ... ..	1·569	1·624	·856	·835	·514	2·205	5·398	4·296
Bihar ... ..	1·489	1·714	·782	·765	·461	2·008	5·211	4·207
Central Province ... ..	1·470	1·631	·786	·713	·344	1·843	4·944	4·022
Orissa ... ..	1·538	1·529	1·000	·861	·628	2·479	5·546	4·306
Bengal ... ..	1·738	1·832	·841	·795	·448	2·084	5·654	4·612
Madras ... ..	1·480	1·673	1·143	1·572	1·163	3·878	7·031	5·092
United Provinces ... ..	1·897	1·619	1·010	·876	·319	2·205	5·721	4·618
Punjab ... ..	1·671	1·296	·709	·785	·645	2·139	5·106	4·033
Native States ... ..	1·745	1·660	·936	·766	·383	2·085	5·490	4·447
Nepal ... ..	1·175	1·150	·500	·225	·200	·925	3·350	2·787
North-West Frontier Province ... ..	1·500	1·500	·500	·700	·400	1·600	4·600	3·800
Bombay ... ..	1·429	1·429	1·000	·571	·286	1·857	4·715	3·786
Assam ... ..	1·400	1·800	·200	·600	·400	1·200	4·400	3·800

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The table shows that the size of the family is the largest in case of Madras both in respect of number of persons in the family and the number of adults, the figures being 7.031 and 5.092, respectively. The size, however, is larger due to larger number of children in each age group than we find in the general average. The number of children in the average Madras family is 3.878 or roughly 4 which is practically double the number in the general average. The number of men and women in the Madras family, however, is only 1.480 and 1.673 respectively or just about the general average.

The next largest family is found among the United Provinces workers both in respect of number of persons and number of adults, these being 5.721 and 4.618. In this case the largeness of the family is due to the larger number of men in the United Provinces family where they happen to be 1.897 or practically 2 per family.

Bengal comes 3rd in respect of size of the family, the number of persons in the family being 5.654 which reduced into adults would be 4.612. In the Bengali family the children number only 2,084 which is less than the number of children in the average family at this centre. The size is swelled because of the large number, both of men and women in the family as they number 1.738 and 1.832, respectively.

Orissa and the Native States come 4th and 5th in respect of the number of persons in the family but the order is reversed if we consider the number of adults in the family. Orissa has 5.546 persons in the family or 4.306 standardised adults. The Oriya family shows fewer men and women than the average family at the centre, their numbers being 1.538 and 1.529, respectively. The largeness of the size is due to slightly larger number of children in the Oriya family. The Native States show 5.490 persons in the family or 4.447 standardised adults. The number of children in these families is actually smaller than the number in the average family, being only 2.085. The size is swelled, however, by the larger number of men and women in the family for they number 1.745 and 1.660.

Bihar comes 6th in respect of size of the family both from the point of view of the number of persons and the number of standardised adults, these being 5.211 and 4.207. These figures

are actually less than the corresponding figures of the average family. A Bihari family has actually smaller number of children and men than the general average, but the number of women is slightly larger than the average family in the centre. The number of men, women and children would be 1·489, 1·714 and 2·008, respectively.

The Punjab comes 7th in the list. The average Punjabi family comprises 5·106 persons or 4·036 standardised adults. The number of men in these families namely 1·671, is slightly larger than the number in the general average, but the number of women is much smaller than the corresponding number in the general average being 1·296 only. The number of women in the Punjabi family is thus smallest except that in the families of the Native States. The number of children also is slightly smaller than in the general average. Thus the size of the Punjabi family is swelled by the larger number of men only.

The Central Provinces family is smaller than the general family at the centre both in respect of the number of persons and the number of standardised adults. It counts only 4·244 persons or 4·032 adults. The number of men in the Central Province family is only 1·470 which is the smallest except for Nepal, Bombay and Assam. The number of women is practically the same as in the general average, namely 1·631, but the number of children is smaller than in the general average by practically 25 per cent.

Bombay, North-West Frontier Province and Assam happen to be 9th, 10th and 11th in respect of the number of persons in the family but the order is slightly changed if we consider the number of standardised adults in the family, when the North-West Frontier Province, Assam and Bombay take 9th, 10th and 11th places respectively.

The Bombay family counts 4·715 persons or 3·786 adults. The number of men in the Bombay family is only 1·429 and the number of women is also 1·429—much smaller than the corresponding number in the general average. The number of children also is much smaller being only 1·857 which is practically 25 per cent smaller than the general average. In respect of standardised adults the Bombay family is the smallest except for Nepal.



The North-West Frontier Province shows 1·500 men, 1·500 women, both slightly larger than Bombay, but smaller than the general average. The number of children is only 1·600 or practically 33 per cent less than the general average.

Assam shows 1·400 men, 1·800 women, and 1·200 children. The children thus number only a little above half of those in the general average, but the number of women is much larger than the number in the general average.

The smallest family is that of the Nepali workers, comprising only 3·250 persons or 2·787 adults. The Nepali has only 1·175 men, 1·150 women—both being only practically two-third of the number in the general average. Children, however, show the smallest number being only ·935 or even less than one per family. They form practically only two-fifth of the children in the general average.

The total population examined comprises as we have seen 1,631 men and 1,689 women. All persons of 15 and above have been returned as men and women and thus among adults the ratio of males to females is 49·12 : 50·88 ; thus among adults females slightly out-number males and the ratio reflects the ratio in the general population of India. It does not accurately reflect the conditions in the industrial centres where there is every where a scarcity of females. Our result is not representative because we have examined only workers living with their families although such workers are not the only ones who supply the labour force for industry in this centre.

The ratio of males to females among persons below 15 is 55·40 : 44·60. Thus males out-number females to the extent of 25 per cent. It is difficult to believe that male children would out-number female children so excessively. This result is partially due to the relative scarcity of female children between 10 and 15 years when their importance is under-mined by their marriages and emigration to their husband's places. The male children, however, remain. Actually in the age group of 10 but not 15 the ratio of boys to girls is 59·03 : 40·97, the number of girls forming just a little over two-thirds of the number of boys. In age group 5 but not 10, the ratio of boys to girls is 54·09 : 45·91, the number of girls forming about four-fifth of the number of boys. Here also the same cause is partly responsible for the smaller number of girls in this age group.

The more important cause that makes the ratio doubtful is that there might have been children belonging to the natural family of the workers but living away from them at their village homes and supported from a common joint family fund and as such not shown as children dependent.

In the total population examined the number of males comes to 2,903 and the number of females to 2,713 so that the ratio would be 51·69 : 48·31. This result confirms the impression that industrial centres suffer from scarcity of females.

In the age group below 5, the number of boys is 485 and the number of girls is 405, their ratio being 54·45 : 45·55. Thus boys out-number girls by about 20 per cent. This phenomenon is not accountable. The distribution of boys and girls in age group below 5 is shown below :—

TABLE No. 13.

Age-group.	Not more than one year.	1 but not 2 years.	2 but not 3.	3 not 4.	4 not 5.
1	2	3	4	5	6
Boys ..	66	100	111	92	116
Girls ...	44	75	89	91	106
Total ..	110	175	200	183	222

It has not been possible to discuss the age distribution of the population adequately. As we have seen above there is no age grouping after 15 years, all the persons above 15 being treated together as adults. This has precluded any survey of the ages of the workers. Similarly we are unable to tell how many persons shown as adults dependants living with wage-earners are really too old for work. It has been possible to attempt the

age distribution only in the case of persons below 15 years. The distribution is shown in the table below :—

TABLE No. 14.

Age-group.	Number of persons.	Percentage of persons in each age-group to the total.
Below 5 years .. .. .	890	15.84
5 to 10 years ... .. .	869	15.05
10 to 15 years .. .. .	537	9.56
15 and over .. .. .	3,320	59.13
Total ...	5,616	..

The table shows that about 40.45 per cent or practically two-fifths of the population is below 15 years. It would have been interesting to compare the percentage of persons above 55 who should be treated as too old for work, but this comparison is not possible for the reasons shown above. The percentage of persons beyond 45 would have also thrown light on whether the population is growing. The larger the percentage of the children in the general population and the smaller the number of persons above 45, the more definite is the indication that the population is growing. In the present instance the percentage of children below 15 years is certainly very high and indicates a progressive population.

It has not been possible to utilise the information contained in the column under the heading "Persons below 15 dead and their ages at the time of death", as the persons dead might or might not belong to the natural family, nor is it clear within what period such death must have occurred since the foundation of the natural family. Even children dying within one year of their birth could not be correlated to the children born in any particular year, because the latter information is wanting. Thus we could not deduce the infant mortality rate. For these reasons this column has been altogether left out of consideration.

The economic status of the various members of the family is shown in the following tables separately for men, women, and children. Only 4 child workers have been reported, 2 belonging to Bihar in the age-group. "10 but not 15", and 2 belonging to the Central Provinces, one in each age group of "5 but not 10 years", and "10 but not 15 years". The child workers form so negligible a part of the working population that no great error will be committed in ignoring them altogether and in the table relating to the children, child workers will not be shown. Child dependants in various age-groups have been shown in 2 tables, one relating to child dependants living with the wage-earners and another to child dependants living away from the wage-earners.

TABLE No 15.

Province or States.	Number of families.	Number of men workers.	No. of men dependents living with wage-earners.	Number of men dependents living away.	Number of all men in the family.
1	2	3	4	5	6
Bihar	280	265	91	61	417
	Average...	0.946	0.325	0.218	1.489
Central Provinces	149	154	41	24	219
	Average...	1.034	0.275	0.161	1.470
Orissa	121	127	29	30	186
	Average...	1.050	0.240	0.249	1.538
Bengal	107	113	35	33	186
	Average...	1.056	0.327	0.355	1.738
Madras	98	102	29	14	145
	Average...	1.041	0.296	0.143	1.480
United Provinces	97	98	42	44	184
	Average...	1.010	0.433	0.454	1.897
Punjab	79	82	25	26	133
	Average...	1.038	0.316	0.317	1.671
Native States	47	48	21	13	82
	Average...	1.021	0.447	0.277	1.745

Province or State.		Number of families.	Number of men workers.	Number of men dependents living with wage-earners.	Number of men dependents living away.	Number of all men in the family.
1	2	3	4	5	6	
Nepal	...	40	41	41	2	47
	Average...		1.025	.100	.025	1.175
North-West Province.	Frontier	10	10	1	4	15
	Average...		1.000	.100	.400	1.500
Bombay	...	7	7	2	1	10
	Average...		1.000	.286	.143	1.429
Assam	...	5	5	...	2	7
	Average...		1.000	...	.400	1.400
Total	...	1,040	1,052	320	259	1,631
	Average		1.012	.308	.249	1.569

TABLE No. 16.

Province or State.	Number of family.	Total number of women workers.	Total number of women dependents living with.	Total number of women dependents living away.	Total of all women in the family.	Average number of women workers.	Average number of women dependents living with.	Average number of women dependents living away.	Average number of women in the family.
1	2	3	4	5	6	7	8	9	10
Bihar ... ..	280	67	328	85	480	·239	1·171	·304	1·714
Central Provinces .. ..	149	39	180	24	243	·262	1·208	·161	1·631
Orissa ... ..	121	7	130	48	185	·058	1·074	·397	1·529
Bengal ... ..	107	...	129	67	196	...	1·206	·626	1·832
Madras ... ..	98	1	142	21	164	·010	1·449	·214	1·673
United Provinces ... ..	97	5	118	34	157	·052	1·216	·351	1·619
Punjab ... ..	79	...	84	22	106	...	1·063	·233	1·296
Native States ... ..	47	13	49	16	78	·277	1·043	·340	1·660
Nepal ... ..	40	...	42	4	46	...	1·050	·100	1·150
North-West Frontier Province ... ..	10	...	13	2	15	...	1·300	·200	1·500
Bombay ... ..	7	...	9	1	10	...	1·286	143	1·429
Assam ... ..	5	...	6	3	9	...	1·200	·600	1·800
Total ... ..	1,040	132	1,230	327	1,689	·127	1·183	·314	1·624

TABLE No. 17.

Province or State.	Number of families.	Child dependents living with wage-earners.				Average number of child dependent per family in age-group.			
		0-5 years	5-10 years.	10-15 years.	Total.	0-5	5-10	10-15	Total.
		1	2	3	4	5	6	7	8
Bihar ... ..	280	210	204	115	529	·750	·729	·411	1·890
Central Provinces ... ..	149	116	100	45	261	·779	·671	·802	1·752
Orissa ... ..	121	92	83	59	234	·760	·686	·488	1·934
Bengal ... ..	107	77	68	33	178	·720	·636	·308	1·664
Madras ... ..	98	112	151	112	375	1·143	1·541	1·143	13·827
United Provinces ... ..	97	77	75	27	179	·794	·773	·278	1·845
Punjab ... ..	79	53	50	31	134	·671	·633	·392	1·696
Native States ... ..	47	37	30	14	81	·787	·638	·298	1·723
Nepal ... ..	40	20	9	7	36	·500	·225	·175	·900
North-West Frontier Province ... ..	10	5	7	4	16	·500	·700	·400	1·600
Bombay ... ..	7	7	4	2	13	1·000	·571	·286	1·857
Assam ... ..	5	1	2	2	5	·200	·400	·400	1·000
<b>Total</b> ... ..	<b>1,040</b>	<b>807</b>	<b>783</b>	<b>451</b>	<b>2,041</b>	<b>·776</b>	<b>·753</b>	<b>·434</b>	<b>1·963</b>

TABLE No. 18.

Provinces or State.	Number of families.	Child dependents living away from the wage-earners.				Average number of child dependent per family each in age group to the total.			
		0-5 years.	5-10 years.	10-15 years.	Total.	0-5	5-10	10-15	Total.
1	2	3	4	5	6	7	8	9	10
Bihar ... ..	280	9	10	14	33	·032	·035	·050	·118
Central Provinces ... ..	149	1	6	6	13	·007	·042	·042	·091
Orissa ... ..	121	29	20	17	66	·240	·165	·140	·545
Bengal ... ..	107	13	17	15	45	·131	·159	·140	·420
Madras ... ..	98	...	3	2	5	...	·031	·020	·051
United Provinces ... ..	97	21	10	4	35	·218	·103	·041	·360
Punjab ... ..	79	3	12	20	35	·038	·152	·253	·443
Native States ... ..	47	7	6	4	17	·149	·123	·085	·362
Nepal ... ..	40	...	...	1	1	...	...	·025	·025
North-West Frontier Province ... ..	10	...	...	...	...	...	...	...	...
Bombay ... ..	7	...	...	...	...	...	...	...	...
Assam ... ..	5	...	1	...	1	...	·200	...	·200
Total ... ..	1,040	83	85	83	251	·080	·082	·080	·242



The tables show altogether 132 women workers in 1,040 families or barely one woman in 8 families. Thus female labour is very unimportant in the economy of the working families. Bengal, the Punjab, Nepal, the North-West Frontier Province, Bombay and Assam show absolutely no female workers. These provinces have besides practically a single male worker in each family, the exact average number of male workers being 1.056, 1.038, 1.025, 1.000 and 1.000 respectively. Families from these provinces are thus practically supported by the work of a single man each.

Madras has reported only one woman worker in a single family out of 98 and Madras male workers do not average more than 1.041 per family.

Orissa and the Central Provinces have slightly a larger number of women workers namely, .058 and .052 per family or roughly one woman worker in 20 families. These figures, however, are no more significant than those of the provinces mentioned above. The corresponding number of men workers for the two provinces are 1.050 and 1.010.

The largest number of women workers are found in the Native States followed by the Central Provinces and Bihar. The number of women workers per family being 2.777, .262 and .239 or roughly one woman worker in 4 families. This considerable number of women workers, however, is found only in families of lower social status and among higher classes female labour out of doors is not favoured. The corresponding number of men workers for the last three regions are 1.021, 1.034 and .946. It would be noted that Bihar has less than even one male worker per family; nor is the number of female worker per family any too high.

We have already considered the number of child workers and found them practically non-existent at this centre.

The total number of adult workers both male and female are shown together for each of the provinces and also the size of the family in terms of adults.

TABLE No. 19.

Province or State.	No. of adult worker.	Size of family in terms of adults.	No. of adults supported by single worker.
Bihar .. .. .	1.185	4.207	3.55
Central Provinces ..	1.296	4.022	3.10
Orissa .. .. .	1.108	4.306	3.89
Bengal .. .. .	1.056	4.612	4.37
Madras .. .. .	1.051	5.092	4.84
United Provinces ..	1.062	4.618	4.35
Punjab .. .. .	1.038	4.036	3.89
Native States ..	1.298	4.447	3.43
Nepal .. .. .	1.025	2.787	2.72
North-West Frontier Province.	1.000	3.800	3.88
Bombay .. .. .	1.000	3.786	3.79
Assam .. .. .	1.000	3.800	3.80
General average ..	1.139	4.296	3.77

We notice that on the average single worker's earnings have to support 3.77 adults. The largest number of adults supported by a single worker's earnings occur in the Madras family where they are 4.84 or practically 5 adults. Bengal and the United Provinces have nearly equal number of such adults, each having just over  $4\frac{1}{2}$ .

Orissa, the Punjab and North-West Frontier Province have 3.88 adults supported by the earnings of a single adult or practically 4 adults. The provinces named above account for 512 families or just about one half the total number of families

in this centre. Bombay and Assam have 3·78 adults each supported by the earnings of a single adult. Bihar and Native States have 3·55 and 3·43 adults each supported by the earnings of a single adult. The Central Provinces has 3·10 adults so supported while Nepal has the smallest number of adults supported by the earnings of one adult worker, namely, 2·72. In fixing minimum wage for workers in this centre, the fact that a single person's earnings go to support practically 4 adults has to be considered.

The following table shows the distribution of the families according to the number of workers in each. The classification is according to the territorial origin of the families.

TABLE No. 20.

Province.	No. of families.	Head only (1) worker.	H.+1M.	H.+1F.	H.+2M.	H.+2F.	H.+2C.	H+1F+1C.	H+1F+1M.	H+1M+2F.									
1	2	3	4	5	6	7	8	9	10	11									
		(2) M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Bihar...	280	208	28	12	1	29	2	2	...	2	...	...	1	...	...	...	...		
Central Provinces	149	98	8	11	...	29	...	1	...	...	...	...	...	2	...	...	...		
Orissa	121	110	1	8	...	4	...	...	...	...	...	...	...	...	2	...	...		
Bengal	107	102	...	4	...	...	...	1	...	...	...	...	...	...	...	...	...		
Madras	98	92	1	6	...	...	...	...	...	...	...	...	...	...	...	...	...		
United Provinces...	97	93	...	...	...	3	...	...	...	...	...	...	...	...	...	...	1		
Punjab	79	76	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...		
Native States	47	34	1	...	...	9	1	1	...	...	...	...	...	...	1	...	...		
Nepal ..	40	39	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...		
North-West Frontier Province.	10	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Bombay	7	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Assam	5	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
<b>Total</b>	<b>1,040</b>	<b>889</b>	<b>39</b>	<b>30</b>	<b>1</b>	<b>74</b>	<b>3</b>	<b>6</b>	<b>...</b>	<b>2</b>	<b>...</b>	<b>...</b>	<b>1</b>	<b>2</b>	<b>...</b>	<b>3</b>	<b>...</b>	<b>1</b>	<b>...</b>

N.B.—In line (1), H stands for the Head of the family; M stands for Males and F for females and C for child. In line (2) M and F stand respectively for families with Male and Female heads.

It will be noted that 996 families have male heads while 44 have female heads. The female heads are found in families where the main bread winner has died while in the industry and the widow or mother has taken to work in order to support the family. 908 families or 88.27 per cent have got single worker each. Of these 869 families have a single male worker while 39 have single female workers.

117 families or 11.25 per cent of the families have got 2 workers each. 39 of them have 2 male workers and 3 have 2 female workers each while the majority of the families, namely 75 families have got one male and one female in the family.

14 families have got 3 workers each. 6 of them have got 3 male workers each; 2 have got one male and 2 females each; one family has got one female and 2 children; 2 families have got one male, one female and one child each; 3 families have 2 males and one female each.

Only one family has got 4 workers, namely, 2 men and 2 women. It would appear that only 121 families or 11.63 per cent have got more than one worker and of these only 4 families have got more than 2 workers.

914 families have only male workers and in only 126 families do we meet men and women also working.

#### *Dependents Living with Wage Earners.*

320 men, 1,030 women and 2,041 children have been shown as dependants living with wage earners. Such dependents in the average family would be 308 men, 1,183 women and 1,963 children. Men dependents living with the wage earners may be either too old for work, disabled, or unemployed. The third category is the largest showing that industrial employment is not available even for families which have severed all connection with agriculture. It is possible that the men dependants might be doing seasonal work or might form the reserve from which the various concerns draw labour when industrial conditions favour more employment. Practically there is a reserve of about 30 per cent of workers waiting for job.

Not much comment is called for regarding the women dependents living with the wage earners. Women are as we

have seen above very unimportant from the point of view of supply of industrial labour and all women not employed are necessarily dependent on the workers.

Whatever children are found in this centre are without work and as such resident dependents.

Dependants living away are, as we have noted above, indefinite category and in order to study them properly we must relate them to the amount remitted to them for their sustenance. The relevant statistics have been summarised in the following table (21) from the point of view of the territorial origins of the workers.

TABLE No. 21.

Province or State.	Number of families reporting dependents living away.	Number of dependents in terms of adults.	Amount remitted.	Income of the families making remittances.	Percentage of incomes remitted in case of families reporting dependents living away.	Percentage of all incomes remitted.	Average dividend per adult dependent living away.	Percentage that adult dependent living away form of the total number of adults in the families.	Extent of dependent.
1	2	3	4	5	6	7	8	9	10
Bihar ...	71	162.5	Rs. s. p. 403 2 0	Rs. s. p. 2,309 15 3	17.45	5.29	Rs. s. p. 2 7 9	13.79	38.86
Central Provinces ...	18	54.5	137 9 6	515 14 3	26.68	3.23	2 8 6	9.10	36.04
Orissa ...	47	111.0	282 13 6	1,535 11 6	18.42	7.51	2 8 9	21.31	35.24
Bengal ...	49	127.5	486 4 6	1,874 4 0	25.95	12.19	3 13 0	25.84	47.18
Madras ...	17	37.5	104 8 6	563 10 9	18.55	3.13	2 12 6	7.51	41.68
United Provinces ...	33	95.5	133 4 0	1,284 3 0	10.33	3.67	1 6 3	21.32	17.21
Punjab ...	26	65.5	453 10 0	940 4 6	48.26	15.64	6 14 9	20.25	77.23
Native States ...	14	37.5	48 0 0	313 14 0	15.19	4.42	1 4 6	17.94	24.64
Nepal ...	4	6.5	40 7 3	140 14 0	28.76	3.95	6 3 6	5.83	67.75
North-West Frontier Province.	3	6.0	36 0 0	99 9 0	36.22	9.33	6 0 0	15.79	59.40
Bombay ...	1	2.0	17 0 0	37 12 0	45.03	7.23	8 8 0	7.55	96.42
Assam ...	3	5.5	11 4 0	86 8 0	13.05	7.79	2 0 9	28.95	26.91
Total ...	286	711.5	2,153 15 3	9,702 8 3	22.20	6.67	3 0 6	15.93	41.37

The table shows that 286 families or 27·5 per cent of all have reported dependents living away. This figure apparently of no small magnitude, is in fact less than what we might have expected from the wide prevalence of joint family in our country; from the difficulty of housing in the industrial areas; and from the possible advantages of country life so often suggested to be a cause of the migratory character of our workers. It presumably hints at the gradual disruption of the workers' attachment to their country-homes, and consequent growth of a proletariat population. It is no less probable that workers are none-too-well-off to spare for remittance to needy relations for whose support they might be morally obliged. The Central Provinces, Madras, Nepal and Bombay show the smallest percentages of families reporting dependents living away, namely, 12·1, 17·3, 10·0 and 14·3 all these being round about half the general percentage. These areas, specially the first three, have evolved specialised industrial families. The largest percentages of such families occur in Assam, Bengal, Orissa, United Provinces and the Punjab, the respective percentages being, 45·8, 38·8, 34·0 and 32·9. Bihar just falls short of the general percentage while the Native States and the North-West Frontier Province exceed the general percentage only slightly; their percentages in the order named are 25·4, 29·8 and 30·0.

The number of dependents living away in term of adults forms 57·9 per cent of the population of families reporting such dependents. But the amount remitted to them is only 22·20 per cent of the income of such families. This shows that even the few dependants living away are so in name only.

An adult dependant living away gets only 37·2 per cent of the dividend enjoyed by a resident consumer. The percentages that adult dependants living away form of the average family in the provinces and states are between 52 and 59 for Bihar, Orissa, Bengal, Nepal, North-West Frontier and Bombay, between 60 and 63 for the United Provinces, Punjab and the Native States, 75·2 for the Central Provinces, between 43 and 49 for Assam.

If we relate these percentages to the shares of incomes remitted home for families reporting dependants living away the degree of their dependence would be clearly revealed. The dividend enjoyed by an adult dependant living away for Bihar, the Central Provinces and Orissa works out at 32·1, 35·5 and 33·6 per cent of the average dividend of a resident consumer of



these areas. The percentages for Bengal and Nepal are 46.0 and 49.3 ; those for the Native States and Assam are 25.2 and 27.0 ; for the United Provinces it is only 16.6 ; for Madras 42.7 ; while for the North-West Frontier Province, the Punjab and Bombay they work out at 68.9, 78.3 and 85.3. Thus only in the last three provinces does the dividend work out at two-third or above of the share of an average resident consumer. These provinces, however, account for only 30 out of 286 families reporting dependants living away. In Bengal and Nepal the share comes roughly to a half, in Madras two-fifths ; in Bihar, the Central Provinces and Orissa to one-third ; in Native States and Assam to one-fourth and in the United Provinces only to one-sixth.

The percentages of all incomes remitted and the percentage that adult dependants living away form of all the adults in the families broadly tell the same story. The extent of dependence shown is hardly different from ratios of dividends of dependants living away to those of resident consumers. The absolute share in rupees, annas and pies should be compared with the corresponding shares of the resident consumer.

More enlightening review of dependants living away, however, would be from the point of view of income grouping. The statistics are summarised in the table below :—

TABLE No. 22.

Income groups.

Number of families.	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and above.	Total.
1	2	3	4	5	6	7	8	9
Number of families ...	5	18	24	67	73	68	31	286
Men ...	3	16	19	56	70	64	31	259
Women ...	4	20	25	66	73	95	44	327
Children 0—5 years ...	1	2	4	5	33	24	14	83
Do. 5—10 years ...	3	5	2	12	19	13	14	85
Do. 10—15 years ...	1	7	1	6	34	18	16	83
Number of dependants in terms of adults.	9·5	43·0	47·5	133·5	186·0	195·0	97·0	711·5
Amount remitted in Rupees, annas and pies.	17 0 0	95 10 0	73 13 9	419 8 6	430 11 6	565 1 0	552 2 6	2,153 15 3
Income of families making remittances.	46 11 0	247 2 6	428 1 9	155 9 3	2,572 5 3	3,158 4 0	1,692 6 6	9,702 8 3
P. C. of their incomes remitted.	36·41	38·46	17·25	26·93	16·74	17·90	32·63	22·20
P. C. of all incomes remitted.	7·08	7·70	3·63	7·00	5·18	6·60	9·32	6·67
Average dividend per adult dependants.	1 12 9	2 3 6	1 9 0	3 8 3	2 5 0	2 14 3	5 11 0	3 0 6
P. C. of family shown as adult dependants.	10·16	12·70	10·86	14·12	16·61	20·53	16·71	15·93
Extent of dependence ..	69·69	60·63	33·43	49·58	31·19	32·15	55·77	41·87

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The number of families reporting dependants living away reduced to percentages of all the families in the several income grades form an ascending series from the lowest income grade to the highest but one. In the grade of incomes above Rs. 50, the percentage falls slightly on account of a number of factors. The percentages from the lowest to the highest income grade are 17·9, 18·6, 20·2, 26·9, 29·7, 35·2 and 28·7. Thus dependants not residing with the workers come into more and more prominence as the families rise in the scale of income. In the lowest grades the incomes can be hardly spared for members outside the worker's natural family but with rise in incomes joint family imposes its obligations. The numbers of dependants living away form roughly between 50 and 60 per cent of the total populations of the families reporting such dependants in almost all the income of grades, the exact percentages being 56·8, 68·3, 53·1, 52·5, 58·34 and 58·2 from the lowest to the highest grade of income. The fractions of the families residing away thus show a general uniformity of size. The percentages that remittances form of the incomes of families making remittances, however, exhibit no such uniformity and here it is that the precise character of the dependants is revealed. The table shows that the percentages remitted in families with incomes of less than Rs. 15 are considerable. The percentage declines sharply in case of families with incomes between Rs. 15 and Rs. 20. In the grade Rs. 20—30 it rises again, though not as much as in the two lowest grades of income to fall by about a third in the income grades "Rs. 30—40 and Rs. 40—50". Above Rs. 50 the percentage again rises. The undulating nature of the remittances curve shows four decisive points in the income scale, namely, Rs. 15, Rs. 20, Rs. 30 and Rs. 50.

In the two income grades below Rs. 15, the families reporting dependants living away are relatively few in number but in cases dependants have been reported the size of remittances is considerable; the dividend of each adult dependant being 64·1 and 56·3 per cent of the share of an average resident consumer. This shows that the dependants living away are members of the workers' natural family to whom the workers' obligation is vital. Such members have been left at home because life at this centre is too dear and too difficult to admit of their living here comfortably. As a matter of fact the size of the family is the smallest in these two groups showing that the family in most cases consists of an adventurous man and a wife.

Families with incomes between Rs. 15 and Rs. 20 are only slightly better than those in the lowest two grades but in this case the need for forcible tearing up of the natural family is not

as urgent. The dependants living away are more likely than not, members of the joint family and the contribution made is smaller per head than in the first two grades. The dividend per dependant works out only at 32·5 per cent of the share of a resident consumer.

Above Rs. 20 we rise into a different economic stratum. The group Rs. 20—30 are of the lower middle class extraction and conscious of a standard they should maintain. Proportionately larger number of families report dependants living away. The majority of such dependants are members of the workers' natural family. The volume of remittance is again considerable and the share coming to an adult dependant not residing with the worker comes to 51·3 per cent of the share of a resident consumer, the percentage being slightly moderated on account of the inevitable presence of members of joint family to whom also some remittance must be made.

The two next higher grades of income, namely, between Rs. 30 and Rs. 50 constitute the middle class par excellence. Workers can maintain their natural families at the work place without great discomfort. Most of the dependants living away are now members of the joint family and size of the remittance is again low. The share coming to such dependant comes to only 29·9 and 30·7 per cent of the share of the resident consumer in these two grades.

Above Rs. 50 we are definitely among families of the higher middle class who form a separate stratum and as in the grades "Rs. 20—30", the contribution to the dependants living away is again high, the share accruing to a non-resident dependant forming 56·1 per cent of that falling to a resident consumer.

The absolute amount remitted per adult dependant should be compared with the dividends of the resident consumer in the appropriate grades. The percentages that remittances form of the total incomes, and the percentages that non-resident dependants form of the adult population of the families give a view of the extent of dependence of the non-resident dependants. The extent of dependence tallies almost uniformly with ratio of dividend accruing to a non-resident dependant to that of a resident consumer.

The above considerations throw some light on the economic position of the various income grades. Life in grades of income below Rs. 20 is definitely hard. It is tolerably comfortable in the grade Rs. 20—30; it is moderately well off in grades between Rs. 30 and Rs. 50, while it rises into relative affluence above Rs. 50.

## CHAPTER III.

### INCOME.

In considering incomes it has been thought necessary to consider the different concerns separately. This is because Tata Iron and Steel Company has a definite classification of workers into weekly paid coolies, monthly paid workers and contract labourers ; while other concerns have no such definite classification. In most of them workers are overwhelmingly temporary to be taken up or thrown off as the employers choose. The classification of workers referred to above in the Tata Iron and Steel Company, and its absence elsewhere has resulted in differences in payments between the various groups of workers. The Tata Iron and Steel Company workers classed as monthly-paid have certain economic privilege like bonus and Provident Fund contributions which are denied to the weekly coolies and contract workers under the same concern. Elsewhere such privileges and benefits are almost entirely absent. These considerations justify a slight departure in our consistent survey of labour enmasse.

The distribution of families according to income and its various components are shown in the table below for the Tata Iron and Steel Works.

TABLE No. 23.

Nature of income.	Less than Rs. 10.	From Rs. 10 to 15.	From Rs. 15 to 20.	From Rs. 20 to 30.	From Rs. 30 to 40.	From Rs. 40 to 50.	From 50 over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Primary earnings ...	27 14 0	532 9 9	1,069 7 3	2,337 10 3	4,476 8 0	5,492 3 0	3,810 13 3	17,747 2 6
Additional earnings from industry.	...	15 11 3	79 2 9	478 10 6	1,067 9 6	1,422 14 3	995 9 9	4,059 10 0
Supplementary earnings not incidental to industry.	0 12 0	3 1 0	14 7 0	59 1 0	69 8 0	153 2 0	237 0 0	536 15 0
Total income ...	28 10 0	551 6 0	1,163 1 0	2,875 5 9	5,613 10 0	7,068 3 9	5,043 7 0	22,343 11 6
P. C. that primary earnings form of the total income.	97.4	98.6	92.0	81.3	79.6	77.8	75.6	79.5
P. C. of additional earnings from indus- try to total income.	...	2.8	6.8	16.6	19.2	20.1	19.7	18.1
P. C. of supplementary earnings not incidental to industry form total income.	2.6	.6	1.2	2.1	1.2	2.1	4.5	2.4
Number of families ...	3	42	70	112	159	159	92	637
Average income per family.	9 8 8	13 2 0	16 9 10	25 10 9	35 4 11	44 7 3	54 13 1	35 1 6

Additional earnings from industry comprise items like bonus, over-time pays, acting allowances and Provident Fund contribution by the Company. Supplementary incomes, not incidental to industry, include incomes from agriculture and so forth. They are shown separately for the various income grades under this company. The figures in brackets indicate families where such items occur.

TABLE No. 24.

*Additional earnings incidental to industry.*

Income Group.	Bonus.	Overtime.	Acting.	Provident Fund.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than 10 ...	...	...	...	...
10 but not 15 ...	13 13 3 (12)	...	...	1 14 0 (2)
15 but not 20 ...	65 4 6 (49)	...	...	13 14 3 (11)
20 but not 30 ...	366 12 6 (88)	...	...	111 14 0 (75)
30 but not 40 ...	748 2 6 (127)	...	21 4 0 (2)	298 3 0 (135)
40 but not 50 ...	933 0 6 (143)	13 0 0 (1)	64 10 0 (3)	412 3 9 (151)
50 and over ...	695 7 0 (90)	...	13 0 0 (1)	287 2 9 (90)
Total ...	2,822 8 3 (509)	13 0 0 (1)	98 14 0 (6)	1,125 3 9 (464)

TABLE No. 25.

Supplementary Earnings not incidental to Industry.

Income Group.	Agriculture.	Market-gardening.	Dairy.	Craft and industry and domestic service.	Shopping and vending wares.	Rent.	Miscellaneous.
1	2	3	4	5	6	7	8
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than 10 ...	...	0 12 0 (1)	...	...	...	...	...
10 not 15 ...	...	1 6 0 (1)	1 0 0 (1)	...	...	...	0 11 0 (1) coal picked pipe.
15 not 20 ...	2 0 0 (1)	...	...	...	...	9 6 0 (3)	3 1 0 (1) coal picked pipe.
20 not 30 ...	...	...	30 12 0 (4)	13 0 0 (2)	...	11 9 0 (4)	3 12 0 (1) coal picked pipe
30 not 40 ...	5 0 0 (1)	...	17 0 0 (5)	2 0 0 (1)	..	28 0 0 (4)	17 8 0 (3)
40 not 50 ...	10 0 0 (2)	11 0 0 (6)	108 8 0 (17)	...	...	32 4 0 (12)	1 6 0 (1)
50 and over ...	10 0 0 (1)	10 0 0 (5)	98 0 0 (16)	...	32 8 0 (3)	37 8 0 (8)	39 0 0 (3)
<b>Total</b> ...	<b>27 0 0 (5)</b>	<b>23 2 0 (13)</b>	<b>255 4 0 (43)</b>	<b>15 0 0 (4)</b>	<b>32 8 0 (3)</b>	<b>118 11 0 (31)</b>	<b>65 6 0 (10)</b>

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It would appear that the lowest income grade is without any of the additional earnings from industry. Of supplementary incomes not incidental to industry only one family has as. 12 as the equivalent of kitchen garden products valued at market price and consumed at home.

In the grades "Rs. 10 but not Rs. 15" Rs. 13-3-3 is shown as bonus for 12 families. This inconsiderable bonus per head is largely attendance bonus of sweepers, etc., who are daily rated but get full wages for the month; although they may have a day or 2 off in the month. So also in the grade "Rs. 15 to Rs. 20". Only after the grade Rs. 15 to Rs. 20 is passed do we get appreciable payment made in shape of bonus. Thus in the four highest grades percentages of workers getting bonus are 78·571; 79·874; 89·937 and 97·826, respectively, from the lowest to the highest. These percentages form an ascending series. The respective percentages that bonus bears to the total incomes for these 4 grades are 8·778; 18·89; 13·20 and 13·79.

Total payment made in the shape of bonus comes to Rs. 2,822-8-3 which forms 15·9 per cent of the primary earnings of the workers and 12·6 per cent of the total income. The number of families benefiting by the scheme comes to 509 or 79·906 per cent of all the families working under this concern.

Overtime pay occurs in a single case in the income grade Rs. 40 but not Rs. 50 only in which one worker gets Rs. 13. Practically there is no system of overtime payment in vogue.

Acting allowance is similarly insignificant, only 6 families in the 3 highest income grades receiving Rs. 98-14-0 or Rs. 16, as ·8 per family on the average.

The other considerable item of additional earning from industry ranking only second in importance to bonus is contribution to Provident Fund made by the company. The scheme benefits 464 families or 72·841 per cent of all the working families. The rule is to contribute one-twelfth of the primary income accruing to the workers. This, however, applies only to workers who get more than Re. 0-8-9 a day and who are not regarded as temporary. This is the reason why this item is altogether absent in the lowest income grade and is relatively insignificant in the grade Rs. 10 but not Rs. 15 and in grade Rs. 15 but not Rs. 20. In the highest 4 grades, however, like bonus, this item has appreciable importance. The percentages of

families enjoying this benefit in the four income grades are 66.964; 84.905; 94.968; and 97.826 from the lowest to the highest grades. These percentages clearly form an ascending series. The percentages that the Provident Fund contribution by the company for the various income grades bear to the total income of those grades are for the four grades referred to above 4.78; 6.66; 7.50 & 7.53, respectively. The percentage that contribution to Provident Fund by the company bears to the primary incomes of the workers; and that it bears to the total income would be 6.33 and 5.03.

An examination of the supplementary incomes not incidental to industry shows that income from agriculture, amounting to Rs. 27 is found only in 5 families and this income is at all considerable only in 4 families of the 3 highest grade. It forms only .11 per cent of the total earnings of the workers.

Kitchen gardening is quantitatively a little less important amounting to Rs. 23-2-0 and shared by 13 families. Domestic service yields Rs. 15 to 4 families while vending wares brings Rs. 32-8-0 to 3 families.

Rs. 65-6-0 has been shown as the supplementary income of 10 families and comprises the value of coal picked up by 5 families (Rs. 7-8-0); interest from Saving Bank accruing to one family (Rs. 1); free housing with relations for one family (Rs. 1-8-0); brother's stipend for one family (Rs. 15); and income from teaching accruing to 3 families (Rs. 25-6-0); and remittance received from home by one family (Rs. 15).

These various items of income amount to Rs. 163 and are shared by 35 families.

House rent yields Rs. 118-11-0 to 31 families. But the most important of such incomes is dairy or net-income from milch cows whether the milk is consumed by the family or sold to others. Dairy has been reported to be a source of income in 43 families or 6.76 per cent of the families, but almost all this income is found in grades of income above Rs. 20. Income from dairy (namely Rs. 255-4-0) forms 1.14 per cent of the total of all incomes; while income from rent forms .53 per cent of all the incomes. These two items form 47.53 per cent and 22.10 per cent of all the incomes not incidental to industry. All the income not incidental to industry, however, comes to only Rs. 536-15-0 which forms 2.40 per cent of all

the incomes of the workers. The number of families sharing such incomes is 109 or 17.11 per cent of all the families. This percentage is not inconsiderable but the percentage that incomes from sources outside the main industry forms of the total income is absolutely insignificant and shows how the workers of this concern are utterly dependent on the main industry. The other incomes do not modify this dependence in any way. The income from agriculture and market gardening ought to be a measure of the workers dependants on land. These two sources yield an income of 22 per cent of the total.

The conclusion is evident, we have here a full fledged proletariate class in existence.

In the case of supplementary earnings not incidental to industry, no definite trend is discoverable as we move from the lowest to the highest income grade. On the average such income makes up 2.4 of the total income of all the families.

In the case of additional earnings from industry, however, there is a definite trend upwards as we rise in the income-grades. The percentage is not important until we come to the grade Rs. 15 to Rs. 20 where it is 6.8 or about one-fifteenth of all the incomes. Above this grade the percentages show that this category of income accounts between one-sixth and one-fifth of the total incomes of the families in the various income grades. Correspondingly the percentage that primary earnings form of the total income declines. On the average primary earnings form less than 80 per cent of all the incomes and in the 3 highest grades the percentages are even less.

Outside Tata Iron and Steel Company the analysis of the incomes is shown in the following table :

TABLE No. 26.

Nature of incomes.	Less than 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 and over.	Total.
1	2	3	4	5	6	7	8	9
Primary earnings...	Rs. a. p. 183 0 9	Rs. a. p. 646 10 0	Rs. a. p. 815 13 6	Rs. a. p. 2,895 8 0	Rs. a. p. 2,373 3 6	Rs. a. p. 1,316 8 0	Rs. a. p. 688 2 0	Rs. a. p. 8,918 13 9
Additional earnings from Industry.	0 12 6	20 1 0	22 4 0	146 15 0	269 3 0	70 6 0	143 3 0	672 12 6
Supplementary incomes from industry.	...	1 0 0	...	2 0 0	...	...	...	3 0 0
Other supplementary income.	27 15 6	23 7 0	33 0 0	72 0 0	68 15 0	101 7 0	49 8 0	374 4 6
Total income	211 12 6	691 2 0	871 1 6	3,116 7 0	2,709 5 6	1,488 5 0	880 13 0	9,968 14 9
Percentage of primary earnings to total income.	86.4	93.6	93.7	92.9	87.6	88.5	78.1	89.2
Percentage of earnings from industry other than the primary earnings, to total income.	4	3.0	2.5	4.8	9.9	4.7	16.3	6.8
Percentage of other supplementary incomes to total.	13.2	3.4	3.8	2.3	2.5	6.8	5.6	3.8
Number of families	25	55	49	137	87	34	16	403
Average income per family.	8 7 6	12 9 0	17 12 6	22 12 0	31 2 3	43 12 4	55 0 10	24 11 9

We notice that outside the Tata Iron and Steel Company the dependence on sources other than the main industry is slightly greater, the percentage of other supplementary incomes being 3.8 as compared to the corresponding percentage of the Tata Iron and Steel Company where it is only 2.4. Supplementary income from the industry totals only Rs. 3 and is only a value-equivalent of the surplus of carbide supplied to the miners in the Mosabari valley to facilitate their work underground. There is no corresponding item in the Tata Iron and Steel Company.

The percentage of all earnings from industry other than the primary earning is only 6.8 while in the Tata Iron and Steel Company the percentage is as large as 18.1 or about three times as large. This percentage does not rise beyond 3 in the grades of income below Rs. 20; and beyond 5 in the grades of income above Rs. 20 except in the grades of Rs. 30 but not Rs. 40 and Rs. 50 and over. The corresponding Tata Iron and Steel Company figures are very much higher.

The percentage of the primary earnings to the total incomes is, as we would expect to find, higher outside the Tata Iron and Steel Company. We notice that on the average the primary earnings form about nine-tenths of all the incomes. In no income grade is the percentage lower than 78 and in most of the grades the percentage is higher. The incomes from the main industry other than the primary earnings are composed of the items: bonus, overtime pay, acting allowance, provident fund contribution; and value of surplus carbide used by the workers.

The valuation of carbide is not very precise and the item occurs only among Mosabani miners. The total value, which is no under-estimate, is Rs. 3 only and is accounted for by about 7 or 8 families only. Altogether this is too negligible and precarious a source of income to be counted among regular incomes.

Bonus is non-existent in the lowest income grade and in the higher grades the payments made in the shape of bonus are Rs. 17; Rs. 8-11-0; Rs. 109-2-0; Rs. 188-4-0; Rs. 50-13-0 and Rs. 96-6-0. The families benefited in the same order are 10, 4, 26, 38, 8, and 13. The total payment made in shape of bonus is Rs. 470-4-0 benefiting 99 families or about one-fourth of all the families and forming about 4.3 per cent of all the incomes. In the Tata Iron and Steel Company percentage of families benefited is as high as about 80, while the percentage that bonus forms of all the incomes is 12.6 or

about three times as much as in the concerns outside Tata Iron and Steel Company. Only in the Tinsplate Company is there a definite scheme of paying bonus. 74 out of 84 families or about five-sixths of the families enjoy bonus under this company and the total sum paid out in shape of bonus comes to Rs. 361-11-0 which accounts for four-fifths of all the sums paid in shape of bonus.

The East Indian Railway works come next from the point of view of the bonus paid. Eight families out of 22 or about one-third of all the families enjoy bonus. The Mowbandar works, the Mosabani Mines and the Wire and Steel Products Company pay some kind of bonus which benefits hardly 10 per cent of all the families under them. The Hume Pipe Company and the Tatanagar Foundry pay no bonus at all. Other incomes from industry except Provident Fund contribution are inconsiderable.

The total contribution made to Provident Fund is only Rs. 170-14-0 and the number of families benefitted is only 66. In grades of income below Rs. 20, the number of families benefitted is only 3 or only 2.3 per cent of all the families in those groups. Even in higher income grades the percentage of families benefitted is only 2.1. The corresponding figures for the Tatas are much higher. Of these 66 families, 60 belong to the Tinsplate Company and only 6 to the Wire and Steel Products Company whose total contribution is only Rs. 14 out of Rs. 170-14-0.

The survey shows that the varieties of payments to workers in the Tata Iron and Steel Company are much larger than elsewhere and are only approximated by the Tinsplate Company. In all the concerns the incomes from sources other than the main industry are small—being only between 2 and 4 per cent. But while in the case of the Tata Iron and Steel Company primary earnings do not form more than 80 per cent of the total income, elsewhere they make up about 90 per cent.

Among non-industrial earnings dairy accounts for Rs. 200-12-0 or over half of all such earnings. Rent yields Rs. 28-15-0 to 10 families; agriculture Rs. 25-14-6 to 13 families and craft Rs. 23-8-0 to 4 families; domestic service accounts for Rs. 18 benefiting 5 families; poultry Re. 1 to one family and market-gardening Rs. 9-15-0 to 13 families. Rs. 66-4-0 comes from miscellaneous sources including remittances from outside.

From all this, dependence on land appears to be as little as in the case of Tata Iron and Steel Company workers. Variety of industrial earnings is not important in itself unless it leads to larger incomes on that account. The variety of incomes does appear to be responsible for raising the earnings of the Tata Iron and Steel Company workers to some extent. The average income of a working family under Tata Iron and Steel Company is over Rs. 35 while that of a working family under other concerns is less than Rs. 25.

In the table below the families have been classified according to income in the various industrial concerns.

TABLE No. 27.

## Number of families in the Various Income Grades.

Concerns.	Less than 10.	10-15.	15-20.	20-30.	30-40.	40-50.	50 and over.	Total.
1	2	3	4	5	6	7	8	9
Tata Iron and Steel Company.	3	42	70	112	159	159	92	637
Tinplate Company	2	4	5	20	36	5	12	84
Wire and Steel Products.	2	17	11	17	4	3	2	56
Tatanagar Foundry	1	4	14	10	6	1	...	36
The Indian Cable Company.	...	6	1	8	8	8	1	32
East Indian Railway Works.	...	...	1	9	4	8	...	22
The Hume Pipe Company.	5	3	1	...	2	...	...	11
Mosabani Mines ...	9	14	11	58	16	5	1	114
Mowbhandar Copper Works.	6	7	5	15	11	4	...	48
Total ...	28	97	119	249	246	193	108	1,040
Actual income ...	Rs. a. p. 240 6 9	Rs. a. p. 1,242 8 0	Rs. a. p. 2,034 2 6	Rs. a. p. 5,991 12 9	Rs. a. p. 8,322 15 6	Rs. a. p. 8,556 8 9	Rs. a. p. 5,924 4 0	Rs. a. p. 31,312 9 9
Average income per family.	8 9 5	12 12 11	17 1 6	24 1 0	33 13 4	44 5 6	54 13 8	31 1 1



If we compare the average incomes of various grades of all the concerns taken together with the corresponding averages of the various groups under the Tata Iron and Steel Company on one hand and of all the other concerns on the other, we find that Tata Iron and Steel Company figures are almost always higher. The average income of a working family at this centre happens to be Rs. 31-1-1 but if he is working under the Tata Iron and Steel Company he is likely to have an average income of Rs. 35-1-6; whereas if he be working under the other concerns his average income would be on the average only Rs. 24-11-9. If we distribute the families according to the territories of their origin and their income grade, the position may be summed up in the following table:—

TABLE No. 28.

Number of families in various income-grades.

Province or State.	Less than 10.	10-15.	15-20.	20-30.	30-40.	40-50.	50 & over.	Total.	Total income.	Average income.
1	2	3	4	5	6	7	8	9	10	11
Bihar ... ..	18	84	47	50	64	43	19	280	Rs. a. p. 7,619 11 3	Rs. a. p. 27 3 5
Central Provinces ... ..	1	19	25	48	25	22	9	149	4,194 13 0	23 2 5
Orissa ... ..	...	18	10	32	30	18	13	121	3,674 14 3	31 1 10
Bengal ... ..	2	2	2	20	27	34	20	107	3,990 0 0	37 4 8
Madras ... ..	...	7	7	23	23	19	14	98	3,340 3 3	34 1 4
United Provinces ... ..	...	6	6	14	27	24	20	97	3,630 15 9	37 6 11
Punjab ... ..	1	1	5	15	26	22	9	79	2,900 2 9	36 11 5
Native States ... ..	5	8	10	16	5	1	2	47	1,085 12 0	23 1 7
Nepal ... ..	1	2	7	20	7	2	1	40	1,024 2 0	25 9 10
North-West Frontier Province ... ..	...	...	...	1	5	3	1	10	383 15 6	38 6 4
Bombay ... ..	...	...	...	1	6	...	...	7	233 8 0	33 5 9
Assam ... ..	...	...	...	4	1	...	...	5	144 8 0	28 14 5
Total ... ..	28	97	119	249	246	193	108	1,040	32,312 9 9	31 1 1

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We note that of 28 families in the lowest income-grade 18 are from Bihar and 5 from the Native States. 4 other provinces make up 5 families. The percentage of Bihari families in the lowest income-grade and that of the Native States families are respectively 6.43 and 10.64.

Altogether 99 families from Bihar or 35.36 per cent of all the families of Bihar are in income grades below Rs. 20. For the Central Provinces this percentage is 30.20; for Orissa 23.14; for Madras 14.28; for the United Provinces 12.37; for the Punjab 8.86; for the Native States 48.90; for Nepal 22.50 and for Bengal 5.60. Thus Bihar is exceeded only by the Native States and is approached by the Central Provinces. The North-West Frontier Province, Bombay and Assam have no family in the grades of income below Rs. 20; while the provinces other than Bihar, the Central Provinces and Native States have only small proportion of the families in the three lowest income grades. For this centre as a whole, 244 families or 23.46 per cent are found in the three last income-grades. The position should be compared with the division of families according to skill.

The most numerous income-grade is Rs. 20 but not Rs. 30 followed closely by income group Rs. 30 but not Rs. 40. These two groups account among them, 495 families or 47.59 per cent of all the families. Thus the most fashionable incomes lie between Rs. 20 and Rs. 40. In Bihar the number of families in these income-grades is 114 or 40.71 per cent which is smaller than the general average. Assam and Bombay count all their families in these two income-grades while the North-West Frontier Province has 66 per cent of its families in these two income-grades and 40 per cent above these grades. Even Nepal has 67½ per cent of its families in these two income-grades. The appropriate percentage for the Central Provinces, Orissa, Bengal, the United Provinces, the Punjab and Native States are respectively, 48.99; 51.24; 43.92; 52.04; 42.26; 51.89 and 44.67.

In grades of income above Rs. 40, Bihar has got only 67 families or 23.93 per cent. The respective percentages for the Central Provinces, Orissa, Bengal, Madras, the United Provinces, the Punjab, the Native States, Nepal and North-West Frontier Province are 20.80, 25.62, 50.47, 33.67, 45.36, 39.24, 6.38, 7.50 and 40. Thus Bengal, the United Provinces, the Punjab and North-West Frontier Provinces and also Madras have quite a large percentage of their workers

in grades of income above Rs. 40. The Native States and Nepal are negligible in these two grades.

Altogether 301 families or 28·94 per cent are found in these two income-grades. The position should be compared with the division of the workers according to the skill.

Viewed according to the communities, the people with the largest incomes are those from the North-West Frontier Province, the United Provinces, Bengal, the Punjab, Madras and Bombay in that order. Bihar has the smallest average incomes except for Nepal and the Native States. The Central Provinces and Assam followed by Nepal and the Native States correspond to the level of incomes of Bihar.

## CHAPTER IV.

### Expenditure.

Information on the details of expenditure of the dependants living away is not available, and even if it were, the way the money remitted by the workers to dependants living away is spent cannot be ascertained since they must have sources of support other than the sums remitted to them. Accordingly we shall examine the income available for the consumption of the resident consumers alone.

The income available for the consumption of the resident members will be taken to be equivalent to the total income of the working families *minus* the amount remitted home *minus* the amount contributed to the Provident Fund. The last item is the only recognized and regular saving and no great error will be committed in taking this to be the only kind of saving. If some families have deposits with banks or in hoards to which they add from time to time, these have not been reported to us and presumably such deposits could not be of any considerable magnitude.

Conceivably there could be other deductions from the total income. Thus whatever the families pay away towards liquidating their debts must be regarded as not available for their consumption. There could, on the other hand, be additions to the available income as by contracting debt. We have not, however, been able to enter into such niceties because the relevant information is either lacking or untrustworthy. As a rough measure, therefore, our scheme must stand.

In the table below the dividend per adult consumer has been computed from the point of view of their territorial origins.

TABLE No. 29.

Province or State.	Total no. of adults.	Total income.	P. F.	Remittance.	Net income available for consumption.	Dividend per adult consumer.
1	2	3	4	5	6	7
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Bihar	1015.5	7,619 11 3	625 12 0	403 2 0	5,590 13 3	6 7 9
Central Provinces.	544.5	4,194 13 0	306 4 0	137 9 6	3,750 15 6	6 14 2

TABLE No. 29—concl'd.

Province or State.	Total no. of adults.	Total income.	P. F.	Remittance.	Net income available for consumption.	Dividend per adult consumer.
1	2	3	4	5	6	7
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Orissa ...	410.0	3,764 14 3	234 4 9	282 13 6	3,247 12 0	7 14 9
Bengal ...	366.0	3,990 0 0	411 10 0	466 4 6	3,092 1 6	8 7 3
Madras ...	461.5	3,340 3 3	278 7 9	104 8 6	2,957 3 0	6 6 6
United Provinces.	352.5	3,630 15 9	393 10 6	133 4 0	3,104 1 3	8 12 9
Punjab ...	258.0	2,900 2 9	212 1 0	453 10 0	2,234 7 9	8 10 6
Native States	171.5	1,085 12 0	49 5 6	48 0 0	983 6 6	5 12 3
Nepal ...	105.0	1,024 2 0	16 10 0	40 7 3	967 0 9	9 3 3
North-West Frontier Province.	32.0	383 15 3	47 10 0	36 0 0	300 5 6	9 6 3
Bombay ...	24.5	233 8 0	16 8 0	17 0 0	200 0 0	8 2 6
Assam ...	13.5	144 8 0	...	11 4 0	133 4 0	9 14 0
<b>Total ...</b>	<b>3754.5</b>	<b>32,312 9 9</b>	<b>2,592 3 6</b>	<b>2,153 15 3</b>	<b>27,566 7 0</b>	<b>7 5 6</b>

We notice that the general average comes to Rs. 7-5-6 which is probably much higher than the corresponding figure for any other industrial centre in Bihar and presumably in India. The provincial averages, however, do not follow this general average closely. The Native States have an average dividend of only Rs. 5-12-3 making the downward deviation as large as 21.5 per cent. The highest dividend is found in the case of Assam where it is Rs. 9-14-0, making the upward deviation even larger, namely 34.5 per cent. Thus apparently we have a range as wide as 56.0 per cent which would take away almost all the meaning out of the general average.

To understand the position better we must examine what percentage of the population is affected by a particular dividend. The highest dividends, namely between Rs. 9 and Rs. 10 are enjoyed by workers from Assam, the North-West Frontier Province and Nepal. These make up 150.5 adults or only 4 per cent of all the adults. The United Provinces, the Punjab, Bengal and Bombay follow in that order, their dividends lying between Rs. 8 and Rs. 9. The total number of adults comprised by these four provinces is 1001.0 or only 26.7 per cent of all the adults. The only other province which has a dividend

slightly higher than the general average is Orissa which has a dividend of Rs. 7-14-9 or slightly less than Rs. 8. This province comprises 410.0 adults or 10.9 per cent of all the adults. The Central Provinces have a dividend of Rs. 6-14-3 or 6.2 per cent lower than the general average but they comprise 544.5 adults or 14.5 per cent of the population. Bihar has a dividend lower than all the territories other than Madras and the Native States. Its dividend is lower than the general average by 11.7 per cent but it comprises 1015.5 adults or 27.0 of all the adults. Madras has a dividend of Rs. 6-6-6 or 128 per cent lower than the general average for 461.5 adults or 12.3 per cent of all the population. The Native States have as we have noted above the lowest dividend actually 21.5 per cent lower than the general average—yet, the number of adults they comprise is 171.5 adults or 4.6 per cent of all the population.

Thus we have :—

- 4.0 per cent of the population by provinces or states enjoying a dividend of between Rs. 9 and Rs. 10.
- 26.7 per cent of the population by provinces or states enjoying a dividend of between Rs. 8 and Rs. 9.
- 10.9 per cent of the population by provinces or states enjoying a dividend of between Rs. 7 and Rs. 8.
- 53.8 per cent of the population by provinces or states enjoying a dividend of between Rs. 6 and Rs. 7.
- 4.6 per cent of the population by provinces or states enjoying a dividend of less than Rs. 6.

Altogether 58.4 or roughly three-fifths of the total population has a dividend lower than the general average and about two-fifths above the general average.

Of course, the dividends for the various territories have been affected by a number of factors. Thus although the Madrasis have a higher income per family than the Biharis, the Madrasi family is much larger and the dependants living away much fewer than those of Bihar. As a result the Madrasi dividend is lower than the Bihari dividend.

The provincial averages, however, can have a meaning only if the income groupings in all the provinces are similar. An analysis of the income grouping, however, shows that certain income groups predominate in some provinces rather than in others. Economic well-being is more largely conditioned by the income grouping than by territorial origin of the workers. Accordingly, we would get a more realistic picture of the

workers' well-being by examining the dividends by income-groups. The relevant statistics are presented in the table below:—

TABLE No. 30.  
INCOME GROUPS.

—	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and above.	Total.
1	2	3	4	5	6	7	8	9
Men ... ..	24	91	135	292	357	290	183	1,372
Women ... ..	34	111	153	309	318	272	165	1,362
Children (0-5) ... ..	16	65	81	170	223	160	92	807
Do. (5-10) ... ..	25	69	87	167	190	141	114	733
Do. (10-15) ... ..	11	53	36	85	116	85	65	451
Total no. of children ... ..	52	187	204	422	519	386	271	2,041
Number of adults ... ..	840	295.5	390.0	812.0	934.5	755.0	483.3	3754.5
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Total income ... ..	240 6 9	1,242 8 0	2,034 2 6	5,991 12 3	8,322 15 6	8,556 8 9	5,924 4 0	32,312 9 9
P. F. ... ..	...	21 14 6	43 12 8	310 9 6	723 2 6	846 3 6	641 9 3	2,592 3 6
Remittance ... ..	17 0 0	95 10 0	73 13 9	419 8 6	430 11 6	535 1 0	552 2 6	2,153 15 3
Net income available for consumption.	223 6 9	1,124 15 6	1,916 8 6	5,261 10 3	7,164 1 6	7,145 4 3	4,730 8 3	27,568 7 0
Dividend per adult consumer ... ..	2 10 6	3 13 0	4 14 9	6 7 9	7 10 9	9 7 6	9 12 6	7 5 6

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This table shows the downward deviation to be much greater than the upward deviation. The maximum downward deviation from the general average is 63·8 per cent while the maximum upward deviation is only 33·2 per cent. The general average, therefore, fails to bring out clearly the conditions in the lower income-grades although it roughly represents conditions in the higher grades.

The range between the maximum and minimum incomes is as wide as 97·0 per cent of the general average. The size of the general average is just a little lower than the dividend of the income-grade "Rs. 30 but not Rs. 40". Dividends above the general average are found only in the three highest income grades. The dividends of the two highest grades are nearly equal in magnitude and these grades are broadly on the same economic level. We can discern roughly four economic strata according to the size of the dividend, namely :—

Income-grades "Rs. 40 and over" comprising 1238·5 adults or 33·0 per cent have a dividend between Rs. 9-8-0 and Rs. 9-12-0.

Income-grades "Rs. 30 but not Rs. 40" comprising 934·5 adults or 24·9 per cent have a dividend of Rs. 7-10-9.

Income-grades "Rs. 20 but not Rs. 30" comprising 812·0 adults or 21·6 per cent have a dividend of Rs. 6-7-9.

Income-grades below "Rs. 20" comprising 769·5 adults or 20·5 per cent have a dividend of less than Rs. 5.

Thus about a third of the population is enjoying a dividend considerably in excess of the general average and must be definitely classed as moderately well-off. Over one-fifth has a dividend lower than the general average to the extent of 11·7 per cent and can be at least regarded as not "indigent". But a fifth of the population with a dividend below Rs. 4-14-9 is definitely poor. The poverty is more intense in the grades of income below Rs. 15 while in the grade of income below Rs. 10 the poverty becomes actual starvation. The latter, however, contains only 2·2 per cent of the total population. The analysis confirms the view that a working family at this centre cannot enjoy the reasonable minimum of comforts unless it has a minimum income of Rs. 20 a month.

The position disclosed, however, is on the whole better than in other industrial areas. The economic pyramid here has a base of affluence gently sloping to a relatively flat roof of indigence. We have thus an inverted pyramid very different from the usual one broad based on poverty and rising to a tapering point of affluence.

## A—food.

The incomes available for consumption are an index to the workers' wealth, but their happiness greatly depends on the judicious expenditure of their incomes. An analysis of the major heads of expenditure, therefore, would enable us to appreciate the resultant happiness better than we could by considering the size of the dividend alone. Such an analysis would also reveal the factors on which the cost of living of workers depends. Accordingly we begin the discussion with "Food" which is by far the most important item in the worker's budget. In the table below the expenditure on food per adult consumer by province or state has been shown along with the percentage that expenditure on food forms of the income available for consumption.

TABLE No. 31

Province or State.	Income available for consumption by resident consumers.	Expenditure on food.	Na. of resident consumers reduced into standardised adults for food consumption.	Expenditure on food per adult consumer.	Percentage of income spent on food.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.		Rs. a. p.	
Bihar	6,590 13 3	4,178 2 3	1022-00	4 1 5	63-39
Central Provinces	3,750 15 6	2,420 8 6	540-04	4 7 9	64-53
Orissa	3,247 12 0	2,044 9 6	420-36	4 13 10	63-25
Bengal	3,092 1 6	2,123 2 6	366-63	5 12 8	68-67
Madras	2,957 3 0	1,030 4 6	426-90	3 14 2	65-27
United Provinces	3,104 1 3	1,884 8 6	352-50	5 10 1	63-93
Punjab	2,234 7 9	1,904 9 9	227-40	7 4 2	85-24
Native States	988 6 6	653 11 6	170-86	3 13 3	66-14
Nepal	967 0 9	638 14 3	102-54	6 3 8	66-97
North-West Frontier Province.	300 5 6	270 14 0	32-32	8 6 1	90-20
Bombay	200 0 0	148 4 9	24-36	6 1 5	74-15
Assam	123 4 0	69 9 6	13-58	5 2 0	52-23
<b>Total</b>	<b>27,566 7 0</b>	<b>18,367 5 3</b>	<b>3204-48</b>	<b>4 13 3</b>	<b>66-63</b>

It would be noted that on the average the expenditure on food comes to Rs. 4-13-3 per adult consumer, and forms 66·63 per cent of the consumable income. The amount spent on food per adult consumer is not unduly large if we consider the relative dearness of living at this centre but the percentage the expenditure on food forms of the consumable income shows that nearly two-thirds of such income is spent in order to procure a frugal and barely sufficient diet. This high percentage of expenditure on food is a measure of economic distress of the working class. They have barely a third of their income left for the other pressing necessities of daily life, for insurance against emergencies and as a reserve against social events like marriage, birth and death. The economic life shows little resistance even against ordinary shocks.

If we compare the general average of expenditure on food and the general percentage that expenditure on food forms of the consumable income with the corresponding figures for the provinces or states, we notice little homogeneity of condition. The North-West Frontier Province and the Punjab show very much larger expenditure on food per adult than the other provinces but their expenditure appears to be inflated by deliberate exaggeration. The percentages that expenditure on food forms of their consumable incomes are shown to be as high as 90·20 and 85·24, respectively. These are incredibly high figures and if true, indicate an extravagant and imprudent class that needs or desires little else than food unless, of course, it can borrow indefinitely.

Even if we leave out the Punjabis and the Frontier Pathans as exceptional, we have not yet smoothed out the rugged curve of provincial expenditure. The percentage that expenditure on food forms of the available incomes, however, have become more reasonable and the deviation from the general percentage is not great. The percentages range from 62·95 to 68·67—a range of 5·72 per cent only—except in the case of Assam and Bombay. The Assamese form a homogeneous group all falling in the income-grades between Rs. 20 and Rs. 40. The percentage in their case is thus appropriately lower than the general percentage, and happens to be 52·23 only. Besides their expenditure on food comes to Rs. 5-2-0 per adult, and on the whole they are a reasonably happy class. The Bombay workers, on the other hand, have a higher expenditure on food per adult, but like the Punjabis and the Frontier Pathans, they show higher percentage of expenditure, namely 74·15.

Even among the provinces or states showing nearly equal percentage expenditure on food, the absolute expenditure per adult consumer is by no means equal. The Native States and Madras show the smallest expenditure per adult both below Rs. 4. On the average, their food consumption is much below the normal and they are otherwise poorest on the whole. Bihar, with the average expenditure of Rs. 4-1-5 is little better off from the point of view of food consumption and still much below the general average. The Central Provinces and Orissa are next in the ascending scale, more or less near the general average in respect of their expenditure on food. Bengal and the United Provinces come in the same class and with an expenditure appreciably above the general average and with the moderate size of the percentage food expenditure must be definitely classed as satisfactory from the point of view of food consumption. Curiously enough Nepal has one of the highest expenditure per adult and is quite well-off otherwise.

Apparently there is much room for improvement in the diet of the people of the Native States, Madras, Bihar and the Central Provinces.

Territorial analysis, however, lumps various income-groups into a homogeneous mass. The strains and stresses that the income-grouping reveals are more enlightening and more vital. Accordingly expenditure per adult and the percentage expenditure on food are presented in the following table from the point of view of the various income-grades.

TABLE No. 32.

Income groups.	Income available for consumption by resident consumers.	Expenditure on food.	No. of resident consumers reduced into standardised adults for food consumption.	Expenditure on food per adult consumer.	Percentage of consumable income spent on food.
	Rs. a. p.	Rs. a. p.		Rs. a. p.	
Less than Rs. 10 ..	223 6 9	195 13 0	85·70	2 4 7	87·64
Rs. 10 but not Rs. 15 ...	1,124 15 6	855 2 0	305·94	2 12 9	76·01
Rs. 15 but not Rs. 20 --	1,916 8 6	1,347 4 0	390·24	3 7 3	70·30
Rs. 20 but not Rs. 30 ...	5,261 10 9	3,908 14 3	816·04	4 12 8	74·29
Rs. 30 but not Rs. 40 ...	7,164 1 6	4,733 12 9	949·74	5 0 1	66·38
Rs. 40 but not Rs. 50 ...	7,145 4 3	4,363 1 0	761·62	5 11 8	61·06
Rs. 50 and over ...	4,730 8 3	2,941 6 3	496·20	5 15 0	62·18
Total ...	27,566 7 0	18,367 5 3	3804·48	4 13 3	66·63

The table has smoothed the irregularities both in the curve of absolute expenditure on food per adult and in the curve of percentages that the expenditure on food forms of the several consumable incomes.

The average food expenditure shows a continuous tendency to rise. The rise is sharp in the lowest four income-grades but becomes gentle in grades of income above Rs. 30. Food consumption in grades of income below Rs. 20 is absolutely inadequate and the lowest two income-grades are characterised by chronic starvation. Thus 20·55 per cent or a little above one-fifth of the total population lives on a fare unworthy of human beings. Not until the income-grade "Rs. 20 but not Rs. 30" is reached do we meet even a tolerable standard of food consumption. It will be noted that the average food expenditure of this grade is just below the general average. In the next higher income-grade, the expenditure does not rise much and any trace of plenty is not detectable before the income-grade highest but one is reached. In the highest income-grade alone do we shed the bonds of necessity and rise into the realm of moderate affluence.

Thus if food consumption is a measure, and a rough measure it undeniably is of people's economic well-being, we can sum up the results of our analysis so far as follows:—

781·88 adults or 20·55 per cent of the total population in income-grades below Rs. 20 are in definite distress.

1765·78 adults or 46·41 per cent of the total between Rs. 20 and Rs. 40, if not in distress have few pleasures.

1256·82 adults or 33·04 per cent of the total above Rs. 40, are above want.

The conclusion is re-inforced if we follow up the percentages of consumable income which tend to fall as we rise in the income-grades, broadly confirming the well-known principle that food forms smaller and smaller proportion of rising incomes. In the lowest three grades the percentages range from 87·64 to 70·30, an indication of a very low economic state. In the next two higher grades they range from 74·29 to 66·38, indicating a slightly better position. In the highest two grades percentage does not rise beyond 62·18 but even so the percentages indicate only slight improvement.

As a matter of fact the percentages do not form a regular and continuous curve. Instead we have a discontinuous curve,

in fact three separate curves showing the presence of non-competing classes each having its own rigid standard of comforts. We met similar non-competing classes while analysing the consumable dividends of the various income groups. In the three lowest income-grades the percentages fall continuously from 87·64 to 70·30. In the next three higher income grades there is an equally continuous fall from 74·29 to 61·06, leaving the highest income grade, viz., above Rs. 50 to form a class by itself. Both the highest and the lowest percentages in the first three grades are higher than the corresponding ones in the next three higher grades while the highest percentage in the grades of income between Rs. 20 and Rs. 30 is higher than the lowest one in the previous three income grades. The same remarks hold true of a comparison between the three income grades between Rs. 20 and Rs. 50 on the one hand and the grade Rs. 50 and over on the other, only in this case the latter of the two series has only one income grade.

All this points to the existence of three separate strata within each of which the law of diminishing percentages holds good, but between which the law does not operate as the strata form non-competing groups. The three classes revealed are, of course, of income below Rs. 20 which are the poorest; the grades of income between Rs. 20 and Rs. 50 which are better off; and the grade of income above Rs. 50 which is indeed prosperous.

The amount spent on food gathers significance if we examine the percentages spent on the various commodities consumed. Such an examination will bring out the importance of the major food items that would be useful in the construction of a cost of living index number for the working families, so far as weighing of commodities is concerned.

For this purpose we have classified food under the following broad division, (1) cereals, (2) pulses, (3) vegetable, (4) spices, (5) salt, (6) sugar, (7) fats, (8) milk, (9) animal foods, (10) food beverages and (11) miscellaneous. These exhaust all the items. The subdivisions under these main divisions would be indicated in the appropriate context.

In the following table have been shown the actual money values of the various commodities together with percentages such values form of the total expenditure on food in the various provinces or States.

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**TABLE No. 33.**

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TABLE No. 33.

PROVINCE OR STATE.

Commodities.	Bihar.	Central Provinces.	Orissa.	Bengal.	Madras.	United Provinces.	Punjab.	Native States.	Nepal.	North-West Frontier Province.	Bombay.	Assam.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rice (1)	1,386 5 0	788 9 0	575 8 0	490 3 0	869 6 0	287 11 0	139 10 0	235 10 0	159 4 0	20 1 0	20 6 0	20 10 0	4,652 8 0
(2)	21'98	32'38	28'15	23'09	29'50	14'50	7'38	26'04	24'08	7'40	10'81	29'66	26'80
Wheat (1)	228 14 0	210 1 0	152 10 0	145 8 0	124 0 0	289 4 0	457 14 0	68 12 0	52 12 0	27 10 0	18 0 0	5 0 0	1,906 8 0
(2)	7'80	8'68	7'46	6'84	6'42	19'61	24'04	8'68	8'27	21'27	12'14	7'12	10'86
Other cereals (1)	8 2 0	...	...	...	12 15 0	1 6 0	25 4 0	...	...	1 4 0	...	...	39 15 0
(2)	'20	...	...	...	'72	'07	'80	...	...	'46	...	...	'22
Pulses (1)	220 16 0	104 6 9	142 12 0	102 4 0	92 7 0	143 0 0	98 14 9	46 10 0	27 2 0	6 2 6	9 0 0	3 15 0	1,307 16 6
(2)	7'92	8'03	6'99	4'82	4'80	7'21	5'19	7'12	5'22	2'41	6'07	5'66	6'57
Vegetable (1)	567 5 0	295 6 0	286 6 0	271 0 0	274 12 0	253 0 0	120 4 0	97 15 0	69 14 0	19 4 0	21 0 0	4 12 0	2,429 4 0
(2)	12'10	12'92	12'21	12'76	14'22	12'75	9'46	14'98	10'84	14'49	14'16	6'84	12'22



Fruits	(1)	4 14 0	6 0 0	5 12 0	2 2 6	6 12 0	4 0 0	9 0 0	...	...	...	...	...	38 8 6
	(2)	'12	'25	'28	'10	'85	'21	'47	...	...	...	...	...	'21
Spices	(1)	118 6 6	62 12 0	23 5 0	55 4 6	80 15 6	64 15 3	42 0 0	19 4 9	15 4 6	7 12 0	5 7 0	2 9 0	531 0 0
	(2)	2'86	2'59	2'75	2'60	4'19	3'22	2'25	2'95	2'39	2'66	3'69	3'66	2'89
Salt	(1)	58 0 9	29 2 3	23 10 3	20 11 6	23 12 3	12 3 0	13 7 6	6 6 3	6 12 6	2 1 6	1 7 3	0 12 0	198 7 0
	(2)	1'89	1'20	1'11	'98	1'23	'61	'70	'98	1'06	'77	'98	1'08	1'07
Sugar	(1)	186 10 0	87 11 0	101 0 0	101 8 0	98 4 0	96 13 0	112 7 0	24 6 0	39 0 0	23 0 0	8 14 0	3 10 0	883 3 0
	(2)	4'47	3'82	4'94	4'78	5'09	4'88	5'93	3'73	6'10	8'49	5'98	6'81	4'81
Ghee	(1)	274 6 0	143 11 0	142 3 0	164 5 0	95 14 0	247 1 6	394 8 0	34 6 0	61 4 0	41 8 0	14 12 0	2 8 0	1,606 6 6
	(2)	6'57	5'94	6'95	7'74	4'96	12'45	20'19	5'26	9'59	15'32	9'85	3'58	6'75
Butter	(1)	...	...	2 2 0	...	2 0 0	...	...	...	...	...	6 6 0	...	12 8 0
	(2)	...	...	'10	...	'10	...	...	...	...	...	4'40	...	'05
Oil	(1)	261 12 0	135 10 6	119 15 6	150 12 0	138 10 0	90 7 0	28 12 0	33 15 6	48 14 0	7 1 0	10 8 0	5 0 0	1,031 5 6
	(2)	6'26	5'60	5'87	7'10	7'18	4'56	1'51	5'29	7'65	2'61	7'09	7'19	5'63
Milk	(1)	338 4 6	190 12 0	192 5 9	246 11 0	169 11 0	251 7 0	254 14 0	48 2 0	48 13 0	29 0 0	8 11 0	4 12 0	1,781 7-8
	(2)	8'05	7'88	8'41	11'62	8'79	12'67	13'88	7'86	7'64	10'70	5'86	6'84	9'70
Meat	(1)	271 6 0	143 5 0	129 8 0	131 2 0	169 13 0	106 10 0	131 1 0	28 14 0	64 12 0	28 10 0	9 0 0	10 6 0	1,222 1 0
	(2)	6'50	5'92	6'33	6'18	8'79	5'37	6'88	4'11	10'13	10'50	6'07	14'37	6'65

TABLE No. 33—concl'd.

Commodities.	Bihar.	Central Provinces.	Orissa.	Bengal.	Madras.	United Provinces.	Punjab.	Native States.	Nepal.	North-West Frontier Province.	Bombay.	Assam.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Fish (1)	48 8 0	17 1 0	84 12 0	205 8 0	28 2 0	3 8 0	8 13 0	18 4 0	2 15 0	1 0 0	1 5 0	4 6 0	424 2 0
(2)	1'16	'71	4'15	9'68	1'44	'18	'40	2'79	'48	'37	'90	6'28	2'39
Other animal (1) foods.	9 10 0	...	6 11 0	5 7 0	6 10 0	14 1 0	10 4 0	...	22 3 0	...	1 13 0	...	76 11 0
(2)	'23	...	'33	'36	'35	'71	'54	...	3'49	..	1'23	...	'42
Tea, etc. (1)	41 0 6	17 0 0	24 1 0	25 14 0	32 8 9	16 1 9	17 8 6	5 2 3	9 14 9	6 2 6	2 3 6	1 11 6	199 4 0
(2)	'98	'70	1'18	1'22	1'69	'51	'92	'79	1'55	2'27	1'47	2'46	1'08
Miscellaneous. (1)	17 11 0	9 1 0	...	5 2 0	2 13 0	3 0 0	...	...	...	...	0 9 0	...	38 3 0
(2)	'42	'38	...	'26	'14	'15	...	...	..	..	'38	...	'20
Total	4,187 2 3	3,420 8 6	2,044 9 6	2,122 3 6	1,930 4 6	1,934 8 6	1,904 9 9	653 11 9	638 14 8	270 14 6	148 4 9	69 9 6	16,367 5 3

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[Note.—In this table horizontal entries in lines marked (1) stand for actual money expenditure and those in lines marked (2) stand for percentages such expenditures form of the total consumable income.]

Among cereals, rice and wheat are the only ones of importance. The item "other cereals" is a heterogeneous group of barley and gram and paddy and rice powder consumed by certain provinces in very limited quantities. On the whole cereals account for 36.38 per cent of the total expenditure on food. Of these the percentage for rice is 25.30 while that for wheat is only 10.86. Thus rice happens to be 233 per cent as important as wheat. "Other cereals" account for only .22 per cent and occur only in Bihar, Madras, the United Provinces, the Punjab and North-West Frontier Province. Only in the Punjab and Madras, however, does the expenditure come at all near one per cent. The general percentage of families reporting consumption of other cereals is only 3.9 and only in Madras, the Punjab and North-West Frontier Province are the percentages at all important, namely 13.3, 12.7 and 10.0. In Bihar and the United Provinces the percentages are 5.4 and 2.1 only. This item, therefore, has no importance in the worker's budget.

The percentages of expenditure on rice and wheat in the various provinces or States, however, show large variations from the corresponding figures for the general population. Here it is that the territorial origin of the workers plays a decisive role; although the gradual spread of wheat consumption, at least in higher income grades, modifies the position to some extent.

Thus in Madras rice is 460 per cent or  $4\frac{1}{2}$  times as important as wheat. In Bihar, Assam and the Native States the corresponding percentages are 410, 413 and 415 so that in these three provinces rice is about four times as important as wheat. The percentages for the Central Provinces and Orissa are 372 and 377—showing rice to be about  $3\frac{3}{4}$  times as important as wheat. In Bengal rice is shown to be 377 per cent or  $3\frac{3}{4}$  times as important as wheat. Nepal is the only other important rice-eating tract where rice is 301 per cent or three times as important as wheat. Bombay also consumes more rice than wheat but the predominance of rice is much less, its importance being only 163 per cent or  $1\frac{2}{3}$  times as that of wheat.

Outside these areas wheat replaces rice as the main cereal. The United Provinces form the transitional zone and here rice although less important than wheat has still importance 74 per cent or  $\frac{3}{4}$  as much as that of wheat. Only in the Punjab and the North-West Frontier Province does wheat assume decisive predominance. Even so rice remains 30 per cent or about  $\frac{1}{3}$  as important as wheat, in these two provinces.

Wheat consumption among the people, however, is quite widespread if we judge it by the percentage that the families reporting wheat consumption form of the total number of families. Altogether 75·0 per cent of the families report wheat consumption, in the three wheat-eating areas, namely the North-West Frontier Province, the Punjab, the United Provinces the percentages are 100·0, 98·7 and 94·8. Even in the rice-eating tracts the percentages are fairly high in some cases. Thus in Bengal, Nepal and Bombay the percentages are between 85 and 90, actually 89·7, 87·5. In Assam it is 80. In the Central Provinces, Orissa and Madras, the percentages are round 75, actually 77·9, 75·2 and 73·5. Only in Bihar and the Native States are the percentages rather low namely 55·4 and 46·8.

The prevalence of wheat consumption so deduced affects the proportionate importance of wheat as a cereal, but the correlation between the quantitative importance of wheat and its prevalence in the several tracts is by no means absolute. Since even nominal consumption of wheat in any family will place the family in the category of those reporting wheat consumption, and inflate its importance in determining the prevalence of wheat consumption.

On the whole except in a small belt in the north-west of India, rice is the staple food of the people with wheat thrown in to introduce a little variety. The percentage of the population living on rice as the staple food is as high as 83.

We have noted above that on the whole cereals account for 36·38 per cent of the expenditure on food. The corresponding percentages for the provinces or States do not follow the general percentage closely. They range from 44·72 per cent in the case of the Native States to 29·13 per cent in the case of the North-West Frontier Province. Now the percentage expenditure on cereals varies inversely with the size of the total expenditure on food and is thus an inverse measure of the worker's wealth. If we arrange the percentages in descending order the resultant order of the provinces or States roughly corresponds with the one resulting from the arrangement in ascending order, of dividends per adult consumer as also of the amounts spent on food. The arrangement shows that the Native States lead in poverty with a percentage expenditure on cereals as high as 44·72. The Central Provinces and Bihar with their percentages just a little above the general percentage, namely, 36·84 and 36·64 follow at a reasonable distance. Orissa comes next with its

percentage of 35.61 lower than the general average but higher than all others below the general average. The United Provinces and Nepal are roughly in the same category with their percentages of 34.18 and 31.95 respectively. The last in the order are Bengal and the North-West Frontier Province, their respective percentages being only 29.93 and 29.13.

The usual pulses are *arhar*, gram, *masur* and *moong* but we have not been able to consider these varieties separately. We can only note that as a whole, the weight to be attached to them from the point of view of money value is roughly 4, 1, 2 and 1 respectively. The variations in the various provinces or States are negligible.

The percentage that expenditure on pulses forms of all food expenditure at this centre comes to 6.57. Pulses, being rich in protein, are a vital necessity to a people where non-vegetarian diet is unimportant. It is only right, therefore, that they are universally consumed in adequate quantities at this centre. Where non-vegetarian diet becomes important as in the North-West Frontier Province, consumption of pulses declines. In respect of consumption of pulses the Central Provinces and Bihar have the highest percentage, namely 8.03 and 7.99. Next come the United Provinces, the Native States and Orissa, their respective percentages being 7.21, 7.13 and 6.99. Bombay, Nepal and Assam follow with their percentages 6.07, 5.82 and 5.66. The Punjab, Bengal and Madras have the next lower percentages, namely 5.19, 4.82 and 4.80; while the North-West Frontier Province has the lowest percentage expenditure on pulses, namely 2.41.

Cereals and pulses are poor peoples' food, being articles of necessity and it would be interesting to see what percentage of total expenditure of food is accounted for by these two categories of food together. In general, their composite percentage is 42.95 or about 43. This percentage is fairly high since the population has only 57 per cent of their total food expenditure available for other items of food. The composite percentages for the provinces or states are, however, uneven and in some cases rather too high to allow any great variety in the food. This is particularly so in the Native States, the Central Provinces and Bihar whose composite percentages are 51.85, 49.09 and 47.97, respectively. Orissa and Assam have also high percentages, namely 42.60 and 42.50, and Madras and the United Provinces have only slightly less, their percentage being 41.44 and 41.39 respectively. Percentages below 40 which may be taken to be

the desirable maximum are found only in Nepal, Bombay, the Punjab, Bengal and the North-West Frontier Province, their respective percentages being 39·02, 38·02, 37·36, 34·75 and 31·54. Only Bengal and the North-West Frontier Province have a percentage that would permit of sufficient richness and variety in the food.

It may be noticed that the order of the provinces or states, if their percentage expenditure on cereal is arranged in descending order, is practically the same as when their composite percentages are arranged in the same order. The only difference is in the position of Bombay which comes 10th in former arrangement and 9th in the latter. Thus the arrangement of provinces according to poverty or wealth remains in tact.

The third main division of food includes vegetables and fruits. Fruits are, of course, included only for the sake of logic and completeness. The percentage expenditure on fruits for the general population is only ·21 and only in one province, namely the Punjab, does the percentage come to as much as  $\frac{1}{2}$ . Elsewhere it is round about ·25 and in the Native States, Nepal, the North-West Frontier Province, Bombay and Assam the item does not occur at all. Only 3·3 per cent of the families in general have reported fruit consumption and even in the provinces in which expenditure on fruits appear, the percentages of expenditure on fruits are none-too-high. Only in the Punjab and Orissa and the Central Provinces are percentages at all noticeable, namely 7·6, 5·00 and 4·7. In Madras and Bihar the percentages are 3·1 and 2·9 and in Bengal and United Provinces only 2·1 each.

The composite percentage of vegetables and fruits is 13·43 for the general population and the corresponding percentages in the provinces or states show no great deviation. Only in Assam, the Punjab and Nepal are the percentages greatly below the general percentage, being 6·84, 9·93 and 10·94. The largest percentage is met in the Central Provinces followed by the Native States, Madras and the North-West Frontier Province and Bombay; their respective percentages being 16·17, 14·98, 14·58, 14·49 and 14·16. The percentages for Bihar and United Provinces, Bengal and Orissa are 13·22, 12·96, 12·86 and 12·49. Thus Eastern India has slightly lower percentages, namely round 13, than Western and Central India, where the percentages lie between 15 and 16. As we have said above, the percentages are quite even and, no further remark is called forth except

that but for the unduly high prices of vegetable at this centre, almost all the provinces would have shown lower percentages, well in keeping with proportions elsewhere.

Spices are the fourth broad division and account for 2·89 per cent of the total expenditure on food in general. The percentages in the provinces and states are even, except in the case of Madras which has an usually large consumption of chillie and tamarind, of Bombay and of Assam.

Salt accounts for 1·07 of the expenditure on food ; and is an article of inelastic necessity everywhere. It is to be noted, however, that even in respect of salt, the percentage expenditure is appreciably higher in the poorer provinces like Bihar and Central Provinces, and Madras, than in the richer ones like the United Provinces, the Punjab and the North-West Frontier Province. In these latter provinces sugar substitutes salt to some extent.

Sugar is viewed as a luxury at this centre being mostly consumed with tea. The only variety reported is the white cane sugar from the mills. Gur is altogether absent. The prevalence of sugar consumption as measured by the percentages of families reporting expenditure on sugar is slightly higher than that of wheat. The general percentage is 78·6, but the percentages of families in the provinces and states are markedly uneven. In the North-West Frontier Province, Bombay and Assam, the percentages are 100·0 each. In Nepal, Bengal and the Punjab and Orissa, the percentages are between 90 and 95—the exact figures being 95·00, 91·1, 91·6, 90·9. Madras and the United Provinces come next with percentages 85·7 and 79·4. The definitely poorer tracts like the Central Provinces, Bihar and the Native States show percentages of 71·1, 64·6 and 55·3 only. The apparently widespread sugar consumption, however, is belied by the small percentage expenditure on this commodity. The general percentage is only 4·81 and among the provinces and states this percentage is markedly exceeded only in the North-West Frontier Province, Nepal, Bombay, the Punjab and Orissa whose respective percentages are 8·49, 6·10, 5·98, 5·93. These are as we have noted the richer of the provinces and sugar consumption among them is not unsatisfactory. Assam, Madras, Orissa and the United Provinces have also percentages exceeding the general average but only nominally: their percentages lie close about 5 being 5·21, 5·09, 4·9 and 4·88. These cannot be rated too high. But there are lower percentages still far below any reasonable minimum in case of Bengal, Bihar, the Native States and the Central Provinces. Their percentages are only 4·78, 4·447, 3·73 and 3·62.

Among fats, ghee and vegetable oils are the only ones of importance. Butter has been reported only in Orissa, Madras and Bombay, in the former two of which barely one per cent of the families consume butter. Only in Bombay is the percentage of families consuming butter considerable namely 28·6. The general percentage of such families comes to ·4 only and the general percentage expenditure only to ·05. In Bombay alone is the percentage expenditure at all important namely 4·40. In the other two provinces, the percentage is only ·10 each.

Among vegetable oils mustard oil is of over-shadowing importance, only Madrasi families reporting groundnut oil in certain cases. Roughly mustard oil accounts for 94 per cent of all the expenditure on oil and we would not be committing great error if we take oil to be a homogeneous commodity.

From the point of view of percentage expenditure ghee is more important than oil, the general percentage expenditure on them being 8·75 and 5·61 respectively. Only in the case of Madras and Assam is oil more important than ghee. Even the importance of ghee from the point of view of percentage expenditure, however, is not equally marked in all the provinces and states. Thus in case of Bihar, the Central Provinces, Bengal and the Native States, the pairs of percentages march close together, their percentages of ghee and oil shown in pairs being as follows: 6·57, 6·26; 5·94, 5·60; 7·74, 7·10 and 5·26, 5·20. These four areas together with the provinces of Madras and Assam have roughly the lowest percentage expenditure on ghee and the highest percentage expenditure on oil and they form the group of the poorer tracts. Nepal and Orissa have the next higher percentages expenditure on ghee but their percentage expenditure on oil is also higher although the pairs of expenditure show greater divergence than in the cases considered before. The percentage expenditure on ghee and oil, arranged in pairs, are in order: 9·59, 7·65 and 6·95, 5·87. The United Provinces and Bombay have still higher percentage expenditure on ghee (with butter in case of Bombay) and much lower percentage expenditure on oil; the divergence between the two percentages is much wider, the percentages for ghee and oil shown in pairs for these two provinces being 12·45, 4·56 and 14·35, 7·09.

The greatest divergence between percentages, however, occur in the Punjab and the North-West Frontier Province. The ghee percentages are the highest in these, and the oil percentages lowest the pairs of percentages for ghee and oil in these two provinces being: 20·18, 1·51 and 15·31, 2·62 respectively.



It is noteworthy that the arrangement of the provinces from the point of view of the extent of divergence between the percentage expenditure on ghee and oil is almost identical with the other arrangements according to wealth.

The percentage expenditure on fat in general comes to 14.41 while the appropriate figure for the provinces are: for the Punjab and Bombay 21.69 and 21.44; for North-West Frontier Province, Nepal and the United Provinces 17.93, 17.24 and 17.01; for Bengal, 14.84; for Orissa, Bihar and Madras, 12.92, 12.83 and 12.24 and for Assam and the Native States 10.77 and 10.46. Thus in respect of fat consumption Orissa, Bihar, Madras, Assam and the Native States are markedly below the average and the Punjab, Bombay, the North-West Frontier Province, Nepal and the United Provinces markedly above it. This again confirms our divisions of provinces and states into rich and poor.

It would be incorrect however to put greater emphasis on ghee as a source of fat. The quantitative importance of ghee in the worker's economy is much smaller than that of oil which fails to figure as high as it should on account of its relative cheapness, oil being only one-third as dear as ghee. In families which have not reported expenditure on ghee oil is, of course, the only source of fat, but even in families which have reported expenditure on ghee, oil is quantitatively more important than ghee except in two or three provinces.

It would be interesting, in this connection to examine the prevalence of ghee consumption as judged by the percentage of families reporting expenditure on ghee. We find that in general only 63.3 per cent of the families have reported such expenditure and a large proportion of these have only nominal expenditure on ghee. In the Native States and Bihar the percentages are as low as 40.4 and 42.5. In Madras the percentage is 52.0; in the Central Provinces it is 57.0; and in Assam and the North-West Frontier Province it is 60.0 each. These are all below the not too high general percentage; and except the North-West Frontier Province these areas have decisively oil as the staple fat.

The Punjab is the only province relying almost exclusively on ghee, the percentages of families reporting expenditure on ghee being 98.7; Bombay and the United Provinces are below the Punjab having respective percentages of 85.7 and 85.6. Bengal, Nepal and the Central Provinces are lower still with percentages of 83.2, 77.5 and 72.7.

Milk intake has a direct bearing on people's health, but only 61.5 per cent of the families in general have reported any

expenditure on milk. Even among such families the majority consume milk as a necessary accompaniment of tea; while among the rest milk is mostly child's diet. There are few adults fortunate enough to consume milk regularly. Most of these families reporting milk consumption on this commodity. Yet spending little the percentage of such families is markedly low in the Native States, the Central Provinces, Bihar and Nepal the figures being 44.7, 49.3, 50.0 and 52.5 only.

The next higher percentages of such families are in Orissa, and the United Provinces namely 64.5 and 66.0. Madras, Bombay and the North-West Frontier Province have better percentages namely 71.4, 71.4 and 70.0. But only in Bengal, the Punjab and Assam are the percentages at all reasonable, namely 87.9, 80.1 and 80.0.

The percentage expenditure on milk, however, has little relation with the percentages of families reporting milk consumption. As we have seen provinces addicted to tea may show larger percentages of such families but smaller percentage expenditure on milk. The percentage expenditure on milk in general is only 9.70 or less than 10 per cent. This low percentage coupled with the almost scarcity price of milk that prevails at this centre shows how infinitesimal must be the quantitative consumption of milk among the people. Even so the percentage expenditure on milk is much below this low general percentage in Bombay, Assam, the Native States, Nepal, the Central Provinces and Bihar whose figures are 5.96, 6.84, 7.36, 7.64, 7.88 and 8.05. In these provinces and states milk consumption is little else than nominal. Madras and Orissa have slightly better percentage expenditure, but still below the general percentage, the figures being 8.79 and 9.41. Even the North-West Frontier Province and Bengal whose figures are slightly higher than the general percentage namely 10.70 and 11.62 are in no enviable position. Only the United Provinces and the Punjab have shown percentage expenditure which may be regarded at all fair, 12.67 and 13.38.

Animal food is exceptional in the Indian dietary. At this centre, however, it is probably more widespread than in the general population of India. The varieties of animal food reported are meat (almost exclusively goats' meat) fish, fowls and eggs. Of these consumption of meat is the most widespread, and has been reported in 70.4 per cent of the families in general, the percentages for fish and other animal food, being only 32.2 and 7.0. Of course, these percentages are not exclusive and the same

family might consume two or more of the varieties of animal food.

In the provinces and states "other animal foods" have not been reported from the Central Provinces, the Native States, the North-West Frontier Province, and Assam. It is only pronounced in Nepal and Bombay where the percentages of families reporting these items are 55.0 and 28.6. In the Punjab and the United Provinces the percentages are as low as 12.7 and 9.1 and elsewhere rarely exceed 5.

Fish consumption is more widespread. In Assam, Bengal and Orissa the percentages are as high as 100.0, 89.7 and 64.5. The Native States and Madras come very much below this with percentages of 40.4 and 35.7. Elsewhere, except in the Central Provinces, the Punjab and the North-West Frontier Province whose percentages lie round 10, they concentrate round 25.

The prevalence of meat consumption is more noteworthy than either of the two classes of animal foods, considered above. As we have seen the percentage of families reporting meat consumption is in general 70.4. This is an impressive figure. Some of the provinces and states have still more impressive percentages. Nepal, the North-West Frontier Province and Assam have percentages between 90 and 100. Percentages for Orissa and Madras lie round 85. Bombay, Orissa and the Punjab show percentages higher than the general percentage and lying between 70 and 75.

Only the United Provinces has a percentage much below the general, namely 52.6. The three other areas namely, the Native States, the Central Provinces and Bihar have their percentages between 60 and 65 which is not very much below the general average.

In spite of the apparently wide prevalence of animal food as shown by the percentages of families, the general percentage expenditure on all the three classes of such food comes only to 9.46 or less than the corresponding figure for milk which occurs relatively smaller percentage of the families.

Assam, Bengal and Nepal show the highest percentage expenditure on animal food, the figures being 20.65, 15.12 and 14.07. The North-West Frontier Province, Orissa and Madras have respectable percentages roughly round, 11, the actual figures being 10.89, 10.81 and 10.58. Bombay, Bihar, the Punjab have percentages lying about 8 being 8.19, 7.89 and 7.88. These are lower than the general percentages and are far from

considerable. The percentages for the Native States, the Central Provinces and the United Provinces are lower still and are little else than nominal : the figures being 6·90, 6·63 and 6·26.

If we analyse the share of the 3 classes of animal food considered, we find that fish and meat is about 275 per cent as important as fish and 1,600 per cent as important as other animal foods. The share of other animal foods is important only in Nepal and Bombay where they account for 25 per cent and 15 per cent of all the expenditure on animal food. Elsewhere their importance is small.

Fish has considerable importance in Bengal, Assam, Orissa and the Native States where it accounts roughly for 60, 30, 36 and 40 per cent of all the expenditure on animal food. Elsewhere its importance is inconsiderable.

The percentages that expenditure on meat form of the total expenditure on animal food are 97 for the North-West Frontier Province, between 80 and 90 for the Central Provinces, the Punjab, the United Provinces, Madras and Bihar, their exact percentages being 89, 87, 86, 83 and 82 ; between 70 and 75 in case of Bombay, Nepal and Assam, the actual figures being 74, 72 and 70 and between 55 and 60 in the Native States, Orissa, and Bengal whose actual figures are 60·59 and 55. Thus everywhere meat is the major animal food consumed.

Tea is almost the only conventional food beverage, coffee having been reported only in a few families in Madras. Neither is very widely prevalent, expenditure on this head only occurring in 56·1 per cent of all the families.

The expenditure on this head comes to only 103 per cent of all the expenditure on food in the general population. The consumption is definitely rare in the United Provinces, the Central Provinces, the Native States and Bihar where the percentages of families reporting consumption of tea and coffee are 37·1, 37·6, 44·7 and 45·3 only. The percentage expenditure for these comes to ·51, ·70, ·79 and ·95 or less than 1 per cent each. In the Punjab and Madras the percentages of families reporting expenditure on tea or coffee are 62·0 and 65·3 respectively. But the percentage expenditure in the Punjab is only ·92, showing how sparingly and by how few of the members is tea or coffee taken. In Madras the percentage expenditure is higher, namely 1·69, mostly because of the relatively dearer price of coffee. Bombay, Orissa and Bengal have the next higher percentages of families reporting expenditure on tea and

coffee, namely 71.4, 73.6 and 78.8. The percentage expenditure also rises, the figures in order being 1.47, 1.18 and 1.22.

Nepal, the North-West Frontier Province and Assam have the highest percentage of families reporting expenditure on such beverages, namely 85.0, 90.0 and 100 and their percentage expenditure is also high, namely 1.55, 2.27 and 2.46. These are the most important consumers of tea, followed by Bombay, Bengal and Orissa. Madras is a consumer of coffee mainly.

The divisions of food examined above practically exhaust the food constituents. Certain other items in minute quantities have been reported in some areas and have been classed under Miscellaneous. The percentage expenditure, however, is only .20 and this head calls for no comment.

We have reviewed the food consumption scheme of the various territorial communities in detail. It is likely that the picture presented is rather confused and hazy. The broader aspects of the food consumption scheme may not be quite as apparent as we should like it to be. Accordingly the following table has been drawn up to give a comparative view of the food consumption of the various territorial communities. The commodities have been classified as follows and the percentage expenditure on them has been indicated. 1. Cereals and pulses; 2. Vegetables and fruits; 3. Sugar; 4. Fats; 5. Milk; 6. Animal foods; 7. Miscellaneous.

TABLE No. 34.

Province or State.	Cereals and pulses.	Vegetables and fruits.	Sugar.	Fats.	Milk.	Animal foods.	Miscel.
1	2	3	4	5	6	7	8
Bihar .. ..	47.90	13.22	4.47	12.83	8.05	7.89	5.65
Central Provinces .. ..	49.09	16.17	3.62	11.54	7.88	6.63	4.87
Orissa .. ..	42.60	12.49	4.94	12.92	9.41	10.81	5.04
Bengal .. ..	34.75	12.86	4.78	14.84	11.62	16.12	5.06
Madras .. ..	41.44	14.58	5.09	12.24	8.79	10.58	7.25
United Provinces .. ..	41.39	12.96	4.88	17.01	12.67	6.26	4.79
Punjab .. ..	37.36	9.93	5.93	21.69	13.38	7.88	3.87
Native States.. ..	51.85	14.98	3.73	10.46	7.36	6.90	4.72
Nepal .. ..	39.02	10.94	6.10	17.24	7.64	14.07	5.00
North-West Frontier Province	31.54	14.49	8.49	17.93	10.70	10.87	5.92
Bombay .. ..	38.02	14.16	5.98	21.44	5.96	8.19	6.52
Assam .. ..	42.50	6.84	5.21	10.77	6.84	20.65	7.20
Total .. ..	42.95	13.43	4.81	14.41	9.70	9.46	5.24

The table brings out clearly the poverty of the Native States and the Central Provinces. They have the highest percentage expenditure on cereals and pulses and vegetables and the lowest on the other classes of commodities. Bihar with its slightly lower percentages of expenditure on cereals and pulses and on vegetables and slightly higher percentage for other items is only little better than the Central Provinces and the Native States. Assam and Orissa can perhaps be classed together but the former devotes larger portion of its income to animal food and lesser to fats and vegetables than the latter. Probably Oriya diet is more varied than the Assamese. Madras percentages show a more satisfactory position but between the United Provinces and Madras, the United Provinces percentages indicate a more balanced diet than the Madras ones. Madras devoting a disproportionately large percentage of the income to spices than to fats and milk.

Diet of the Nepal workers is better than that of the Bombay worker, although Nepal and Bombay can be placed in the same class from the point of view of diet.

Perhaps the best diet is met in the North-West Frontier Province, followed by the Punjab and Bengal. The latter two are roughly in the same class but the Punjab diet is better than the Bengal one, for Bengal has less milk, less fat and less sugar but more vegetables and animal foods.

A more concrete idea of the diet of the various territorial communities would be given by indicating the quantity of various foods available for an adult consumer. In the following table the total quantity of certain foods have been given in maunds and seers together with the average quantity per adult consumer in seers. In certain cases, where quantity would be inappropriate the actual money value of the foods has been shown in rupees and annas and the average in annas and pies.

# FOOD CHART.

## TABLE No. 35.

[N. B.—Horizontal entries in lines (a) and (b) show quantities and in lines (c) and (d) show money value.]

Commodities.	Bihar.	Central Provinces.	Orissa.	Bengal.	Madras.	United Provinces.	Punjab.	Native States.	Nepal.	North-West Frontier Province.	Bombay.	Assam.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Rice	(a)	383-25½	223-36	156-20½	131-37½	159-17½	69-33	36-2	68-10	41-38	5-11	7-37	6-0	1268-28
	(b)	15'02	16'58	14'89	14'40	12'75	7'92	5'34	15'98	16'36	6'53	13'01	17'67	13'55
Wheat	(a)	66-27	42-8	29-12½	29-1	21-11	77-17	95-30	11-9	10-18	12-10	3-28	1-0	400-11½
	(b)	2'61	3'18	2'79	3'17	1'71	8'79	14'60	2'63	4'95	15'18	6'08	2'95	4'21
Other Cereals(c)	(a)	8-2	...	...	...	13-15	1-6	15-4	...	...	1-4	...	...	39-15
	(d)	0 0 1½	...	...	...	0 0 5½	0 0 ½	0 0 11	...	...	0 0 7½	...	...	0 0 2
Pulses	(a)	60-18	35-10½	22-37½	17-7	15-24½	22-38	15-38	8-18½	6-23	1-7	1-16½	-23½	208-22
	(b)	2'37	2'61	2'18	1'67	1'36	2'64	2'43	1'98	2'67	1'45	2'32	1'73	2'19
Vegetable	(a)	547-5	385-6	285-6	270	274-12	253	180-4	97-15	69-14	39-4	21	4-12	2429-14
	(d)	6 8 7	0 11 5	0 10 8½	0 11 10	0 8 10	0 11 6	0 11 0	0 9 1½	0 10 11	1 3 5	0 18 9	0 5 7	0 10 8
Fruits	(a)	4 14 0	6 0 0	5 12 0	0 2 2 6	6 12 0	4 0 0	9 0 0	...	...	...	...	...	39 8 6
	(d)	0 0 1	0 0 2	0 0 2½	0 0 1	0 0 2½	0 0 2	0 0 6½	...	...	...	...	...	0 0 2



Spices	(a)	118 6 6	82 12 0	56 5 0	56 4 6	90 15 6	64 15 3	42 0 0	19 4 9	15 4 6	7 12 0	5 7 0	2 9 0	531 0 0
	(d)	0 1 10	0 1 10½	0 2 1½	0 2 5	0 2 7	0 2 8	0 2 6½	0 1 9½	0 2 4½	0 2 10	0 3 7	0 2 11	0 2 3
Salt	(a)	17-17	9-32½	6-34½	6-6	6-38½	3-13½	3-34	1-35	1-36½	-24	-17½	-9	59-8
	(b)	.69	.64	.65	.67	.66	.38	.59	.44	.75	.74	.72	.66	.61
Sugar	(a)	18-23	8-30½	10-4	10-3½	9-33	9-17½	11 9	2-17½	3-36	2-12	-36½	-14½	87-37
	(b)	.73	.65	.96	1.10	.79	1.07	1.71	.57	1.52	2.65	1.50	1.07	.92
Ghee	(a)	4-30	2-25½	2-19½	2-30½	1-25½	4-8½	6-33	-24	1-1½	-26½	-10	-1½	27-36½
	(b)	.19	.19	.24	.30	.15	.48	1.04	.14	.40	.82	.41	.13	.29
Butter	(a)	...	...	-2	...	-2	...	...	...	...	...	-6	...	-10
	(b)	...	...	.005	...	.004	...	...	...	...	...	.25	...	.003
Oil	(a)	13-2½	6-37½	6-8	7-18½	8-31	4-22½	1-18	1-30½	2-18	-14	-22	-10	53-17½
	(b)	.51	.53	.59	.81	.69	.52	.22	.41	.96	.43	.90	.74	.56
Milk	(a)	40-14½	22-18	22-22½	29-32½	9-33½	20-2	30-34½	5-38	5-18	3-17½	1-2½	-10½	211-12
	(b)	1.58	1.66	2.15	3.28	1.60	3.30	4.76	1.39	2.13	4.25	1.74	1.44	2.22
Meat	(a)	12-30½	6-37½	6-16	6-11½	8-11½	4-39	5-31½	1-13½	2-7½	1-10½	-18	-19	56-14½
	(b)	.51	.52	.61	.69	.67	.56	.88	.31	1.24	2.80	.74	1.41	.61
Fish	(a)	2-26½	-33	4-13	11-19	1-22½	-7	-18½	-36½	-7	-2	-2½	-10	22-37½
	(b)	.10	.06	.41	.125	.13	.02	.08	.21	.07	.06	.10	.74	.24

TABLE No. 35—concl'd.

Commodities.	Bihar.	Central Provinces.	Orissa.	Bengal	Madras.	United Provinces.	Punjab.	Native states.	Nepal.	North-West Frontier Province.	Bombay.	Assam.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Other animal food (e)	9 10 0	...	6 11 0	5 7 0	6 10 0	14 1 0	10 4 0	...	22 3 0	...	22 3 0	...	1 13 0
(d)	0 0 2	...	0 0 3½	0 0 3	0 0 2½	0 0 7½	0 0 8	...	0 3 5½	...	0 1 2	...	0 0 4
Tea and coffee (e)	41 0 6	17 0 0	24 0	25 14 0	32 8 9	16 1 9	17 8 8	5 2 3	9 14 9	6 2 6	2 2 6	1 11 6	199 4 0
(d)	0 0 7½	0 0 6½	0 0 11	0 1 2	0 1 1	0 0 9	0 1 0	0 0 6	6 1 9	0 3 1	0 1 5	0 2 2½	0 0 10
Miscellaneous (e)	17 11 0	9 1 0	...	5 2 0	2 12 0	3 0 0	...	...	...	...	0 9 0	...	38 3 0
(d)	0 0 3½	0 0 3	...	0 0 2½	0 0 1½	3 0 1½	...	...	...	...	0 0 4½	...	0 0 3

It is easy to note the quantitative predominance of rice over wheat in the general population, rice being about 3 times as important as wheat. Only in the United Provinces the Punjab and the North-West Frontier Province, does wheat show a greater quantitative importance than rice and only in the latter two of the three provinces is its preponderance remarkable. On the average the worker's diet consists of 18 seers of cereals and 2 seers of pulses. These quantities are slightly exceeded in the Central Provinces, the Punjab, Nepal, the North-West Frontier Province, Bombay and Assam, almost equalled in the Native States, Orissa and Bihar, and while in Madras and the United Provinces, the quantities fall short of the general averages. On the whole, however, except in Madras, the consumption of cereals and pulses is adequate for ordinary purposes. The Madras diet is poor as appears from the relative insignificance of wheat and pulses in its constitution. So also the diet of the Native States. The diet of the United Provinces, the Punjab and Bombay is well-balanced and quantitatively adequate, while those of the other territories are average. There appears to be a deficiency of protein yielding pulses in the diet of Madras, Bengal, the Native States, the North-West Frontier Province and Assam although the deficiency in this respect is made up by emphasis on animal food in Bengal, the North-West Frontier Province and Assam.

Fruits, except in the Punjab, never exceeds 2 pies a month per consumer and we cannot regard it as a constituent of the workers diet at all. Vegetables which would be expected to be an important item, as Indians are proverbially vegetarians, figure rather ingloriously. The average consumption of vegetables comes to only 4 pies a day per consumer which is very small indeed when we notice the inordinately high prices of vegetables at this centre.

Nowhere is this figure materially exceeded except in the North-West Frontier Province whose expenditure per consumer is double the general average. Bihar, Madras and the Native States have figures well below even this insignificant average which reflects their poverty. Vegetable consumption in Assam is the smallest but Assam makes it up by getting a larger share of animal foods.

Spices deserve little attention but even in respect of this Bihar, the Central Provinces and the Native States show expenditure which is the lowest and very much below the general average.

Not much disparity is noticeable in salt consumption which is round about 60 seers a month per consumer. In respect of sugar, however, we notice marked disparity. Here again Bihar, the Central Provinces, Madras and the Native States have the poorest figures which varies from 10 to 13 chataks a month, the United Provinces, Bengal, Assam and Orissa have about a seer each. The remaining territories have respectable figures, the North-West Frontier Province figure being as high as about 3 seers per adult consumer.

On the average ghee consumption per adult per month barely comes to 4 chataks, while consumption of oil is quantitatively double this figure. The ratio runs counter to that shown by percentage expenditure on these two main fats, because of the wide difference in their prices. Ghee consumption in Madras, the Native States and Assam hardly exceeds 2 chataks a month. In Bihar and the Central Provinces it is about 3 chataks, in Orissa less than 4 chataks, in Bengal less than 5 chataks, in Nepal and Bombay about 6 chataks. Only in the United Provinces, the North-West Frontier Province and the Punjab are the quantities adequate being 8, 14 and 16 chataks per consumer per month. The lowest quantities of ghee go with the lowest ones of oil in Bihar, the Central Provinces, Orissa, Madras and the Native States which brings out their insufficiency of fat consumption clearly.

Milk consumption is pathetically small among the workers. The general average consumption is 2.22 seers per month per adult, which comes to barely 1 chatak per day, not even enough, for tea. The highest milk consumption is recorded in the Punjab, the North-West Frontier Province, Bengal and the United Provinces whose monthly figures are 4.76, 4.25, 3.28 and 3.30 seers respectively. This comes to  $2\frac{1}{2}$  chataks,  $2\frac{1}{4}$  chataks,  $1\frac{3}{4}$  chataks —  $1\frac{3}{4}$  chataks per day being the highest order of infinitesimals. Elsewhere the consumption is between  $1\frac{1}{2}$  to 2 seers or  $\frac{3}{4}$  of a chatak to 1 chatak. Here vanishes our workers' prospect of healthful living.

“Other animals foods” except in Nepal and Bombay is an insignificant item, the average expenditure on this being only 4 pies a month. Fish consumption comes barely 4 chataks a month in the general population but actually outside Bengal, Assam and Orissa the consumption is utterly unworthy of mention. Meat consumption comes to 9 chataks per adult per month and except in the Native States whose share is only  $4\frac{1}{2}$  chataks, and the Punjab, Nepal, the North-West Frontier Province, Assam

and Bombay whose shares are 14 chataks, 20 chataks, 45 chataks, 22 chataks, and 12 chataks—the territorial figures happen to lie round the general average. Even so Bihar, the Central Provinces, Orissa and the Native States lead in deficiency. The quantity of meat and fish consumed, combined is as follows :—

Provinces or states.	Quantity in seer per adult.
North-West Frontier Province	2.86
Assam	2.15
Bengal	1.94
Nepal	1.31
Orissa	1.02
Punjab	.96
Bombay	.84
Madras	.80
Bihar	.61
Central Provinces	.58
United Provinces	.58
Native States	.52
General average	.85

Tea and coffee remain the only other important commodities to consider. The average expenditure on these is only 3 pice a month. Except in the North-West Frontier Province, Assam and Nepal whose expenditure comes to 3 annas, 2 annas and 7 pice respectively, the average is nowhere exceeded materially. As elsewhere, the poorest returns are from the Native States, the Central Provinces and Bihar whose expenditure lies between 2 and 2½ pice per adult per month.

The analysis has abundantly shown the general inadequacy of the diet of the workers, except from the Punjab, the North-West Frontier Province, Bengal, Assam and Bombay. The greatest deficiency is noticeable in the Native States, Madras, Bihar and the Central Provinces.

The analysis of food has so far proceeded from the point of view of territorial origin of the workers. Consequently the class differences from the point of view of income have been obliterated. These differences are, however, more significant and have larger bearing on the worker's welfare. We shall accordingly attempt an analogous food analysis from the point of view of income grouping. In the table below the actual expenditure and the percentage expenditure on each food item have been indicated exactly as in the table no. 33.

TABLE No. 36.

INCOME GRADES.

Commodities.	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rice (1) ...	112 10 0	346 12 0	460 1 0	1,137 14 0	1,150 5 0	878 11 0	565 14 0	4,652 3 0
(2) ...	57-55	40-56	34-15	29-13	24-16	19-21	19-24	25-30
Wheat (1) ...	9 4 0	63 6 0	117 10 0	342 1 0	582 15 0	541 13 0	339 2 0	1,996 3 0
(2) ...	4-72	7-41	8-73	8-89	12-25	12-46	11-53	10-86
Other cereals (1) ...	0 10 0	0 10 0	5 10 0	8 10 0	16 5 0	5 0 0	3 2 0	39 15 0
(2) ...	·32	·07	·42	·23	0-35	·12	·11	·22
Pulses (1) ...	11 7 0	71 11 0	104 7 6	270 4 9	307 7 9	275 6 0	167 3 6	1,207 16 6
(2) ...	5-84	8-38	7-75	6-76	6-46	6-33	5-68	6-57
Vegetables (1)...	16 4 0	114 7 0	180 6 0	510 5 0	629 4 0	597 2 0	381 8 0	2,429 14 0
(2) ...	8-62	13-38	13-38	13-27	13-22	13-78	12-97	13-29

Fruits (1)	...	...	0 8 0	0 10 0	1 0 0	4 4 0	8 12 0	12 8 0	10 14 6	38 8 6
(2)	...	...	.26	.07	.07	.11	.18	.28	.38	.21
Spices (1)	...	...	6 0 0	28 2 6	40 9 6	115 8 9	136 6 6	115 15 6	88 5 8	531 0 0
(2)	...	...	3.00	3.29	3.01	3.01	2.86	2.67	3.00	2.89
Salt (1)	...	...	4 11 0	14 1 0	19 7 9	45 11 6	49 5 6	88 6 6	26 11 9	198 7 0
(2)	...	...	2.39	1.64	1.45	.17	1.03	.39	.91	1.07
Sugar (1)	...	...	1 12 0	29 10 0	54 2 0	191 15 0	234 6 0	213 8 0	157 14 0	883 3 0
(2)	...	...	.89	3.46	4.01	4.79	.93	4.97	5.37	4.81
Ghee (1)	...	...	2 4 0	29 8 0	60 12 0	280 5 6	455 4 0	664 13 0	813 8 0	1,606 6 6
(2)	...	...	1.15	3.15	4.51	7.28	9.57	10.76	10.66	8.75
Butter (1)	...	...	...	...	...	...	8 6 0	2 2 0	...	10 8 0
(2)	...	...	...	...	...	...	.17	.05	...	.05
Oil (1)	...	...	18 2 0	50 10 0	86 14 6	235 13 6	249 7 0	229 13 6	165 9 0	1,031 5 6
(2)	...	...	6.76	5.92	6.45	5.82	5.25	5.89	5.60	5.61
Milk (1)	...	...	2 8 0	87 3 0	80 9 0	276 2 9	493 8 6	534 8 0	417 5 0	1,781 7 3
(2)	...	...	1.28	4.85	5.98	7.18	9.10	12.40	14.15	9.70
Meat (1)	...	...	6 6 0	43 10 0	94 12 0	313 2 0	314 12 0	172 7 0	177 0 0	1,222 1 0
(2)	...	...	3.28	5.10	7.03	7.82	6.62	6.26	5.99	6.65
Fish (1)	...	...	4 13 0	12 5 0	15 15 0	75 2 0	114 8 0	114 2 0	86 11 0	424 2 0
(2)	...	...	2.46	1.51	1.18	1.78	2.41	2.63	2.99	2.39

TABLE No. 36—concl'd.

Commodities.	Less than Rs. 10,	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Other animal Foods (1) ...	2 4 0	5 11 0	6 12 0	36 7 0	9 9 0	12 13 0	3 3 0	76 11 0
(2) ...	1·15	·67	·50	·94	·20	·30	·11.	·43
Tea and coffee (1) ...	0 12 0	6 3 6	13 7 9	51 4 6	43 4 6	49 12 6	84 7 3	199 4 0
(2) ...	·38	·72	·99	1·33	·94	1·14	1·17	1·08
Miscellaneous (1) ...	...	...	4 12 0	13 15 0	11 15 0	4 9 0	3 0 0	38 3 0
(2) ...	...	...	·33	·36	·25	·11	·11	·20
Total (1) ...	195 13 0	855 2 0	1,347 4 0	3,908 14 3	4,756 12 9	4,363 1 0	2,941 6 3	18,367 5 3



The general percentages have been considered already during our analysing of food expenditure according to tracts. At present, therefore, we shall confine ourselves to considering the percentages in the several groups and these percentages are revealing. We notice how much less important the item "other cereals," now becomes; the expenditure on it nowhere attains a percentage of even  $\frac{1}{2}$  and although we meet small fractions under each income grade, the item is nowhere of any great prevalence. The highest percentage of families affected comes to only 6.7 in the grade Rs. 15 but not Rs. 20 followed remotely by 4.9 in the grade Rs. 30 but not Rs. 40. In the grade Rs. 20 but not Rs. 30 the percentages of families affected is only 4.0, while in the lowest income grade, it is 3.6 only. Elsewhere the percentage hardly exceeds 2.5.

The more important cereals, rice and wheat show percentages which have more regular and better defined trends than they had when viewed according to tracts. The percentage expenditure on rice falls consistently and that on wheat rises, except in the highest grade. The opposite trends reflect the richness or deficiencies of the workers diet better. The percentage that expenditure on rice forms of that on wheat when arranged according to ascending scale of income forms on descending series; 1,219, 547, 391, 328, 197, 154 and 167.

The fall, however, is not equally rapid at all stages and the percentages arrange themselves in a manner suggesting important gradations of income. We note 4 such grades marked by wide variations in the percentages namely of income below Rs. 10; of income of Rs. 10 but not Rs. 15; of income of Rs. 15 but not Rs. 30 and of income above Rs. 30. The extreme poverty of the lowest two income grades is obvious from the disproportionate expenditure on rice is but even in grades above Rs. 15 but below Rs. 30 the heights of the rice wheat percentages are not reassuring. In grades of income above Rs. 30 alone do the percentages become reasonable.

The rice-wheat percentages also show that rice is the more important of the two cereals in all the income grades although its importance diminishes as the income rises, wheat accounting for one-half to two-thirds of the expenditure on rice in the three highest grades. This is in confirmity with the prevalence of wheat consumption in the various income grades as indicated by the percentage of families reporting expenditure on wheat. Thus in the lowest income grades only 14.3 per cent or one family in 7 shows expenditure on wheat. In the next higher grade the

percentage of families is only 47·4 and only in the 5 higher grades of income above Rs. 15 does the percentage rise to 61·3, 73·5, 83·7, 87·6 and 91·7. In the lower grade, besides, the expenditure though reported in a large number of families is likely to be much smaller than in the higher grades.

The percentage that expenditure on cereals forms of all food expenditure of the general population, comes to 36·38 per cent as we have noticed already. The corresponding percentages for the income groups from the lowest to the highest are : 62·59, 48·04, 43·30, 38·25, 36·76, 31·79 and 30·88. The figures so arranged clearly form a descending series which is only natural to expect. The relation of these figures to the general percentage expenditure on cereals is significant. We find that only the highest two income grades have figures below the general percentage, the five lower grades having percentages each above the general average. This shows that the general percentage does not summarise the position satisfactorily as the maximum upward deviation from the general percentage is as high as 72 per cent while the maximum downward deviation is only 15 per cent.

The magnitude of percentages reveals the utter poverty and wretchedness of the lowest income grade and not much better position of the next two highest grade. In fact, the expenditure on cereals does not become reasonable till we reach the grades of income above Rs. 30.

Pulses ought to be of universal consumption as being almost the only source of protein for the workers and in fact, they have been reported from all the families as the usual accompaniment of rice. The percentage expenditure on pulses, however, is only 5·84 in the lowest income grade. The next higher income grade also has about the same percentage namely 5·68, but unlike the lowest grade this grade has greater command over milk, ghee, meat and other animal foods. The percentages in grades of income above Rs. 10 decline gradually, being 8·38, 7·75, 6·76, 6·46, 6·33, and 5·68. This decline corresponds with the increase of other foods in the higher income grades.

It would be scholastic irony to dilate upon the workers infinitesimal consumption of fruits which accounts for a maximum percentage expenditure of less than ·04.

Percentage expenditure on vegetables, however, is of respectable dimension being 13·22 in case of the general population. No significant deviation is noticeable in the income grades except in the lowest where the percentage expenditure is only 8·62. In

the higher grades the percentages are 13.38 ; 13.38; 13.27, 13.22, 13.78 and 12.97.

So with spices. The general percentage expenditure is 2.89. The appropriate percentages of the income grades show a maximum downward deviation of only 7.6 and the maximum upward deviation of only 14.0 per cent. Most of the group percentages, however, are just round the general average.

It is interesting to note that the percentage expenditure on salt falls as we move from the lower to the higher income grades. This shows that salt unlike spices is an inelastic necessity. The high percentage expenditure in income grades below Rs. 20 is to be particularly noted.

The food items considered so far have invariably shown declining percentage expenditure as we move from the lower to the higher income grades. These are the inelastic necessities of life which account for the largest percentage of the workers' expenditure on food. The real test of the workers' dietary is provided for by the food items that we must now consider. We shall notice the percentage expenditure would now show an ascending curve as we move upward in the income grades.

To take sugar first, we find that in the lowest grade the percentage expenditure is only .89 which is only about two-fifths of that on salt. In this grade only 25 per cent of the families or barely 1 family in 4 has reported any consumption of sugar. Thus for this grade sugar consumption is negligible. In the 6 next higher grades, the percentage of families reporting expenditure rises to 52.6 ; 65.5; 79.5; 82.9; 90.2 and 94.4. Thus in grades of income above Rs. 20 over 4 families in 5 take sugar but even in the higher grades all the families do not take sugar. The larger percentages of sugar consuming families correspond with the larger percentage expenditure on sugar in the several income-grades above Rs. 10 namely 3.46 ; 4.01, 4.79 ; 4.93 ; 4.97, 5.37. Here again we notice that in grades of income above Rs. 20 the percentage expenditure comes to about 5 per cent. Sugar thus is a luxury and is a sensitive measure of the worker's well being. The declining percentage expenditure on salt and the rising percentage expenditure on sugar, well-marked in the higher income grades shows that in these grades sugar competes with salt as a better substitute.

In respect of fats we have already noted the insignificant expenditure on butter. Butter occurs only in the two income grades between Rs. 30 and Rs. 40 and the maximum percentage

expenditure is only  $\frac{1}{6}$  of one per cent while the percentage of families affected is 1.2 and .5 only.

The percentage expenditure on oil is well-nigh stationary with a hardly noticeable tendency to decline. The percentage expenditure from the lowest to the highest grade comes to 6.76, 5.92, 6.45, 5.82, 5.25, 5.39 and 5.60. Since the quantitative importance of oil is much greater than that of ghee, these percentages show that even oil is not an article of rigid necessity for the population.

On this more or less stationary base the fluctuations in the percentage expenditure on ghee clearly measure the variation in the well being from grade to grade. Thus in the lowest grade the percentage expenditure is only 1.15 and the percentage of families affected is only 7.1 or one family in 14. The percentages of families reporting expenditure on ghee remains unimportant till we rise into the grades of income above Rs. 20 where it varies from 61.0 to 89.8. The percentage of families for each income grade from the lowest to the highest is 7.1, 22.7, 32.8, 61.0, 74.8, 84.0 and 89.5. These rising percentages correspond with the rising percentage expenditure on ghee which comes to 1.15, 3.45, 4.51, 7.28, 7.28, 9.57, 10.76 and 10.66. Here again we notice that the percentage expenditure is not important except in the grades of income above Rs. 20.

Milk tells a similar story. The intake as judged by the percentage expenditure is negligible in the grades of income below Rs. 20, the figures being 1.28, 4.35 and 5.98. Above Rs. 20 the percentage expenditure becomes more reasonable being 7.18, 9.10, 12.40, and 14.15. But even in the highest income grade the percentage is not high enough to provide for a regular diet of milk for the members. In most cases milk is consumed either as an accompaniment of tea or as children's diet.

The milk intake as judged by the percentage of families most of whom have only nominal expenditure to report shows how little this vital factor of health is emphasised in the lower income grades. Thus in the three lowest grades the percentage of families affected comes to only 10.7, 41.2 and 42.0. Even in the 4 income grades above Rs. 20 the percentages are not desirable in all the grades, the figures viewing 52.6, 67.1, 82.4 and 85.2. Apparently milk is more of a luxury as is indicated by the wide differences in the percentage expenditure in the lowest and that in the highest income grade.

The three categories of animal foods should be taken together in order that the trend of percentage expenditure be clear as the

importance of the three constituents fluctuates from grade to grade in no defined manner. Thus in case of meat we get a parabolic curve, the percentage expenditure rising from 3.26 in the lowest grade to 7.82 in the grade of income "Rs. 20 but not Rs. 30" and declining again to 5.99 in the highest income grade. But in case of fish, the parabolic curve is in the reverse sense, the percentage expenditure first declining from 2.46 in the lowest to 1.18 in the grades of income "Rs. 15 but not Rs. 20" and then rising to 2.99 in the highest income grade. Other animal foods show no such regular trend. Taken together the percentage expenditure on all animal foods comes to 6.87, 7.28, 8.71, 10.54, 9.23, 9.19 and 9.09 from the lowest to the highest income grade. We notice the low percentage in the lowest three grades and also the rapidity with which these percentages rise to 10.54. In grades of income above Rs. 20 the percentages decline uncertainly. This shows that there is an attempt to reach a desirable level of animal food consumption which seems to have been realised only in grades of income above Rs. 20. In the three highest grades the decline is so unnoticeable that on the whole we have to regard animal foods as a luxury for the grades of income below Rs. 20 and a conventional necessity for grades above Rs. 20.

Percentages of families reporting expenditure on the three categories have been computed separately but these give no clear idea of the percentages of vegetarian and non-vegetarian families. The percentages are not exclusive and the same family may consume more than one variety of animal foods. The percentages for the seven income grades from the lowest to the highest are 39.3, 67.0, 65.5, 71.5, 76.2 and 73.1 in case of meat; 28.6, 22.7, 21.9, 34.5, 35.8, 32.1 and 39.8 in case of fish and 17.9, 4.1, 5.9, 14.0, 4.1, 4.7 and 2.8 in case of other animal foods. It is unlikely, however, that families taking fish and "other animal foods" would not take meat and the meat percentages accordingly may be taken as a more or less correct indication of the prevalence of animal food. So viewed animal foods are found only in 66 to 75 per cent of the families. The utter unimportance of this item in the lowest income grade is to be noted.

Even tea and coffee appears to be a luxury for the three lowest income grades as shown by the low but rising percentages of expenditure on it. In grades of income above Rs. 20, however, the level of consumption seems to have been realised and tea becomes a conventional necessity. The percentage expenditure on this item is round 1 except in the lowest two grades where it is only .33 and .72.

The habit of taking tea or coffee is found only in 56·1 per cent of all the families but in the lowest three grades the percentage comes to 21·4, 30·9 and 47·1 only. In the four higher grades the percentages are 65·1, 51·6, 65·3 and 70·4. Thus these beverages are not widely consumed in the families considered and even among these only small percentage of the members enjoy the privilege.

They exhaust the workers' food, other unspecified item being reported only in grades of income above Rs. 15 and nowhere is the expenditure higher than  $\frac{1}{2}$  per cent of all food expenditure.

The consumption scheme of the workers for each income grade can be better studied from the table which summarises the percentage expenditure on major divisions of food.

TABLE No. 37.

Commodities.	Less than Rs. 10.	Rs. 10—15.	Rs. 15—20.	Rs. 20—30.	Rs. 30—40.	Rs. 40—50.	Rs. 50.	Total.
1	2	3	4	5	6	7	8	9
Cereals and pulses..	68.63	56.42	51.05	45.01	43.22	38.12	36.56	44.95
Vegetables and fruits	8.88	13.45	13.45	13.38	13.40	14.06	13.35	13.43
Salt and spices ..	5.45	4.93	4.46	4.18	3.89	3.56	3.91	3.96
Sugar ..	.89	3.46	4.01	4.79	4.93	4.97	5.37	4.81
Fats ..	7.91	9.37	10.96	13.10	14.19	16.20	16.26	14.41
Milk ..	1.28	4.35	5.98	7.18	9.10	12.40	14.15	9.70
Animal foods ..	6.87	7.28	8.71	10.54	9.23	9.19	9.09	9.46
Tea and coffee } and Miscellaneous. }	.38	.72	1.34	1.69	1.19	1.25	1.28	1.28

Thus in the lowest income grade about seven-tenths of the expenditure is devoted to cereals and pulses alone and if we add to it the expenditure on vegetables and fruits and salt and spices 86·96 per cent of the expenditure is taken up by the 6 irreducible necessities of life and only 13·04 is available for giving richness and variety to the food.

This is a deplorable situation but even in the next two higher grades conditions are far from satisfactory. The percentage available for items other than the irreducible necessities comes to 25·10 and 31·04. Only in grades of income above Rs. 20 is the inexorable sway of necessities relaxed and items other than necessities show available percentage expenditure to be 37·43, 39·49, 44·26 and 46·18 in the four higher grades. In fact only in grades of income above Rs. 40 do we definitely pass from the sphere of necessity to the realm of freedom. The declining percentages of expenditure on the necessities of life and the rising percentages of that on other foods—introduce greater variety in the food of the grades of income above Rs. 20. In grades below this the dietary is poorer and more unbalanced.

The above analysis will acquire greater significance if we examine for each grade the actual quantities of the various food constituents in maunds and seers, or when quantity be appropriate, the actual amount spent on various items. The actual quantities or sums distributed over resident consumers reduced into adults for the purposes of food requirements will give the monthly consumption in seer or in annas and pies. The following table summarises the necessary information.

In this table entries in lines (a) and (b) are for quantities and in lines (c) and (d) for money values as in table no. 35.



TABLE No. 38.

## FOOD CHART IV.

Commodities.	Less than Rs. 10.	Rs. 10—15.	Rs. 15—20.	Rs. 20—30.	Rs. 30—40.	Rs. 40—50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
Rice .. (a)	35-34	100-13	132-33	322-4½	310-14½	236-4	151-5	1288-28
(b)	16-73	13-12	13-61	15-79	13-07	12-40	12-21	13-55
Wheat .. (a)	1-34	13-2	23-18	68-4	120—18	106-25½	66-30	400-11½
(b)	.86	1-71	2-40	3-34	5-07	5-60	5-39	4-21
Other cereals..(c)	0 10 0	0 10 0	5 10 0	8 10 0	16 5 0	5 0 0	3 2 0	39 15 0
(d)	0 0 1½	0 0 0½	0 0 3	0 0 2	0 0 3½	0 0 1½	0 0 1	0 0 2
Pulses .. (a)	1-37½	12-34½	19-7½	47-12½	52-1	45-29	29-20	208-22
(b)	.94	1-68	1-97	2-32	2-20	2-40	2-40	2-19

TABLE No. 38—*contd.*

Commodities.	Less than Rs. 10.	Rs. 10—15.	Rs. 15—20.	Rs. 20—30.	Rs. 30—40.	Rs. 40—50.	Rs 50 and over.	Total.
1	2	3	4	5	6	7	8	9
Vegetables .. (c)	16 14 0	114 7 0	180 6 0	510 5 0	629 4 0	597 2 0	381 8 0	2,429 14 0
(d)	0 3 2	0 6 0	0 7 6½	0 10 0	0 10 7	0 12 6½	0 12 4	0 10 3
Fruits .. (c)	0 8 0	0 10 0	1 0 0	4 4 0	8 12 0	12 8 0	10 14 6	38 8 6
(d)	0 0 1	0 0 0½	0 0 0½	0 0 1	0 0 2	0 0 3	0 0 4	0 0 2
Spices .. (c)	6 0 0	28 2 6	40 9 6	115 8 9	136 6 6	115 15 6	88 5 3	531 0 0
(d)	0 1 1½	0 1 6	0 1 8	0 2 3	0 2 4	0 2 5	0 2 10	0 2 3
Salt .. (a)	1-16½	4-10½	5-31	13-16	14-11½	11-17	7-25½	58-8
(b)	.66	.56	.59	.66	.60	.60	.62	.61
Sugar .. (a)	.7	2-38½	5-16½	19-7½	23-18½	21-9½	15-19½	87-37
(b)	.08	.39	.55	.94	.99	1-12	1-25	.92

Ghee	.. (a)	-1½	-22½	1-2½	4-34½	8-2½	8-3½	5-8	27-35½
	(b)	.02	.07	.11	.24	.34	.42	.42	.29
Butter	.. (a)	..	..	..	..	.8	.2	..	.10
	(b)	..	..	..	..	.01	.003	..	.003
Oil	.. (a)	-26½	2-22½	4-15	11-36½	12-22½	13-21	7-33½	53-17½
	(b)	.39	.34	.45	.58	.53	.71	.63	.56
Milk	.. (a)	-12½	4-26½	9-1½	31-23½	52-2½	65-13	48-14	211-13
	(b)	.15	.61	.93	1-55	2-19	3-44	3-90	2-22
Meat	.. (a)	-12	2-12	4-19½	14-38	14-32	13-9	8-12	58-14½
	(b)	.14	.30	.46	.73	.62	.69	.69	.61
Fish	.. (a)	-10	-29½	-33½	4-4	6-5	6-27	4-8½	22-37½
	(b)	.12	.10	.09	.20	.26	.35	.34	.24
Other animal food.	(c)	2 4 0	5 11 0	6 12 0	36 7 0	9 9 0	12 13 0	3 3 0	76 11 0
	(d)	0 0 .5	0 0 3½	0 0 3½	0 0 8½	0 0 2	0 0 3	0 0 1	0 0 4

TABLE No. 38—concl'd.

Commodities.	Less than Rs. 10.	Rs. 10—15.	Rs. 15—20.	Rs. 20—30.	Rs. 30—40.	Rs. 40—50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
Tea .. (c)	0 12 0	6 3 6	13 7 9	51 4 6	43 4 6	49 12 6	34 7 3	199 4 0
(d)	0 0 1½	0 0 4	0 0 7	0 1 ½	0 0 9	0 1 ½	0 1 1	0 0 10
Miscellaneous (c)	..	..	4 12 0	13 15 0	11 15 0	4 9 0	3 0 0	38 3 0
(d)	..	..	0 0 2½	0 0 3½	0 0 2½	0 0 1	0 0 1	0 0 2

The lowest group lives almost wholly on rice and salt of which it consumes the largest quantity per adult. Pulses do not come to more than half a chatak per adult per day whereas the requisite quantity for a normal man of the class would be about four times as much. Wheat like pulses, appears to be a rare food, reserved for occasions of festivities and rejoicings. Expenditure on vegetables comes to one pice a day per adult. One wonders how much and what kind of vegetables falls to his lot in view of the scarcity of prices at this centre. The quantities of sugar and ghee are a comment upon the magnitude of their poverty. Even oil, that cheap variety of fat comes to only six chataks a month per adult. Their share of meat, fish and milk comes to between 2 and  $2\frac{1}{2}$  chataks a month and their modest quota of tea is half a pice a month. This group has thus, a sufficiency in rice and salt alone, every other kind of food is deficient beneath contempt.

The next higher group does not show any quantitative improvement in cereals and pulses, but the increased welfare is seen in the larger quantities of wheat and pulses per adult, each of which comes to about  $\frac{7}{8}$  chatak per day. These quantities must double themselves before the consumption of wheat and pulses becomes reasonable. The expenditure on vegetables doubles that in the lowest group but is still far from importance. Position in respect of sugar is much better, the share being .39 seer or six chataks per month—sufficient for tea making but for nothing else. Ghee now comes to the respectable figure of one chatak a month enough for flavouring their meagre quota of meat which is about five chataks a month. Milk rises to ten chataks per adult—again sufficient for tea but for nothing else. Expenditure on tea is now thrice as much in the lowest group being one pice and half per month. Thus in this group also except for cereals and pulses, which are moderately sufficient, dietary remains deficient but slightly less so than in the lowest grade.

In the grade of "Rs. 15 but not Rs. 20" consumption of cereals and pulses registers further improvement both in quantity and quality. Wheat now comes to  $1\frac{1}{4}$  chatak per day and pulses rise to one chatak a day. Even so these latter figures are far from satisfactory. Improvement is maintained in respect of vegetables, expenditure on which comes to one pice a day. Sugar consumption comes to nine chataks and ghee to  $1\frac{3}{4}$  chataks a month. Oil shows a rise to about seven chataks a month. Thus fats come to be moderately sufficient in quantity, but poor in quality. Milk now rises to half a chatak a day but remains

still too low for any other purpose than tea making. Milk and fish comes to about nine chataks a month. Tea consumption becomes respectable being  $2\frac{1}{2}$  pice per month per adult.

In the grade "Rs. 20 but not Rs. 30" for the first time we get sufficiency of cereals both in quantity and quality and this position goes on improving till we reach the highest grade. However, we have not yet reached the optimum of affluence in respect of cereals and pulses as the trend of improvement is still rising. Expenditure on vegetables rises to 10 annas a month in this grade which is only slightly exceeded in the higher grades. Sugar consumption also improves and rises to .94 scer a month and is only slightly exceeded in the other higher grades. But the fact that the improvement in quantity continues shows that the desirable optimum has not yet been reached. Fats are moderately sufficient in this grade although the desirable optimum is reached in the grade "Rs. 40 but not Rs. 50" only. The quantity of ghee per adult comes to four chataks a month in this grade and rises to about six chataks in the two highest grades. But these quantities are still low and the sufficiency of fat is ensured by the poorer variety of oil which has reached a stationary level.

Milk intake continues to improve but even in the highest grade the consumption does not go beyond two chataks a day. The low milk intake together with the rising trend of the quantity consumed shows that we are still far from the desirable optimum of milk consumption. Consumption of meat and fish in grades of income above Rs. 20 is better but is not too high. In respect of tea, however, we have a moderate sufficiency.

The conclusion is obvious. In grades of income below Rs. 20 there is moderate sufficiency in respect of cereals only, but pulses still admit of improvement. Even the cereals deserve qualitative and quantitative improvement. Other items are deficient and so in the lowest income grade.

In grades of income above Rs. 20 cereals and pulses are sufficient both in quality and quantity but further improvement in quality appears to be desirable. In respect of tea, sugar and animal foods and vegetables also we meet moderate sufficiency. But there is room for improvement in all these both in respect of quantity and quality. Milk intake remains utterly low even in the highest income grades and more importance should be attached to milk, ghee, butter and other milk products. Grades of income below Rs. 20 are helpless unless their income improves

markedly. On the whole even in the highest grade we have not yet risen into affluence in respect of food and the optimum consumption is yet unattained.

### B—Clothing.

Limitations in the enquiry form precluded us from having a glimpse of the worker's wardrobes and no census of clothes was taken that could give an intelligible picture of their relative nakedness. We have only expenditure on clothing per month for the family and are left to make imperfect guesses by relating the expenditure to the number of persons in the family reduced into standardised adults, every person below 15 years counting as half. The expenditure reduced to money units, brings in a quantitative homogeneity, but the qualitative peculiarities in the dress of the territorial communities cannot be brought out. We can, therefore, consider this item of expenditure from the point of view of income grouping alone. In respect of other items to follow the analysis from the point of view of territorial communities will have far less justification and generally, henceforward our discussion will be from the point of view of income grouping.

It is necessary to indicate the wide connotation of the word clothing which includes not only usual wearing apparels but also, shoes, umbrellas, quilts, wrappers and so forth. It is also necessary to emphasise the way the monthly expenditure has been arrived at. The factors involved were duration of the articles, their prices, the frequencies of their purchase, the way they are disposed of after their prime utility disappears and so forth. Each of these considerations is likely to involve varying degrees of personal error but the resulting money value is likely to have been exaggerated rather than minimised. In any case, the value so deduced are objective facts only approximately but if they err, they err towards excess.

Presumably expenditure on clothing should strictly relate to the purchase, making and repair of clothes of what may be called capital and renewal charges. We have, however, juxtaposed, without amalgamating with the former, the cost of washing whether in the shape of payments made to dhobis, or for purchase of washing soap and other ingredients; since we regard the category of expenditure as an extension of the renewal and maintenance cost.

The cost of purchase, making and repair, and the cost of washing together with the average monthly expenditure on clothing per adult have been indicated in the following table from the point of view of the income groups.

TABLE No. 39.

Income groups.	Cost of purchase, making and repair.	Cost of washing.	Total expenditure on clothing.	Average expenditure on clothing per family.	Average expenditure on clothing per adult.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10 ..	22 3 3	8 6 3	30 9 6	1 1 6	0 5 10
Rs. 10 but not Rs. 15 ..	102 11 3	31 15 0	134 10 3	1 6 3	0 7 3
Rs. 15 but not Rs. 20 ..	154 1 9	42 3 9	196 5 6	1 10 5	0 8 1
Rs. 20 but not Rs. 30 ..	451 8 3	146 5 0	597 13 3	2 6 5	0 11 9
Rs. 30 but not Rs. 40 ..	751 4 3	198 5 9	950 4 0	3 13 10	1 0 3
Rs. 40 but not Rs. 50 ..	712 3 0	196 8 3	908 11 3	4 11 4	1 3 3
Rs. 50 and over ..	437 12 0	150 9 0	588 5 0	5 7 2	1 3 5
Total .. ..	2,631 11 9	744 15 9	3,406 10 9	3 4 5	0 14 6
Percentage of the net consumable income: ..	9.54	2.82	12.36	..	..



We find that the total general expenditure on purchase, making and repair of clothing comes to Rs. 2,631-11-9 or 9.54 per cent of the net consumable income. The corresponding figures for washing are Rs. 744-15-9 and 2.82. Thus altogether 12.36 per cent of the net consumable income is spent on clothing, 22.9 per cent of which is accounted for by washing. The percentage expenditure on washing is much higher among the mining families in which washing forms about 40 per cent of the total expenditure on clothing.

The percentages of expenditure on purchase, making and repair of clothes and their washing are thus quite modest and far from extravagant. The percentages for the various income grades are indicated in the following chart which also shows the percentage that washing forms of the total expenditure on clothing.

TABLE No. 40.

	Purchase, making and repair cost as percentage of net consumable income.	Washing cost as percentage of net consumable income.	Total expenditure on clothing as percentage of net consumable income.	Washing cost as percentage of total expenditure on clothing.
1	2	3	4	5
Less than Rs. 10	9.94	3.75	13.69	27.4
Rs. 10 but not Rs. 15	9.13	2.84	11.97	23.8
Rs. 15 but not Rs. 20	8.04	2.20	10.24	21.5
Rs. 20 but not Rs. 30	8.58	2.78	11.36	24.5
Rs. 30 but not Rs. 40	10.49	2.77	13.26	20.9
Rs. 40 but not Rs. 50	9.97	2.75	12.72	21.6
Rs. 50 and over ..	9.26	3.18	12.44	25.6
Total ..	9.54	2.82	12.36	22.9

The percentages of expenditure on purchase, making and repair show a gradual fall in the three lowest grades showing that beyond the absolute minimum little is being spent on improving quantity of clothes and apparels. Cloth is shown to be an article of necessity in grades of income below Rs. 20. In the grades of income between Rs. 20 and Rs. 40 there is a rise indicating change in the nature of cloth as a commodity. These grades can expand their expenditure on clothes a little and are trying to reach a desirable optimum. In grades of income above Rs. 40 there is little attempt to make further improvement in quantity of clothes. This shows how meagre are the requirements of the people in respect of quantities of clothes and apparels, although even the low requirements are not fulfilled in the grades of income below Rs. 20.

The same tendency is revealed by the percentages that expenditure on washing forms of the consumable income. Only in this case there is greater attempt at cleanliness in the highest income grade. The trend of the percentages of total expenditure on clothing is almost identical with these two trends.

All this shows three classes of income with respect to consumption of clothing. In grades of income below Rs. 20 the percentages of expenditure, absolutely not very high, fall exhibiting the rigorous sway of necessity. Above this limit but below Rs. 40 the population seems to have been relieved from this rigour, and there is a modest overflow of resources to improve the consumption standard of clothing. In grades of income above Rs. 50 the higher, but still, very modest standard, seems to have been realised and no more resources are devoted to improve it further.

The percentages that cost on washing forms of the total expenditure on clothing show little variation, almost all of them lying between 20 and 25 except in the lowest grade whose percentage is as high as 27.4.

If we examine the average expenditure on clothing per family we notice a continuous rise from the lowest to the highest income grade. The rise, however, is very gentle in the first three grades, which thus seem to belong to the same category of what Mr. Bernard Shaw would call the "hungry ones". The position improves markedly in the two higher grades next and expenditure seems to have reached respectable dimensions in the highest two grades.

The expenditure per family, however, does not bring out the absolute share per adult, the rise in which is shown to be much less spectacular in grades of income above Rs. 30. In these grades the average expenditure per adult seems to be stationary, round Rs. 1-3-0. In the four lowest grades, however, the average expenditure per adult amounts rapidly. Thus the struggle to have a satisfactory minimum of clothing has not abated until we rise into grades of income above Rs. 40.

The absolute expenditure per adult below Rs. 20 is very small indeed, being less than Rs. 6 a year. One-fourth of this goes to meet washing cost so that the amount actually available for purchase, repair, and making of clothes, shoes, umbrellas etc., is less than Rs. 4 and in the lowest grade even less than Rs. 3. Thus in respect of clothing, the families with incomes below Rs. 20 are at an undesirably low level, even if we allow for the tropical climate of this country. The absolute minimum of clothing required for an adult in this country may be set forth as follows:—

TABLE No. 41.

Items of clothing with likely duration.	Minimum cost.			Cost per month.		
	Rs.	a.	p.	Rs.	a.	p.
A pair of <i>dhoties</i> or <i>saries</i> in a year	1	12	0	0	2	4
A pair of <i>kurtas</i> per male or blouses etc., per female, in one year.	1	8	0	0	2	0
Quilt or blanket for winter, once in four years.	3	0	0	0	1	0
A pair of shoes or sandals, etc., for two years	1	8	0	0	1	0

Thus at least six annas four pies per month should be available for purchase, repair and making of clothes. These requirements cannot be regarded as too high. The prices and durations are somewhat arbitrary but presumably they tend to depress the minimum requisite expenditure rather than exaggerate it. If we add the washing cost which for these items cannot be less than eight annas six pies per month we have an absolute minimum of eight annas seven pies per adult per month below which no human being should be allowed to fall. Thus viewed people in grades of income below Rs. 20 are virtually leading a sub-human existence from the point of view of clothing.

If we are more generous and include *ganjis*, umbrellas, head wears and so forth in the permissible minimum, even people in grades of income below Rs. 30 would appear to be below this minimum. Even the highest grades, however, can claim no superfluity of clothes.

### C—Housing.

The presence of immigrant workers in considerable number at this centre where industries have grown up in unpopulated jungly tracts, has brought in the serious problem of housing. We have no data about workers who live beyond five miles of the limits of the towns of Jamshedpur, Mosabani and Mowbandar. Their housing is presumably not different from that of the rural population. Such workers might have flimsy country dwellings with few urban amenities but free from overcrowding, clean and otherwise comfortable. Housing in the towns, however, presents more complex problems and we shall be concerned mainly with a review of the urban housing. This will not vitiate our generalisation as almost 90 per cent of the workers are immigrants who would presumably dwell near the works rather than in the countryside beyond in which they are perfect strangers.

As a preliminary we may observe that those responsible for providing shelter to the homeless immigrants had a splendid opportunity of building on a soil unencumbered by ugly survivals of the past and they were building for a mass.

But the opportunity has not been adequately realised and opportunism and accident inseparable from a planless economy that is ours outweighed considerations of beauty and usefulness to a very large extent. Both in quantity and quality the provision of housing by the employers has been far from satisfactory.

From the point of view of quantity and mere number of dwellings provided, the only concerns that seem to have made serious attempts to house their workers are the Tisco and the I. C. C. Both of them were under inescapable obligation being the pioneers of peopling the empty tracts. But even they have provided barely a 5th of the dwellings required by their workers and most of such dwellings have been designed for the better paid and clerical staff. The Tinsplate Company is throwing up some dwellings mainly for the latter class. The Cable Company has some quarters in the Cable Town, but few

are occupied by the less well paid staff with which they are concerned. Except for a few tinsheds near the works the Wire and Steel Products Company have no quarters for their workers. Other concerns have hardly any and they have relied upon the possibility of drawing labour which would congregate at this centre in any case.

The opportunism and accident is more apparent in the character of the dwellings than in their numbers. Thus the *tinkholis* of the Wire and Steel Works were hastily improvised for loyalist workers during a strike. Probably the most ill advised opportunism characterises the quarters built by the Indian Copper Corporation both at the works at Moubhandar and at the mining colony of Mosabani. The quarters are the flimsiest pucca structure imaginable. The walls and roof are only 5" to 10" thick and lime sand mortar that has been used lacks any consistency. The result is that water passes through the walls and roofs and during rains these pucca quarters are more uninhabitable than even the *ghashholis* nearabout. The walls are so flimsy that even a gentle push will shake them and if a nail be sought to be driven into them they get cracked. The company spends more on their repair than on the fixed cost and yet the scheme does not appear to be unprofitable. This shows how cheaply housing can be provided, if a little imagination and sympathy goes with the plan. On the whole the housing provided by the Copper Corporation which is the only concern other than the Tisco to provide housing on a considerable scale, lacks both utility and grace. The workers yet aspire to such quarters because lacking security of tenure they are unwilling to sink capital for building houses of their own.

The only other considerable provider of housing are the Tisco. They supply a little above one-fifth of the dwelling required by the workers. Most of the dwellings that are available for the lower paid workers that we are considering are single room ones and are not suitable for occupation by families. Family men are however the most numerous class of the workers under the company and they are obliged to be cramped in these single rooms. We have in view the colonies called 'Ramdas Bhatta', R. N. type blocks and so forth. The unfortunate feature of these quarters is that they are built back to back and often in unbroken lines. The scheme saves a little space but effectively shuts out light and air from the rooms. There are very few types like the N. type, M. type and the C-Town quarters in which a lower paid worker's family may

live in comfort. It would be both profitable for the Company and cheap and comfortable for the workers if they supply a few standard types of family dwellings in separate blocks with a little space round the homes. The present chaotic array of types could be very well simplified.

Outside the quarters supplied by the employers which are at least subject to an organised plan, we pass into a world where housing condition is under little conscious control.

We may distinguish three systems under which housing is provided. In the first place we have the employers who both own the house sites and build the houses on them and let them out to their workers. The resulting groups of quarters are called towns whose conservancy, water-supply and sanitation are in the hands of the employers. Such are the N. type, C. town, L-town, *Ramdasbhatta*, the Cable town, the *tinkholis* of the Wire and Steel Products and so forth at Jamshedpur and the quarters of the Indian Copper Corporation at Mosabani like the Topline, the Engineering line, the Gurkha line, etc. and at Mowbhandar like the A-town, B-town, the Cooly lines and so forth. We have already seen that such towns house less than one quarter of the working population.

Next we have the system under which the employers own the land and lease out building plots to private persons. These might either build for themselves or let out on rent. In either case the employers get a ground rent and are responsible for the supply of water and conservancy, but their control on the buildings is limited to laying down a few general conditions, such as that the houses should be in straight lines with their doors facing on one side. Such are the line systems of houses at Mohulbera, Kasidih, Dhatkidih, the East plant *basti* and such other areas within the jurisdiction of the employers. At Mosabani and Moubhandar such areas are not considerable.

Thirdly, there is the system under which the house site belongs to private landlords who lease it to individuals who may build for their use or for hire. These are the most unregulated type of houses; the ground rent is often lower than what would be charged by the employers for a similar plot; but there is the counterbalancing factor that the employers arrange for sanitation, water-supply and conservancy which the private site owners do not. Such are the areas like Jugsalai at Jamshedpur and the *Jangli basti* at Mosabani.

As is natural the worker's first impulse is to look for one of the employer's quarters, but they are so few that they cannot be had by all. They next turn to private house owners who are a considerable supplier of housing in this area. Only when the workers have a sense of security and can spare money to sink in houses, do they build for themselves. A comparative table of the houses supplied by the various landlords is given below :—

TABLE No. 42.

	Employer.	Private landlord.	Self.	Friend or relation.	Total.
1	2	3	4	5	6
Less than Rs. 10.	2	10	16	...	28
Rs. 10 but not 15	15	41	40	1	97
15 but not 20	19	48	51	1	119
20 but not 30	46	83	118	2	249
30 but not 40	46	85	114	1	246
40 but not 50	63	45	85	..	193
50 and over.	30	17	61	..	108.
Total ..	221	329	485	5	1,040

We notice that actually the employers supply houses only to 221 families or 21·25 per cent of all the families. If we examine the income grades, we notice that only 7·14 per cent of the people of the lowest income grades live in houses provided by the employers. In the two grades above Rs. 10 but not Rs. 20 the percentages are 15·46 and 15·97. In the two higher grades next they are 18·47 and 18·70. Only in the highest two grades are the percentages at all considerable being 32·64

and 27·28. Thus more than 80 per cent of the families in grades of income below Rs. 40 have to manage dwellings howsoever they can.

The private landlords come to their help but they are less scrupulous than the employers ever can be and the house rent charged is simply excessive for the indifferent dwellings they provide. These dwellings are mostly *kutchas* with tiled roofing at Jamshedpur and *ghaskholi* (twig structures plastered with mud and thatched with straw) at Mosabani and Moubhandar. The outlay on such houses is small and the private house owners reap handsome profits. The absurdities of their dealing were exhibited glaringly at the Tatanagarbasa (Cable *basti*) where one man owns a whole block of labyrinth line house where rooms, dark, damp and sombre are let out promiscuously to all sorts of people at fanciful rents. The private landlords supply housing to 329 families or 31·63 per cent of all the families. Thus as suppliers of housing they are 150 per cent as important as the employers.

Even in the lowest income grade which cannot afford to spend much on house rent they supply 35·71 per cent of all the families and this percentage rises to 42·27 in the next higher income grade. After this grade the percentages decline gradually but even in grades of income above Rs. 15 the percentages are by no means low. The exact percentages for these grades from the lower to the higher are 40·34, 33·33, 34·55, 23·32 and 15·74. The decline in the higher grades is mainly due to the fact that more of such grades can afford to live in the employer's quarters and many more can lay by resources to build a house for themselves.

The largest number of families live in houses owned by themselves but paying ground rent either to the employers or to the private site owners. 485 families or 46·63 per cent live in their own houses. This system of housing is the cheapest in vogue but it presupposes security and affluence among the workers if they want to have decent dwellings. For the lowest grades, however, the flimsiest shed serves the purpose, as we find in the sweeper's *basti* near Dhatkidih where coolies of the Health Department of the Tisco live. Presumably some of them are exempted from any payment but the concession is negligible, since these people occupy the least space for living. Their houses are often too low for a man to stand erect and are built of discarded canisters and so forth. Similar is the sweeper line



at Mowbandar as also the Kolipara village at the same place. Sometimes, as we find conspicuously at Mosabani and Mowbandar, such houses may be built on lands of private site owners. Invariably such sites carry a lower rent and a worker often takes up more land than is absolutely necessary for building. Here he may grow vegetables and other crops.

The houses owned by the workers themselves are little distinguishable from those built by the private landlord, but the dwellers in such houses enjoy invariably greater accommodation than they do otherwise. The percentages of families living in their own houses are from the lowest to the highest grades : 57·18, 41·24, 42·52, 47·39, 46·34, 44·04 and 56·48. These percentages are almost invariably higher than any of the other two.

Very few families enjoy the hospitality of friends and relations and escape all payments on housing cost. Altogether five such families were discovered forming 50 of the total number of families.

We have already briefly referred to the kinds of houses provided by the employers, the private landlords and the workers themselves. We have noticed the unsatisfactory nature of almost all the housing provided by the Indian Copper Corporation and the few relative types of good houses provided by the Tisco. It will be now convenient to summarise the various types of houses provided for each income grade. In the table the descriptions of houses have been shown from the point of view of materials in composition and peculiarities in architecture :

TABLE No. 43.

Description of houses.	Less than Rs. 10.	Rs. 10-15.	Rs. 15-20.	Rs. 20-30.	Rs. 30-40.	Rs. 40-50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
Kutcha with straw thatching	5	22	1	7	—	—	—	35
Ghaskholi	13	23	11	64	14	6	—	117
Kutcha with tiled roofing	9	39	65	135	118	74	28	468
Brick wall with clay mortar and lime sand plaster and tiled roof.	—	6	29	19	77	36	53	209

TABLE No. 43—concl'd.

Description of houses.	Less than Rs. 10.	Rs. 10-15.	Rs. 15-20.	Rs. 20-30.	Rs. 30-40.	Rs. 40-50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
Corrugated sheet sheds ... ..	2	7	6	5	...	...	...	20
N1.—All <i>pucca</i> rooms ... ..	...	1	1	2	17	20	18	64
M2.—Gurkha line, <i>pucca</i> halls ... ..	...	...	4	11	2	3	...	19
Cooly lines, walls of unbaked brick with lime sand plaster and tiled and <i>kutcha</i> floor.	...	...	1	1	...	...	...	2
Randas.—All <i>pucca</i> but floor <i>kutcha</i> ... ..	..	...	1	4	4	19	11	39
Ghatsila CA-B block Mosabani no. 3 town lines.— <i>Pucca</i> rooms but with walls and roofs 5' to 10' thick and so pervious to rain.	...	...	...	6	10	3	1	20
Ghatsila.—Sweeper line ... ..	...	...	..	1	...	...	...	1
Tisco New Harijan quarters with <i>pucca</i> walls, <i>kutcha</i> fl or and corrugated roofing with tiles on.	...	...	...	2	..	...	...	2
C. Town.— <i>Pucca</i> wall with <i>kutcha</i> floor roof tiled on a bamboo thatch.	...	...	..	2	3	22	4	31
Mosabani.— <i>Tinkholi</i> with <i>kutcha</i> floor and <i>kutcha</i> brick wall and corrugated sheet roofing.	...	..	..	..	1	...	...	...
BN Type—Tisco <i>gholkholi</i> .. ...	...	...	...	...	...	6	2	8
Do. Cable ... ..	...	...	..	...	...	7	...	7
Total ... ..	28	97	119	249	246	193	108	1,040

We notice that the three most numerous types are houses with (1) *kutcha* wall and floors and tiled roofing; (2) Brick walls, clay mortar, lime and sand plaster, *pucca* floor and tiled roofing; and (3) twig structure with mud and thatched with straw.

Of these the first two are curiously confined to Jamshedpur and the last as curiously to the Mosabani-Moubhandar area. These types of houses are almost wholly owned by private landlords or the workers themselves. The three types form in order 44.52, 21.15 and 11.25 per cent of all the houses and together make up 76.92 per cent or more than three-fourths of all the houses. *Kutcha* houses with straw roofing are the most numerous in the lowest two income groups and that at Jamshedpur alone. They are altogether absent in grades of

income above Rs. 30. Almost all such houses are owned by the workers themselves. They form 3.37 per cent of all the houses.

All the other types of houses are nearly owned by the employers and belong to the so-called towns of the companies. We have already briefly reviewed the quarters provided by the employers and their suitability as family dwellings. A little further comment seems to be called for on some of these types. The corrugated sheet sheds are a peculiarity with the Wire and Steel Products only. Elsewhere it is altogether absent except in a few stray cases at Mosabani. These sheds are single-roomed with no verandah or courtyard.

The all *pucca* rooms as we meet in N1 and M2 types of dwellings under the Tisco are generally the best of all the houses provided by the employers being both commodious and designed for family purposes. These number 54 and make up nearly 2/5 of the house of the workers provided by the Tisco. The N1 type of houses have one large room (13'×16'×10'), 1 small room (8'×5'×7') also used as kitchen, 1 courtyard (15'×10') and one small verandah (6'×4') and have been quite well ventilated. The drainage and conservancy is satisfactory. The M2 type has two rooms (10'×9'×9') and 6'×5'×8' respectively, one courtyard 8'×6' and one small verandah (6'×5') also used as kitchen.

Other types have no courtyards which are universally in demand and are less satisfactory as family dwellings. The *Ramdasbhatta* type, RN type, *golkholis* and *khapra hholis* have nothing to recommend them, being single roomed dwellings with a verandah each, ill-ventilated, ill-lighted and otherwise undesirable. The C-town quarters with a courtyard or enclosure in front would have improved a great deal.

A word about the new Harijan colony at Dhatkidih. These quarters mark a departure towards new humanitarian ideas. There are 100 such quarters each having a single room (10'×10'×9') with two verandahs on either side 10'×4' each. The walls are *pucca* but curiously the floor is *kutchra* except for the inner verandah. The quarters are reasonably clear. The two large windows for the room would have assured good ventilation but for the fact that they are unbarred. The few belongings of the tenants are thus exposed to men and beasts and the people have defeated the whole purpose of the windows by closing them altogether.

The architecture at Mosabani and Moubhandar is almost identical as we have noted already. The *tinkholis* at Mosabani are not unlike *Ramdasbhatta* with its defects. The most abominable architecture perhaps is the Gurkha lines with their

61 long halls (30' × 10' × 10') with two doors at two extremities on the front and one on the back and two small windows unbarred 2' square. Each of these halls contains over a dozen human beings of different families. Rarely a partition of gunny bags or other material may be thrown in, in order to get some privacy.

The types of houses enjoyed by various income grades would naturally differ. In the lowest grade we meet the poorest housing as we would expect. Half the housing provided is *kutcha* with tiled roof in 9 and straw thatching in 5 cases. Another half is overwhelming *ghaskholi* with 2 corrugated sheet sheds. In the next higher grade not much improvement is noticeable. *Kutcha* houses with tiled roofing (39) and straw thatching (22) make up about 63 per cent of their houses. *Ghaskholi*, the only type at Mosabani-Moubhandar area makes up 23 per cent and the corrugated sheet sheds still make up more than 7 per cent. Thus about 93 per cent of the houses are still as in the poorest group. The little improvement marked in respect of 6 houses with brick walls and tiled roofs and 1 all *pucca*. Such houses form 7 per cent of all the houses in this income group.

In the grade of income Rs. 15 but not Rs. 20 we notice distinct improvement. The *kutcha* houses are now overwhelmingly tiled and they make up about 55 per cent of all the houses in the group. With *ghaskholi*, their percentage would be only 65. Corrugated sheet sheds and Gurkha lines would add 85 per cent more. Thus over 26 per cent of the houses in this group are of the better type.

In the grade Rs. 20 but not Rs. 30 first 5 types of houses form the following percentages 2·81, 21·60, 54·22, 7·63 and 2·01 making 88·35 per cent to 92·78. There is thus an apparent reversal. But from the point of view of space and comfort the *kutcha* houses with tiles are not very badly off.

In grades of income above Rs. 30 the trends improve definitely. The *kutcha* straw thatched houses have disappeared. The *ghaskholis* decline from 5·69 per cent in the lowest of the three grades to 2·09 in the next higher and disappear completely in highest grade. *Kutcha* houses with tiled roof decline progressively in importance, their percentage for the three grades being 48·03, 38·34, and 21·30. Corrugated sheet sheds are altogether absent. The percentages of brick houses with tiled roofs have risen, being 3·30, 18·65 and 49·07. Thus housing standard is generally higher and better in grades of income above Rs. 30.

The accommodation available for the workers of each grade has been shown in the table below :—

TABLE No. 44.

Income grade.	Number of rooms.	Floor space of rooms.	No. of verandahs.	Floor space of verandahs.	Number of court-yards.	Area of court-yards.	Available floor space of room per adult in square feet.	Area of persons reduced into adults for purposes of accommodation.
1	2	3	4	5	6	7	8	9
Less than Rs. 10'	42	2,655	12	739	...	...	80'00	33 19
Rs. 10 but not 15	125	9,788	37	1,454	2	210	279'25	35'05
15 but not 20	149	12,045	60	3,479	3	215	369'75	35'05
20 but not 30	404	35,245	132	9,827	19	1,213	769'75	32'58
30 but not 40	402	37,441	212	13,980	16	1,114	878'75	42'61
40 but not 50	381	33,439	187	10,579	50	4,942	715'00	46'79
Rs. 50 and over.	242	22,594	125	6,676	21	2,408	460'50	49'06
Total ...	1,745	153,207	765	46,734	111	10,102	3552'75	43'12
Average number per family.	1.68	147'31	.74	44'94	.11			

Before analysing this table we might briefly dispose of the question of accommodation provided by the quarters of the employers. As to the number of rooms, court-yards and verandah they contain we have already made a passing reference. We found that most of them are single roomed and ill-adapted to family dwellings. Here it is necessary to review only the floor space of the rooms including those used as kitchens, stores and for similar other purposes.

The five types of quarters provided by the Tisco have following floors space in square feet.

Types.	Floor space.
Ramdasbhatta	.. 120
C-Town ..	.. 336
N-Type ..	.. 170
M2-type ..	.. 120
RN type ..	.. 120
New Harijan Colony	.. 100

The floor space exceeds the minimum requisite of 113 square feet for an average family of 3.42 adults except in the New Harijan quarters, the C-Town and N-type quarters only.

At Mosabani the employer's quarters have the following floor space in square feet.

Types.	Floor space.	
Engineering line	..	72
Topline <i>Tinkholi</i>	..	100
A line, etc. ..	...	117
Gurkha line ..	..	100 (supposing that one hall is used by three families).

We notice that the floor space is grossly inadequate and the minimum requisite space is available only in one type. At Ghatsila the figures are as follows :—

Types.				Floor space in square feet.
A and B quarters	..	..	..	125
Workmen's lines	..	..	..	120

Thus in respect of floor space the housing is adequate. In the Cable town and the tinsheds of the Wire and Steel Works the floor space is 100 and 136 square feet respectively.

Air space will be discussed presently.

To turn to table II above. The number of rooms shown include kitchen, stores and the like as we have pointed out already. Even so the average number of rooms per family is only a little above one and half. From this we can realise the undue prevalence of single roomed dwellings for the families. The number of rooms per family from the lowest to the highest grade is as follows :—

1.50, 1.29, 1.25, 1.62, 1.63, 1.97 and 2.24. Thus families do not have two rooms on average except in the highest two grades and in the grades of income below Rs. 20 the dwellings are almost always one roomed except in the lowest grade in which workers can build small sheds for themselves. The two higher grades next rely mostly on private landlords and have to content themselves with the minimum they can take up. In the two grades between Rs. 20 and Rs. 40, over half the families have more than one room. It is curious to note that as the percentage of families dwelling in their own home rises, the average number of rooms per family also rises.

The average floor space of the room is 147·31 which is moderately above the required minimum of 130 square feet. An adult on the average enjoys 43·12 square feet of floor space against an irreducible minimum of 33 square feet. The floor space per adult, however, is just round the minimum in grades of income below Rs. 20. If we allow for space used for kitchen, store and similar other purposes these grades would actually fall below the irreducible minimum. If we relate this position with the air space available for these grades, we shall find that the dwellings of workers in grades of income below Rs. 30 leave much to be desired. In grades of income above Rs. 20 the floor space is moderately adequate, but even in the higher grades, the freedom which one would like to have is not available. A sense of frustration prevails among the workers who clamour for more and more accommodation to relieve their high strung nerves from the effects of overcrowding.

Verandahs are only a partial relief from such overcrowding. The space is so limited that they are a priced possession to the workers. Here they can sit and accommodate guests if any. They provide besides, some protection from heat that would be excessive in the houses without verandahs. Yet on the average only 3 families in 4 can boast of a verandah and the floor space that falls to the lot of a family is less than 45 square feet. The average number of verandahs per family on the various income grades are ·43, ·39, ·50, ·53, ·86, ·97, and 1·16 from the lowest to the highest income grades. It would appear that only in grades of income above Rs. 30 can a family hope to enjoy 1 verandah average. In grades lower than Rs. 30 barely 2 families in 5 have a verandah. If we distribute the floor space of the verandahs among all the families the average will be 26·40, 15·00, 29·15, 39·47, 56·83, 54·84 and 61·80 square feet from the lowest to the highest grade. The figures show a rising trend and in grades of income above Rs. 40 the floor space is not inconsiderable.

The position with respect to courtyards is more deplorable, only 1 family in 9 has a courtyard on average and spread over families, area of courtyard per family is less than 10 square feet. Courtyards are altogether absent in the lowest income grade and in the two higher grades the number of courtyards is utterly negligible. Even in the higher income grades the percentages of families with courtyards never rise beyond 20. Some sort of an enclosure, however, is definite necessity to satisfy the thirst for privacy that is natural to man. Any satisfactory plan of housing must make liberal provision for courtyards.

Altogether the families have just living space and in the lower grades of income the accommodation available is subnormal.

This conclusion will be reinforced if we examine the air space available for the people. Unfortunately, however, the data regarding air space are incomplete and we are unable to provide exact figure as we have done so far.

This is because the enumerators have uniformly constructed dimensions of the room as length and breadth only. Heights have been, however, recorded in a few typical cases of each category and in almost all cases where the employers have provided the housing. We have admitted the heights recorded as fair representation of facts for there is nothing to suggest that these have been either exaggerated or minimised. The average heights of the various types of quarters supplied by the Tisco are between 8 and 10. It being 8 feet for *Ramdasbhatta* type, 16 ft. for C-town, 9.68 ft. for N1 and 8.75 ft. for M2 and 9.00 for the New Harijan quarters. The general average would be thus a little above 9 feet. The average height for the quarters at Mosabani and Ghatsila is 10 feet, at Cable town 8 feet and height of the tinsheds supplied by the Wire and Steel Products is 8 feet. The heights of the other types of houses are as follows:—

Description.	Cases examined.	Average height in feet.
<i>Ghaskholi</i> .. .. .	9	8.66
Gurkhabasti and Janglibasti Kolepara and Nalarpar basti of junglies.	8	5.88
Houses built on Tisco's land and owned by workers or private landlords at Kasidih, Mohulbera, East plant Basti, Newlines, Kaliman basti, Namdah, Amdabasti, Kadmaslope, Dhatkidih and Tatanagarbasa.	19	8.00
Houses built on lands of private landowners and owned by workers or private house owners as at Jugsalai.	4	8.25
General average of houses not built by the employers.	40	7.75



Thus the houses provided by the employers are generally higher than the others. But on the whole their importance is so small that there will be no great error in taking 8 feet as the average height of the houses at this centre.

The average number of adults per family for the purposes of housing comes to 3.42. The air space available for an average family is inadequate in the New Harijan colony, *Ramdasbhatta* and M2 type, the space per adult being only 263, 281 and 306 cubic feet against the minimum requisite of 333 cubic feet. In N1 type it is better with 481 and even in RN type it is as high as 351. In C town the air space is abundant being 982 cubic feet per adult.

The air space available per adult in the Mosabani quarters is 211 cubic feet in the Engineering line, 292 in the Topline *tinkholi*, 265 in the other lines and even in the long halls of the Gurkha line, it is not likely to be adequate. At Ghatsila the air space of the A and B blocks is 365 cubic feet and is thus adequate. Cable town quarter and Wire and Steel Products *tinkholis* have an air space of 234 and 294 cubic feet per-adult.

Thus even among employers' quarter, air space is more often inadequate for purposes of families that reside in them. In the dwellings other than those provided by the employers no uniformity of types is possible and accordingly we cannot pronounce upon the adequacy and inadequacy of the air space of the various kinds of houses. We can, however, compute the air space for the various grades of income and the space available per adult therein. The results are shown in the following table.

TABLE No. 45.

Grades in income.			Computed air space for the grades in cubic feet.	Average air space per adult in cubic feet.
Less than Rs. 10	..	..	21,240	265.50
Rs. 10—15	..	..	78,304	280.41
Rs. 15—20	..	..	96,360	250.69
Rs. 20—30	..	..	280,960	365.12
Rs. 30—40	..	..	2,995,280	340.81
Rs. 40—50	..	..	267,512	374.14
Rs. 50 and over	..	..	180,752	392.51
Total	..	..	12,225,656	344.99

Thus except in the three lowest grades air space is everywhere adequate but even in grades of income above Rs. 20 the maximum air space enjoyed by any grades is not more than 20 per cent above the minimum requisite of 333 cubic feet per adult and if we leave out the space contributed to the kitchens, stores, and so forth only the barest minimum of space will remain.

The sources of water-supply that have been reported are taps, well, rivers and tanks. Their importance is shown in the table below :—

TABLE No. 46.

	Tap.	Well.	River.	Tank.	Total.
1	2	3	4	5	6
Less than Rs. 10 ..	16	..	..	12	28
Rs. 10—15 ..	76	12	1	8	97
Rs. 15—20 ..	85	29	..	5	119
Rs. 20—30 ..	226	19	4	..	249
Rs. 30—40 ..	216	23	2	5	246
Rs. 40—50 ..	173	20	..	..	193
Rs. 50 and over ...	99	9	..	..	108
<b>Total ..</b>	<b>891</b>	<b>112</b>	<b>7</b>	<b>30</b>	<b>1,046</b>

The importance of rivers as a source of water is utterly negligible. Only 7 families or 67 per cent of all rely upon this source and all of these families are found at the Mosabani and Moubhandar area. Similarly tanks as a source of supply

are confined only to some of the jungly families at Mosabani. In both these cases the families are living beyond the jurisdiction of the employer's estates. Tanks supply only 30 or 2·88 per cent of the families.

Shallow wells are more important than either of the two sources considered. They supply 112 families or 10·77 per cent of all the families ; here again almost all the wells are found at Jamshedpur area ; nearly all these are outside the jurisdiction of the Tatas in Jugsalai.

The company's water taps supply all the so-called towns of the companies and also the *bastis* on the companies' lands. Their importance is overwhelming. They supply 891 families or 85·68 per cent of all the families. This high percentage shows what a large proportion of the families live on the employer's lands.

The adequacy of the water-supply, however, cannot be judged by a quantitative compilation. So far as the dwellings on the private lands are concerned they are vitally affected by the conditions of the wells, rivers and tanks. In summer these often dry up and are reduced into mere pools of mud. The brackish and stagnant water they yield is often unhygienic. The water-supply of these 15 per cent of the families is altogether precarious and even if the quantity of water be abundant the quality is often questionable.

Even the company's towns and *bastis*, however, are not ideally situated in this respect. It is difficult to generalise but a few instances would indicate their conditions. The number of taps may be far too few for the cluster of houses. They may be too widely spaced. The supply may be controlled both in respect of duration and strength.

On each of these accounts we received numerous representations.

Thus let us consider the company's town at Jamshedpur. The Dhatkidih, Harijan colony old and new 4 taps supply over 200 families. At Kadma slope, company's town, 1 tap supplies 32 quarters : at M2 type 2 taps supply 56 quarters and at *Ramdasbhatta* over 40 families take water from a single tap.

Outside Tisco's towns at Cable town we find 16 quarters supplied from a single tap, but the scarcity is evidenced in the controlled supply, hours of supply being 5 a.m. to 7 a.m., 11 a.m. to 1 p.m. and 5 p.m. to 10 p.m. and the pressure is very low. At Wire and Steel company's *tinkholis* there are 4 taps for 100 families and the supply is not continuous.

At Mosabani 61 halls of the Gurkha lines housing over 600 persons have only 8 taps widely spaced and the supply is too much controlled. The top-line *tinkholis* have 1 tap for 40 quarters housing 150 people and water is available for 6 hours and not conveniently selected for the workers proceeding on duty in the morning. At engineering line, taps supply 3 lines of 20 quarters each and the supply is controlled.

Thus even in the company's towns the impression is one of acute water scarcity.

Outside the towns conditions are, if anything, worse. Thus at Kalmani *basti* only 2 taps are available for about 150 families. At east plant *basti* (New Block) 4 taps supply about 300 houses. At Mohulbeira in *Dusadhpatti* 2 taps supply 150 houses and for the lines proper, there are only 8 taps for 16 lines or 400 houses. Workers often send away their families to avoid the discomfort of inadequate water-supply. At Kasidih two long lines of houses had no taps at all and water was fetched from long distances. On the average one tap serves 100 families.

At Mosabani, outside the Company's town for 100 *ghaskholis* there is only one tap and at Moubhandar in the Kolepara one tap supplies 100 families.

We have drawn the instances from as wide a field as possible in order to avoid giving prominence to local scarcities. The instances can be multiplied but these are enough to show that the water scarcity is both acute and widespread.

Not much can be said about sanitation and conservancy with scientific exactitude and generalisation is largely a matter of opinion. For the sanitation and conservancy of towns and *bastis* on their lands, the companies are responsible. Elsewhere rural conditions prevail in unmitigated form. Thus Jugsalai, although it has a sort of municipal committee, is merely an overgrown village and the committee is not very effective in provision of urban amenities. Much of the problems of drainage, sewer disposal and cleanliness are solved by the contour of the

landscape but where congregation is dense organised sanitation is necessary. In such cases two problems are of decisive importance, namely the provision of latrines and urinals and the question of drainage. In both these respects much remains to be done. Here again a few specific instances would speak better than many laboured paragraphs.

In the Tisco's towns drainage and sewer disposal is reasonably satisfactory but the supply of latrines is everywhere inadequate except perhaps in M2 types of houses which have got latrines inside. Elsewhere the latrines are common and placed at one or more spots. Everywhere there are more latrines for males than for females but the total seats available are below a reasonable minimum.

Thus in the New Harijan colony at Dhatkidi, there are three latrines widely spaced having in all 12 seats for men and 6 for women for the 100 quarters. But since there are no other latrines, the people of the old Harijan *basti* near about also, use them with the result that all are put to great inconvenience. At *Ramdasbhatta*, there are 8 seats for males and 4 for females for 200 quarters. At the N1 town, conditions are little better, The company's latrines are at the two extremes of the lines of 16 quarters, one having 4 seats for men and 4 for women and the other having 2 for men and 1 for women. But at C-town for 96 quarters there are only 22 seats for males and 8 for females. Kadma slope, Company's town, is hardly better having only 1 latrine for 32 quarters, with 4 seats for males and 2 for females.

In the Cable town conditions are similar but the latrines are inside. The *tinkholi* of the Wire and Steel Products, however, is like the company's *bastis*, having neither latrines nor drains.

Outside these towns, the company's *bastis* have hardly any latrines or drains or even regular conservancy. Thus the East plant *basti*, the new lines, the Kalmanibasti and the Namda *basti* have absolutely no latrines, no drains and hardly any conservancy. These areas are, however, helped by the natural slopes and since they are sparsely peopled and have vast open spaces about them, open easing is possible without great detriment to the *bastis* health. But even well populated areas like Mohulbeira have no drains at all and the company's latrines are non-existent there. The most abominable areas are, however, Dhatkidih and Kasidih, old colonies very much congested.

and without any of the advantages of natural situation. In these overgrown and dense habitations the company has provided a few latrines to mitigate the distance but the provision is utterly inadequate. Thus at Dhatkidih we found latrines widely spaced with only 6 seats for males and 2 for females for over 200 people for each latrine. As to drainage Kasidih is probably the greatest sufferer. The *kutchas* drains are undefined and sluggish and stinking materials 3 feet deep accumulate at the people's doors. There is great deal of congestion and the abominable area rarely knows municipal conservancy.

Outside the company's jurisdiction, absolutely no municipal facilities are available and the colonies reproduce conditions of ugly, planless over grown villages.

At Mosabani, latrines were unknown till recently and even those built are shamelessly lacking privacy, the seats being in continuous lines without any screening arrangement. Even in the company's towns latrines and drains are inadequate. Thus in the engineering line, there are 3 latrines, 2 for males and 1 for females with 6 seats each and these serve over 60 quarters. In the Punjabi line, there is an overflow of people on to the open spaces for easing themselves. For the Gurkhaline, housing 600 to 700 people, there are 7 latrines with 6 seats each open and without privacy, majority being for females.

In the company's *bastis* conditions are worse. There are in the Gurkhabasti only 2 latrines with 8 seats each serving 100 houses and in the *basti* with *ghaskholi*, there are no latrines at all. Drainage is partially helped by the contour but most often the drains are open.

At Mowbandar the company's A town has only 1 latrine for 2 blocks having 2 seats each.

Thus out of the companies' towns there is much scope for improvement of sanitation and even in the towns sanitary facilities are not ideal.

Distance of the workers' dwellings from the place of work will be suitably considered with the cost incurred on travelling to and from the place of employment. When no cost is incurred the workers must walk the distance which would naturally cause fatigue and impair their efficiency. In the following table the houses have been classified from the point of view of their distances from the place of work and the cost incurred by each grade has been also indicated.

TABLE No. 47.

Distance of the dwellings from the place of work in miles.

	0-1.	1-2.	2-3.	3-4.	4-5.	Cost incurred on travelling.
1	2	3	4	5	6	7
						Rs. a. p.
Less than Rs. 10 ..	4	21	3	..	..	..
Rs. 10-15 ..	17	32	40	3	5	0 2 4½
Rs. 15-20 ..	22	57	29	11	5	1 2 1
Rs. 20-30 ..	66	108	68	7	..	1 11 11
Rs. 30-40 ..	36	23	146	41	..	7 13 6½
Rs. 40-50 ..	51	70	69	3	..	14 2 6
Rs. 50 and over ..	1	31	71	5	..	4 7 4
Total ..	197	342	426	70	5	29 7 9

We notice that even within the jurisdiction of the towns of Jamshedpur, Mosabani and Moubhandar to which we have confined our inquiry, the distances are considerable. Jamshedpur may be really regarded as a town of distances. The table shows that families residing within 1 mile of the place of work number 197 forming only 18·94 per cent of all the families. 342 families or 32·88 per cent of all the families are living between 1 and 2 miles away from the work place. But the largest number of families namely 426 or 40·96 per cent of all are living between two and three miles of their work place. Those living beyond three miles are relatively few being only 75 families or 7·21 per cent of all. Of these only 5 per cent or only 50 per cent are living beyond 4 miles and none beyond 5 miles at all. Thus the most fashionable distance of the dwellings within the towns is two to three miles. Those living within one mile are mainly concentrated at Mosabani and Moubhandar.

In the lowest grade three-fourths of the families are living between 1 and 2 miles away but all trudge the distance on foot and incur no cost on travelling. In the next higher grade the cost incurred is negligible although 50 per cent of the families live beyond 2 miles and more than 5 per cent beyond 4 miles. The fatigue of the workers may be well-imagined from the dreary walks of over 4 miles a day, fifty per cent of them have to undertake in addition to the toil in the works.

In the grade Rs. 15—20 only 18·49 per cent of the families are living within one mile of the works and about one-third of all the families are living beyond two miles. Yet not more than a fourth of such families incur any cost on the workers' journeys to and from place of work and almost in all cases the cost incurred is on purchase, maintenance and repair of push bicycles.

In the next higher grade three-tenths of the workers are living beyond two miles and over three-fourths are living beyond one mile. Yet the cost incurred does not improve and less than 6 per cent of the families show any expenditure on workers, journeys to and from place of work.

In the lowest of the three highest grades 183 families or about three-fourths of all are living beyond two miles yet the cost incurred is only Rs. 7-13-6½ and has been recorded in 40 families, that is only two-ninths of the families whose workers have to go more than two miles to works can afford to arrange for their conveyance.

In the highest grade but one 72 families or 37·31 of all live beyond two miles but their expenditure on travelling, is considerable and almost none of their workers walk to the workplace. In the highest grade, however, there is a curious reversal, for although 76 families or 70·37 of all live beyond two miles only a quarter of these prefer to use any conveyance for journeys to and from workplace.

Altogether 501 families are living beyond two miles, but only 145 families have any arrangement for conveyance. The rest walk on foot and prejudice their efficiency. A cheap method of collecting workers is a great desideratum.

It is now necessary to examine the cost of the kind of housing already discussed. The costs shown are definite periodical payments that workers have to make. The fixed cost has been excluded because it is not easy to deduce it. Hence the real outlay of the workers cannot be indicated in the cases in which the houses are owned by the workers and they pay a ground rent either to the employers or private site-owners. Where, however, the workers live in hired dwellings, the monthly payments exhaust all their liability. We have seen that about 47 per cent of all the dwellings are owned by the workers themselves. In these cases the outlay has been minimised because of the non-inclusion of the capital costs. The total housing expenditure that results is, therefore, below the actual expenditure. It is necessary to bear this in mind in appreciating the percentage that housing cost forms of the net consumable income as shown in the following table.



The total of recurring costs of housing forms only 5.50 per cent of the net consumable income. If we follow up appropriate percentages in the several income grades, we find that they form a decreasing series. The absolute magnitude of the percentages is none too high, the maximum being 8.50 per cent. If, in spite of this the percentages are falling, the inescapable conclusion is that housing is also an inelastic necessity like salt, and the workers, once they have the minimum of housing facilities do not care to improve upon them. There is no attempt at having better housing or more space as the dull monotony of the available air space and floor space, as well of the kinds of houses shows.

The total expenditure is made up of ground rent, house rent and other rates and taxes, the sole representatives of latter being municipal and *chaukidari* taxes. The latter two are paid only by workers living in their own houses but on sides owned by private landlords. Those living in dwellings supplied by the employers or by the private landlord pay only house rent. Only 5 per cent of the families escape all payments.

The average monthly payments made by workers living in their own houses and by those living in leased houses are shown below.

TABLE No. 48.  
Recurring cost of housing.

Income groups.	Ground rent.	House rent.	Other rates and taxes.	Total	The percentage that the total expenditure on housing forms of the net consumable income.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Less than Rs. 10 ...	2 18 3	16 0 0	0 1 0	18 14 3	8.46
Rs. 10—15 ...	23 13 0	71 9 0	0 2 0	95 8 0	8.50
Rs. 15—20 ...	25 6 3	100 3 0	0 4 0	125 13 3	6.57
Rs. 20—30 ...	58 4 9	250 9 9	0 9 0	309 7 6	5.77
Rs. 30—40 ...	73 0 0	320 10 0	0 8 0	394 2 0	5.50
Rs. 40—50 ...	41 9 9	326 10 0	0 10 0	368 13 9	5.16
Rs. 50 and over ...	48 8 0	153 4 0	0 7 0	202 3 0	4.27
Total ...	273 7 0	1,239 13 9	2 9 0	1,514 13 9	5.50

TABLE No. 49.

Income grades.	Average monthly expenditure on housing in case of families owning their own homes.	Average monthly expenditure on housing in case of families living in hired houses.	Average monthly expenditure per family for the grade.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10 ..	0 2 11	1 4 0	0 10 10
Rs. 10—15 ..	0 9 7	1 4 5	0 15 11
Rs. 15—20 ..	0 8 0	1 7 11	1 1 1
Rs. 20—30 ..	0 8 0	1 15 1	1 7 1
Rs. 30—40 ..	0 10 4	2 7 2	1 9 9
Rs. 40—50 ..	0 7 11	3 0 5	1 14 7
Rs. 50 and over ..	0 12 10	3 4 2	1 13 11
Total ..	0 9 1	2 4 0	1 7 5

The expenditure of families owning their own houses shows no definite trend. Both the site rent and the rates paid are well nigh fixed and the differences in the magnitude of the average are explained by the varying importance of private house sites and the companies house sites in each grade. The expenditure of families living in hired houses shows a continuous rise but here again in the three lowest grades the overwhelming importance of private landlords makes the rise very moderate, the landlords rarely providing varieties in the types of houses. In the higher grades the higher expenditure is mostly caused by the preponderance of the employers' quarters. Even when the workers live in hired houses their absolute expenditure is not very high although it is really high if we bear in mind the kinds of houses supplied.

The percentage expenditure on housing given above does not represent facts faithfully. A better perspective can be had if we imagine all the families to be living in private houses and then reduce the expenditure in each grade by the following formula:—

Formula (1) computed housing expenditure in any grade =  

$$\frac{\text{Actual house rent paid by families living in hired houses} \times \text{total number of families in the grade}}{\text{number of families living in hired houses.}}$$



Income grade.	Expenditure according to formula (1)			Expenditure according to formula (2)			Average expenditure per family according to formula (1)			Average expenditure per family according to formula (2)		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Rs. 20—30 (1)	479	13	5	422	8	9	1	15	1	1	11	4
(2)		9	12		9	03	..			..		
Rs. 30—40 (1)	599	8	10	522	4	1	2	7	2	2	2	1
(2)		8	33		7	29	..			..		
Rs. 40—50 (1)	583	11	1	543	11	8	3	0	5	2	13	1
(2)		8	17		7	60	..			..		
Rs. 50 and over. (1)	352	2	5	304	0	10	3	4	2	2	13	1
(2)		7	51		6	43	..			..		
Total (1)	2,349	5	9	2,091	13	11	2	4	0	2	0	4
(2)		8	52		7	59	..			..		

[NOTE—Horizontal entries in lines marked (1) are for computed money expenditure and those in lines marked (2) for percentages such expenditure forms of the net consumable income.]

The approximate housing costs of the various grades of income is thus seen to be between  $7\frac{1}{2}$  to 11 per cent according to one formula and  $6\frac{1}{2}$  to 10 per cent according to the other. Only in the lowest grade is the expenditure excessive being 14 to 15 per cent. In either case the percentage expenditure tends to fall. These percentages are about one and a half times as high as those disclosed by the actual recurring costs only. In respect of housing the average expenditure per family shows that the three lowest grades have nearly the same kind and quality of housing. The next two higher show marked improvement as judged by the average expenditure. These two grades have nearly similar housing facilities. The two highest grades have also similar housing but a little better than in the lower grades.

**D.—Fuel and Light.**

We have dealt with the major elements of the workers' well being, namely food, clothing and shelter at some length. The rest of the ground may be traversed hurriedly without loss of proportion. Fuel, which is used exclusively for cooking, might have been discussed with food; and light with housing. There were ample reasons, however, for considering fuel and light separately.

In the following table the quantity and value of fuel and light consumed in the various income grades have been indicated for comparative view. The quantities of wood and coal are in maunds, of matches in unit boxes, of kerosene in unit bottle. Prices are always in rupees and pies. The horizontal entries in lines marked (1) are for actual quantity or price and those in lines marked (2) are for the average quantity or price per family.

Income grades.	Wood.		Coal.		Matches.		Kerosene.		Other fuel and lights.	Total cost of fuel and light in Rs. As. ps.	Percentage that the total cost forms of the consumable income.	
	Q.	P.	Q.	P.	Q.	P.	Q.	P.				
1	2	3	4	5	6	7	8	9	10	11	12	
		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.		
Less than Rs. 10	(1)	43'50	18 7 3	80'50	9 15 6	182	3 2 6	46	6 9 6	...	38 2 9	14'40
	(2)	1'52	0 10 7	1'09	0 5 8	6'5	0 1 10	1'6	0 3 9	...	1 5 10	...
Rs. 10-15 ...	(1)	170'00	81 15 0	50'00	17 14 3	636	10 10 0	23	32 7 0	1 0 0	143 14 3	12'79
	(2)	1'75	0 13 8	'52	0 2 11	6'6	0 1 9	2'4	0 5 4	0 2 2	1 7 9	...
Rs. 15-20 ...	(1)	185'00	94 12 0	79'00	27 1 3	859	15 4 8	307	43 2 0	...	160 3 9	9'40
	(2)	1'55	0 12 9	'66	0 3 8	7'2	0 2 1	2'6	0 4 5	...	1 8 3	...
Rs. 20-30 ...	(1)	553'00	262 2 6	168'00	62 8 6	2496	42 2 3	67'6	122 1 0	2 0 0	491 14 3	9'35
	(2)	2'22	1 0 10	'76	0 4 0	10'0	0 2 8	2'5	0 7 11	0 0 3	1 15 7	...
Rs. 30-40 ...	(1)	571'00	280 6 9	239'0	80 2 6	2556	43 1 6	94'1	133 3 0	...	536 18 9	7'49
	(2)	2'32	1 2 3	'97	0 5 3	10'4	0 2 10	2'8	0 8 8	...	2 2 11	...

No. 40-50 ...	(1)	808'00	295 8 0	158'00	54 1 8	2485	41 14 8	925	180 14 3	...	402 9 3	6'47
	(2)	2'82	1 3 6	'82	0 4 8	15'0	0 3 6	4'8	0 10 10	...	2 6 4	...
No. 50 and over!	(1)	297'00	147 8 6	108'00	26 18 0	1428	24 2 0	561	78 18 0	...	287 8 6	6'07
	(2)	2'76	1 5 10	1'00	0 5 5	15'2	0 3 7	5'2	0 11 8	...	2 10 7	...
Total ...	(1)	3524'50	1120 9 0	852'50	288 9 8	10642	180 5 2	2887	548 0 9	3 0 0	2,140 7 6	...
	(2)	2'24	1 1 8	'82	0 4 5	10'2	0 2 10	2'7	0 8 5	0 0 1	2 1 0	7'76

We notice that wood and coal are the only two fuels used. The "other fuels and lights" stand for the remnant of the carbide supplied to the miners at Mosabani for underground work. A few families of the Gurkhas rely upon this as the only illuminant and since this item has been shown under income it has for the sake of accounting, been shown under expenditure also. Kerosene is the only illuminant used in spite of the cheap electricity that we find in this area. Matches, of course, include those used to light *biri* and cigarettes which consume the largest proportion. The rather heavy consumption of matches corresponds with the wide spread prevalence of smoking habit which entails a considerable expense.

The average consumption of wood and coal per family comes to 2.24 and .82 maunds, respectively. This is far from a satisfactory standard. Not all families consume coal. At Mosabani hardly any family uses coal. At Mowbhandar coal is used but only in a small number of families. At the Mosabani-Mowbhandar area almost the sole fuel is wood. At Jamshedpur use of coal is more widespread, but it remains always less important than wood both in quantity and value. Thus importance of wood in the average family is about 270 per cent as much as that of coal in respect of quantity and about 300 per cent in respect of value. Wood is dearer than coal, the price per maund being 7 to 10 annas for wood and 5 to 6 annas for coal. In spite of it, it is more widely used probably because the workers feel that cooking with wood fuel gives more tasteful dish than that with coal. The fuel value of equal quantities of wood and coal ought to be examined both from the point of view of calories and of their effect on the tastefulness of dishes.

In the three lowest income grades the position with respect to fuels is almost the same. The total fuel consumed is about 2½ maunds except in the lowest grade where it is about 2⅓ maunds. Most of the wood fuel in these income grades has been purchased in bundles of varying weights from the aboriginal fetchers. They have been reduced to maunds according to the prices paid. In some cases, the wood fuel has been picked up from the neighbouring wastes by the working families notably at Mosabani. The slightly more generous fuel consumption in the lowest grades is, therefore, not unnatural. As we rise higher in the income grades, the fuels are almost exclusively purchased for a price and the least possible expenditure is incurred on the purchase, resulting in almost a rigidly rationed consumption. In a large number of the families in these income grades cooking is often on alternate days.



In grades of income above Rs. 20 the provision is more generous rising from 2.98 maunds in the lowest of these grades to 3.75 maunds in the highest grade. Even so, the provision is nowhere above a rigidly rationed quantity.

The consumption of matches is rather heavy because of the widespread habit of smoking as we shall notice shortly. Here again the three lowest grades have an average of between  $6\frac{1}{2}$  to 7 boxes of matches per family. In the two higher grades next this, average rises to 10 ; and in the highest two grades the average is as high as 13.

In respect of kerosene the average number of bottles consumed per month in the lowest income grade is only  $1\frac{1}{2}$ . This grade is thus a class of day light animals whose activity ceases with the nightfall. In the two higher grades the average rises to  $2\frac{1}{2}$  but the homes are hardly better lighted than in the lowest grade. Only in grades of income above Rs. 20 is the absolute minimum of illumination approached. In these four grades the monthly averages of the bottles (pint-bottles) of kerosene consumed per family are 3.5 ; 3.8 ; 4.8 and 5.2. It would be conceded that only in the two highest income grades, is the lighting standard at all satisfactory.

The broad conclusion is that in respect of fuel and light, as in other respects, three income strata with varying comforts can be deducted. In the grades of income below Rs. 20 standard of fuel and light is below a permissible minimum. The homes are unlit and often insufficiently cooked or stale food is their general lot. In the grades of income between Rs. 20 and Rs. 40 a precarious minimum of fuel and light is found. Only in the grades of income above Rs. 40 is a satisfactory level reached.

The view is reinforced by an examination of the average expenditure on fuel and light per family. In three lowest grades this average is between Re. 1-6-0 and Rs. 1-8-0. The rise in incomes has little effect on the average and as a result we find the percentage expenditure declines from 14.40 to 9.40 in these three grades, showing how inelastic is the workers' demand for fuel and light.

In the two higher grades next the average lies between Rs. 2 and Rs. 2-2-0 showing much improvement on the previous three grades but little between the two grades mutually. The inelasticity of the average expenditure results in a fall in the percentages expenditure from 9.35 to 7.49.

In the highest two grades the improvement on the previous two grades is not as marked but that between themselves is slightly better. The fall in the percentage expenditure, therefore, is a little less perceptible being from 6·47 to 6·07 only.

The average expenditure is Rs. 2-1-0 and the percentage expenditure 7·76.

### E.—Furniture and Utensils.

Here, as in case of clothing, no census of the items of furniture and utensils was taken. We shall have to infer the bareness or otherwise of the workers' homes from the expenditure on these heads. As in case of clothing, computation of the monthly expenditure on these heads is likely to involve some personal error, since we have had to consider a large number of factors in the process.

We would have liked to consider the expenditure on the two heads separately but the limitations of the form of inquiry have made it difficult to affect a separation. The combined expenditure is shown in the following table for what it is worth.

Income grades.	Monthly expenditure.	Average expenditure per family.		Percentage that the monthly expenditure forms of the net consumable income.
		Rs. a. p.	Rs. a. p.	
Less than Rs. 10	2 3 6	0 1 3	1·00	
Rs. 10—15	11 4 6	6 1 10	1·00	
Rs. 15—20	16 7 0	0 2 2	·86	
Rs. 20—30	39 0 6	0 2 6	·74	
Rs. 30—40	96 3 0	0 6 3	1·34	
Rs. 40—50	101 12 9	0 8 5	1·42	
Rs. 50 and over	74 7 6	0 11 0	1·57	
Total	341 6 9	0 5 3	1·24	

We notice that the expenditure per family rises continuously from the lowest to the highest grades. In grades of income below Rs. 30, however, the expenditure is unspeakably low. The falling percentages show how infinitesimal is the improvement from grade to grade so far as incomes below Rs. 30 are concerned. In few of these families the utensils are other than earthenware with one or two brass *lotas* and *thalis*. Of furniture there are hardly any except a rare *charpoy* and few wooden or iron boxes for keeping the paltry family trinkets and clothes. The expenditure, which lies between  $\frac{1}{2}$  to 1 per cent of the consumable income of these grades is mainly the maintenance and replacement cost of the few items of furniture and utensils.

In grades above Rs. 30 both the average expenditure and the percentage expenditure rise, showing that increasing share of the workers' resources are being devoted to beautify the home and to improve its utility. The average expenditure in these grades is moderately higher but is yet far from adequate.

We may compute the minimum requirements of furniture and utensils for a family of 3.42 adults as follows :—

	Rs.	a.	p.
3 ordinary rope beds at Re. 1 each lasting for 1 year on average. Monthly cost.	0	4	0
1 ordinary steel or wooden trunk for Rs. 3 lasting for 4 years. Monthly cost.	0	1	0
2 steel baltis for Rs. 1-8-0 lasting for two years. Monthly cost.	0	1	0
2 earthen water pitchers for Re. 0-3-0 lasting for 3 months. Monthly cost.	0	1	0
3 earthen cooking pots for Re. 0-3-0 lasting for 3 months. Monthly cost.	0	1	0
1 lantern (ordinary) for Re. 1 lasting for 3 years. Monthly cost.	0	0	6
	—————		
Total minimum monthly expenditure ...	0	8	6
	—————		

There may be a little room for curtailment in this list but even if we reduce this minimum by 25 per cent or even 50 per cent, families in the grades of income below Rs. 30 would be found to be living at an incredibly low level of comfort.

The unambitious minimum that we have suggested is realised only in grades of income above Rs. 40 and not before we rise into grades above Rs. 50 is this minimum appreciably exceeded. The utter poverty of the workers' homes is patent and there can be no two opinions about it.

#### F.—Health, culture and relaxation : Physical and Mental.

Under this head we shall deal with education, amusement and medicine which though less urgent on a short view than the primary question of food, clothing and shelter, have vital bearing on the efficiency and character of man. The terms of the inquiry do not permit us to dwell on these problems at length. We cannot discuss the medical facilities available, the number of doctors, compounders, dressers and nurses that the companies maintain to look after their workers, the number of indoor beds available for urgent cases of injury or illness, the number of cases of sickness daily reported, the number of industrial diseases and so on. They have to be inquired into statistically and not by a mere look at the facilities provided which may leave a false impression. We may not dwell on the preventive measures like the malaria gang that works unnoticed at Jamshedpur. We have only to examine the expenditure incurred by the workers direct and to see whether they are adequate.

So also in case of education we have been precluded from taking a census of literacy among the workers, the proportion of children of school-going age attending school, the facilities for their education and so forth.

What we can do is to examine the expenditure on each of these heads. In the following table the expenditure has been shown for each income grade. The horizontal entries in the lines marked (1) denote actual expenditure and those in lines marked (2) average monthly expenditure per family :—

Income grades.	Cost of medicine and medical fees.	Cost of appliances of teaching and teachers' fees.	Expenditure on amusement.	Total.	Total expenditure of net consumable income.
1	2	3	4	5	6
Less than Rs. 10 (1)	Rs. a. p. 2 7 6	Rs. a. p. ...	Rs. a. p. 3 8 0	Rs. a. p. 5 15 6	2.67
(2)	0 1 5	...	0 2 0	0 3 5	...
Rs. 10—15 (1)	18 1 0	4 9 0	4 10 6	27 4 6	2.43
(2)	0 3 0	0 0 9	0 0 9	0 4 6	...

Income grades.	Cost of medicine and medical fees.	Cost of appliances of teaching and teachers' fees.	Expenditure on amusement.	Total.	Total expenditure of net consumable income.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Rs. 15—20 (1)	32 15 0	10 6 6	7 10 0	50 15 6	2.66
(2)	0 4 5	0 1 5	0 1 0	0 6 10	...
Rs. 20—30 (1)	91 5 0	51 10 0	19 7 6	162 6 6	3.09
(2)	0 5 11	0 3 4	0 1 3	0 10 6	...
Rs. 30—40 (1)	123 3 3	75 5 0	30 8 3	229 0 6	4.08
(2)	0 8 0	0 4 11	0 2 0	0 14 11	...
Rs. 40—50 (1)	130 11 6	114 8 9	34 10 0	279 14 3	3.92
(2)	0 10 10	0 9 6	0 2 10	1 7 3	...
Rs. 50 and over (1)	101 9 3	106 7 3	25 0 6	233 1 0	4.90
(2)	0 15 0	0 15 9	0 3 9	2 1 6	...
Total (1)	500 4 6	362 14 6	125 6 9	988 9 9	3.59
(2)	0 7 8	0 5 7	0 1 11	0 15 3	...

We find that the average expenditure under each of the three heads rises from the lowest to the highest income grade and the percentage expenditure also rises on the whole. Expenditure on medicine and medical cost, however, is utterly small in the grades of income below Rs. 30. Most of the cost is accounted for by medical fees because the workers have to pay the doctor except for their personal consultation. The lower average expenditure in the grades below Rs. 30 does not mean that the incidence of diseases is less in these grades but only the families cannot afford to spend on treatment and leave the diseased to cure themselves, if they can. For minor ailments there would be probably no treatment at all. Even for serious cases quacks and country doctors who are cheaper are often called. Even in the higher grades the annual cost is only 6 to 12 rupees for an average family comprising more than 4 persons.

Education seems to be much worse off. Taking on the average two children of school-going age in each family and receiving only elementary lessons in the three R's, the average cost

in teacher's fee cannot be less than 6 annas and if books, paper, slates and pencils are considered, the minimum cost would go up to 8 annas. Viewed in this light the absolute absence of any expenditure on education in the lowest grade, only an average expenditure of 3 to 6 pice in the two higher grades next shows that less than 10 per cent of the children must be going to school in these grades. Actually the expenditure on education in these 3 grades occurs in 8 and 13 per cent of the families only.

However, the average expenditure improves; but only in the highest two grades does that expenditure become at all adequate. The percentages of families reporting expenditure in the 4 higher grades are 16, 19, 24 and 32. The higher average expenditure on education in the two highest grades is due to the fact that expenditure is concentrated in a few families because of the cost entailed on keeping private coaches at home. On the whole only 18 per cent of the families have reported any expenditure on education and it would be not unfair to conclude that children going to school occur in about a fifth of the families only and even in these not all the children of age (5 to 15 years) are receiving education.

Expenditure on amusement is altogether absent at Mosabani where there are few other activities to beguile the workers' hours. They may meet and have music and probably dancing but these cost nothing. At Ghatsilla conditions are nearly alike but some adventurous persons may avail of the railway to have an off day at Jamshedpur. The amusement cost is nearly all incurred at Jamshedpur. The average per family is, however, so small that we cannot accuse the workers of being addicted to city pleasures. Their life is rather ascetic, if any thing. The maximum cost is less than 4 annas a month for a family of more than 4 persons.

Thus what may be called cost of conservation and development lies between 2½ to 5 per cent of the net consumable income. In the grades below Rs. 20, however, the absolute cost per family is less than 7 annas and only in grades above Rs. 40 is the average even mentionable.

#### **G.—Conventional indulgences. Drinks, Drugs, Tobacco and Pan.**

Drinks and drugs and tobacco and *pan* are conventional indulgences, which although not contributing positively to the workers' well being and some times actually brutalising them, are often supposed to lend a cheer to an otherwise unrelieved drudgery of existence. Being matters of habit, while they may be

often taken without positive zest, unavailability of the usual dose is more likely to be unpleasant. As such, these indulgences toll exert perceptible pressure on the workers' budget.

In the following table the actual expenditure on drinks and drugs and on tobacco and *pan* have been shown together with the average per family and the percentages that these items of expenditure form of the net consumable income. The horizontal entries in lines marked (1) stand for actual expenditure, those in lines marked (2) for average expenditure, per family and the ones in lines marked (3) for percentage expenditure.

Of drinks and drugs almost the sole representative is liquor, most important of which is *handia* brewed from fermented rice. Opium has been reported from 2 families or 2 per cent of all the families only and *bhang* from 3 or 3 per cent of all. *Charas* and other drugs have not been reported at all.

Among tobacco and *pan* should be included *ganja*, and the crude cigars prepared by Telugus; the *biris* which are most widely consumed variety of tobacco, *khainis* or chewing tobacco and cigarettes.

Of these '*ganja*' has been reported from 3 families or 3 per cent of all the families only. *Pan* includes arecanuts and other ingredients that accompany it.

Income grades.		Expenditure on	Expenditure on	Total expenditure
		drinks and drugs.	tobacco and <i>pan</i> .	on indulgences.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10	(1)	9 13 3	6 9 0	16 6 3
	(2)	0 5 7	0 3 9	0 9 4
	(3)	4-40	2-94	7-34
Rs. 10 but not Rs. 15	(1)	39 2 9	44 12 0	83 14 9
	(2)	0 6 6	0 7 5	0 13 11
	(3)	3-48	3-94	7-42

Income grades.	Expenditure on drinks and drugs.	Expenditure on tobacco and <i>pan</i> .	Total expenditure on indulgences.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rs. 15 but not Rs. 20 (1)	34 5 0	71 3 6	105 8 6
(2)	0 4 7	0 9 7	0 14 2
(3)	1.79	3.72	5.51
Rs. 20 but not Rs. 30 (1)	128 8 0	240 12 0	369 4 0
(2)	0 8 3	0 15 6	1 7 9
(3)	2.44	4.58	7.02
Rs. 30 but not Rs. 40 (1)	117 8 0	297 13 0	415 5 0
(2)	0 7 8	1 3 5	1 11 1
(3)	1.64	4.16	5.80
Rs. 40 but not Rs. 50 (1)	111 0 6	287 14 0	398 14 6
(2)	0 9 2	1 7 10	2 1 1
(3)	1.55	4.03	5.58
Rs. 50 and over (1)	45 11 6	180 14 6	226 10 0
(2)	0 6 9	1 10 11	2 1 7
(3)	.97	3.82	4.79
Total (1)	486 1 0	1,129 14 0	1,615 15 0
(2)	0 7 6	1 1 6	1 9 0
(3)	1.76	4.10	5.86

5.86 or about one seventeenth of the net consumable income of the general population is spent on conventional indulgences. The general percentage is thus by no means immoderate. Of this only 1.76 is on drink and drugs. The rest namely 4.10 is accounted for by tobacco and *pan*. The percentage on drink and drugs shows that the population is eminently sober. But the



extent of drink evil is not indicated properly because the quantitative consumption of drinks and drugs will be swelled by the cheap price of liquor (prominently *handia* brewed from fermented rice). It sells at 3 to 4 pice per bottle and is often brewed at home at a much lower cost. But even with this cheapness, the sobriety of the population is not greatly affected; and the position in respect of drink contrasts pleasantly with that at other centres.

The extent of drink evil varies from place to place and from community to community. Thus the aboriginal workers in the lower grades have a more widespread drink habit than the other communities. The Gurkhas at Mosabani colony have an equally marked drink habit, but outside these communities, which consume the cheapest *handia*, the habit is less widespread and costlier liquor is consumed as among the Punjabis. At Mosabani where the liquor shop is undesirably near to the works, the drink evil is the most widespread. Thus 62 per cent of the miners have reported expenditure on drinks but at Jamshedpur only 23 per cent of the workers have any such expenditure.

The degree of drink habit, of course, varies with the income grades, but as the composition of the grades is not the same as the point of view of communities represented therein, the variation is not regular. Even so we can discern three classes with respect to drink-prevalence. In the lowest three grades the average expenditure per family varies from 5 to 6½ annas. In the next three higher grades the averages are between 8 and 9 annas. In the highest income grade, however, the average falls to 6¾ annas. The general average is 7 annas and 6 pies or one pice per family per day which cannot be regarded as alarming. The prevalence of drink as judged by the percentage of families reporting expenditure thereon, however, declines as the incomes rise, the percentages being 59, 38, 22, 14, 9, 7 and 4, respectively, from the lowest to the highest grade. These percentages considered with the generally rising averages of expenditure show that the lower income grades although more addicted to drink content themselves with the cheaper variety of liquor.

The general percentage of the net consumable income spent on drinks is only 1.76 as we have noted already. The percentage is, however, higher in the lower income-grades, and declines as we rise into higher grades. Even in the lowest income grades, however, the percentage does not rise beyond 4½.

All this shows that although improvement in sobriety is desirable, the existing position is not unsatisfactory and much

improvement can be affected simply by a more judicious spacing of the liquor shops and by limiting the hours and days of sale of liquor.

There are fewer objections to the use of tobacco and *pan*. We have already indicated the variety of forms in which tobacco may be consumed. Of these *biri* is the commonest followed remotely by semi-liquid tobacco used in pipes and *khaini* chewed instead of being smoked. The forms vary from community to community. Thus among aboriginals *biri* is the most popular form of tobacco. Among the Telugus crude cigars of rolled tobacco leaves are common. *Khaini* is found mainly among Upper India families. Even *pan* consumption varies with communities, the heaviest chewers being the Oriyas and the Bengalis.

Except among the Sikhs who do not smoke tobacco and *pan* have no religious prejudice attached to them and are widely consumed. This is evident from the percentage expenditure on these which is 4.10 or  $2\frac{1}{2}$  times as much as on drinks and drugs. The average expenditure for the families in general is Rs. 1-1-6 against Re. 0-7-6 on drinks and drugs. The average expenditure rises continuously from Re. 0-3-9 per month per family in the lowest to Rs. 1-10-11 in the highest grade. Except in the lowest grade these averages are always higher than those on drinks and drugs. The percentage expenditure rises from 2.94 in the lowest grade to 4.58 in the grade Rs. 20 but not Rs. 30. Above this the percentage declines gradually to 3.82 in the highest income grade.

Thus tobacco and *pan* are of the class of conventional necessities par excellence in grades of income above Rs. 20 but below that they come into conventional luxuries.

The average expenditure on the two classes of indulgence together lies between 9 and 14 annas in the lowest 3 grades, between Rs. 1-8-0 and Rs. 1-11-0 in the two higher grades next and about Rs. 2-1-0 in the highest two income grades. Thus on the whole the expenditure rises continuously, much of the regularity in rise being due to the ever increasing importance of tobacco and *pan* as the income rises. Percentage expenditure on indulgences is quite high namely about 7 per cent in grades of income below Rs. 30 but declines in the three higher grades. Thus at least in grades of income above Rs. 30 there is little scope for improvement in respect of sobriety.

**H.—Remittance.**

The topic has been exhaustively dealt with in connection with dependants living away and no further comment is called for.

**I.—Religious Observances, Feasts and Festivals.**

These are occasions for group rejoicing, and in the otherwise uneventful life of the workers, they are memorable events. Much has been said about the extravagance of our people on such occasions and the unfortunate effects thereof in adding to their indebtedness.

A rigid curtailment of expenditure, however, will do little to improve their well-being and unless we devise new occasions of rejoicings and group union with greater significance in our life the cheer that goes with these festivals, however obsolete, will be denied to the workers.

The present cost incurred by working families per month on such items is shown in the following table.

Income grade.	Actual expenditure.	Average expenditure per family.	Percentage of net consumable income spent.
	Rs. a. p.	Rs. a. p.	
Less than Rs. 10 ..	14 2 0	0 8 0	6.32
Rs. 10 but not Rs. 15 ..	25 15 6	0 4 3	2.31
Rs. 15 but not Rs. 20 ..	43 2 0	0 5 10	2.28
Rs. 20 but not Rs. 30 ..	125 1 6	0 8 0	2.38
Rs. 30 but not Rs. 40 ..	155 1 0	0 10 1	2.16
Rs. 40 but not Rs. 50 ..	289 6 6	1 8 0	4.05
Rs. 50 and over ..	162 8 9	1 8 1	3.44
<b>Total ..</b>	<b>815 5 3</b>	<b>0 12 7</b>	<b>2.96</b>

We notice that the average monthly expenditure comes to Re. 0-12-0 or about Rs. 9-8-0 a year which is not very high. The percentage expenditure is about 3. If we follow the averages and the percentages of the various groups we notice three gradations.

In the lowest grade the toll of religion and superstitions is simply excessive. The average expenditure per family is Re. 0-8-1 per month which is not repeated until we rise to grades above Rs. 20. The percentage expenditure is 6.32 which is repeated in no other income-grades. This grade can, therefore, be rightly regarded as extravagant in respect of such expenditure.

In the next 4 higher grades the average expenditure gradually rises from Re. 0-1-3 to Re. 0-10-1 per family but the absolute magnitude of the average is never unreasonably high. The percentage expenditure lies round 2½ for these 4 grades.

In the two grades above Rs. 49 a marked rise in average expenditure is noticeable. These two grades spend Rs. 1-8-0 per family per month. The percentages for them are 4.05 and 3.44 respectively.

Thus from unreasonable extravagance in the lowest income-grade we pass to moderation in the 4 succeeding grades and then to liberal but not extravagant expenditure in the two highest grades.

#### J.—Trade unionism.

Trade Unionism at this centre is of fairly long standing but the recent labour troubles have made for a vigorous and better co-ordinated development. Now every industry at Jamshedpur, Mosabani and Ghatsila has a trade union and evergrowing proportions of the workers are being embraced by the movement. The worker's contribution to the Trade Union Fund which

measures his allegiance to the movement is indicated in the following table.

Income-grades.	Actual contribution to the T. U. Fund.	Average contribution per family.	Percentage of net consumable income contribution to T. U. F.
	Rs. a. p.	Rs. a. p.	
Less than Rs. 10 ..	0 3 0	0 0 1½	.08
Rs. 10 but not Rs. 15 ..	0 10 0	0 0 1½	.06
Rs. 15 but not Rs. 20 ..	2 7 0	0 0 4	.13
Rs. 20 but not Rs. 30 ..	12 3 0	0 0 9½	.23
Rs. 30 but not Rs. 40 ..	16 11 0	0 1 1½	.23
Rs. 40 but not Rs. 50 ..	44 7 0	0 3 8½	.62
Rs. 50 and over ..	21 2 0	0 3 1½	.45
Total ..	97 11 0	0 1 6	.36

We notice that the average contribution per family is only Re. 0-1-6 and the percentage of consumable income contributed to Trade Unionism Fund comes to .36 only. In the grades of income below Rs. 20 the contribution is so small as to be negligible. The percentages contributed by the families are between 1/17 to 1/8. This shows that Trade Unionism has not affected the workers in the lower income-grade to any appreciable extent although these are the grades that need the strength from union most. In the two lowest income-grades percentages of families contributing to Trade Union Fund are only 7.14 and 8.25 while in the grade of Rs. 15 to Rs. 20 the percentage comes to 15.97. In grades of income above Rs. 20 the contribution ranges from ½ to ½ per cent of the net consumable income. The average contributions also improve being about 1 anna per family in the two grades between Rs. 20 and Rs. 40 and between 3 to 4 annas in the two highest grades.

The percentages of families contributing to the Trade Union Fund also improve.

For the first two higher grades above Rs. 20 the percentages are round 22 and for the highest two grades they are between 30 and 33. Thus as the incomes rise the average contribution as well as the percentages of families contributing to Trade Union Fund rise. The rise is less certain in grades of income above Rs. 50 than in the lower grades because those in grades above Rs. 50 have lesser inducement to union than their companions in the lower grades.

Only 22.69 per cent of all the families have shown any contribution to the Trade Union Fund. Even if we regard the heads of all such families as being regular members of the Trade Unions, the movement does not appear to have embraced more than one-fifth of all the workers. The financial aid to movement rendered by these few members is far from considerable.

The conclusion is evident. The movement lacks comprehensiveness and financial strength and the stage of vigorous trade unionism is yet far off.

#### K.—Savings: provision for the future.

We have noted already that contribution to the Provident Fund, a detailed discussion of which occurs in the Chapter "Income", represents the only organised saving that the workers have. The existence of a co-operative society at Jamshedpur has induced a little saving in certain income grades, which might usefully be considered with Provident Fund.

The following table sums up the discoverable savings of the workers.

Income-grade.	Contribution to Provident Fund.	Deposits with Co-operative Society.	Total savings.	Percentage of income saved.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Less than Rs. 10	..	..	..	..
Rs. 10 but not Rs. 15.	21 14 6	..	21 14 6	1.77
Rs. 15 but not Rs. 20.	43 12 3	..	43 12 3	2.15

Income-grade.	Contribution to Provident Fund.	Deposit with Co-operative Society.	Total savings.	Percentage of income saved.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Rs. 20 but not Rs. 30.	310 9 6	60 8 0	371 1 6	6.20
Rs. 30 but not Rs. 40.	728 2 6	178 10 0	906 12 6	10.90
Rs. 40 but not Rs. 50.	846 3 6	176 0 0	1,022 3 6	11.95
Rs. 50 and over..	641 9 3	96 2 0	737 11 3	12.45
Total ..	2,592 3 6	511 4 0	3,103 7 6	9.60

The table shows that deposits with the co-operative society forms less than one-fifth of the total savings. Contribution to the Provident Fund remains the main form of organised savings. On the whole only 9.60 per cent of the monthly incomes of all the families is laid by for future. These are, however, not the net savings which would be in most cases negative; for we have not set off the amount saved against the amount borrowed. As a matter of fact, the Provident Fund and the co-operative society serve as sources for the surplus income of the workers. We shall find that considerable sums have been borrowed from these two sources. The lowest grade has not even an apparent saving and the next two higher grades have a saving of only about 2 per cent of their incomes. Thus in grades below Rs. 20 the savings are not worth mention. Even in the grade "Rs. 20 but not Rs. 30" which is the most numerous of all, the percentage saved is only 6.20. The percentage exceeds 10 but never 12½ in the three highest grades only.

The percentage saved increases from 0 to 12½ from the lowest to the highest grade. The absolute monthly savings for the grades with rising incomes naturally show a more spectacular rise, the averages being : 0; Re. 0-3-7; Re. 0-5-11; Re. 1-7-10; Rs. 3-12-0; Rs. 5-4-9 and Rs. 6-13-3. The general average saved per family is only Rs. 2-15-6.

### L.—Sundry other expenditure.

The items considered above practically exhaust the major periodic expenditures incurred by the workers. There remain certain other items too numerous to mention but individually of very small importance. The aggregate expenditure on these might be treated together. Such unspecified items include toiletry, cost of keeping domestic servants and such other matters.

The following table sums up the expenditure together with the average cost per family and the percentage of consumable income so spent.

Income grades.	Actual cost.	Average cost per family.	Percentage of net consumable income spent on such unspecified items.
	Rs. a. p.	Rs. a. p.	
Less than Rs. 10 ..	10 5 0	0 5 11	4.62
Rs. 10 but not Rs. 15 ..	36 4 0	0 6 0	3.22
Rs. 15 but not Rs. 20 ..	68 8 0	0 9 3	3.57
Rs. 20 but not Rs. 30 ..	160 5 0	0 10 4	3.05
Rs. 30 but not Rs. 40 ..	274 11 0	1 1 10	3.83
Rs. 40 but not Rs. 50 ..	267 9 6	1 6 2	3.73
Rs. 50 and over.. ..	236 2 0	2 3 0	4.99
Total ..	1,053 12 6	1 0 3	3.90

It is apparent that little expenditure beyond the minimum necessary is incurred. The unspecified expenditure is nowhere higher than 5 per cent of the net consumable income. The general percentage is lower, namely 3.90. Thus the well-being of the workers is measured almost absolutely by the expenditures considered heretofore. The unspecified expenditure is so small that it does not seem to indicate any superfluity in the worker's budget.



## CHAPTER V.

### Balance sheet of the workers' position.

In Chapter IV we dealt with the regular and periodic expenditures incurred by the working families. The payments made by the workers to pay up the principal and interest of their debts have not been treated as regular expenditures. They represent charges incurred for the debt service and will be logically considered with the general question of the worker's indebtedness.

We have besides, ignored the variety of non-recurring and irregular expenditures incurred by the workers on various occasions. The only justification for such neglect is the difficulty of getting at correct figures and of averaging out expenditures which are of necessity heterogeneous.

It is, therefore, necessary to emphasise the limitations of our treatment. We have to give due weight to social events like marriages, births and deaths, which although not in regular sequence, are of universal occurrence in our lifetime. Then there are natural and social misfortunes that ought to be anticipated and provided for. Such are the natural calamities like floods, earthquakes, fires and similar destructive agencies that may dissipate the patient accumulations of ages. Social calamities such as unemployment, strikes and lock-outs that result in widespread misery must be provided for until a saner social order eliminates these preventible evils. Allied to these are the more individual misfortunes in the shape of accident, disability, disease and death of the workers which might spell disaster to the working families.

All these are predictable emergencies and when they materialise they involve lump expenditure. These must have their due place in the workers' budget which we have not been able to make fully comprehensive. As provisions against these emergencies and as reserves to meet them when they materialise we have the balance of incomes that is left over after the regular expenditures have been accounted for. How large the positive balance should be to cover these emergencies is a matter on which we cannot pronounce. What have been the actual costs incurred we have no materials to show. But we can indicate the actual balance for the various income grades after the ordinary recurring expenditures have been met. In the following table we present a general Balance Sheet of the workers' position which shows the balance available for meeting the aforesaid emergencies and other irregular events at a glance.

BALANCE SHEET.

	Less than Rs. 10.	10-15.	15-20.	20-30.	30-40.	40-50.	50 & over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.	Rs. s. p.
<b>Income</b> ... ..	240 6 9	1,242 8 0	2,034 2 6	5,991 12 3	8,322 15 6	8,556 8 9	5,924 4 0	32,312 9 9
<b>Expenditure—</b>								
<b>A. Food</b> ... ..	195 13 0	855 2 0	1,347 4 0	3,909 14 8	4,755 12 9	4,863 1 0	2,941 6 8	18,867 5 3
<b>B. Clothing</b> ... ..	30 9 6	134 10 8	196 5 6	597 13 3	950 4 0	908 11 8	588 5 0	3,406 10 9
<b>C. Housing with cost of travelling to and from place of work.</b>	18 14 3	95 8 0	125 13 3	309 7 6	394 2 0	868 13 9	202 3 0	1,514 13 9
<b>D. Fuels and Lights</b> ...	33 2 9	143 14 3	180 3 9	491 14 3	536 13 9	462 3 3	287 3 6	2,140 7 6
<b>E. Furniture and Utensils</b> ...	2 3 6	11 4 6	16 7 0	39 0 6	66 3 0	101 12 9	74 7 6	341 6 9
<b>F. Health, culture and Relaxation—</b>								
<b>(a) Medicines and Medical fees.</b>	2 7 6	18 1 0	32 15 0	91 5 0	123 3 3	130 11 6	101 9 3	500 4 6
<b>(b) Education</b> ... ..	...	4 9 0	10 6 6	51 10 0	75 5 0	114 8 9	106 7 3	362 14 6
<b>(c) Amusement</b> ... ..	3 8 0	4 10 6	7 10 0	19 7 6	30 8 3	34 10 0	23 0 6	125 6 9
<b>G. Conventional Indulgences—</b>								
<b>(a) Drink and Drugs</b> ...	9 13 3	39 2 9	34 5 0	128 3 0	117 3 0	111 0 6	45 11 6	436 1 0
<b>(b) Tobacco and Pan</b> ...	6 9 0	44 12 0	71 3 6	240 12 0	297 13 0	287 14 0	180 14 6	1,129 14 0
<b>H. Remittances</b> ... ..	17 0 0	95 10 0	73 13 9	419 3 6	430 11 6	565 1 0	352 2 6	2,133 15 3

	Less than Rs. 10.	10-15.	15-20.	20-30.	30-40.	40-50.	50 & over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. a p	Rs. a. p.	Rs. a. p.	Rs. s. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
I. Religious observances, feasts and festivals.	14 2 0	25 15 6	43 2 0	125 1 6	155 1 0	289 6 6	162 8 9	815 5 3
J. Trade Unions ...	0 3 0	0 10 0	2 7 0	12 3 0	16 11 0	44 7 0	21 2 0	97 11 0
K. Savings :—								
(e) Contribution to P. F. ...	...	21 14 6	43 12 3	310 9 6	728 2 6	846 3 6	61 9 3	2,592 3 6
(b) Deposits with Co-operative Society.	...	...	...	60 8 0	178 10 0	176 0 0	96 2 0	511 4 0
L. Unspecified ...	10 5 0	36 4 0	68 8 0	160 5 0	274 11 0	267 9 6	236 2 0	1,053 12 6
Total Expenditure ...	349 10 9	1,532 0 3	2,254 4 6	6,966 15 9	9,161 8 0	9,072 2 3	6,262 14 9	35,599 8 3
Actual balance if savings be regarded as necessary expenditure.	-109 4 0	-289 8 3	-220 2 0	-975 3 6	-838 8 6	-515 9 6	-333 10 9	-3,286 14 6
Percentage balance if savings be regarded as necessary expenditure.	-45.4	-2.33	-10.8	-16.3	-10.1	-6.0	-5.7	-10.2
Actual balance if savings be not regarded as expenditure.	-169 4 0	-267 9 9	-176 5 9	-664 2 0	+ 68 4 0	+496 10 0	+399 0 6	-183 7 0
Percentage balance if savings be not regarded as expenditure.	-45.4	-21.5	-8.7	-10.8	+8	+5.8	+6.6	-6

The balance sheet shows a net deficit of 10 per cent for the population as a whole in respect of the regular expenditure. But if we treat savings as assets, the deficit shrinks to 6 per cent. The size of the deficit is apparently not large but if we remember that the irregular events and emergencies have not been reckoned in the calculation, the position becomes alarming. The economic condition is unhappy even in day to day life. Against emergencies, even predictable ones, its resistance is absolutely nil. We have a population making violent efforts to stretch their inadequate resources to cover the immediate needs. For the future they look helplessly to a benign providence to buoy them up above the engulfing misfortunes.

If savings be regarded necessary expenditure not a single income-grade shows any positive balance. The deficits range from 45 per cent and 23 per cent in the two lowest grades to about 6 per cent in the highest two grades. If savings be treated as assets, the position becomes a little more hopeful. The grades of income below Rs. 30 still remain deep in deficits. But above Rs. 30 the grades show positive balances. The magnitude of the positive balances even in the highest two grades, however, is not higher than 6 to 7 per cent. This small balance has not only to finance social events like marriages, births and deaths, and other capital expenditures like building and repair of houses, but has also to serve as reserves to be drawn against in case misfortunes visit the workers. Viewed in this light the economy even of the two highest grades seems to be far from compact and weather-proof. These two grades which alone can claim any satisfactory status count only 301 families or barely 29 per cent of all the families.

The income grade Rs. 30—40 also shows a positive balance if savings are treated as assets, but the balance is so small as to be negligible. This group counting 246 families or less than 24 per cent of all the families lives just in the present. It keeps afloat in the day to day life, but in its utter resourcelessness, can have no confidence in the future. Its security is literally founded on sand.

In grades below this, even if the savings be shown as assets, we meet nothing but unrelieved deficits. The condition of the lowest income grade with the deficit of 45.41 per cent can be hardly described by words. We can only say that it is incredibly subnormal. In the next higher grade the deficit declines to 21.5 per cent but this can be hardly regarded as an

improvement. In the two higher grades the deficits become more credible being between 9 and 11 per cent.

Each of these four grades is unable to meet its day to day cost. One really wonders whence they tide over their deficits. To talk of their future is to invite cynicism.

## CHAPTER VI.

### Indebtedness.

A consideration of the balances naturally leads to the question of indebtedness. It is clear that deficits in the regular periodical expenditure must be met somehow and the irregular events and emergencies that we have discussed must be financed. The most obvious method is to borrow if lenders can be found on the questionable security that the workers can offer. Grades of income below Rs. 30 must be specially obliged to borrow because even if we show their savings on the side of assets their budget deficits continue alarmingly high. Even in grades above Rs. 30 the small positive balances after meeting the ordinary expenditures of life are hardly reassuring. The strain on the slender balances caused by irregular events and emergencies must drive the workers to the money-lenders' arms. Below we indicate the volumes of debt for each income grade, the multiples of these form of the actual monthly incomes and the proportion of families in debt.

	Volume of debt in rupees.	Multiple that debt forms of monthly income.	Percentages of families in debt.	Percentages of families not in debt.
1	2	3	4	5
	Rs.			
Less than Rs. 10 ..	1,329	5.53	64.3	35.7
Rs. 10 but not Rs. 15	3,403	2.74	63.9	36.1
Rs. 15 but not Rs. 20	5,189	2.53	61.3	38.7
Rs. 20 but not Rs. 30	20,306	3.39	77.1	22.9
Rs. 30 but not Rs. 40	35,414	4.25	76.8	23.2
Rs. 40 but not Rs. 50	41,851	4.89	82.9	17.1
Rs. 50 and over ..	23,093	3.90	79.6	20.4
<b>Total ..</b>	<b>1,30,585</b>	<b>4.04</b>	<b>75.0</b>	<b>25.0</b>

The total debt of 1,040 families of this centre is Rs. 1,30,585 which is 4.04 times the monthly income of these families. Evidently the volume of debt is not unduly large and ordinarily repayment would not have presented any serious problems. But the alarming deficits that we meet in the grades below Rs. 30 make even this moderate debt a matter of no small concern.

If we follow up the various income grades we shall find that the volume of debt is everywhere moderate. Except in the lowest grades the debt never exceeds five times the monthly income.

The multiples, however, fall into definite classes. In grades of income below Rs. 20 which have the largest but diminishing deficits, the multiples tend to fall from 5.53 to 2.53. In the next three higher grades the multiple rises from 3.39 to 4.89 to decline in the highest income grade to 3.90. The rising multiples for the three grades between Rs. 20 and Rs. 50 are an abnormal phenomenon. Ordinarily we would have expected decline in the multiples as the incomes and positive balances rise. The fact that instead of declining the multiples tend to rise, shows that people are in a better position to borrow and the restraint of prudence that characterised the well-paid families has been inoperative. Decline in the highest grade is only natural to expect. In the three lowest grades with their abnormal visible deficits, the low multiples are really a puzzle. Either these grades have failed to present their debt position correctly or the huge deficits disclosed by their expenditure are a fraud. In the latter case the living standard of the workers must be even lower than the ridiculously humiliating standard of their living that we have portrayed.

The average debt burden per family would be for the total population 125.5 rupees; but if we consider those families only that have reported indebtedness, the volume of debt would be larger, namely 167.4. The corresponding pairs of averages for each income grade from the lowest to the highest are in rupees: 47.5, 73.8; 35.1, 53.9; 43.6, 71.1; 81.6, 105.8; 144.0, 157.4; 216.8, 261.6 and 23.8, 268.5. The average debt burden mounts rapidly but the height is unconscionable in the lowest income grade which is not exceeded till we rise into grades above Rs. 20.

The multiple that debt forms of the monthly incomes have been based on the assumption that the debt burden may be spread over all the families. If we consider only the families

actually in debt, the multiples will be much higher indicating much greater strain on the indebted families. The multiples from the lowest to the highest grades would be 8·02, 4·07, 3·43, 4·52, 5·41, 6·21 and 5·20. All these multiples exceed 3 which we regard as the normal multiple that debt should form of the monthly income of a family. The greatest strain is indicated in the lowest income grade but no grade is likely to find its debt burden easy to bear.

Three-fourths of all the families examined are in debt. The percentages of families in debt are highest in the two grades above Rs. 40 ; the figures being 82·9 and 79·6. The two grades immediately below these come second in respect of the height of the percentages of families in debt which are about 77. In the lowest three grades the percentages of indebted families lie between 61 and 64.

Thus as we rise from the lower to the higher income grades more and more families are found in debt. One would have expected larger proportion of solvent families in the higher income grades, but the tendency is actually reverse. This shows that the lower income grades having little security are not in a position to borrow extensively. But as incomes rise the rigidity in expenditure is relaxed and the deficits are met with greater facility by borrowing for which these grades can offer a slightly better security. The unnatural position, however, reflects on the prudence of the workers.

If we relate the volume of indebtedness to the size of the deficits for the various grades we shall find that the lowest two income grades are inextricably in debt. The only remedy is to write off their debts and to raise their income by 100 to 50 per cent. The next two higher grades are little better and most of their debt is irrepayable. Their consumption scale is already too low to permit further curtailment.

The income grade Rs. 30 to Rs. 40 shows no deficit but hardly any positive balance. Even this grade, therefore, cannot be expected to reclaim itself unless with a violent struggle and ascetic economy.

It is only in the highest two income grades that the positive balance is at all high. Only these two grades can be expected to meet their indebtedness without great inconvenience to themselves.

We may sum up the debt position in terms of families as follows :—

25·00 per cent of the families are not in debt ;

33·17 per cent of the families, all in grades of income below Rs. 30 are inextricably in debt ;

18·17 per cent of the families, all in grade Rs. 30—40 are so deeply in debt that their reclamation without organised assistance is very difficult ;

23·66 of the families, all in grades above Rs. 40 although heavily indebted can help themselves out with an effort.

The occasions which obliged the workers to borrow have been classified for this centre into four broad heads. The first two heads include borrowing for which the worker himself has been responsible and which can be allocated to definite categories. These borrowings either are Productive (A) or Unproductive (B). Class C includes ancestral debts for which the worker is not responsible. Class D includes borrowings whose character has not been specified. The various sub-classes have been shown under these in the table below which shows the sums borrowed on their account in rupees. The percentage sum borrowed on various accounts have also been indicated in brackets immediately after the entries of actual sum borrowed.



Causes of indebtedness	Less than Rs. 10.	Rs. 10-15.	Rs. 15-20.	Rs. 20-30.	Rs. 30-40.	Rs. 40-50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<b>A.—Productive debt incurred by worker on account of—</b>	...	163 (4'8)	418 (9'1)	2,501 (12'3)	5,106 (14'4)	4,240 (10'1)	3,597 (15'6)	16,025 (12'3)
(a) Agriculture ... ..	...	123 (3'6)	125 (2'4)	80 (1'2)	711 (3'0)	698 (1'7)	440 (1'9)	2,145 (1'6)
(b) Industry ... ..	...	...	...	220 (1'1)	402 (1'1)	530 (1'3)	590 (2'6)	1,742 (1'3)
(c) Buildings and repair of houses ... ..	...	...	125 (2'4)	1,077 (5'3)	2,885 (6'7)	1,014 (2'4)	1,135 (4'9)	5,716 (4'4)
(d) Acquisition of property ... ..	...	40 (1'2)	88 (1'7)	1,055 (5'2)	1,080 (2'6)	1,240 (3'0)	800 (3'5)	4,304 (3'3)
(e) Acquisition of knowledge and skill ... ..	...	...	...	98 (1'5)	428 (1'2)	760 (1'8)	520 (2'3)	1,806 (1'4)
(f) Others ... ..	...	...	80 (1'6)	...	120 (1'3)	...	112 (1'5)	312 (1'2)
<b>B.—Unproductive debt incurred by the worker on account of—</b>	1,297 (9'6)	3,040 (8'4)	4,461 (8'0)	15,427 (76'0)	22,763 (64'3)	29,378 (70'2)	17,761 (76'9)	94,137 (72'1)
<b>I. Social ceremonies—</b>	212 (16'0)	864 (25'4)	2,643 (50'9)	5,156 (25'4)	8,136 (28'0)	13,863 (33'1)	8,000 (24'6)	38,874 (29'9)
(a) Marriage, betrothal and allied ceremonies.	110 (8'3)	550 (16'2)	2,100 (40'5)	4,148 (30'4)	6,242 (17'6)	11,796 (28'2)	7,070 (30'6)	32,016 (24'5)
(b) Birth celebrations ... ..	...	144 (4'2)	146 (2'6)	314 (1'5)	184 (1'4)	317 (1'6)	...	1,055 (1'8)
(c) Funerals ... ..	102 (7'7)	166 (4'9)	388 (7'5)	622 (3'1)	1,550 (4'4)	1,550 (3'6)	930 (4'0)	5,318 (4'1)
(d) Other ceremonies like <i>upanayan</i> , etc.	...	4 (1)	9 (1)	72 (1)	200 (1)	200 (1)	...	485 (1)

Causes of indebtedness.	Less than Rs. 10.	Rs. 10-15.	Rs. 15-20.	Rs. 20-30.	Rs. 30-40.	Rs. 40-50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<b>II. Religious occasions</b> ... ..	6 ('5)	87 (3'5)	47 ('9)	280 (1'4)	760 (3'1)	1,367 (5'3)	100 ('4)	2,647 (2'0)
(a) Festivals and worship ... ..	6 ('5)	79 (3'3)	33 ('6)	180 ('9)	640 (1'6)	787 (1'9)	100 ('4)	1,804 (1'4)
(b) Religious pilgrimage ... ..	...	...	...	40 ('2)	...	...	...	40 (—)
(c) Feasts, etc. ... ..	...	8 ('2)	15 ('3)	80 ('3)	120 ('3)	600 (1'5)	...	803 ('6)
<b>III. Social difficulties—</b> ... ..	...	588 (17'3)	660 (12'9)	4,652 (22'3)	4,551 (12'9)	2,586 (6'2)	1,370 (5'9)	14,887 (11'0)
(a) Voluntary unemployment or strike ... ..	...	240 (7'1)	350 (6'8)	2,422 (11'9)	2,896 (8'2)	866 (2'1)	775 (3'3)	7,540 (5'9)
(b) In-voluntary unemployment as dis- missal or discharge, etc. ... ..	...	318 (9'2)	350 (4'4)	1,810 (6'9)	292 ('8)	762 (1'9)	290 (1'3)	3,697 (2'8)
(c) Litigation ... ..	...	...	...	261 (1'4)	1,239 (3'5)	818 (2'0)	305 (1'3)	2,643 (2'0)
(d) Others ... ..	...	85 (1'0)	80 (1'5)	119 ('6)	124 ('4)	140 ('4)	...	498 ('4)
<b>IV. Individual disability such as—</b>								
Sickness, accident, confinement and other bodily ailments.	218 (16'4)	448 (13'1)	208 (4'0)	2,017 (9'9)	3,408 (9'8)	5,110 (12'3)	2,095 (13'4)	14,497 (11'0)
<b>V. Default in consumable dividend</b> ...	861 (64'7)	1,055 (30'8)	903 (17'4)	3,352 (16'5)	5,918 (16'7)	6,452 (18'4)	5,196 (22'5)	23,738 (18'3)
<b>C.—Ancestral debt for which the worker is not directly responsible.</b>	18 (1'2)	50 (1'5)	70 (1'3)	352 (1'7)	2,945 (8'3)	2,737 (8'9)	1,435 (6'2)	8,604 (8'6)
<b>D.—Insufficiently described or unspecified causes.</b>	17 (1'4)	150 (4'4)	240 (4'5)	2,016 (9'9)	4,600 (13'0)	4,496 (10'7)	300 (1'3)	11,819 (9'1)
<b>Total</b> ...	1,329	3,438	5,189	20,206	35,414	41,851	28,093	1,30,865

Of the total debt 12·3 per cent represents borrowings for productive purposes. In some cases trade and industry has resulted in loss and the deficits caused have been met from debt. Such borrowings have been also called borrowing for productive purposes. The most important categories of the productive debts have been incurred in respect of building and repair of houses and the acquisition of property, the percentage of debt on these being 4·4 and 3·3. Pursuit of agriculture and of industry account for about 1·5 per cent of the debts while pursuit of knowledge and skill has entailed only 1·4 of all the debts. Thus barely one-ninth of the productive debt has been incurred on account of intellectual pursuits.

The percentages of definitely productive debts in the various income grades are revealing. They range from 0 to 15·6 from the lowest to the highest grade and form a regular ascending series except in the grade Rs. 40—50 in which the trend dips suddenly to rise again. For the grades below Rs. 40, therefore, we can say that the higher the income per family, the higher the percentage that the productive debts form of the total. The same can be said of the other two groups which fall into another category.

The importance of agricultural pursuit as a cause of debt diminishes as we rise in the income grades as the diminishing percentages of debts on this account show. The percentages are 3·6 and 2·4 in the lowest two grades and about 2 in the higher one.

There is absolutely no debt on account of industrial pursuits in grades of income below Rs. 20. In the remaining four grades the percentages of debts are peculiarly uniform round 1·1 except in the highest grade where the percentage is 2·6. Thus as agriculture diminishes industry grows in importance as a cause of indebtedness.

The lowest two grades have incurred no debts on account of building and repair of houses. In the three grades between Rs. 15 and Rs. 40 the percentages of such debts are rising, being 2·4, 5·3 and 6·7 respectively. In the two higher grades slightly different conditions prevail as the percentages are low but rising.

Acquisition of property, being almost entirely purchase of agricultural land, has been an important cause of indebtedness in the six grades above Rs. 10 but only in the four higher grades does the percentage of debt incurred rise beyond 1·7. Even in

these the percentages lie mainly between 3 and 3½ only. Debt contracted for purposes of education and training has been shown under acquisition of knowledge and skill. As we have seen already only one-ninth of the productive debt has been incurred for such purposes. Such debt is altogether absent in grades of income below Rs. 20 and in the four higher grades the percentages are .5, 1.2, 1.8 and 2.3 only. These percentages together with the cost incurred on education discussed already show how little mental and intellectual development is appreciated by the working families.

72.1 per cent of the total debt is definitely unproductive. The most important constituents being debts incurred on social ceremonies and these to meet deficits in the consumable dividend. The percentages of total debt accounted for by these two categories are 29.8 and 11.2 respectively. The remaining three-eighths of the unproductive debts are almost entirely accounted for by social difficulties like strikes, etc., the individual disabilities like accidents and diseases. These categories account for 11.0 per cent of the total debt each. Religious observances, feasts and festivals have contributed to only 2.0 per cent of the total debt, which is rather low for a religion-ridden country that India is.

The five categories of unproductive debt deserve further analysis. Among social ceremonies, marriage, betrothal and allied ceremonies are of over shadowing importance. These account for 24.5 out of 29.8 per cent of the total debt incurred for social ceremonies. As a matter of fact marriages and allied ceremonies are the most important factor of indebtedness, being singly responsible for about one-fourth of the total debt. The next important item is funerals which, however, accounts for only 4.1 per cent of the total debt. Thus as a cause of indebtedness funerals happen to be only one-sixth as important as marriages. Birth celebrations and other ceremonies have very little importance being jointly responsible for 1.2 per cent of the total debt only.

Among religious causes, feasting and pilgrimages are very unimportant indeed. The important category is festival and worship which accounts for 1.4 per cent of the total debt.

The most important of the social difficulties have been voluntary unemployment in the shape of strikes. This has contributed 5.8 per cent of all the debt and over one half of the debt on account of social difficulties.

Involuntary unemployment like discharge and dismissal has caused 2·8 per cent of the total debt. This for a population normally employed is rather a large percentage. Litigation of various kinds are an important item, but they account for only 2 per cent of all the debt.

Deficits in consumable dividend have contributed 18·2 per cent of all the debts and individually these are only second to marriages and allied ceremonies as a cause of indebtedness.

If we review the position from the point of view of income grades we can understand the magnitude of unproductive debts better. We notice that the percentage of unproductive debts are very high but they tend to fall as we rise in the income grades.

In the lowest income grade 97·6 per cent of all the debts is unproductive and there is no productive debt at all. 64·7 per cent or two-thirds of all the debts are on account of deficits in the consumable dividend alone ; 16·4 per cent on account of sickness and other individual disabilities and 96 per cent on account of social ceremonies of which marriage accounts for 8·3 and funeral for 7·7 per cent of all the debts. There is thus little discoverable extravagance in this group except probably in respect of marriages and funerals expenditure on which might be curtailed. The real difficulty lies in the deficit in the consumable dividend which must be removed before we can expect improvement in this sorry state.

In the next two higher grades the unproductive debts form 89·3 and 86·0 per cent of the total debt as against productive debt whose percentages are 4·8 and 8·1. Social ceremonies are again the most important cause of indebtedness being responsible for 25·4 and 50·9 of all the debts in the two grades. Among social ceremonies marriages and allied ceremonies take precedence with percentages of 16·2 and 40·5 respectively. Funerals again come second with percentages of 1·9 and 7·5. Only in these two grades birth celebrations have any importance, the percentage of debts being 4·2 and 2·5 per cent respectively.

Little need be said of religious causes which account for only 2·5 and ·9 per cent of all the debts. Social and individual difficulties as in the general population come third as causes of debt.

In the two higher grades between Rs. 20 and Rs. 40 the percentages of unproductive debts continue to fall as the

productive debt percentages rise. But in the highest two grades there is a curious reversal and the percentages of unproductive debt rise again. In the highest grade the percentage is swelled by the facts that the class of unspecified debt has been very much narrowed in this group.

Social ceremonies continue to be the most important factor of unproductive debts, accounting for one-fourth of the total debts in the first two grades and one-third in the highest two. Marriages remain the most important of such ceremonies accounting for one-fifth or one-sixth of the total debt in the first two grades and about three-tenths in the highest two grades. Funeral again follow marriages in order and account for between 3 and 4 per cent of all the debts.

Religious causes are again of small importance and little of the much discussed extravagance is discernible.

Social difficulties, however, exert great pressure in the two grades between Rs. 20 and Rs. 40 which comprise about half the total number of families examined. The percentages of debts incurred on these accounts are 22.3 and 12.9. In the highest two grades, however, the percentages are about 6 only. Most important of such difficulties are again voluntary unemployment or strikes which account for 11.9, .2, 2.1 and 3.3 per cent of all the debts. Involuntary unemployment in the shape of loss of work, dismissal or discharge exerts the greatest pressure in the income grade Rs. 20 but not Rs. 30 which is the most numerous of all. The percentage of debt on this account is 8.9 for this grade and less than 2 in the three higher ones.

No debt has been incurred on account of litigation in the grades below Rs. 20 which have little property entanglements which are fruitful source of litigation. The debt on this account begins with a moderate percentage of 1.4 in the lowest of the 4 higher grades, rises to a maximum of 3.5 in the next higher grade and fall to 2.0 per cent and 1.3 per cent in the two highest grades.

Individual disabilities like sickness have caused about 10 per cent of all the debts in the first two of these 4 grades and 12 to 13 per cent of all in the highest two. In absolute money value, the debts incurred for these reasons would be much higher in the highest two grades which can afford to spend more on the care of persons than those below.

Deficits in the consumable dividend has been a very important cause of debt in each of the income grades. In the

two lowest grades this category forms 65 and 31 per cent of all the debts ; but in grades above Rs. 20, the percentages of such debts become more reasonable and remain uniformly between 15 and 17. In the highest income grade, however, the percentage rises to 22.5 indicating a spendthrift living.

Ancestral debts form only 6.6 per cent of all the debts. Their importance, however, is great only in the three grades of income above Rs. 30 wherein they form 6 to 9 per cent of all the debts. In the lower income grades, only about  $1\frac{1}{2}$  per cent of all the debts is ancestral. Thus the lower income grades inherit few liabilities from their fathers even as they inherit few assets.

No regular trend can be indicated in respect of the insufficiently described or unspecified debts. On the whole about 9 per cent of the debts has not been sufficiently described. In most cases, however, these debts would be found to be due to deficits in the consumable dividend which entails purchases on credit, arrears in payments and so forth tending to swell the value of debt.

A broad outline of the character of debts of the various income grades that we have considered in some detail can be had from the following summary.

The lowest income grade has no productive debts at all and the unproductive and other debts are accounted for by shortage of consumable income (65 per cent) sickness and allied disabilities (16 per cent) ; marriages (8 per cent) and funeral (8 per cent) .

The next higher grade has productive debt to the extent of 5 per cent only, 4 per cent of which is due to pursuit of agriculture and 1 per cent to purchase of land. The major portion of the remaining debt is accounted for by deficits in consumable income (31 per cent), marriages (6 per cent), sickness and other disabilities (13 per cent), loss of job as by lock-out, dismissal or discharge (9 per cent) or by strike etc. (8 per cent), birth celebration (4 per cent) and funeral (5 per cent).

In the next higher grade productive debts rise to 8 per cent mostly on account of agricultural operations, purchase of land and building and repair of houses. The major portion of the remainder is due to marriages (41 per cent), deficits in consumable income (17 per cent), loss of job as by strike (7) and by lock-out, dismissal and discharge (4 per cent), funerals (8 per cent) and sickness, etc. (4 per cent).

In the grade Rs. 20 but not Rs. 30 productive debt rises to 12 per cent, about nine-tenths of which is due to building and repair of houses and acquisition of property, almost entirely land.

Of the remainder marriage accounts for 20 per cent; funerals for 3 per cent, loss of job by strike, etc. (22 per cent) and by dismissal, etc. (9 per cent) deficits in consumable income (17 per cent) and sickness, etc. (10 per cent).

The next higher grade has a productive debt to the extent of 14 per cent. Marriage accounts for 18 per cent, funerals for 4 per cent, shortage in consumable dividend for 17 per cent, loss of work as by strike for 8 per cent, litigation for 4 per cent, sickness for 10 per cent and ancestral debt for 8 per cent.

In the highest grade but one productive debt forms 10 per cent of all debts. Marriage accounts for 28 per cent and funeral for 4 per cent. Sickness adds 12 per cent deficits, consumable dividend 16 per cent and ancestral debt 10 per cent.

In the highest income grade productive debt rises to a record height of 16 per cent. Of the remainder marriage accounts for 31 per cent, funerals for 4 per cent; sickness for 13 per cent; deficit in consumable dividend for 23 per cent and ancestral debt for 6 per cent.

The extravagance in marriages and very much less so in funerals might be mitigated by simplification of such rites and by social education. The indebtedness caused by loss of work either voluntary or involuntary and also by litigation is very likely to be solved by arbitration and conciliation, by improved labour laws and such other ameliorative devices. Institutions like employment exchanges and so forth may help even in the existing frame work of our competitive economy. Cheaper, prompter and more effective justice might help minimising expenditure on litigation. The wider problem of unemployment and underemployment which make their own contribution to the workers' indebtedness will probably require fundamental changes in our economy. It is astonishing how comprehensive must be our effort to deal with indebtedness arising out of political and economic causes. It is in this sphere that compulsive state activity is most urgently called for.

Individual disabilities like disease, accidents, disability and death in workers' family have caused one-ninth of all the debts. That workers should have to spend money out of their petty incomes on treatment of sickness is a real hardship. It ought to be easy to make medical facilities more



adequate and cheaper since we are dealing with a concentrated mass of human beings. As to accidents and diseases, comprehensive insurance schemes are the only help.

It would have been surprising if shortage in consumable dividend had not figured as a cause of debt, since we found all the income grades without any appreciable positive balance. Raising of wages comes in this context.

We have analysed the occasion which necessitate borrowing. The next question is what agencies supply the credit. In the following, the agencies supplying credit have been indicated for each income grade. Their percentage share of the total debt has been shown in the lines marked (2), the lines marked (1) showing the actual sum borrowed in rupees.

### Sources of credit.

Income grades.	Regular money-lender.	Worker money-lender.	Shop-keeper.	Friends or relations.	Workers' co-operative society.	Provident Fund.	Other sources.	Total.
1	2	3	4	5	6	7	8	9
Less than Rs. 10 (1)	1,117	..	197	3	..	..	12	1,329
(2)	84.05	..	14.82	.23	..	..	.93	
Rs. 10 but not (1)	1,061	498	795	932	71	..	46	3,403
Rs. 15. (2)	31.18	14.63	23.36	27.39	2.09	..	1.35	..
Rs. 15 but not (1)	3,240	38	615	788	486	..	.22	5,189
Rs. 20. (2)	62.44	.73	11.85	15.15	9.37	..	.42	..
Rs. 20 but not (1)	8,930	1,282	2,910	2,717	2,923	1,043	501	20,306
Rs. 30. (2)	43.98	6.31	14.33	13.38	14.33	5.14	2.42	..

Rs. 30 but not Rs. 40.	(1)	16,132	1,409	1,933	3,491	7,860	4,544	45	35,414
	(2)	45.55	3.98	5.46	9.86	22.19	12.83	.13	..
Rs. 40 but not Rs. 50.	(1)	15,002	900	2,582	3,745	15,628	3,951	43	41,851
	(2)	35.85	2.15	6.17	8.81	37.34	9.44	.10	..
Rs. 50 and over	(1)	6,052	140	1,714	2,366	9,110	3,364	347	23,093
	(2)	26.21	.60	7.42	10.25	39.45	14.57	1.50	..
Total	(1)	51,534	4,267	10,746	14,042	36,078	12,902	1,016	1,30,585
	(2)	39.46	3.27	8.23	10.75	27.63	9.88	.78	..

Regular money-lenders are the most important sources of credit at this centre, accounting for 39.46 of the credit supply. Their importance, however, is only slightly greater than that of organised institutions which supply 37.51 per cent of all the credit requirements of the workers. Such institutions, however, are found best developed among the employees of the Tata Iron and Steel Works only. Among the employees of Indian Copper Corporation both at the Mowbandar Works and in the Mosabani mines, a sort of a co-operative loan society exists but as there is no system of Provident Fund for the employees, the sources of credit supply are somewhat restricted. Altogether the co-operative loan societies have supplied 27.63 per cent of all the debt and the Provident Fund has contributed 9.88 per cent of all. Among employees of the Indian Copper Corporation only about one-tenth of the credit required has been supplied by the Co-operative Loan Society. The employees of the Tisco, however, get three-fifths of their credit requirement from the co-operative societies and the Provident Fund. Outside these two companies, the employees have no such institution and all their credit requirement has to be met from non-organised sources. It thus happens that the benefit of cheap interest rates is restricted almost entirely to the employees of the Tisco. The advantage of such a society is patent. Not only does it touch the co-operative instinct of the workers, but it provides credit at surprisingly cheap rate. In respect of borrowings from the workers' Provident Fund account, no interest has to be paid and for borrowing from the co-operative societies interest rates mostly lie round 10 per cent per annum.

These two sources together account for 76.97 or over three-fourths of the total credit supply. Of the remainder about half is accounted for by friends and relations who lend a helping hand in times of need. Shop-keeper, as a supplier of credit, is very unimportant accounting for only 8.23 per cent of all the supply. Worker money-lenders are even less important.

If we review the position of the various income grades we notice that the lowest income grade is hopelessly in hands of the *mahajan* who supplies 84.5 per cent of all his needs, the rest being met by the shop-keeper.

In the next highest grade organised institution supplies only 2 per cent of all the requirement. The regular money-lenders supply 31.18 per cent and the worker money-lender, no more considerate than the regular money-lenders in respect of the interest they charge, supply 14.63 per cent of all the debt. Thus

45·81 per cent of all the debts is supplied by money-lenders who have no other motive than to fleece the workers. Shop-keepers supply 23·36 per cent and friend and relations 27·39 per cent of all the debts.

The importance of organised credit grows only moderately in the next higher income grade which gets only 9·37 per cent of all its requirements from such institutions. Provident Fund does not figure as a source yet. 62·45 per cent of all the credit is supplied by regular money-lenders; 11·85 per cent by shop-keepers; and 15·15 per cent by friends and relations.

The position improves in grades of income above Rs. 20; organised institutions supply 19·47 per cent of all the credit requirements in the lowest of these grades and 35·02, 46·78 and 54·02 per cent in the three higher ones in order. The importance of the regular money-lender diminishes as that of organised institutions rises, the percentage of credit supplied by these being 43·98, 45·55, 45·85 and 20·21 respectively for these 4 grades. The importance of the worker money-lenders also diminishes, the respective percentages of credit supply being 6·31, 3·98, 2·15 and ·06 from the lowest to the highest in these 4 grades. Jointly the regular and worker money-lenders diminish in importance progressively and without a break.

The trend of the percentages of credit supplied by shop-keepers is not clear but except in the lowest of these 4 grades the magnitude of the percentages is not larger than  $7\frac{1}{2}$ . So also in respect of friends and institutions, the percentages except in the lowest of these 4 grades lie between 9 and 10. Thus the organised institutions compete with the regular and money lenders rather than with shop-keepers, friends and relations and other non-descript sources. This competition is desirable as both the regular and worker money-lenders are definitely out to make money irrespective of what hardships they cause in the process. The success of the organised institutions among the employees of the Tata Iron and Steel Works among whom the *mahajans* have been definitely worsted points to the like desirability of such facilities being extended elsewhere.

The rates at which workers borrow depend partly on the security they can offer, the only discoverable ones being service status and wages, but much more on the agencies that supply the credit. The sums borrowed from the Provident Fund carry no interest while those borrowed from the co-operative societies rarely carry an interest beyond 12 per cent.

Conventionally the shop-keeper does not charge visible interest but he most certainly recovers enough to spare from the higher prices charged from purchasers on credit. Friends and relations generally charge no interest and when they do charge, the rates are not unconcionable. The regular money-lenders and the worker money-lenders charge interest at as high a rate as the customers can bear.

In the following the various sums borrowed at different rates of interests have been shown for the several income grades

The horizontal entries in lines marked (1) stand for actual sums borrowed and those in lines marked (2) for percentages such sums form of the total dbt.

Income grades.	No interest.	Less than 10 per cent.	10 per cent but not 20 per cent.	30 per cent but not 40 per cent.	30 per cent but not 40 per cent.	40 per cent but not 50 per cent.	50 per cent but not 75 per cent.	75 per cent but not 100 per cent.	100 per cent but not 150 per cent.	Over 150 per cent.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
Less than Rs. 10 (1) ...	170	291	...	352	210	18	6	201	60	90	1,329
(2) ...	13'79	16'63	...	26'49	16'80	1'35	'45	15'12	4'51	6'77	...
Rs. 10 but not Rs. 15 (1) ...	909	210	110	...	165	20	468	748	352	391	3,403
(2) ...	26'71	6'17	3'23	...	4'85	'59	13'75	21'98	11'23	11'36	...
Rs. 15 but not Rs. 20 (1) ...	1,500	834	75	219	360	100	207	1,062	145	667	5,189
(2) ...	28'91	16'07	1'45	4'22	7'52	1'93	3'99	20'47	2'79	12'85	...
Rs. 20 but not Rs. 30 (1) ...	4,748	3,086	2,067	1,418	1,888	236	3,204	2,161	676	388	20,805
(2) ...	28'86	16'19	10'18	6'96	9'27	1'16	15'78	10'64	3'23	4'13	...
Rs. 30 but not Rs. 40 (1) ...	7,520	6,932	3,202	1,299	2,090	1,493	1,692	5,424	1,643	2,119	35,414
(2) ...	21'22	25'22	9'04	3'67	5'90	4'22	4'78	15'32	4'64	5'98	...
Rs. 40 but not Rs. 50 (1) ...	9,846	15,479	2,322	2,321	2,441	1,515	960	4,050	2,265	792	41,861
(2) ...	23'53	26'99	5'81	5'47	5'83	3'62	2'30	9'68	5'39	1'90	...
Rs. 50 and over (1) ...	7,809	6,070	3,902	592	1,390	261	509	1,670	790	..	23,003
(2) ...	23'38	26'29	16'46	2'62	6'02	1'12	2'20	8'10	3'42	...	...
Total (1) ...	32,497	34,833	11,478	6,166	8,553	3,643	7,046	15,516	5,951	4,897	1,30,585
(2) ...	24'89	26'67	8'79	4'72	6'55	2'79	5'89	11'88	4'56	3'75	...

We notice that 24.89 per cent or about one-fourth of all the debt carries no interest. The percentage of debt borrowed from shop-keepers, friends and relations and the Provident Fund comes to 28.86 which close to the percentage of debt carrying no interest. Sometimes shop-keepers charge interest when the dues have been of long standing and friends and relation also may charge an interest. The difference in the two percentages is thus explained. 26.67 per cent or a little above one-fourth of all the debts carries an interest rate not exceeding 10 per cent. Nearly all such debts have been borrowed from the co-operative societies whose contribution to credit supply is 27.63 per cent. In some cases the co-operative societies charge an interest slightly in excess of 10 per cent as in Mosabani. We find that 8.79 per cent of all the debts carries an interest of 10 to 20 per cent.

Thus 60.35 per cent of the debt carries an interest below 20 per cent and not much above 12 per cent per annum. This is almost entirely made up of borrowings from shop-keepers, friends and relations. Provident Fund and Co-operative Societies whose share of credit supply comes to 56.49 per cent. All this shows a very satisfactory state. Interest rate so far cannot be regarded as too high although the shop-keeper must be charging higher rates than those disclosed here.

The remaining debt being 39.65 per cent of the total has been contracted at rates varying from 20 to over 150 per cent. Almost all such debt has been contracted from regular or worker money-lenders whose contribution to the credit supply comes to 42.73 per cent. The sums borrowed from the money-lenders at several interest rates show no regular trend but it is significant to note that 20.19 per cent or over half the borrowings from the money-lenders are at a rate above 75 per cent and over and one-fifth at rates above 100 per cent. These are unduly harsh rates. Only 4.72 per cent of all debts or about 12 per cent of the debts from money-lenders carries an interest rate at all reasonable, namely between 20 per cent and 30 per cent. We can sum up the position thus.

Thus 60.35 per cent of all the debts not contracted from money-lenders carries interest at rates lower than 20 per cent and such rates are definitely favourable; 20.19 per cent of all debts nearly all from money-lenders carries interest at rates above 75 per cent which is undeniably harsh. Such borrowings form



nearly half of the debt contracted from money-lenders. 47.2 per cent of all debts accounting for 12 per cent of borrowings from money-lenders carries interest at rates between 20 and 30 per cent which is not unfavourable.

The rest, namely 14.74 per cent of all debts, or 37 per cent of all debts from money-lenders has been borrowed at rates between 30 and 75 per cent, which are harsh rates.

Thus moderation has been shown by money-lenders barely in 12 per cent of their lendings; in over 50 per cent, they have been unconscionably harsh and in the rest they have been sufficiently harsh to deserve condemnation.

If we examine the position by income grades, we find that in the lowest income grade less than 30 per cent of the debt carries favourable rates, namely below 20 per cent; over 26 per cent carries rates unconscionably high, while in about 54 per cent the rates are rather harsh.

In the next higher grade, over 36 per cent has been borrowed at favourable rates and over 44 per cent at unconscionably high rates. The remainder 20 per cent or so carry rates between these extremes.

In the following grade further improvement is maintained, the percentage of debt borrowed at favourable rates being over 46 and at unconscionably high rates about 36 per cent.

In grades above Rs. 20 borrowings at unconscionably heavy rates shrink to 18.10, 25.92, 16.97 and 11.52 respectively. Those at favourable rates rise to 48.73; 65.49; 65.83 and 76.13, respectively. Thus the higher we rise in the income scale the better becomes the terms of borrowing. Much of it is due to the fact that the higher income grades can borrow from co-operative societies and from Provident Fund which are unavailable for the lower grades.

The payments made towards principal and interest of debt have not been recorded regularly but even if they had been, they would have only shown a vain effort to wipe out a small debt by contracting a larger one. The workers' available balances leave nothing with which to pay debts. The conclusion is clear. Indebtedness is bound to increase, however slowly, if the present conditions continue unmodified.

## II.—JAMALPUR CENTRE.

The report for Jamalpur centre relates to labour in the Jamalpur railway workshop and in the Tobacco Factory at Monghyr. 455 budgets were collected of which ten were rejected on grounds of incomplete or exaggerated entries. Of the 445 budgets accepted, 324 relate to Jamalpur and 121 to Monghyr. The Labour at Jamalpur has been considered separately from that at Monghyr whenever the conditions of their work and earnings affected the argument. Otherwise, they have been treated together.

### CHAPTER I.

#### Origin and classification of Labour.

Jamalpur relies almost exclusively on local labour, the migrant labour being only 19 or 4·27 per cent of the total labour force. For this centre local labour has been defined to include persons living within 20 miles of Jamalpur and collected from the villages along three branches of the railway line by workmen's trains plying two or more times a day. The facility of transport opens up the hinterland of a teeming rural population and makes available for industry labour which would have otherwise encumbered the rural economy around. The local labour so defined includes also some people from neighbouring areas of the district of Bhagalpur which are served by the workmen's trains. The advantage of this is that workers have not to be torn away from their natural environment.

Of the 19 migrant workers eight are Biharis from districts other than Monghyr, 11 from other provinces being seven from the United Provinces, three from Bengal and one from the native state of Jaipur.

These 19 workers migrated to this centre, four having been transferred to this place from employments under the same employers at different places, three having been appointed in place of their relations, two having been helped by Christian missionaries into secular work, and ten being new entrants to their jobs which they sought to earn their living. Of the 445 workers only these can be regarded as having been altogether dissociated from land as the frequency and occasions of their visits show. Thus only one visited home, for economic reasons, viz., to see to a litigation in connection with his house. The other 18 visited purely for social reasons, eight to meet his relations, two to enjoy holidays, five to attend marriages and three on account of illness. Altogether they spent 100 days at home or 5·3 days each. All these visited home within a year

and all visit homes once or more a year. The local labour is deeply associated with land and has therefore greater economic stability and lesser mobility than the proletariat elsewhere.

Religions.	Number.
Hindus—	
Class .. .. .	298
Depressed .. .. .	46
Muslims .. .. .	94
Christians .. .. .	7

The predominance of Hinduism is clear from the table; they account for 77.30 per cent, 10.34 per cent of whom are depressed class people. The Muslims are the next numerous community accounting for 94 or 21.12 per cent of the total, thus showing a larger proportion to the labour force than they do to the general population in Bihar. Seven Indian Christians account for the rest.

As we have seen, non-Biharis form a very minute section of the labour population in this centre, being only 11 out of 445 or 2.47 per cent. Now a perusal of the budgets shows little difference in the general schemes of expenditure of the various communities of the Bihari workers. I shall, therefore, leave out considerations of their expenditure from the point of view of their territorial origin and their religious distribution and content myself with viewing them only according to income grouping.

For economic purposes it is necessary to classify labour according to the character of their work, because the latter determines the earnings of the group. For Jamalpur centre the conditions of work in the two concerns have affected our classification. Thus in the railway workshop at Jamalpur, we have adopted the classification as used by the management. They have classified the workers according to income grades treating people in the grade from Rs. 13 rising to Rs. 21 as unskilled, in grade Rs. 21 to Rs. 27 as semi-skilled and in the grades Rs. 27 to Rs. 38 and Rs. 38 to Rs. 54 as skilled.

For Monghyr in absence of any classification by the management, it was thought proper to classify workers according to the nature of their work. Thus we have shown workers like fitters, carpenters, testers, operators, feeders, sorters and solderers as skilled; packers, markers, cask-makers, wrappers.

and straighteners as semi-skilled; and coolies, *Durwans*, *Chaprasies*, *Khalasies* and sweepers as unskilled. Clerks are shown as a separate class. The classification on this basis is shown separately for Jamalpur and Monghyr.

	Unskilled.	Semi-skilled.	Skilled.	Clerks.	Total.
1	2	3	4	5	6
Jamalpur ..	97	113	112	2	324
Monghyr ..	48	39	27	7	121
Total ..	145	152	139	9	445

Leaving out the clerks who were included only by accident and bearing in mind the fact that both for Jamalpur and Monghyr budgets have been collected in uniform proportions, we find that Jamalpur labour is mainly of the skilled and semi-skilled classes which form together 69.44 per cent. Monghyr labour, however, has a less favourable proportion of skilled and semi-skilled groups, namely 54.55 per cent. Work at Monghyr beside being mainly un-skilled, is also temporary. All this shows that ordinarily a worker at Monghyr does not find continuous employment and is, on the whole, less well off than his compatriot at Jamalpur. This point will be clearer when we shall examine the incomes at Jamalpur and Monghyr respectively.

## CHAPTER II.

### Size and composition of the family.

The head of the family is a female in ten cases, all of them being at Monghyr, out of 445 families examined, or in 2.25 per cent of the total. For Monghyr alone the percentage will be 8.26, by no means a negligible minority. The 445 families

according to the economic status of the members are composed as follows :—

		Men.	Women.	Boys.	Girls.
1	2	3	4	5	6
Workers	Monghyr ...	128	10	...	...
	Jamalpur ...	369	1	...	...
	Total ...	497	11	...	...
Dependents living with wage earners.	Monghyr ...	71	225	183	123
	Jamalpur ...	155	663	440	577
	Total ...	226	888	623	699
Dependents living away from wage earners.	Monghyr ...	11	6	...	...
	Jamalpur ...	16	13	9	6
	Total .	27	19	9	6
Grand total	Monghyr ...	210	241	183	122
	Jamalpur ...	540	677	449	583
		750	918	632	705

Thus an average family consists of 1.69 men, 2.06 women, 1.42 boys and 1.58 girls.

Boys and girls do not figure as workers at all. The only workers are 497 men and 11 women or 508 adults in all. These

508 workers are responsible for the maintenance of 1,160 adults and 1,337 children. Taking each child as  $\frac{1}{2}$  for purposes of maintenance we have 3.60 standardised adult dependants to each adult worker. This fact must be borne in mind in fixing minimum wage for industry. The corresponding figures for Jamalpur and Monghyr are shown in the following table for facility of comparison :—

Place.	Average number of men.	Women.	Boys.	Girls.	Average number of adult worker.	Number of standardised adult dependant to each adult worker.
1	2	3	4	5	6	7
Jamalpur ..	1.70	2.09	1.38	1.80	1.14	3.68
Monghyr ..	1.74	2.00	1.50	1.01	1.14	3.37
Both together..	1.69	2.06	1.42	1.58	1.14	3.60

The relative insignificance of women labour is to be noted. At Jamalpur there is only one female worker and at Monghyr only ten. On the whole the female sex predominates both among adults and among persons below 15 years, number of females per 100 males being 122.40 and 111.55 respectively. This marked excess of females over males is unaccountable but is faithful reflection of the ratio of males to females in the total dejure population of Bihar from which almost all the labour force is derived.

Dependents living away from wage earners have caused considerable difficulty at other centres where they form a large proportion of the family. At Jamalpur, however, they are a small number being only 27 men, 19 women, nine boys, and six girls which reduced in terms of adults equals 53.50. These have to be considered in relation to the total remittances made

to them for only so can their dependence on the workers be computed. The position is shown below :—

Income groups.	Number of families making remittances.	Earnings of families making remittances.	Amount remitted.	Number of dependants in terms of adults.	Proportion of 4 to 3.	Remittance per head.
1	2	3	4	5	6	7
		Rs. a. p.	Rs. a. p.			Rs. a. p.
Less than Rs. 10 ... ..	...	...	...	...	...	...
Rs. 10 but not Rs. 15 ... ..	14	196 4 0	40 2 0	12'50	20'45	3 3 3
Rs. 15 but not Rs. 20 ... ..	...	...	...	...	...	...
Rs. 20 but not Rs. 30 ... ..	8	192 8 0	80 8 0	8'00	15'84	3 13 0
Rs. 30 but not Rs. 40 ... ..	8	96 0 0	18 0 0	4'00	18'50	4 8 0
Rs. 40 but not Rs. 50 ... ..	6	264 9 0	71 0 0	14'00	28'84	5 1 3
Rs. 50 and over ... ..	11	586 14 0	171 8 0	15'00	29'17	11 6 6
Total ... ..	42	1,336 3 0	380 13 0	53'50	24'76	6 8 0

The remittance in the first income group is nil. The remittance in the second income group is all from workers at Monghyr while in the fourth group all from workers at Jamalpur. In the highest group it is mainly non-Bihari migrant workers that contribute to the remittance, while in the highest but one the clerks are the most important contributors.

It will be seen that the contribution per head rises from the lowest to the highest income groups and the proportion remitted also tends to rise with rise in incomes. This correlation throws some light on the character of the dependants who appear to be clamorous members of the joint family, eclipsed during the indigence of the workers but re-emerging as soon as workers earn enough to spare something for them. The remittance per head, however, is adequate in each case and shows that the members reported as dependants are really entirely dependent on the workers' earnings.

An attempt was made to get at the modal size of the family at this centre. The results show that the most fashionable number of men in a family is one, of women two, of boys one and of girls one. Variations from these figures are not great except in the case of men, two men being found in at least one-third of the families. 226 men have been returned as dependants living with wage earners. It is probable that some of them are casual workers but have not been described as such, the workers treating any relation drawing from a common fund to which he makes no regular contribution as dependants.

The following table shows the distribution of families according to the number of workers:—

Number of workers in the family.	Number of families at Monghyr.	Number of families at Jamalpur.	Total.
1	2	3	4
Man head as only worker ..	93	284	377
Women head as only worker...	10	Nil	10
Male head and one male worker.	16	33	49
Male head and two male workers.	1	6	7
Male head and three male workers.	1	Nil	1
Male head and one female worker.	Nil	1	1
Total ...	121	324	445

It would thus appear that 387 or 86·97 per cent of the families have only one worker, ten having a single female worker each. Two male workers occur in 16 families at Monghyr and in 33 at Jamalpur. All the workers do not necessarily work in either of the two main industries at Jamalpur and Monghyr respectively. The female worker, for



instance, occurring with the male head, is a maid servant at Rs. 5-8-0 a month at Jamalpur, the husband being employed in the workshop. I shall, however, neglect the contribution of other occupations to the primary earnings of the workers, as their contribution is relatively small.

The column "Persons below 15 dead and their ages at time of death" has not been entered properly or regularly. Even when entries have been made, they do not tell whether the persons dead were children of a natural family or members of a joint family. Of the persons below 15 dead, those dying within one year of birth cannot be correlated to children born in any particular year and infant mortality rate cannot be deduced from such figures. I have accordingly left out of consideration entries in this particular column. It is interesting to examine the distribution of children living according to their age and sex. The following table sums up the position :—

Ages.	Boys.			Girls.		
	Jamalpur.	Monghyr.	Total.	Jamalpur.	Monghyr.	Total.
1	2	3	4	5	6	7
Less than 1 year	6	4	10	10	5	15
1 but not 2 years	25	9	34	26	11	37
2 but not 3 years	30	12	42	34	14	48
3 but not 4 years	26	14	40	29	15	44
4 but not 5 years	19	8	27	30	9	39
5 but not 10 years	156	82	238	159	37	196
10 but not 15 years	188	52	241	293	33	326
Total	450	182	632	581	124	705

The excess of girls over boys has to be noted as it indicates the general excess of the female sex over the male in Bihar. The same condition is reflected if we follow the various age groups above. But in age group "5 but not 10 years", boys outnumber girls by 42 or 21.43 per cent. This curious phenomenon is not easily accountable, but may partly be due

to failure of the investigators to record ages correctly between two age limits. This supposition is confirmed by the consideration that in the highest age groups girls outnumber boys by an overwhelming majority, showing that some girls of the lower age group (5 but not 10 years) have been transferred to the higher age group. Thus roughly in all the three main age groups of "less than 5 years"; "5 but not 10 years", and "10 but not 15 years" boys numbering 153, 238 and 241 may be made to correspond with girls numbering 183, 196 and 326.

Size and composition of the family in relation to income and consumption will be considered shortly.

### CHAPTER III.

#### Income.

Families distributed according to income grades and character of their work are presented in the table below :—

Income grade.	Monghyr.				Jamalpur.				Total number of families.
	Skilled.	Semi-skilled.	Unskilled.	Clerks.	Skilled.	Semi-skilled.	Unskilled.	Clerks.	
1	2	3	4	5	6	7	8	9	10
Less than Rs. 10 ... ..	Nil	2	2	...	...	...	...	...	4
Rs. 10 but not Rs. 15... ..	7	15	33	...	...	...	4	...	69
Rs. 15 but not Rs. 20... ..	8	16	6	...	...	...	20	...	50
Rs. 20 but not Rs. 30... ..	3	1	2	...	...	61	62	...	129
Rs. 30 but not Rs. 40... ..	7	4	3	2	13	42	6	1	79
Rs. 40 but not Rs. 50... ..	1	...	1	2	59	8	...	...	71
Rs. 50 and over ... ..	1	1	1	3	41	2	3	1	53
<b>Total</b> ... ..	<b>27</b>	<b>39</b>	<b>48</b>	<b>7</b>	<b>112</b>	<b>113</b>	<b>97</b>	<b>2</b>	<b>446</b>

It is to be noted that no family at Jamalpur has an income of less than Rs. 10 and only 24 have an income below Rs. 20.

At Monghyr, however, four families (two semi-skilled and two un-skilled) have an income of less than Rs. 10 and 89 have an income below Rs. 20, the latter counting 15 skilled families, 33 semi-skilled and 41 un-skilled. At Jamalpur no skilled family gets less than Rs. 20 and 300 families or 92.59 per cent are getting over Rs. 20. At Monghyr, however, only 32 families or 26.41 are drawing over Rs. 20. Moreover, the lowest income at Monghyr is barely Rs. 5 whereas at Jamalpur it is not less than Rs. 14-6-0. In the table below average income per family in each grade has been shown for Monghyr and Jamalpur separately.

Income grade.	Total income.			Average income.		
	Monghyr.	Jamalpur.	Both.	Monghyr.	Jamalpur.	Both.
	2	3	4	5	6	7
1	2	3	4	5	6	7
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10 ...	20 2 0	...	20 2 0	5 0 0	Nil	5 0 0
Rs. 10 but not Rs. 15 ...	710 15 0	57 8 0	768 7 0	12 14 9	14 6 0	13 0 3
Rs. 15 but not Rs. 20 ...	624 0 0	367 0 0	891 0 0	17 7 6	18 5 6	17 13 0
Rs. 20 but not Rs. 30 ...	131 8 0	3,329 10 0	3,461 2 0	21 14 9	27 1 9	26 1 3
Rs. 30 but not Rs. 40 ...	491 8 0	3,262 10 0	2,763 10 0	30 11 0	35 14 9	34 13 9
Rs. 40 but not Rs. 50 ...	190 0 0	3,203 15 0	3,393 15 0	47 8 0	47 13 0	47 13 0
Rs. 50 and over ...	356 14 0	3,257 12 0	3,614 10 0	69 7 9	69 5 0	68 3 0
Total ...	2,434 7 0	12,478 7 0	14,902 14 0	...	...	...

The average income per family at Monghyr will thus be Rs. 20-0-6 while at Jamalpur it is Rs. 38-6-9, viz., about double that at Monghyr. The average income at Jamalpur is consistently higher than that at Monghyr in each income grade; but the most remarkable excess in incomes at Jamalpur appears in grades Rs. 20 but not Rs. 30, Rs. 30 but not Rs. 40 and in Rs. 50 and over. In the former two grades Monghyr averages

tend to be round the lower limit of the grades while Jamalpur averages tend to be above the mean of the two limits. But for the wide range of income grades, Jamalpur would have shown few people drawing between Rs. 20 and Rs. 25 and Rs. 30 and Rs. 35. It will be further noted that Jamalpur has got 186 or 57.41 per cent and Monghyr only 22 or 18.18 per cent workers in these two groups. All this shows incredibly large differences in wages at Monghyr and at Jamalpur for each grade of workers, although the cost of living should be the same at the two places. May be, Jamalpur workers do more arduous and skilled work than workers at Monghyr, but the difference in their exertion and skill must be certainly less than the difference in their wages. The conditions call for levelling up of wages at Monghyr to correspond reasonably with those at Jamalpur.

Total incomes shown above have been analysed into their components in order that the relative importance of the main industries and other sources of income may be appreciated. The results are summarised in the table below :—

Income grades.	Primary earnings.	Supplementary earnings.	Additional income incidental to industry.	Other additional earnings.	Total.	
1	2	3	4	5	6	
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Less than Rs. 10	M.	29 2 0	...	...	...	29 2 0
	J.	...	...	...	...	...
Rs. 10 but not Rs. 15	M.	688 8 0	1 0 0	...	21 7 0	710 15 0
	J.	53 4 0	4 4 0	...	...	57 8 0
Rs. 15 but not Rs. 20	M.	438 11 0	...	...	85 5 0	523 6 0
	J.	328 0 0	38 0 0	3 0 0	8 0 0	367 0 0
Rs. 20 but not Rs. 30	M.	111 0 0	...	...	20 8 0	131 8 0
	J.	2,697 0 0	373 10 0	236 6 0	22 10 0	3,328 6 0

Income grades.	Primary earnings.	Supplementary earnings.	Additional income incidental to industry.	Other additional earnings.	Total.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rs. 30 but not Rs. 40	M. 395 8 0	6 8 0	...	89 0 0	491 0 0
	J. 1,718 0 0	285 4 0	228 9 0	30 13 0	2,263 10 0
Rs. 40 but not Rs. 50	M. 179 0 0	4 0 0	7 0 0	..	190 0 0
	J. 2,574 0 0	523 4 0	91 11 0	15 0 0	3,203 15 0
Rs. 50 and over	M. 827 10 0	18 0 0	8 8 0	2 12 0	856 14 0
	J. 2,642 0 0	445 8 0	93 12 0	76 8 0	3,257 12 0
Total	M. 2,160 7 0	29 8 0	15 8 0	219 0 0	2,424 7 0
	J. 10,015 4 0	1,659 14 0	653 6 0	149 15 0	12,478 7 0

We thus find that while at Monghyr Rs. 219 out of Rs. 2,424-7-0, viz., 9-03 per cent of the income is entirely independent of the main industry, at Jamalpur only Rs. 149-15-0 out of Rs. 12,478-7-0 or only 1-20 per cent is so independent. This fact throws further light on the low level of wages at Monghyr where the main industry pays little beyond the daily wages. The sum of Rs. 29-8-0 under supplementary earnings at Monghyr is all due to overtime and the sum of Rs. 15-8-0 under additional earnings incidental to the industry represents the cost of free housing and free uniform supplied to the jamadars of the company who do not strictly come under the category of factory labour.

Of the Rs. 219-0-0 under other additional earnings Rs. 89-9-0 comes from agriculture and nearly as much, namely Rs. 83-8-0 comes from remittances received from relations. One family gets Rs. 1-5-0 from a craft; and one gets Rs. 3 from selling milk, shopping gives Rs. 28-15-0 to five families and three families get Rs. 7-12-0 from domestic service while only one family derives Rs. 5 as rent from a house. Thus altogether 46 or about 40 per

cent of the families derive considerable portions of their incomes from outside the main industry. The low wages necessitates their dependence on non-descript sources of living. This industry is thus rightly regarded as the resort of widows and orphans.

Conditions at Jamalpur are altogether different. Here besides the primary wages, overtimes and contribution to Provident Fund are integral parts of the cash payments made to the workers. Thus Provident Fund contributions are a regular feature in income grades above Rs. 20 and the total contribution to Provident Fund is Rs. 688-8-0 or 5.52% of the total incomes of the workers engaged in the industry; while Rs. 971-6-0 represents overtime payment, forming 7.78 per cent of the total incomes. The concession in the shape of reduced prices of coal has been probably over-rated and placed at Rs. 16-8-0 representing coal cinder sold only to workmen. Free houses valued at a monthly rental of Rs. 41 have been supplied to certain firemen only who remain near the works as precaution against emergencies, while free uniform has been supplied to workers in the foundry shops valued at a monthly cost of Rs. 21-8-0.

An important factor of the workers' welfare is the workmen's trains running to and from about 20 miles of Jamalpur on three sides. The workers are collected from their village homes along the railway routes and the cost of their transport to and from work place has been valued at Rs. 574-6-0 per month. These items make 98.80 of the workers incomes at Jamalpur. The inconsiderable proportion of outside incomes is accounted for as follows :—

	Rs.	a.	p.	
Agriculture	..	62	15	0 .. 14 families.
Craft	..	32	8	0 .. 8 „
Dairy	..	4	0	0 .. 1 family
Shopping	..	34	0	0 .. 6 families.
Domestic service	..	4	0	0 .. 2 „
Remittance	..	12	8	0 .. 3 „
<b>Total</b>	..	<b>149</b>	<b>15</b>	<b>0 .. 34 families.</b>

Thus only 34 families show any dependence on outside sources of living. Agriculture is the most important of outside sources of income but only 14 families have any land to cultivate. Thus, their association with land is mainly for the purpose of residence only. But for this industry, it is safe to assert a large

proportion of these workers would have swelled the class of landless agricultural labour.

## CHAPTER IV.

### Expenditure.

Expenditure, as indicated above, will be viewed in relation to income grades only. The dependants living elsewhere will be left out of view and the total income minus remittances to dependents will be supposed to be available for the consumption of members of workers' families actually living at or near the work place. Savings are so negligible that expenditure shown here is not likely to be seriously over rated.

The following table shows the number of resident consumers in each income grades and the actual income available for their consumption normally and if no debt is incurred.

Income grds.	Actual income.	Men.	Women.	Children below 5.	Children 5 but not 10.	Children 10 but not 15.	Total no. of standardised adults.
1	2	3	4	5	6	7	8
Less than Rs. 10	Rs. a. p. 20 2 0	2	9	2	7	2	16.50
Rs. 10 but not Rs. 15.	728 5 0	70	101	51	68	6	233.50
Rs. 15½ but not Rs. 20.	891 0 0	79	99	48	72	23	249.50
Rs. 20 but not Rs. 30.	3,430 10 0	190	223	135	158	88	608.50
Rs. 30 but not Rs. 40.	2,735 10 0	170	207	108	96	53	505.50
Rs. 40 but not Rs. 50.	3,322 15 0	102	134	72	105	58	353.50
Rs. 50 and over ...	3,443 7 0	110	121	54	74	42	316.00
Total ...	14,572 1 0	723	899	470	580	272	2283.00

Incomes available for consumption per consumer reduced into adults would be as follows:—

Income groups.		Income per consumer reduced to adults.		
		Rs. a. p.		
Less than Rs. 10	...	..	1	3 6
Rs. 10 but not Rs. 15	..	..	3	2 0
Rs. 15 but not Rs. 20	..	..	3	9 3
Rs. 20 but not Rs. 30	..	..	5	10 3
Rs. 30 but not Rs. 40	..	..	5	6 6
Rs. 40 but not Rs. 50	..	..	9	6 6
Rs. 50 and over	..	..	10	14 6
General average	..	..	6	6 3

The lowest grade has an incredibly small dividend per consumer and must be simply starving. Dividends for the next two grades are none too high either. Even moderately decent life would be impossible for families with incomes less than Rs. 20 a month since demands of social conventions are not less inexorable for families of lower incomes. Below we consider expenditures on major items.

#### A.—Food.

For purposes of food requirements the resident consumers have been reduced into standardised adults and are presented in the table below in relation to their food consumption.

Income grades.	No. of consumers.	Expenditure on food.	Expenditure on food per adult consumer.	Total income available for consumption.	Percentage of 3 to 5.	
1	2	3	4	5	6	
		Rs. a. p.	Rs. a. p.	Rs. a. p.		
Less than Rs. 10	...	16.13	15 1 0	0 15 0	20 2 0	74.84
Rs. 10 but not Rs. 15	...	225.11	581 6 0	2 9 3	728 5 0	79.83
Rs. 15 but not Rs. 20	...	247.48	650 12 0	2 10 0	691 0 0	73.04
Rs. 20 but not Rs. 30	...	614.58	1,955 7 0	3 3 0	3,430 10 0	57.00
Rs. 30 but not Rs. 40	...	497.40	1,582 7 0	3 3 0	2,735 10 0	57.87
Rs. 40 but not Rs. 50	...	360.36	1,555 12 0	4 5 9	3,322 15 0	46.82
Rs. 50 and over	...	316.69	1,479 9 0	4 10 9	3,413 7 0	42.92
Total	...	2277.75	7,820 6 0	2 13 6	14,572 1 0	53.66



It would be noted that the food consumption per head is unbelievably low in the lowest income grade. It is still low but steady in the two higher grades next. Even for the two highest grades the food consumption rate does not vary much. The average for the whole population is only Rs. 2-13-6 per adult. If we notice the proportion that expenditure on food bears to the total income available for consumption we find that it is about 75 per cent in the 3 lowest grades of less than Rs. 20 ; about 57 per cent in the 2 grades between Rs. 20 and Rs. 40 ; 47 per cent in the grade of Rs. 40 but not Rs. 50 and 43 per cent in the highest grade of income. This gradual decline in the proportion amply confirms the theory that food forms a diminishing proportion of rising incomes. The slight aberration from the general trend is probably due to unequal ranges of the income grades in certain cases. One would have expected a less gradual fall than what we find exhibited here, since the expenditure on food per adult is far from adequate. Even so the terribly high proportion of expenditure on food in families getting less than Rs. 20 shows how inadequate their expenditures must be on other necessities and luxuries of life.

The expenditures on various components of food for the total population are shown below :—

Commodities.	Quantities.		Prices.			Percentage of 3 to actual expenditure on food, viz., 7,820—6.
	Md.	sr.	Rs.	a.	p.	
Rice .. ..	837	22	2,843	5	0	36.358
Wheat .. ..	303	35	1,217	0	0	15.562
Gram .. ..	132	9	405	5	0	5.183
Pulses .. ..	227	14	813	0	0	10.397
Vegetables .. ..	..	..	632	9	0	8.089
Meat .. ..	8	0	160	0	0	2.046
Fish .. ..	4	19	45	7	0	5.81
Mustard oil .. ..	24	20	488	9	0	6.312

Commodities.	Quantities.		Prices.	Percentage of 3 to actual expenditure on food, vis., 7,820-6.
	Md.	sr.		
<i>Ghee</i> .. ..	9	2	362 0 0	4.629
Sugar .. ..	17	19	135 13 0	1.737
Milk .. ..	102	23	447 1 0	5.717
Tea .. ..	..	..	28 15 0	.370
Spices .. ..	..	..	175 9 0	2.245
Salt .. ..	20	31	65 12 0	.841

Both in quantity and price rice leads every other commodity accounting for 36.36 per cent of the total expenditure on food, wheat follows with its percentage of 15.56. The next considerable item other than pulses, is gram which forms a staple food of the poorer section of the people who parch and grind it into powder, called "Satu" and thus relieve themselves from the drudgery of daily cooking. The morning meal is in most cases "Satu", rice being taken in the evenings only. Cereals alone account for 57.103 per cent of the total expenditure and cereals with pulses account for 67.500 or over two-thirds of the total. It indicates appalling poverty for expenditures on cereals and pulses vary inversely with incomes.

Pulses with a percentage of 10.40 have an importance double that of gram and occur in each income grade, being the usual accompaniment of both rice and bread. Vegetables bear quite a considerable proportion but animal foods of which fish and meat are the only representative are relatively unimportant accounting for only 2.63 per cent of the total expenditure on food.

Mustard oil and *ghee* are the only kinds of fats consumed. The overwhelming preponderance of mustard oil over *ghee* both in quantity and price is apparent from the table. In the lower income grades *ghee* is almost a negligible item.

Sugar consumption is equally small. All the sugar shown above is refined sugar, *gur* having found no mention at all.

Probably *gur* would be widely consumed in the village homes of the workers but as information is entirely lacking no conclusion is possible.

Milk intake deserves special notice, being directly related to nutrition. The quantity and price of milk consumed shows how utterly small is the consumption; expenditure on milk forming only 5.72 per cent of the total expenditure on food.

It would be worthwhile to examine the importance of the following items in the various income grades, rice, wheat, gram, pulses, meat, fish, mustard oil, *ghee*, sugar and milk. To this end the amount of these foods per adult consumer in each income grade is shown in the following table:—

Amount of various foods per adult consumer in seers, per month.

Income grade.	Rice.	Wheat.	Gram.	Pulses.	Meat.	Fish.	Mustard oil.	Ghee.	Sugar.	Milk.
1	2	3	4	5	6	7	8	9	10	11
Less than Rs. 10...	2.48	...	6.80	.93	...	...	.12	...	...	...
Rs. 10 but not Rs. 15.	13.65	3.55	4.78	3.23	.04	.09	.29	.04	.06	.27
Rs. 15 but not Rs. 20.	13.54	3.66	2.46	3.56	.07	.09	.25	.03	.49	.28
Rs. 20 but not Rs. 30.	15.05	5.86	1.22	4.35	.02	.03	.50	.08	.14	1.25
Rs. 30 but not Rs. 40.	13.65	5.02	1.19	3.34	.24	.12	.34	.15	.21	2.12
Rs. 40 but not Rs. 50.	17.07	6.16	2.12	4.52	.22	.06	.55	.27	.47	5.87
Rs. 50 and over ...	15.29	6.71	4.34	4.75	.25	.17	.56	.38	.38	2.92
General average ...	14.71	5.34	2.33	3.98	.14	.06	.50	.28	.31	1.72

An examination of the table leads to interesting conclusions. In the lowest income group, wheat, fish, *ghee*, sugar and milk are entirely absent. Rice and pulses are consumed in very small quantities while the staple food is gram made into "Satu". This item is the highest in this income group and diminishes up to the group Rs. 30 but not Rs. 40. After this group gram again rises but not as an article of necessity but of luxury, gram being handy for a large variety preparations.

Altogether the food consumption of the lowest income group is less than half of what it should be if the average consumptions be taken as normal and a reasonable standard of food consumption is not reached before the group Rs 30. to Rs. 40.

Even the consumption of the common staple food, rice rises with rising incomes but normal consumption is about 15 seers a month. Wheat shows a consistent rise in the consumption scale and is a rough measure of the workers' prosperity. Gram we have already noted, while pulses again like wheat show a consistent rise.

Thus with rising income a rise even in consumption of cereals and pulses is consistently noticeable. That shows a state of chronic poverty for we are still far from the economic stage whence cereals and pulses show a tendency to fall in the consumption scale.

Animal foods like meat and fish are negligible even up to the grade Rs. 20 but not Rs. 30. After this grade they show a rise but even in the highest grade, their quantitative importance is small.

Among fats both mustard oil and *ghee* rise with rising incomes but *ghee* is always of smaller importance than mustard oil. There appears to be no defined trend in consumption of sugar but we may note that the quantity of sugar available per consumer in any grade is deplorably small.

If we neglect salt which is an inelastic necessity, we have still three items, viz., vegetables, spices and tea to consider for each grade. These are to be treated as articles of luxury to the workers. The following table shows the consumption per adult consumer in annas per month.

Income grade.	Vegetable.	Tea.	Spices.
Less than Rs. 10 .. ..	1.00	..	.88
Rs. 10 but not Rs. 15 ..	1.76	.12	1.99
Rs. 15 but not Rs. 20 ..	1.90	.14	1.94
Rs. 20 but not Rs. 30 ..	3.85	.13	.91
Rs. 30 but not Rs. 40 ..	4.58	.19	1.17
Rs. 40 but not Rs. 50 ..	6.98	.33	1.10
Rs. 50 and over .. ..	7.24	.33	1.12

Vegetables rise from 1 anna per adult per month to 7.24 anna per adult per month from the lowest to the highest group but it is grossly small for income grades below Rs. 30, where—in it never exceeds  $\frac{1}{2}$  pice per day. Even in the highest group vegetables which include what little fruits are taken, do not exceed 1 pice per adult per day.

Tea is scarcely taken at Jamalpur centre and it is absolutely small for income grades below Rs. 40 and inconsiderable above that limit. If we take tea for the families wherein it is consumed it does not exceed 2 pice per adult per month showing that it is consumed infrequently and not as an important beverage.

Spices show no regular trend but the highest consumption in any grade does not exceed  $\frac{1}{4}$  pice per adult per month. These various considerations show that on the whole a reasonable standard of food consumption is not approached until the group Rs. 30 to Rs. 40 is reached. Families with total incomes of less than Rs. 30 manage to exist at a starvation or a semi-starvation level.

### B.—Clothing.

No census of the articles of clothing possessed by each family of workers has been attempted. We have got only average expenditure on cloth per family per month. Purchase, repair and making cost have been shown together while washing has been separately shown. The following table gives the expenditure per family per month on clothing in each grade.

Income grade.	Making, purchase, repairs.	Washing.	Total on clothing.	Total per family.	Percentage of 4 to total incomes.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Less than Rs. 10 ...	1 15 0	0 8 0	2 7 0	0 9 9	12.91
Rs. 10 but not Rs. 15	73 0 0	9 2 0	82 2 0	1 6 3	11.27
Rs. 15 but not Rs. 20	73 1 0	11 4 0	84 5 0	1 11 0	9.48
Rs. 20 but not Rs. 30	234 10 0	48 2 0	282 12 0	2 8 0	8.24
Rs. 30 but not Rs. 40	205 12 0	45 10 0	251 6 0	3 3 0	9.19
Rs. 40 but not Rs. 50	208 10 0	26 1 0	234 11 0	3 3 0	7.06
Rs. 50 and over ...	124 9 0	20 13 0	145 6 0	2 12 0	4.22
Total ...	921 9 0	161 8 0	1,083 1 0	2 7 0	7.43

Thus expenditure on clothing rises from Re. 0-9-9 per family in the lowest grade to about Rs. 3 in the highest grades. It is rather strange that in grades above Rs. 30 expenditure on clothing per family is almost uniform and shows no rise with rising incomes. In grades up to Rs. 30 however, there is a steady rise in expenditure on clothing per head. It thus appears that clothing is an elastic commodity for the lower income grades but becomes practically inelastic in grades above Rs. 30. In other words until the expenditure of practically Rs. 3 per family is not reached, families try to realise that ideal but once that is reached, there is no search or scope for variety. The percentage that expenditure on clothing bears to the total income available for consumption shows a steady decline, indicating that no attempt is made to get at variety in clothing once the average standard is attained. That also shows that families are hard up in grades below Rs. 30.

The percentage that washing bears to the total expenditure on clothing is given below :—

—			Expenditure on washing.	Total on clothing.	Percentage of 2 to 3.
			Rs. a. p.	Rs. a. p.	
Monghyr	..	..	35 10 0	264 0 0	13.49
Jamalpur	..	..	125 14 0	657 9 0	19.14
Total		..	161 8 0	921 9 0	17.52

Thus on the average washing forms 17.52 of the clothing bill or above one-sixth of all. At Monghyr, however, washing bill is lighter than at Jamalpur since work is not done in as smoky and dusty a surrounding as at Jamalpur. Part of the expenditure on washing of the workers at Jamalpur is thus due to conditions of the industry.

### C.—Housing.

Housing presents a relatively simpler problem to the workers at Jamalpur centre than elsewhere. Most of the workers are living in the country around. Their houses although sharing in the characteristics of flimsy village dwellings

are freer from effects of overcrowding as witnessed in industrial areas generally. At Jamalpur only 17 per cent of the families are living within the municipal jurisdiction and at Monghyr about 33 per cent. The rest are drawn from villages around. Due to the vast area over which the workers are spread, it is difficult to describe the common features of their houses. Investigators had in most cases, to rely on the crude description of the workers. The houses within the municipal limits are mostly pucca, well ventilated, spacious and have adequate arrangements of water-supply, latrines, road, drainage and other municipal services. Those in the villages share the features of village dwellings being mostly kutcha and without organised public utilities. Roughly the dwellings of the workers may be classified into four kinds as shown in the table below :—

Centre.	Pucca wall and roof.	Pucca wall and tiled.	Partly pucca and partly kutcha.	Mud wall and tiled roof.	Mud wall and straw roof.
1	2	3	4	5	6
Jamalpur ..	36	74	37	117	60
Monghyr ..	7	14	1	83	16

Thus while Jamalpur workers have 147 houses either pucca or semi-pucca, Monghyr workers have only 22 such; the respective percentages being 45·37 and 18·18 for these centres. That shows that the workers at Jamalpur are relatively better housed than those at Monghyr.

Mud walls and tiled roof characterise 117 houses at Jamalpur and 83 at Monghyr, their percentage being 36·11 and 68·60; while the percentages of kutcha houses with straw roof are 18·50 and 13·22 only.

Thus normally a Monghyr worker lives in a kutcha house with tiled roof, while at Jamalpur they are normally in a pucca or semi-pucca house.

The employers as a rule provide no housing for the workers getting below Rs. 50. The only exceptions are in case of 3 firemen for emergencies at Jamalpur and in case of 2 jamadars at Monghyr to watch the company's property. To

these 5 families houses have been supplied free of rent near the works. The overwhelming majority of houses are owned by the resident families, these being almost all in the country. Jamalpur workers live in their own houses in 288 cases; they live with relations and escape payment of rent in 8 cases and they live in houses owned by private landlords in 25 cases. The percentages work out at 88·89, 2·47 and 7·72, respectively. At Monghyr the numbers are 89, 9 and 21 and the percentages 73·55, 7·44 and 17·36 respectively.

If we examine the distances of the workers' dwellings from the work place, we find that the overwhelming majority of them are living within 5 miles of their works. Thus 210 or 64·81 of the houses at Jamalpur are within 5 miles of the works and most of these are well within 3 miles of the works. Monghyr workers have 117 or 96·70 per cent of their dwellings within 5 miles of the place of work, while only 4 or 3·31 per cent are above 5 miles but below 8 miles from the work place.

Houses over 5 miles away from works for Jamalpur workers are as follows:—

	5 but not 10 miles.	10 but not 15 miles.	15 but not 20 miles.
No. 67 .. ..	9	38	
Percentage 20·68 .. ..	2·78	11·73	

Jamalpur workers have the advantage of the workmen's trains while Monghyr workers have not. On the whole, however, distances of their dwellings put no appreciable strain on the workers for either place.

Information regarding accommodation is incomplete for Jamalpur but not for Monghyr. The following tables sum up the relevant statistics.



No. of rooms in the house.	Monghyr.			Jamalpur.			Total no. of houses.	Floor space.	Average floor space.
	No. of houses.	Floor space in sq. ft.	Average floor space in sq. ft.	No. of houses.	Floor space in sq. ft.	Average floor space.			
1	2	3	4	5	6	7	8	9	10
									Per cent.
1 room .. ..	32	3,001	93.78	34	3,410	100.30	66	6,411	97.14
2 rooms .. ..	62	9,510	153.59	69	25,523	369.89	131	35,033	267.43
3 rooms .. ..	17	5,193	305.47	56	17,825	318.30	73	23,018	315.32
4 rooms .. ..	6	1,725	287.50	48	16,015	333.69	54	17,740	328.52
5 rooms .. ..	1	225	225.00	18	4,867	270.39	19	50,922	68.00
Over 5 rooms ..	3	3,446	1148.67	17	15,247	896.88	20	18,693	943.65
<b>Total</b> .. ..	<b>121</b>	<b>23,100</b>	<b>190.99</b>	<b>242</b>	<b>82,887</b>	<b>342.50</b>	<b>363</b>	<b>105,987</b>	<b>291.98</b>

The resident consumers of housing comprise 1,622 adults, 852 children between 5 and 15 years and 470 children below 5 years. Reduced into standardised adults for the purpose of housing according to our own formula (vide the general preface) these come to 2165.50 adults for all the 445 families or on the average 4.86 adults per family. The average floor space required for this number of adults is 160.58 sq. feet and the average air space required is 1620.34 cubic feet.

If we look at the table above we find that the average floor space required is inadequate in the houses which have single rooms and such houses number 66 or 18.18 per cent for the whole of Jamalpur centre and 26.45 for Monghyr alone. Two roomed houses at Monghyr fall short of the requirement but are more than adequate for Jamalpur. Thus Monghyr workers have got 94 or 77.68 per cent of their houses below the required standard, while Jamalpur workers have got only 34 or 14.05 per cent below the required level. For houses having more than 1 room Jamalpur workers have nearly always a higher accommodation than the workers at Monghyr. Thus on the whole workers of Monghyr have smaller accommodation and less suitable houses than the workers at Jamalpur. Houses having less than 2 rooms should be discouraged for either place. Heights of rooms have not been recorded regularly but even assuming the average height of rooms to be 10 ft., which errs on the side of excess, 94 families of Monghyr workers or 77.68 per cent lack adequate air space but only 34 families or 14.05 of Jamalpur workers are below this standard. Air space standard, however, is not strictly applicable to India where sleeping in open or on verandahs is possible during the major part of the year. Some of the houses have verandahs which serve to add both to the effective floor space and air space. The statistics of verandahs are given below :—

			House with verandahs.	1 verandah.	2 verandahs.
Monghyr	..	..	31	84	6
Jamalpur	..	..	87	31	51

Only 31 or less than 40 per cent of houses at Monghyr are without verandahs whereas at Jamalpur 87 or 51.48 are without any. 84 houses at Monghyr have one verandah with a total area of 7,932 sq. feet or 94.43 sq. feet each and 6 have 2 verandahs with a total area of 16.42 sq. feet or 273.67 sq. ft. on average.

At Jamalpur houses with 1 verandah number 31 with total area of 2,131 sq. ft. or 70 sq. ft. on average each, while 51 houses have 2 verandahs with a total area of 10,747 sq. ft. or 210.73 sq. ft. each. The verandahs, therefore, compensate to some extent for the inadequate housing which we meet in certain families.

Sources of water-supply for the house are shown below.

—	Well.	Municipal tap.	River.	Tank.	Total.
Monghyr ..	76	40	5	..	121.
Jamalpur ..	187	42	7	1	237.

Municipal taps supply water to those within the municipal areas of Monghyr and Jamalpur. About 33 per cent of Monghyr workers are living within municipal limits and about 17.72 per cent of Jamalpur. The rest living in villages rely predominantly on wells for their water-supply. Rivers and tanks as sources of supply are negligible.

We have no materials for any other aspect of housing than those discussed above.

We shall now examine what housing costs these workers. The expenditure by income groups is given below:—

Income group.	House rent.	Ground rent.	Municipal rates and <i>chaukidari</i> .	Total.	Average per family.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10 ...	1 0 0	0 6 0	0 10 0	2 0 0	0 8 0
Rs. 10 but not Rs. 15 ...	6 4 0	7 13 0	6 5 0	20 6 0	6 5 6
Rs. 15 but not Rs. 20 ...	14 12 0	4 11 0	7 12 0	27 3 0	0 8 9
Rs. 20 but not Rs. 30 ...	22 8 0	9 1 0	25 14 0	57 7 0	0 7 0
Rs. 30 but not Rs. 40 ...	34 2 0	13 2 0	20 0 0	67 4 0	0 12 3
Rs. 40 but not Rs. 50 ...	39 8 0	22 5 0	32 14 0	94 11 0	1 5 3
Rs. 50 and over ...	24 6 0	18 11 0	27 11 0	70 12 0	1 5 3
Total ...	142 8 0	76 1 0	121 2 0	339 11 0	...

House rent includes ground rent where they are paid together. We find that altogether Rs. 142-8-0 is being paid for house rent for 46 families, 25 of Jamalpur workers and 21 of Monghyr workers. These include some clerks and other workers who get generally above Rs. 20 each. Only Rs. 22 is paid as house rent by 14 families in income grades less than Rs. 20.

It is rather doubtful whether what has been shown as ground rent is really rent for site of dwellings. In villages it is likely that most of the house sites are free being rated along with the rent of the workers' petty holdings. There are some cases, however, where depressed class workers have built houses on private land and pay a ground rent for it. Such pure ground rents form a very small proportion of the rent paid. Most of the ground rent shown includes rent for petty plots round workers' homes. The composite ground rent totals Rs. 16-1-0 for about 380-house sites or Re. 1 for 5 house sites or Re. 0-3-2 per house site. Even this is rather high for agricultural rent in the country side around is not very high. These 380 families pay, besides, certain amount of municipal tax and in the villages *chaukidari* tax. These are not really cost of housing but for services of security and public utilities. The composite total is Rs. 121-2-0 for the 380 families or 5 annas each on average. Thus even those who have a house of their own pay about 8 annas on average every month. Only 22 families escape all payments, 17 living in relations' houses, 5 having been provided free housing by the Company (although against the latter Rs. 41 should be shown as expenditure on house rent for purposes of accounting only). It will appear that except for the lowest grade, housing cost rises with rising incomes. The total housing cost of Rs. 339-11-0 forms only 2.33 per cent of the net income available for expenditure by the resident consumers, an unusually small portion of what it would be in the west.

#### D.—Fuels and lights.

Among fuels coal and wood are the only two mentioned. Both appear to be of equal importance. For lights kerosene oil is universally used. Matches have been also shown under lights.

The following table shows the expenditure according to income grades. Quantities have unfortunately not been mentioned.

Income grades.	Coal.	Wood.	Kerosene.	Matches.	Total.	Average expenditure per family.
1	2	3	4	5	6	7
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10	0 7 0	1 1 0	1 0 0	0 2 0	2 10 0	0 10 6
Rs. 10 but not Rs. 15.	16 6 0	31 0 0	18 0 0	1 2 0	66 8 0	1 2 0
Rs. 15 but not Rs. 20.	20 14 0	36 5 0	17 10 0	0 14 0	75 11 0	1 8 3
Rs. 20 but not Rs. 30.	193 15 0	70 7 0	46 10 0	1 15 0	222 15 0	1 11 9
Rs. 30 but not Rs. 40.	62 0 0	47 12 0	37 8 0	1 9 0	148 13 0	1 14 3
Rs. 40 but not Rs. 50.	59 8 0	77 0 0	34 6 0	1 4 0	172 2 0	2 6 9
Rs. 50 and over	52 9 0	67 3 0	31 0 0	1 6 0	152 2 0	2 14 0
Total ...	315 11 0	330 12 0	185 2 0	8 4 0	840 13 0	...

Thus from the point of view of money expenditure wood is slightly more important than coal and is more widely used in the villages. Except for the groups Rs. 20 to Rs. 30 and Rs. 30 to Rs. 40 which use more coal than wood, wood is always higher in the fuel consumption. Expenditure on fuel and lighting grows with income rising from Re. 0-10-6 per family in the lowest income grade to Rs. 2-14-0 in the highest grade. People of lowest income groups are thus day light animals and cook their food once in a couple of days. Expenditure on fuels and lights rise with rising income but the total expenditure on fuels and lights (viz., Rs. 840-13-0) forms only 5.77 per cent of the net income available for expenditure by the resident consumers, fuel being only required for cooking and not for heating purposes at all.

### E.—Household utensils and furniture.

As we have noted in the preface, expenditure on household utensils and furniture can give us no adequate picture of the

bare homes of the workers. But since these are the only figures available they are presented for what they are worth.

Income grade.	Utensils.	Furniture.	Total.	Average per family.
1	2	3	4	5
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10	0 9 0	0 8 0	1 1 0	0 4 3
Rs. 10 but not Rs. 15.	10 9 0	12 10 0	23 3 0	0 6 3
Rs. 15 but not Rs. 20.	10 5 0	16 4 0	26 9 0	0 8 6
Rs. 20 but not Rs. 30.	46 11 0	40 8 0	87 3 0	0 10 9
Rs. 30 but not Rs. 40.	19 11 0	35 10 0	55 5 0	0 11 3
Rs. 40 but not Rs. 50.	29 12 0	58 10 0	88 6 0	1 4 0
Rs. 50 and over	34 15 0	53 13 0	88 12 0	1 10 9
Total ..	152 8 0	217 15 0	370 7 0	0 13 3

Thus while we find that expenditures on these two items increase regularly as income increases, the expenditures in grades below Rs. 40 are very small. These expenditures are mostly due to breakages and replacement of earthenware, etc. The homes below Rs. 40 limit are practically without useful possessions. These two items accordingly form only 2.54 per cent of the net income available for expenditure by the resident consumers.

## F.—MISCELLANEOUS.

### (a) Remittances.

We have already examined remittances to dependants in relation to the dependants living away from earners. We found

that 42 families remitted Rs. 330-13-0 to 53·50 adult dependants. The remittances were substantial and formed 24·76 per cent or about one-fourth of the total incomes of the families that make such remittances. But the percentage it bears to the total income of all the workers is only 2·22.

**(b) Travelling to and from work-place.**

We have noted the facility provided by the workmen's trains and valued the cost of transport of Jamalpur workers at Rs. 574-6-0 only. In expenditure the same sum is shown against Jamalpur workers only. Monghyr workers have no such facility and they do not incur any cost in travelling to and from place of work; but may sometimes travel in a clandestine manner on the workmen's trains. The cost forms 3·95 per cent of the total income available for expenditure by the resident consumers.

**(c) Provident Fund.**

This we have already mentioned in connection with incomes. Provident Fund is a feature of workers' expenditures found only at Jamalpur and that for workers above Rs. 10 only. The total sum contributed to the Provident Fund by the Company is Rs. 638-8-0 or 5·52 of the total incomes of the workers and 6·87 per cent of their primary earnings. An equal sum is contributed by the workers, thus bringing the total deduction on account of Provident Fund to Rs. 1,377-0-0 or 9·45 per cent of the total income available for expenditure by the workers.

**(d) Mental and bodily health.**

Data regarding this are only indirect and we shall have to guess the position by examining the expenditure on various factors of mental and bodily health. We shall treat together medicine cost and medical fees, teachers' fees and cost of books and other appliances of education, and amusement cost.

The table below shows expenditure per family.

Income grades.	Medical fee.	Medicine cost.	Average medical expenditure per family in annas.	Teachers' fees.	Cost of appliances of education.	Average of education cost per family in annas.	Amusement.	Average of amusement cost per family in annas.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
Less than Rs. 10	1 0 0	0 12 0	0 7 0	..	..	...	..	..
Rs. 10 but not Rs. 15.	21 7 0	6 1 0	7-46	4 5 0	1 10 0	1-61	2 1 0	.56
Rs. 15 but not Rs. 20.	13 5 0	7 11 0	6-72	9 4 0	3 1 0	3-98	3 0 0	.96
Rs. 20 but not Rs. 30.	96 8 0	29 1 0	15-57	45 10 0	13 4 0	7-30	31 4 0	3-88
Rs. 30 but not Rs. 40.	57 4 0	37 6 0	19-16	44 4 0	20 5 0	13-08	8 10 0	1-75
Rs. 40 but not Rs. 50.	80 2 0	50 10 0	29-47	91 5 0	48 3 0	31-35	10 4 0	2-31
Rs. 50 and over	99 10 0	41 13 0	42-70	140 6 0	52 0 0	58-08	19 13 0	6-00
Total ..	369 4 0	173 6 0	19-51	335 2 0	138 7 0	17-03	75 0 0	2-70



The lowest income group shows no expenditure whatsoever on either education or amusement but diseases take a tribute of 7 annas per family. The expenditure on medicine and medical fees grows steadily with rising income till after the lower limit of Rs. 40 is passed it becomes quite considerable. For groups between Rs. 20 and Rs. 40 medical expenditure is about half that of the highest two grades. The smaller expenditure per family in the lower income groups does not mean that incidence of diseases is smaller in these groups, but only that very often people are left without treatment to live or to die. It is worthwhile to note that medicine cost is less than half of what the workers pay to doctors as their fees.

The lowest income group shows no expenditure on education at all, while the expenditure is dismally low in income groups below Rs. 30. Only in the two highest groups is the expenditure at all appreciable. If the expenditure on amusement were a guide to the workers' happiness, most of the homes would be dismally cheerless, except probably in the income group Rs. 50 and over. But the villages have their own amusements to offer without entailing money expenditure. The low level of cash expenditure on amusement which even for the income group highest but one is less than 2 pice per month for each member should be carefully noted. Altogether expenditure on bodily and mental health totals Rs. 542-10-0 and Rs. 448-9-0 or only 3.72 and 3.08 per cent respectively of the total income available for consumption by the resident consumers.

**(e) Social conventions and individual habits.**

Expenditures incurred on these accounts have been classed under the following groups: drink and drugs; tobacco and *pan*; religious observances; feasts and festivals; unspecified expenditures including expenditure on toiletry, etc., and trade union subscription. No other items occur. The expenditures are shown according to income grades in the table below:—

Income grade.	Drink and drugs.	Tobacco and <i>pan</i> .	Religious observances feasts and festivals	Trade union subscrip-tion.	Unspecified.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10.	0 2 0	0 10 0	1 0 0	0 2 0	0 12 0
Ra. 10 but not Rs. 15.	5 5 0	17 11 0	21 0 0	3 0 0	23 4 0

Income grade.	Drink and drugs.	Tobacco and pan.	Religious observances, feasts and festivals.	Trade union subscription.	Unspecified.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rs. 15 but not Rs. 20.	6 6 0	25 1 0	18 4 0	3 8 0	21 10 0
Rs. 20 but not Rs. 30.	34 8 0	85 1 0	87 5 0	8 0 0	82 2 0
Rs. 30 but not Rs. 40.	22 10 0	62 5 0	59 9 0	5 9 0	38 10 0
Rs. 40 but not Rs. 50.	36 6 0	79 7 0	100 12 0	8 3 0	79 3 0
Rs. 50 and over.	21 8 0	65 4 0	151 8 0	15 9 0	76 14 0
Total ..	126 13 0	335 7 0	439 6 0	43 15 0	322 7 0

Drink and drugs thus occupy a very small place in the expenditure scheme, the total being only Rs. 126-13-0 or less than 1 per cent of the total income available for consumption. Few people drink and the few that drink do not do so in large quantities. If we take the number of families in which expenditure on drinks and drugs occur, these number only 76 out of 445; and of these only 16 fall in the income grades less than 15. The expenditure on drink of these 16 families, viz., Rs. 5-7-0 forms only 3·88 of their total income, showing that people are eminently sober.

In income grades above Rs. 15 expenditure on drinks equals Rs. 121-6-0 or about 7 per cent of the total incomes of the families in which drinks and drugs occur.

Tobacco and *pan* is more widespread as a conventional indulgence. The total sum spent on tobacco and pan comes to Rs. 335-7-0 or 2·28 of the total income available for consumption. It appears to be an article of inelastic demand because in no income group does it exceed 3 per cent of the total income, the percentage tending to fall with the higher incomes.

Religious observances, feasts, and festivals have been supposed to be the bane of the workers' life, but these items are only of moderate importance in the workers' budget here. The total expenditure on these comes to Rs. 439-6-0 or 3.02 per cent of the total income of the workers available for consumption.

The "Trade Union Subscription" and "Unspecified" columns need little comment.

## CHAPTER V.

### Balance sheet of the workers' position.

We have examined above almost all the important departments of the workers' incomes and expenditures. Among expenditures, it is likely that we have not given due weight to events like births, deaths, marriages and so forth which may not occur every month or every year, but which are of universal occurrence in our life time. We have also, presumably, left out of account economic catastrophes which have to be foreseen as emergencies to be insured against. Such for instance, are periods of sickness and unemployment, and earthquakes and floods which may destroy years of patient accumulations. We shall try to see whether the workers are in a position to meet these foreseen and unforeseen events with any degree of resistance after the more clamorous demands of every day life have been met.

Let us try to draw a balance sheet of the position so far reviewed. The following table is an attempt in that direction.

Income grades.	Total.	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Incomes after deducting remittance.	14,572 1 0	20 2 0	728 5 0	891 0 0	8,430 10 0	2,735 10 0	3,322 13 0	3,443 7 0
<b>Expenditures—</b>								
A.—Food ...	7,820 6 0	15 1 0	581 6 0	650 12 0	1,955 7 0	1,582 7 0	1,555 12 0	1,479 9 0
B.—Clothing ...	1,083 1 0	2 7 0	82 2 0	84 5 0	282 12 0	251 6 0	234 11 0	145 6 0
C.—Housing ...	339 11 0	2 0 0	20 6 0	27 3 0	57 7 0	67 4 0	94 11 0	70 12 0
D.—Fuels and Lights..	640 13 0	2 10 0	66 8 0	75 11 0	222 15 0	148 13 0	172 2 0	152 2 0
E.—Utensils and furniture.	370 7 0	1 1 0	23 3 0	26 9 0	87 3 0	55 5 0	88 6 0	88 12 0
<b>F.—Miscellaneous :—</b>								
(a) Travelling to and from place of work.	674 8 0	...	...	3 0 0	230 14 0	197 9 0	77 3 0	65 12 0
(b) Provident Fund ...	1,377 0 0	...	...	3 0 0	243 4 0	233 8 0	467 4 0	427 0 0
(c) Medicine and Medical fees.	542 10 0	1 12 0	27 8 0	21 0 0	125 9 0	94 10 0	130 12 0	141 7 0
(d) Education ...	473 9 0	...	5 15 0	12 5 0	58 14 0	64 9 0	139 8 0	192 6 0

(c) Amusement ...	75 0 0	...	2 1 0	3 0 0	31 4 0	8 10 0	10 4 0	19 13 0
(f) Drink and drugs ...	126 13 0	0 2 0	5 5 0	6 6 0	34 8 0	22 10 0	36 6 0	21 8 0
(g) Tobacco and pan ...	335 7 0	0 10 0	17 11 0	25 1 0	85 1 0	62 5 0	79 7 0	65 4 0
(A) Religious observances, feasts and festival.	439 6 0	1 0 0	21 0 0	18 4 0	87 5 0	59 9 0	100 12 0	151 8 0
(i) Trade Union Subscription.	43 15 0	0 2 0	3 0 0	3 8 0	8 0 0	5 9 0	8 3 0	15 9 0
(j) Unspecified ...	322 7 0	0 12 0	23 4 0	21 10 0	82 2 0	38 10 0	79 3 0	76 14 0
<b>Total Expenditure :—</b>	<b>14,764 15 0</b>	<b>27 9 0</b>	<b>379 5 0</b>	<b>981 10 0</b>	<b>3,595 9 0</b>	<b>2,892 12 0</b>	<b>3,274 8 0</b>	<b>3,113 10 0</b>
Excess ...	...	...	...	...	...	...	48 7 0	329 13 0
Deficits ...	192 14 0	7 7 0	151 0 0	90 10 0	164 15 0	157 2 0	...	...

We thus find that the net position shows a deficit of Rs. 192-14-0 which is 1.32 per cent of the total income. The size of the total deficit is not large but it shows that the workers' reserves against social events like marriages and economic emergencies like unemployment are actually negative after they have met the ordinary expenditures of life. Even if Provident Fund be taken to be a deposit, the actual reserve will be only Rs. 1,184-2-0 or 8.13 per cent of the total effective incomes of the groups. This small reserve has not only to serve as the workers' old age insurance and insurances against misfortunes but has also to meet social events like marriages, births and deaths. The resourcelessness and the fair weather character of the workers economic status is only too evident. Besides, the workers might have inherited debts and liabilities of their fathers which would also be discharged out of this reserve, if it be so termed. Yet the general state of the whole mass of workers, however bad, does not show the actual strains and stresses in the various income groups. If we examine the position of each income group, we find that only the two highest income-groups have got any excess of income over expenditure. In the group highest but one the excess is only Rs. 48-7-0, however; and in the highest group it is Rs. 329-13-0. Reduced to percentages of the total income of these groups the excesses are 1.46 and 9.53 or if we include the provident fund 15.52 and 21.98 per cent of the total income of these groups. These are substantial reserves. Not that the excesses are evenly spread even inside these groups. Thus in the group Rs. 40 but not Rs. 50, 50 families have a net excess of Rs. 97-13-0 while 21 families have a net deficit of Rs. 49-6-0. In the highest group 40 families have a net excess of Rs. 442-8-0 while 13 have a net deficit of Rs. 112-11-0.

These two groups account for 124 families out of 445 or 27.87 per cent of the total families.

The five lowest income-groups show a net deficit each. In the income group below Rs. 10, 1 family gains Re. 0-8-0 while 3 others fall short by Rs. 7-15-0. The net deficit, since there is no provident fund in this group, is Rs. 7-7-0 or 36.97 per cent of the effective income.

In the income group Rs. 10 but not Rs. 15, 1 family gains Rs. 1-11-0 while 58 fall short by Rs. 152-11-0. The net deficit, there being no Provident Fund, is Rs. 151-0-0 or 29.72 per cent of the effective income.

In the group Rs. 15-0-0 but not Rs. 20, 6 families gain Rs. 12-2-0 while 44 fall short by Rs. 102-12-0. The net deficit is Rs. 90-10-0 or, if provident fund is allowed for, Rs. 87-10-0. The percentages are 10·17 and 9·83 respectively. In group Rs. 20 but not Rs. 30, 54 families gain Rs. 499-8-0 while 75 families fall short by Rs. 664-7-0. The net deficit is Rs. 164-15-0, but if provident fund is allowed for, there is a slight excess of Rs. 81-5-0. The deficit without provident fund is 4·88 per cent of the effective incomes while the excess with provident fund is 2·37 of the effective income.

In the group Rs. 30 but not 40, 31 families gain Rs. 312-1-0 while 48 are short of Rs. 469-3-0. The net deficit without provident fund is Rs. 157-2-0 while if provident fund is allowed the net gain is Rs. 76-6-0. The percentages of deficit without provident fund and excess with provident fund are 5·74 and 2·78 respectively.

The above considerations naturally lead us to a discussion of the indebtedness of the workers.

## CHAPTER VI.

### Indebtedness.

The following table shows the extent and causes of indebtedness by income groups :—

Causes.	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Birth and confinement	...	105 0 0	210 0 0	220 0 0	325 0 0	200 0 0	50 0 0	110 0 0
Marriage, betrothal ...	...	1,405 0 0	1,190 0 0	6,801 0 0	3,244 0 0	7,200 0 0	5,371 0 0	24,711 0 0
Funeral ...	50 0 0	990 0 0	545 0 0	1,950 0 0	950 0 0	300 0 0	225 0 0	5,010 0 0
Sickness ...	50 0 0	857 0 0	716 0 0	3,978 0 0	3,235 0 0	2,426 0 0	2,615 0 0	13,887 0 0
Ancestral debt or debt to pay it off.	...	450 0 0	590 0 0	945 0 0	415 0 0	...	150 0 0	2,550 0 0
Involuntary unemployment.	...	100 0 0	50 0 0	760 0 0	500 0 0	...	600 0 0	2,060 0 0
Litigation	...	...	1,200 0 0	1,065 0 0	540 0 0	815 0 0	1,450 0 0	5,070 0 0
House building and repair.	225 0 0	1,125 0 0	1,470 0 0	4,467 0 0	4,80 0 0	7,568 0 0	5,950 0 0	24,885 0 0
Consumption	100 0 0	1,332 0 0	930 0 0	2,228 0 0	2,155 0 0	697 0 0	646 0 0	8,088 0 0
Total ...	425 0 0	6,374 0 0	6,901 0 0	21,914 0 0	15,494 0 0	19,206 1 0	17,057 0 0	87,371 0 0
Multiple that debt forms of monthly available income.	21.12	8.78	7.75	6.39	5.66	5.78	4.96	6.00



Thus although we find that on the average the volume of debt does not exceed six times the monthly available incomes of the workers in general, the multiple is tremendously high being over 21 times of the lowest income grade which is also the one with the heaviest deficit of 36.89 per cent of the available income. Already their consumption level is irreducibly low. They are irretrievably in debt and their debt position will worsen till they meet their doom. About the lowest income grade the multiples get more and more reasonable till we reach the top grade with total indebtedness of less than five times the monthly incomes.

The lowering multiples, however, do not hold out much hope because we have found all groups of workers getting less than Rs. 40-0-0 with deficit budgets. They must not only lower their consumption level, which is none too high to do away with the recurring deficits, but also to wipe off their burden of debt. A perusal of the debt multiples and the net deficit percentages after Provident Fund has been allowed for, leads to the conclusion that only the two highest income grades can meet their indebtedness without discomfort to themselves. Families with income between Rs. 20 and Rs. 40 can help themselves out with a more ascetic restriction of their consumption ; while the groups getting more than Rs. 10 but less than Rs. 20 have no hope of relief except by drastic scaling of debt and by advance of long range credit by private or state credit organisations. The lowest group is beyond help and needs not only absolute debt extinction but also reasonable rise in wages to pay their way.

Thus 113 out of 445 families or 25.40 per cent of the families are at present inextricably in debt, and 208 or 46.74 per cent of the families are now neck deep in debt and must make violent struggles to get out.

The causes of debt shown above are neither exhaustive nor without overlapping but these are the major categories into which the causes may be divided for this centre. The table shows that the most important single cause of debt has been the need to make and repair houses. This item occurs in all groups and on a mass scale and shows up the devastating influence of the earthquake of January 1934 which shook this area to the depth and caused widespread economic ruin. This item forms 28.48 per cent of the total debt. In the lowest grade it forms over 50 per cent while it is about 27 per cent, 33 per cent and 40 per cent in the three highest grades.

Next in importance is marriage, betrothal and other allied ceremonies. This item forms 28·35 of the total debt but is altogether absent in the lower grade to whom few can lend for joyous celebrations. For the next 6 grades as the income rises the percentages this item bears to the total incomes are 22·01, 17·24, 27·77, 20·94, 37·49 and 33·60 respectively. Thus a large part of the debt ranging from about  $\frac{1}{5}$ th to over  $\frac{1}{3}$ rd is due to the borrowings on account of marriage. This proportion could be certainly lowered a great deal by education and legislation.

Sickness comes third in the list as a cause of indebtedness accounting for 15·89 per cent of the total debt. The appropriate percentages for the various groups from the lowest to highest are 11·76, 13·60, 10·37, 18·15, 20·88, 12·63 and 15·33.

Consumption which connotes purchase of things on credit or borrowing money to meet ordinary expenditures of daily life come fourth in the list as a cause of indebtedness forming 9·26 per cent of the total debt. The appropriate percentages for the groups from the lowest to the highest are 23·52, 20·90, 13·47, 10·17, 13·91, 3·42 and 3·79. These percentages show that whereas the lower income groups require to borrow even for daily consumption, the higher income groups are naturally immune from it and reserve their borrowings for more important social events or for emergencies.

Litigation and funerals are two other items of more than negligible importance. Litigation accounts for 5·83 per cent of the total, while funerals account for 5·82 per cent.

The above causes are responsible for Rs. 81,651 or 93·46 per cent of the total. The other three items in order of importance are "Ancestral debt", accounting for Rs. 2,550 or 2·92 per cent; involuntary unemployment like dismissal and discharge, accounting for Rs. 2,060 or 2·36 per cent and birth and confinement, accounting for Rs. 110 or 1·26 per cent.

The survey shows that ancestral debt is of minor importance while social events that are important as causes of debt are only marriage and funeral; marriage being of a much great importance than funeral. Birth is of very small importance, indeed. The major cause of debt seems to be natural calamities like earthquake which find workers absolutely without reserves.

Consumption and sickness are two other causes of debt which call for purely economic solutions.

The agencies that advance credit to the workers in various income grades are shown in the following table :—

Income grades.	Total.	Regular money lender.	Bania advancing goods on credit.	Workers' Co-operative Society.	Friends, relations and acquaintances.	Other agencies.
1	2	3	4	5	6	7
Less than Rs. 10 ...	425	325	...	...	100	...
Rs. 10 but not Rs. 15 ...	6,374	4,845	784	...	745	...
Rs. 15 but not Rs. 20 ...	6,901	4,576	1,125	475	475	250
Rs. 20 but not Rs. 30 ...	21,914	8,246	2,228	7,831	2,079	1,530
Rs. 30 but not Rs. 40 ...	15,494	7,950	2,090	4,184	1,240	...
Rs. 40 but not Rs. 50 ...	19,206	7,593	497	10,111	1,005	...
Rs. 50 and over ...	17,057	6,572	646	9,254	585	...
Total ...	87,371	40,137	7,370	31,855	6,229	1,780
Percentage of total debt	100·00	45·94	8·44	36·46	7·13	2·03

The importance of the regular money-lender as a source of credit is evident. They supply 45·94 or only a little less than half the credit requirement of the working population. The workers' co-operative society has supplied 36·46 or above  $\frac{1}{3}$  of the total requirements, but co-operative credit has so far been available only for the Jamalpur workers who are on the whole better paid and better organised than the workers at Monghyr. Indeed, if we consider the Jamalpur workers alone, the credit society would appear to supply 43·3 per cent and the regular *mahajans* only 41·4 of the total credit requirement. For Monghyr alone the regular money-lenders provide just over 70 per cent of the total requirements. It would be worthwhile to extend the benefits of co-operative credit to Monghyr workers as we have found co-operative credit already eclipsing the money-lender at Jamalpur.

*Banias* advancing things on credit or sometimes cash also, account for only 8·44 per cent of the total indebtedness being followed closely by such non-descript lenders as friends, relations

and acquaintances who give a temporary advance to the workers in small quantities, their share being 7.13 per cent of the credit supply.

“ Other agencies ” count only Government loans to earthquake sufferers and account for only 2.03 per cent of the total indebtedness. The importance of the various credit agencies as measured by the percentage of loan supplied by them to each group is shown in the following table :—

Income grades.	Regular money-lender.	Shop-keeper.	Co-operative Society.	Friends, relations and acquaintances.	Other agencies.
1	2	3	4	5	6
Less than Rs. 10 ..	76.47	..	..	23.53	..
Rs. 10 but not Rs. 15	76.01	12.30	..	11.69	..
Rs. 15 but not Rs. 20	66.31	16.30	6.88	6.88	3.63
Rs. 20 but not Rs. 30	37.63	10.17	35.74	9.49	6.97
Rs. 30 but not Rs. 40	51.51	13.49	26.98	8.02	..
Rs. 40 but not Rs. 50	39.53	2.59	52.70	5.18	..
Rs. 50 and over ..	38.53	3.79	54.27	3.41	..

It would appear that the percentage of loans from regular money-lenders declines as we move from the lower to the higher grades. There is a corresponding rise in the percentage of loans from the Co-operative Society, which, as we have seen, overshadows even the regular money-lender at Jamalpur. Another point to notice is that greater reliance on shop-keepers' credit characterises the lower income-grades but it becomes negligible as we rise above Rs. 40 in the income-grades.

The following table indicates the rates at which the workers borrow :

Interest rates	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
No interest.. ..	..	970	330	1,490	1,080	415	550	4,835
Less than 10 per cent .. ..	..	150	820	12,333	7,244	10,789	10,835	42,171
10 per cent but not 20 per cent .. ..	250	1,907	2,010	3,432	3,344	2,377	2,922	16,242
20 per cent but not 30 per cent .. ..	75	994	1,310	1,975	1,811	3,020	1,950	11,135
30 per cent but not 40 per cent .. ..	100	2,333	1,325	1,817	650	..	800	7,025
40 per cent but not 50 per cent .. ..	..	..	1,065	47	1,300	2,505	..	4,917
50 per cent but not 75 per cent .. ..	..	..	..	500	..	100	..	600
75 per cent but not 100 per cent .. ..	..	20	..	320	..	..	..	340
100 per cent but not 150 per cent .. ..	..	..	41	..	65	..	..	106
Total .. ..	425	6,174	6,901	21,914	15,494	19,206	17,057	87,371

It would thus appear that Rs. 4,835 or 5.53 per cent of the debts incurred carry no interest; Rs. 42,171 or 48.27 per cent carry an interest rate of less than 10 per cent; Rs. 16,242 or 18.59 per cent carry an interest rate of 10 per cent but not 20 per cent., majority of it being co-operative or secured debt; and Rs. 11,135 or 12.74 per cent carry a rate of 20 per cent but not 30 per cent. Thus 53.80 per cent or over half the debts of the workers are at an interest rate of less than 10 per cent. Almost all this debt is from the Co-operative Society, only a small fraction being heavily secured debts of money-lenders. Debts carrying an interest of 10 but not 20 per cent are partly from the Co-operative Society but mostly from money-lenders. These three categories of interest rates apply to 72.39 per cent or about three-fourths of the total debt of the workers.

Thus interest rates are not unduly high at this centre, a rate of 50 per cent and over applying only to Rs. 1,046 or 1.18 per cent of the debts. The secret of low interest rates lies in the co-operative credit organisation which, as we have seen, supplies 36.46 per cent of the credit requirements of the workers. This points to the desirability of extending co-operative credit under proper regulation wherever possible.

An attempt was made to find out if there was any correlation between the rate of interest and the magnitude of the worker's income, but none was discoverable.

This volume of debt at a rate of interest, however moderate, has to be met by workers whose economic balance-sheet shows a negative reserve. The only conclusion is that the volume of debt will tend to grow, however imperceptibly. The payments made towards principal and interest have not been correctly recorded, but even if they had been, they would have shown only an attempt to substitute new and mounting debts for old.

### III.—ROHTAS CENTRE.

The report for this centre relates to the labour engaged in the works of the Rohtas Cement Company at Dalmianagar and the Sone Valley Cement Company at Japla, together with the labour in their quarries at Dumarkhar in one case and at Baulia and Banjari in the other.

The labour in the works and in the quarries differ in nature and must be considered separately. But even within the works conditions of employment in the two concerns warrant different treatment.

This centre has a hinterland of a numerous agricultural population and labour might have been easily drawn from the over-crowded agricultural areas. But in the Rohtas Industries much of the labour has been imported from outside, whereas in the Sone Valley Cement Company, most of the labour has been recruited from this province. Partly this disparity is due to the fact that the work at Japla has had a longer start and has been able to create suitable labour for itself while the works at Dalmianagar and the Dumarkhar quarries have been started only recently and have had no time to create suitable labour in the neighbourhood.

For this centre 445 budgets were collected, strictly on proportionate basis, namely 3 per cent of all families being examined. After scrutiny only 254 budgets have been accepted, the rest having been rejected on grounds of incomplete, exaggerated and incredible entries. The 254 budgets are distributed over various concerns as follows :—

TABLE NO. 1.

Concerns.				Number of budgets.
Dalmianagar	..	..	..	116
Japla ..	..	..	..	71
Dumarkhar	..	..	..	35
Banjari ..	..	..	..	21
Baulia ..	..	..	..	11
				254
			Total ..	254

Thus Dalmianagar alone accounts for 45.66 per cent of the budgets, Japla following with a percentage of 28. Altogether 187 budgets out of 254 belong to labourers working in

the cement factories. The rest of the budgets namely 67 or 26·37 per cent belong to the workers in quarries. Of these, 35 belong to Dumarkhar, 11 to Baulia and 21 to Banjari.

It is necessary to point out that all these budgets are not really family budgets. Only 110 budgets out of 254 are budgets of workers living with their families, 144 or 56·69 per cent of the budgets are single-men budgets. This proportion reflects the civil state of the workers, very few having their families with them. The proportion of single men to family men is shown in the following table :—

TABLE NO. 2.

Concerns.	Single men.	Family men.	Total.
Dalmianagar .. .. .	61	55	116
Japla .. .. .	42	29	71
Dumarkhar .. .. .	26	9	35
Banjari .. .. .	14	7	21
Baulia .. .. .	1	10	11

We find that in the quarries at Dumarkhar and Banjari the workers with families number only 16 out of 56 or 28·57 per cent. Only at Baulia quarries, the single man is of negligible importance. In the works the percentage of family men to single men is 50·29.



## CHAPTER I.

### Origin and classification of labour.

The territorial distribution of the working families in each concern is shown in table number 3 below :—

TABLE NO. 3.

Province or state.	Dalmia-nagar.	Japla.	Dumarkhar.	Banjari.	Baulia.	Total.
1	2	3	4	5	6	7
Bihar ... ..	89	69	6	18	10	192
The Punjab ... ..	18	..	2	..	..	20
United Provinces ... ..	7	1	..	2	..	10
North-West Frontier Province.	..	..	10	..	..	10
Central Provinces ... ..	..	..	8	1	..	9
Rajputana ... ..	..	..	7	..	..	7
Nepal ... ..	..	1	2	..	1	4
Bengal ... ..	2	..	..	..	..	2
<b>Total</b> ..	<b>116</b>	<b>71</b>	<b>35</b>	<b>21</b>	<b>11</b>	<b>254</b>

Thus Bihar leads with a total of 192 budgets or 74·80 per cent of all the budgets. The distribution of Biharis, however, over the various concerns, is markedly irregular. At Japla Biharis number 69 or 96·12 per cent. At Banjari their number is 18 or 85·71 per cent. At Baulia they make up 10 or 91 per cent. Thus at these three places Biharis make up 94·17 per cent of all the workers.

At Dalmianagar the number of Bihari workers is only 89 out of 116 or 76·72 per cent while at Dumarkhar Biharis number only 6 or 17·14 per cent. Altogether at these two places there are 95 Bihari workers out of 151 or 62·92 per cent. The disparity in the percentage of Bihari workers in the two groups noted above reflects the policy and the requirements of the two different managements.

The Punjabis come next but are only 10 per cent as important as Bihari workers. They number 20 or 8 per cent. All the Punjabis are found at Dalmianagar and Dumarkhar where they are 18 and 2 respectively. The Punjabi workers form the majority of the more efficient and the superior grade

of labour at Dalmianagar where their percentage is 15.41; but their importance from the point of view of wages payment is very much greater. At Dumarkhar their percentage is 5.71. The United Provinces comes third in the numerical order. The United Provinces workers number 10 but 7 of these are found at Dalmianagar; and one only at Japla and 2 at Banjari. The Pathans from the North-West Frontier Province have the same importance as the United Provinces workers. They number 10, all of them being found at Dumarkhar. The Central Provinces contribute 9 workers, 8 to Dumarkhar, and one to Banjari. Rajputana states supply 7 workers all to Dumarkhar. Nepal sends 4, 2 to Dumarkhar and one each to Japla and Baulia. Two Bengali workers are only found at Dalmianagar. We find that the largest percentage of extra provincial labour is found at Dumarkhar quarries where their percentage is 82.86. At Dalmianagar 27 such workers make up a percentage of 23.27. At other three places their importance is very small, there being only 6 workers at these three places or 5.82 per cent only.

The distribution of the workers according to religion is shown in the table below together with the territories of their origin.

TABLE NO. 4.

Provinces and States.	Hindu.	Muslim.	Sikh.	Total.
Bihar .. .. .	175	17	..	192
Punjab .. .. .	13	3	4	20
United Provinces .. .. .	10	..	..	10
North-West Frontier.. .. . Province.	..	10	..	10
Central Provinces .. .. .	9	..	..	9
Rajputana .. .. .	7	..	..	7
Nepal .. .. .	4	..	..	4
Bengal .. .. .	2	..	..	2
<b>Total .. .. .</b>	<b>220</b>	<b>30</b>	<b>4</b>	<b>254</b>

The overwhelming importance of Hinduism is clear. They form 86.61 per cent or practically nine-tenth of the

working population. Muslims are the next considerable group numbering 30 and forming 11·81 per cent. Muslims have a smaller percentage in the working population at this centre than they have in the general population of India. The Sikhs number only 4 forming 1·58 per cent of the total labour force in this centre. They are thus relatively unimportant if we remember that the Sikhs are as a general rule an enterprising and venturesome people. Other religions are altogether unknown.

The provincial distributions show that all the Sikhs are from the Punjab. The 30 Muslims are accounted for by three British India provinces. The North-West Frontier Province has 10 Muslim workers, these being the only workers for this province. The Punjab has only 3 Muslim workers in the total of 20 or 15 per cent. This percentage is very much less than what the Muslim majority has in the total population of the Punjab. Curiously enough 13 out of 20 or about two-third of the workers from the Punjab are Hindus showing a much larger percentage among the Punjabi workers at this centre than they have in the general population of their home province. The largest number of Muslim workers are from Bihar which contributes 17 such workers. The Muslim workers among the Biharis at this centre form 8·85 per cent, the rest of workers being Hindus. Workers from other provinces are all Hindus.

Grouping of families according to religion, however, does not appear to have much economic significance. Conditions of earnings and wage rates do not vary with the religion of the workers nor do their consumption schemes vary with religion. The more enlightening classification would be according to the territorial communities and in the following pages the problem will be considered from the point of view to the major territorial classes alone.

We have yet to consider the classification of worker according to work they do. The conventional classification into unskilled, semi-skilled and skilled classes is a matter of great difficulty. In the following two tables the workers have been classified according to their designation in the industries and according to whether they are skilled, semi-skilled and unskilled. In both the cases the classification has been according to the provinces.

TABLE No. 5.

Workers.	Fihar.	Punjab.	United Provinces.	N.-W. F. Province.	Central Provinces.	Rajputana.	Nepal.	Bengal.
1	2	3	4	5	6	7	8	9
Carpenter ..	8	..	..	..	..	..	..	..
Coolies ..	61	..	2	..	..	..	..	..
Quarry in-charge.	2	1	..	..	..	1	..	..
Hammer men	7	..	..	..	..	..	..	..
Loader ..	9	1	1	..	1	..	..	..
Trolley men	1	..	..	..	..	..	..	..
Khalasi ..	32	9	1	..	..	..	1	..
Driver ..	4	..	2	..	..	..	..	..
Mahaldar ..	3	..	..	..	..	..	..	..
Stone cutter	2	..	..	10	6	6	2	..
Supervisor..	1	..	..	..	..	..	..	..
Gardener ..	3	..	..	..	..	..	..	..
Fitters ..	16	6	1	..	..	..	..	2
Sweeper ..	5	..	..	..	..	..	..	..
Boiler ..	1	..	..	..	..	..	..	..
Printer ..	1	..	..	..	..	..	..	..
Mistri ..	2	..	..	..	..	..	..	..
Firemen ..	3	..	..	..	..	..	..	..
Packer ..	2	..	..	..	..	..	..	..

Workers.	Bihar.	Punjab.	United Provinces.	N.-W. F. Province.	Central Provinces.	Bajputana.	Nepal.	Bengal.
1	2	3	4	5	6	7	8	9
Peon ..	3	..	..	..	..	..	..	..
Chaprasi ..	1	..	..	..	..	..	..	..
Beldar ..	1	..	..	..	1	..	1	..
Tindel ..	3	..	..	..	..	..	..	..
Greaser ..	2	..	..	..	..	..	..	..
Moulder ..	1	..	..	..	..	..	..	..
Learner ..	1	..	..	..	..	..	..	..
Turner ..	3	1	..	..	..	..	..	..
Mason ..	3	1	1	..	..	..	..	..
Blacksmith	2	..	..	..	..	..	..	..
Helper ..	8	1	..	..	..	..	..	..
Mate ..	1	..	1	..	1	..	..	..
Munshi ..	..	..	..	..	..	..	..	..
Chattadar ..	..	..	1	..	..	..	..	..
Total ..	192	20	10	10	9	7	4	2

The above table shows the actual designation of the workers. We have treated carpenters, quarry incharge, trolley-men, drivers, mahaldars, supervisors, fitters, boilers, printers, mistics, firemen, tindels, moulders, turners, masons, blacksmiths, and mates as skilled and hammermen, stone cutters packers, beldars, learners, helpers, *munshis* and chattadars as semi-skilled and coolies, loaders, *khalasis*, gardeners, sweepers, peons and *chaprasis* as unskilled.

The treatment is purely a matter of opinion. The three classes of workers are shown according to the provinces or State in the table below :—

TABLE No. 6.

Provinces or States.	Skilled.	Semi-skilled.	Un-skilled.
1	2	3	4
Bihar .. ..	55	23	114
Punjab .. ..	10	1	9
United Provinces .. ..	5	1	4
North-West Frontier Province .. ..	..	10	..
Central Provinces .. ..	2	6	1
Rajputana .. ..	1	6	..
Nepal .. ..	..	3	1
Bengal .. ..	2	..	..
Total .. ..	75	50	129

129 out of 254 workers are unskilled being over one-half the total number of workers. Semi-skilled workers number 50 or 19·69 per cent. Skilled workers are more numerous than the semi-skilled, being 75 or 29·53 per cent. Thus the labour constitution shows a vast mass of unskilled workers directed by a sufficiently numerous class of skilled workers who are helped by a smaller number of semi-skilled workers. It will be noted that 88·37 per cent of all the unskilled workers is accounted for by Bihar. The unskilled workers are absent in the North-West Frontier Province, Rajputana States and Bengal. In the Central Provinces and Nepal their percentage is only 11·11 and 25 per cent, respectively. The United Provinces is nearer Bihar in that it has 4 unskilled workers out of 10 or 40 per cent. 9 *Khalasis* are reported from the Punjab. *Khalasis* have been classed as unskilled but the Punjabi *Khalasis* have a wage rate out of all proportion to the Bihari unskilled workers at the centre. From the point of view of earning they are as well off as the Bihari skilled workers. This excessive disparity in the wage rates between the workers of two regions doing the same kind of work is hardly explained by the suggestion that the Punjabi workers are very much more efficient than the workers from Bihar. Among the Bihari workers themselves, the unskilled workers form 59·37.

Of the 50 semi-skilled workers, Bihar contributes 23 or 46 per cent. The Punjab contributes 1, the United Provinces 1 and Nepal 3, the respective percentage being 2, 2, and 6. Rajputana and the Central Provinces and North-West Frontier Province, with their quota of 6, 6, and 10, respectively make up 12, 12 and 20 per cent. Among the Bihari workers, the semi-skilled class forms 11·98 per cent, among the Punjabi workers 5 per cent, and among the United Provinces workers 10 per cent. North-West Frontier Province has all its workers of the semi-skilled class. The percentages of the semi-skilled workers among the workers of the Central Provinces, Rajputana and Nepal are 66·66, 85·71 and 75.

The skilled workers are non-existent in the North-West Frontier Province and Nepal. In Bengal all the two workers are skilled, Bengal forming 2·7 per cent of all the skilled workers. Rajputana has only one skilled worker out of 7, forming 1·3 per cent of all the skilled workers. The Central Provinces have two skilled workers out of 9, accounting for 2·7 per cent of all the skilled workers. The United Provinces have five skilled workers out of 10, forming 6·7 per cent of all the skilled workers. The Punjab has got 10 skilled workers out of 20, accounting for 13·3 per cent of all. The largest number of skilled workers is from Bihar numbering 55 or 73·27 per cent. Thus the percentage of the skilled class among the Bihari workers is 28·64 while the corresponding percentage to the total number of skilled workers at this centre is 73·27. The table shows that while the Bihari workers are predominantly unskilled, the workers from the Punjab, the United Provinces and Bengal are mainly skilled, while those from the North-West Frontier Province, the Central Provinces and Rajputana and Nepal are semi-skilled.

Out of 254 units examined only 73 families come from districts outside that in which they work. Of these 73, 62 are workers from province or States other than Bihar. Of the Bihari families working here only 11 belong to the districts other than those in which they work. As many as 181 out of 192 Bihari families or 94·27 per cent are local.

As a matter of fact local labour should have been adequate for running the industry at the Rohtas centre involving as they do relatively lesser amount of skill. The considerable proportion of non-Bihari workers are found largely at Lalmianagar and Dumarkhar, the works and quarries at these two places

being under the same management. Dalmianagar and Dumar-khar have got 56 non-Bihari workers while Japla, Banjari and Baulia have only six such.

Local workers took to industry as the industries sprang up in these crowded areas and served to alleviate a little the pressure on land.

The migrant workers numbering 73 deserve some attention. The causes that have brought them to this centre have not been carefully specified. Unemployment in the home province has been shown to be the driving force in 36 cases and poverty in 16; while only 21 families have been attracted to this place by offers of work. These 21 workers alone had any choice in the matter of their migration to this place. The other 52 families migrated to this place on account of the deep economic distress prevalent in every part of India and conveniently summed up as unemployment and poverty.

Of the 73 families of the migrant workers, 17 have never visited home and may be taken as settled; 10 visit home more often than once in a year, 37 visit home once in one but not two years, 5 in 2 but not three years; and 4 in over three years.

Occasions of the last visit are important as they show what connection the migrant workers keep with home. The 56 workers who last visited home did so for the following purposes :—

TABLE No. 6(a).

Occasions.			Frequencies.
Marriage	..	..	8
To see relations at home	..	..	37
Illness	..	..	5
Funerals	..	..	2
Religious observances	..	..	4
		Total	56

It would be seen that all the occasions enumerated above are non-economic showing how little workers have to do with home economically. The most numerous occasions for a visit is a desire to renew acquaintances with people at home, while social ceremonies like marriage and funerals are the next important occasions accounting for ten visits.

23 families visited home within the past year and 33 families more than one but less than two years ago. On the average they stayed at home for a period of over three weeks or actually 23 days.



## CHAPTER II.

### Size and composition of families.

The 254 budgets relate to a population of 412 men, 429 women and 653 children. This includes dependants living away from the workers. The latter are an indefinite category. The dependants living away from the wage earners number 81 men, 206 women and 330 children.

Thus an average family will consist of 1,622 men, 1,682 women and 2,571 children or 5,780 persons in all. Reduced into adults the size of the average family will be 4.554. In the following table the provincial figures have been shown side by side with the general figure for a comparative study.

TABLE No. 7.

Total number of family..	Province or State.	Men.	Women.	Children below 5.	Children 5, not 10.	Children 10, not 15.	Total of children.	Number of persons in the family.	Number of adults in the family.
1	2	3	4	5	6	7	8	9	10
192	Bihar .. (1)	310	351	186	214	150	550	1,211	936
	(2)	1-614	1-828	968	1-115	781	2-864	6-162	4-875
20	Punjab .. (1)	33	24	12	22	14	48	105	81
	(2)	1-650	1-200	600	1-100	700	2-400	5-250	4-050
10	United Provinces (1)	18	21	6	7	4	17	56	47-5
	(2)	1-800	2-100	600	700	400	1-700	5-600	4-750
10	N.-W. F. .. (1)	11	6	1	4	3	8	25	21-000
	Province. (2)	1-100	600	100	400	300	800	2-500	2-100
9	Central Provinces (1)	12	12	8	3	3	14	38	31
	(2)	1-333	1-333	889	333	333	1-556	4-222	3-444

7	Rajputana	(1)	15	11	6	5	1	12	38	32
		(2)	2.143	1.571	.857	.714	.143	.714	5.429	4.571
4	Nepal ..	(1)	7	5	4	3	1	8	20	16
		(2)	1.750	1.250	1.000	.750	.250	2.000	5.000	4.000
2	Bengal ..	(1)	6	3	..	..	1	1	10	9.5
		(2)	3.000	1.500	..	..	.500	.500	5.000	4.750
254	Total	(1)	412	433	223	258	177	658	1,503	1,167
		(2)	1.622	1.691	.878	1.006	.690	2.573	5.886	4.599

NOTE.—The figure and bracket (1) stand for actual number ; and (2) for average number in the family.

The table shows that the size of the family is the largest among the Biharis with its 6·162 persons or 4·875 adults. The United Provinces, Rajputana, the Punjab, Nepal, Bengal and the Central Provinces and the North-West Frontier Province follow in that order with 5·600, 5·429, 5·250, 5·000, 5·000, 4·222 and 2·500 persons, respectively. The figures for adults are 4·750, 4·571, 4·050, 4·000, 4·750, 3·444 and 2·100, respectively. The figure for North-West Frontier Province appears to be unreliable on account of the fact that the workers did not record the dependants living away from them carefully, and as a rule the Pathans are living a life of forced celibacy.

In respect of men, Bengal leads with its 3 followed by Rajputana, the United Provinces, Nepal, the Punjab, Bihar, the Central Provinces and North-West Frontier Province with their 2·143, 1·800, 1·750, 1·650, 1·333 and 1·000. It would be seen that Bihar comes 5th in the list in respect of number of men in the families.

With respect to women, Bihar with its 1·828 is preceded by only the United Provinces with its 2·100. In respect of children also, Bihar has the largest figure namely 2·864.

Among persons above 15, all of whom have been treated as adults, the percentages of men and women are 48·9 and 51·1, respectively. This proportion would be presumably reflected among children but our figures for children do not distinguish them according to the sex very carefully. The records show the number of boys and girls in the age groups as follows:—

Age groups.		Boys.	Girls.
Below 5 years	..	135	88
5 but not 10 years	..	139	116
10 but not 15 years	..	91	84

The proportions of boys to girls would be 60·54 : 39·46, 54·51 : 45·49 and 52·00 : 48·00. In each group girls fall short of boys.

The size and composition of family as noted above does not reflect the conditions of the labouring population in this centre, but to the ideal families if we imagine them to be intact even when some of the members are not living with the wage earners. The number of men, women and children at the place of work would present a very different picture than what we have portrayed above. Such a picture will be presented when we deal with the expenditure of the workers.

It has not been possible to discuss the age distribution adequately. As we have seen above there is no age group after

15 years, all the persons above 15, being treated together as adults. This has precluded any surveys of the ages of the workers. Similarly we are unable to tell how many persons shown as adult dependants living with the wage earners are really too old for work. It has been possible to attempt the age distribution only in the case of persons below 15 years. The distribution is shown in the table below :—

TABLE No. 8.

Age groups.	Number of persons.	Percentage of persons in each group to the total.
Below 5 years	.. 223	14.926
Of 5 years but not 10	258	17.068
10 but not 15	.. 177	11.714
15 and over	.. 845	56.292
Total	.. <u>1,503</u>	

The table shows that about 44 per cent or four-ninth of the total population is below 15 years. It would have been interesting to compare this with the percentage of persons above 55 who should be treated as too old for work but this comparison is not possible for the reasons shown above. The percentage of people beyond 45, would have also thrown light on whether population is growing, for the smaller the number of persons above 45 the more definite is the indication that the population is growing. In the present instance the percentage of persons below 15 is very high indeed and indicates a progressive population.

Information about "persons below 15 dead and their ages at the time of death" has not been recorded uniformly and even where it has been it cannot be utilised because the persons dead might not belong to the natural family since its foundation nor can they be correlated with children born in any particular year so as to give us the infant mortality rate. Accordingly I have left out any consideration of this problem.

The economic status of the members of the family is shown in the following tables separately for men, women and children. As no child worker has been reported, the tables relating to children will show only child dependants living with the wage earners and child dependants living away from the wage earners.

TABLE No. 9.

Men.

Province or State.	A	B	C	D					
Number of families.	Number of men workers.	Number of men dependants living with wage earners.	Number of men dependants living away from wage earners.	Total number of men in the family.	Average of A.	Average of B.	Average of C.	Average of D.	
1	2	3	4	5	6	7	8	9	10
Bihar ..	192	212	40	58	310	1.100	.208	.306	1.614
Punjab ..	20	20	3	10	33	1.000	.150	.500	1.659
United Provinces	10	12	2	4	18	1.200	.200	.400	1.800
N.-W. F. Province.	10	10	..	1	11	1.000	..	.100	1.100
Central Provinces	9	10	..	2	12	1.111	..	.222	1.333
Rajputana ..	7	13	1	1	15	1.857	.143	.143	2.143
Nepal ..	4	5	..	2	7	1.250	..	.500	1.750
Bengal ..	2	2	1	3	6	1.000	.500	1.500	3.000
Total ..	254	281	47	81	412	1.118	.185	.319	1.622

TABLE No. 10.

## Women.

Province or State.	Number of families.	Number of women worker.	Number of women dependants living with wage earners.	Number of women dependants living away from wage earners.	Total number of women in the family.	Average of women worker.	Average of women dependants living with wage earners.	Average of women dependants living away from the wage earners.	Average of women workers in the family.
1	2	3	4	5	6	7	8	9	10
Bihar ..	192	19	169	163	351	·099	·880	·849	1·828
Punjab ..	20	..	9	15	24	..	·450	·750	1·200
United Provinces ..	10	..	7	14	21	..	·700	1·400	2·100
North-West Frontier Province.	10	..	1	5	6	..	·100	·500	·600
Central Provinces ...	9	9	1	2	12	1·000	·111	·222	1·333
Rajputana ..	7	8	2	1	11	1·143	·286	·143	1·571
Nepal ..	4	1	..	4	5	·250	..	1·000	1·250
Bengal ..	2	..	1	2	3	..	·500	1·000	1·500
Total ..	254	37	190	206	433	·145	·748	·798	1·691

TABLE No. 11.

*Child dependants living with wage earners.*

Province or State.	Number of families.	Number of children below 5 years.	Number of children of 5 but not 10 years.	Number of children of 10 but not 15 years.	Total of children.	Average of children below 5 years.	Average of children of 5 but not 10 years.	Average of children of 10 but not 15 years.	Average of total number of children.
1	2	3	4	5	6	7	8	9	10
Bihar ..	192	95	116	66	277	·495	·604	·344	1·443
Punjab ..	20	9	6	3	18	·450	·300	·150	·900
United Provinces	10	3	4	2	9	·300	·400	·200	·900
N. W. F. Province.	10	..	..	..	..	..	..	..	..
Central Provinces	9	8	3	3	14	·889	·333	·333	1·556
Rajputana ..	7	5	4	..	9	·714	·571	..	1·285
Nepal ..	4	..	..	..	..	..	..	..	..
Bengal ..	2	..	..	1	1	..	..	·500	·500
Total ..	254	120	133	75	328	·472	·523	·295	1·290



TABLE No. 12.

*Child dependants living away from the wage earners.*

Province or State.	Number of families.	Number of children below 5 years.	Number of children of 5 but not 10 years.	Number of children of 10 but not 15 years.	Total number of children.	Average of children below 5 years.	Average of children of 5 but not 10 years.	Average of children of 10 but not 15 years.	Average of total number of children.
1	2	3	4	5	6	7	8	9	10
Bihar .. ..	192	91	98	84	273	·473	·511	·437	1·421
Punjab .. ..	20	3	16	11	30	·150	·800	·550	1·500
United Provinces .. ..	10	3	3	2	8	·300	·300	·200	·800
North-West Frontier Province.	10	1	4	3	3	·100	·400	·300	·800
Central Provinces .. ..	9	..	..	..	..	..	..	..	..
Rajputana .. ..	7	1	1	1	3	·143	·143	·143	·429
Nepal .. ..	4	4	3	1	8	1·000	·750	·250	2·000
Bengal .. ..	2	..	..	..	..	..	..	..	..
Total .. ..	254	103	125	102	330	·466	·482	·395	1·282

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We shall deal with dependants living away from wage earners first. As we have seen above 81 men, 206 women and 330 children are dependants who live away from the wage earners. Their distribution over each income grade together with the remittances made to them is shown in the table below.

TABLE No. 13.

Income grade.	Number of families making remittances.	Their income.	Remittances made.	Male.	Female.	Child below 5 years.	Child of 5 not 10.	Child of 10 not 15 years.	Total number of dependants in terms of adult.	Divided per dependant.
1	2	3	4	5	6	7	8	9	10	11
		Rs. a. p.	Rs. a. p.							Rs. a. p.
Less than Rs. 10	18	139 6 0	72 0 0	9	31	20	24	12	68	1 1 0
Rs. 10-15	14	168 4 0	57 0 0	6	19	10	16	14	45	1 4 0
Rs. 15-20	17	295 9 0	86 0 0	20	28	21	14	15	73	1 3 0
Rs. 20-30	33	854 13 0	304 0 0	21	69	25	37	34	138	2 3 0
Rs. 30-40	14	494 12 0	229 8 0	15	33	19	18	13	73	3 2 0
Rs. 40-50	10	414 8 0	232 0 0	7	20	5	13	9	40.5	5 12 0
Rs. 50 and over	4	221 8 0	111 0 0	3	6	3	3	5	14.5	7 10 0
Total	110	2,588 12 0	1,091 8 0	81	206	103	125	102	452	2 7 0

It will be seen from the table that in income grades below 20 rupees the remittance per adult dependant is hardly above rupee one. The remittance becomes important only after the income grade Rs. 15 but not Rs. 20 is passed. In the income grade Rs. 20 but not Rs. 30, the remittance is about Rs. 2-4 and is quite an adequate figure. In grades above 30 rupees the remittances work at practically Rs. 3, Rs. 6 and Rs. 8 respectively, and are fairly considerable. The remittances form practically  $\frac{2}{5}$ th of the incomes of families actually making remittances.

The fractions that remittances form of the actual earnings in each income grade are shown in the following table:—

TABLE No. 14.

Income grade.	Actual income.	Remittances.	Percentage of remittances to actual income.
1	2	3	4
	Rs. a. p.	Rs. a. p.	
Less than Rs. 10 ..	316 6 0	72 0 0	22.76
Of Rs. 10 but not 15	419 8 0	57 0 0	13.59
Of Rs. 15 ,, ,, 20	805 15 0	86 0 0	10.67
Of Rs. 20 ,, ,, 30	1,642 15 0	304 0 0	18.50
Of Rs. 30 ,, ,, 40	1,079 14 0	229 8 0	21.25
Of Rs. 40 ,, ,, 50	695 2 0	232 0 0	33.36
Of Rs. 50 and over	641 5 0	111 0 0	17.00
<b>Total ..</b>	<b>5,601 1 0</b>	<b>1,091 8 0</b>	<b>19.46</b>

It will be seen that on the average about one-fifth of the earnings is remitted home. The proportion falls below this average in case of income grades "Rs. 10 but not Rs. 15" and

"Rs. 15 but not Rs. 20" and in the income grade Rs. 50 and over. It exceeds materially in the income grade "Rs. 40 but not Rs. 50."

The incomes of the workers are available for the support of 722 adults at the work place and 452 dependants away from the workers. The share of the incomes enjoyed by these two classes is, however, very uneven, being Rs. 4,509-9-0 in case of adults residing at the work place and only Rs. 1,091-8-0 in case of 432 dependants living away; so that while on the average the dependants living away get only a dividend of Rs. 2-7-0 each, the persons residing at the work place enjoy a dividend of Rs. 6-3-0. This shows that generally the persons reported to be dependents living away from the wage earners are hardly absolute dependants on them. They are in very many cases either members of a joint family or members of the workers' natural family supported by a joint family fund.

We notice that as many as 110 families have reported dependants living elsewhere. Even in Bihar families who have reported dependants living elsewhere are 80 in number forming about two-fifth of all the Bihari families at this centre. This merely means that quite a large proportion of the workers are living a life of celibacy.

As we have remarked above no child worker has been reported at this centre, the only workers being men and women above 15 years. The number of men workers at this centre is 284 while the number of women workers is only 37. Thus female labour is only 13·03 per cent as important as male labour. Women labour has been reported only in Bihar, the Central Provinces, Rajputana and Nepal. Only in the Central Provinces and Rajputana, however, are they of any considerable importance. The Central Provinces have reported 9 female workers in 9 families or one female worker at the average in each family; while Rajputana has got 8 female workers in 7 families or just over one female worker in each. In Bihar one female worker is found in about 10 families in the average. As a matter of fact the considerable disparity in the earnings of the workers in the Central Provinces and Rajputana on the one hand and Bihar on the other is largely due to the fact that the Bihar workers have very few females to assist them. The number of men workers per family is on the average 1·118 only. Bihar just falls short of this average and the Punjab, North-West Frontier Province and Bengal come even lower than Bihar having only one man worker per family. These provinces have beside, no female workers whatsoever and yet comparatively

the earnings of the workers from these provinces are very much higher than the corresponding earnings of the workers of Bihar. Such disparity is hardly accountable even if we regard the Bihari workers as somewhat less efficient than their compatriots from outside. The United Provinces and Nepal exceed the general average but very slightly, and the Central Provinces although a little above Bihar in respect of men workers is still below the general average. Rajputana leads in respect of men workers also having on the average 1.857 men workers per family or about 75 per cent as many men workers per family as in the general average.

If we distribute the families according to the number of workers in each, we shall get a table as follows :—

TABLE No. 15.

Income group.	Head only.	The head and 1 male worker.	Head and 1 female worker.	Head with 2 male workers.	Head with 2 female workers.	Head with 1 male and 2 female workers.	Total number of families.
1	2	3	4	5	6	7	8
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	
Less than Rs. 10 ...	44 0	...	...	...	...	...	44
Rs. 10 to 15 ...	30 1	...	4 0	...	...	...	35
Rs. 15 to 20 ...	31 0	5 0	7 2	1 0	...	...	46
Rs. 20 to 30 ...	53 1	7 0	9 0	...	...	...	70
Rs. 30 to 40 ...	22 0	5 0	...	2 0	2 0	...	31
Rs. 40 to 50 ...	12 0	3 0	...	...	...	1 0	16
Rs. 50 and over ...	9 0	...	3 0	...	...	...	12
Total ...	201 2	20 0	23 2	3 0	2 0	1 0	254

Peculiarly the lowest income grade is the one which has got only one worker per family namely the head. Only 20 families have got an extra male worker and only 25 families an extra female worker each while families with 3 workers including the head of the family, comes up only to 5. Only a single family has reported one male and 2 female workers extra working with the head. Thus in 203 cases out of 254 i.e., in 80 per cent of the families the head is the only worker.

Dependants living with wage earners include only 47 men, 119 women and 328 children. The small number of women dependants at the work place together with the small number of women workers at the work place shows terrible scarcity of females at this centre.

Altogether 284 men and 37 women are responsible for the support of 1,174 adults including themselves so that the earnings of an adult worker goes to support 3.66 adults on the average or practically 4 adults.

## **CHAPTER III.**

### **Income.**

Families distributed according to income grades are presented in the two tables below; according to the territories of origin in table 16 and according to the place of work in table 17.

TABLE 16.

*Number of families in wages income grade according to Provinces.*

Income grade,	Bihar.	Punjab.	United Provinces.	North-West Frontier Province.	Central Provinces.	Rajputana.	Nepal.	Bengal.	Total.
1	2	3	4	5	6	7	8	9	10
Less than Rs. 10 ...	42	...	2	...	...	...	...	...	44
Rs. 10 but not Rs. 15	34	...	1	...	...	...	...	...	35
Rs. 15 but not Rs. 20	37	1	1	...	6	...	1	...	46
Rs. 20 but not Rs. 30	45	8	3	6	3	2	3	...	70
Rs. 30 but not Rs. 40	23	4	0	2	1	1	...	1	31
Rs. 40 but not Rs. 50	6	5	2	1	0	2	...	...	16
Rs. 50 and over	6	2	1	1	..	2	...	1	12
Total ...	192	20	10	10	9	7	4	2	254
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Actual earnings ...	3,731 13 0	710 0 0	250 0 0	295 3 0	167 8 0	272 15 0	84 10 0	93 0 0	5,601 1 0
Average income per family.	19 7 0	35 8 0	25 0 0	29 8 6	18 9 9	39 0 0	21 2 6	43 8 0	22 1 0



TABLE No. 17.

*Number of families in wages income grades according to the place of work.*

Income grades.	Dalmia Nagar.	Dumar- khar.	Japla.	Banjari.	Baulia.	Total.	Actual income.	Average income.
1	2	3	4	5	6	7	8	9
							Rs. a. p.	Rs. a. p.
Less than Rs. 10 ..	40	Nil	3	1	...	44	316 6 0	7 3 0
Rs. 10 but not Rs. 15 ..	15	..	10	10	...	35	419 8 0	11 15 9
Rs. 15 but not Rs. 20 ..	11	9	17	6 4	3	46	805 15 0	17 9 0
Rs. 20 but not Rs. 30 ..	23	13	23	..	7	70	1,642 15 0	23 7 6
Rs. 30 but not Rs. 40..	13	6	11	..	1	31	1,079 14 0	34 13 0
Rs. 40 but not Rs. 50 ..	9	4	3	..	..	16	695 2 0	43 7 0
Rs. 50 and over ..	5	3	4	..	..	12	641 5 0	53 7 0
Total ..	116	35	71	21	11	254	5,605 1 0	22 1 0

The table shows that 125 families or practically one-half of the working families are getting less than Rs. 20. Forty-four families or one-sixth of the total working families are getting an average income of barely Rs. 7-3. Almost all these are Biharis, the only other province whose workers are getting less than Rs. 10 being the United Provinces with its two families. Thirty-five families also, all Biharis except for one United Provinces family, have an income between Rs. 10 and Rs. 15, which at average works at just below 12 rupees. Forty-six other families, counting among them 37 Bihari families, are getting an average income of only Rs. 17-9. Thus 113 Bihari families out of 192 or 58·85 of the Bihari families have an income below 20 rupees, only about 41 per cent having an income above this figure. It will be noted that the workers from the Punjab, North-West Frontier Province, Rajputana and Bengal are practically non-existent in the income grades below Rs. 20. The largest number of workers, making up about 31 per cent of the total, are found in the income grade Rs. 20 but not Rs. 30. While in this grade are found 40 per cent of the Punjabis, 30 per cent of the United Provinces workers, 60 per cent of the North-West Frontier Province people, 33 per cent of the people from the Central Provinces and three-fourth of the people from Nepal, only 45 workers from Bihar making up barely 23 per cent of the Bihari workers are found in this grade. In the income grades Rs. 30 but not 40 rupees, are found half the Bengalis, one-seventh of the people in Rajputana, one-fifth of the people in North-West Frontier Province and in the Punjab, only 23 per cent of the Bihari workers or one-ninth of the total population are found in this grade. Above this grade Biharis are negligible forming only one-seventeenth of the total Bihari workers ; while the Punjabis account 35 per cent of their workers in the two highest grades, the United Provinces 30 per cent ; North-West Frontier Province 20 per cent, Rajputana 56 per cent and Bengal 50 per cent.

The tables show that while ordinarily Biharis rarely rise beyond 30 rupees—actually they are the most numerous below 20 rupees—the Punjabis below Rs. 20 are practically non-existent. More than one-half of them are getting above 30 rupees while the other half gets between Rs. 20 and 30 rupees. The United Provinces present a picture very much like Bihar except for the fact that the United Provinces workers in income grades above 20 rupees number practically 60 per cent. Most of the workers from the North-West Frontier Province are in the income grade 20 but not 30 rupees, although 40 per cent of them

get more than 30 rupees. They do not figure at all in the income grades below Rs. 20. The workers from the Central Provinces are all getting between Rs. 15 and 30 about two-thirds of them being in the lower grade of Rs. 15 but not Rs. 20. Rajputana families which count the largest number of men and women workers justifiably rise to income grades above 20 rupees, none of them being found below this limit. The Nepalis, like the Central Provinces workers, have an income between Rs. 15 and 30 although unlike the Central Provinces three-fourth of the Nepalis are in the income grade Rs. 20 but not 30.

The low earnings of the Bihari workers must be considered in relation to their classification according to skill where we have noticed about two-third of the Bihari workers have been reported as unskilled, these being practically the only unskilled workers in this centre.

Table no. 17 also reveals the wage rates prevalent at various places at this centre. We notice that at Dalmianagar 66 out of 116 workers or over more than half are in the income grades below Rs. 20 ; at Japla, the percentage in the higher income grades is larger. Among the quarries the highest incomes per family are found at Dumarkhar which is also peculiar for the fact that 29 out of its 35 workers are people from provinces other than Bihar.

The average income of the working families at this centre is about 22 rupees ; and Bihar, the Central Provinces and Nepal are near this average but all below it. The highest incomes per family are found among the Bengali workers, the Rajputana workers, the Punjab workers, followed remotely by the workers of the North-West Frontier Province and the United Provinces. Bihar has an average income of only Rs. 19-7-0 per family although the size of the Bihari families is the largest comprising 6.16 persons or 4.9 adults. Thus the dividend available for each member of the Bihari families is just a little above Rs. 3.

The total income of Rs. 5,601-1-0 shown above has been analysed into its various constituent in the following table.

TABLE NO. 18.

	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
(1) Primary earnings ...	295 2 0	881 18 9	714 10 3	1,493 8 0	983 9 0	607 9 0	598 0 6	5,074 4 6
	93-29	91-06	88-68	90-90	91-09	88-18	93-24	90-695
Overtime pay ...	...	0 12 0	...	...	8 0 0	4 0 0	...	12 12 0
Other additional earning from industry.	0 4 0	4 4 0	5 6 0	13 6 0	15 8 0	8 0 0	4 0 0	50 12 0
Agriculture ..	2 0 0	5 8 0	54 8 0	60 8 0	25 0 0	31 8 0	10 0 0	199 0 0
Market gardening ...	...	...	8 0 0	5 0 0	9 0 0	...	3 0 0	25 0 0
Dairy ...	...	10 0 0	...	20 0 0	15 0 0	...	10 0 0	55 0 0
Craft ...	4 0 0	2 0 0	5 0 0	...	...	...	12 0 0	23 0 0
Shopping ...	...	...	...	...	...	10 0 0	...	10 0 0
House rent ...	15 0 0	6 8 8	18 6 9	35 9 0	21 9 0	28 1 0	4 4 6	130 6 6
Domestic service ...	...	5 0 0	...	...	...	...	...	5 0 0
Miscellaneous ...	...	3 10 0	...	14 0 0	2 4 0	6 0 0	...	25 14 0

(1) Total of all incomes from industry other than primary.	0 4 0	5 0 0	5 6 0	13 6 0	23 8 0	12 0 0	4 0 0	63 8 0
	.08	1.19	.68	.82	2.18	1.73	.64	1.134
(1) Total of all other supplementary incomes.	21 0 0	32 10 3	85 14 9	136 1 0	72 13 0	75 9 0	39 4 6	463 4 6
	6.63	7.75	10.64	8.28	6.73	10.14	6.12	8.271
(1) Total of all incomes other than primary.	21 4 0	37 10 3	91 4 9	149 7 0	96 5 0	87 9 0	43 4 6	528 12 6
	6.71	8.94	11.32	9.10	8.91	11.87	6.76	9.405
Total income from all sources.	316 6 0	419 8 0	805 15 0	1,642 15 0	1,079 14 0	695 2 0	641 5 0	5,601 1 0

The table shows that about nine-tenths of the total incomes is accounted for by the primary earnings of the workers, only about 9 per cent being in form of supplementary or additional incomes. Cash payments made by the industry outside the primary earnings include only overtime pay which is very negligible indeed, being only about one-fourth per cent of the primary earnings.

Additional earnings from industry have been reported to be Rs. 50-12-0 but the nature of the earnings has not been indicated. Probably it includes the cost of free lighting and water-supply in some cases. In any case the total income from the industry other than the primary earnings comes to only Rs. 63-8-0 which forms only 1.13 per cent of the total earnings of the workers. The bulk of the income other than the primary earnings is from sources other than the industry. Agriculture contributes Rs. 189 of the workers' incomes or 3.36 per cent of the total income. This not inconsiderable contribution of agriculture is evenly distributed in all the income grades. After agriculture, market gardening is not very important accounting as it does for only Rs. 25 of the additional earnings. Craft is practically of the same importance as market-gardening; accounting for Rs. 23 of the total income. Shopping and domestic service are practically negligible accounting respectively for 10 and 5 rupees while non-descript sources of income jumbled together contribute Rs. 25-14-0. Altogether these various sources other than agriculture count for Rs. 143-14-0 which is less than the contribution of the agriculture alone. Altogether they form 2.57 per cent of the total incomes. The only other considerable item is house rent which occurs in all the income grades, this item is presumably the valuation of the housing supplied by the employers. The total contribution is Rs. 130-6-6 which forms 2.33 per cent of the total incomes. The percentage of the supplementary and additional earning in various income grades may be found in the table above wherein the brackets and figures (1) and (2) stand respectively for actual amount and the appropriate percentage.

## CHAPTER IV.

### Expenditure.

The expenditure as indicated above will be viewed in relation to income-grades only. The dependants living elsewhere will be left out of view and the total income minus remittances to dependants will be supposed to be available for the consumption of the members of the workers' families actually living with the workers. The following table shows the number of resident consumers in each income grade.

TABLE NO. 19.

Income groups.	Actual income available for consumption.	Men.	Women.	Children below 5 years	Children below 5 years but not 10 years.	Children above 10 years.	Total number of adult consumers.	Incomes available consumption per adult consumer.
1	2	3	4	5	6	7	8	9
	Rs. a. p.							Rs. a. p.
Less than Rs. 10 ... ..	244 6 0	52	36	14	18	9	108.5	2 4 0
Rs. 10 but not Rs. 15 ... ..	362 8 0	39	31	16	27	17	100	3 10 0
Rs. 15 " 20 ... ..	719 15 0	56	39	26	27	16	129.5	5 8 6
Rs. 20 " 30 ... ..	1,338 15 0	94	64	31	30	16	196.5	6 13 0
Rs. 30 " 40 ... ..	850 6 0	45	30	15	18	9	96	8 14 0
Rs. 40 " 50 ... ..	462 2 0	23	12	12	8	4	47	9 13 7
Rs. 50 and over ... ..	530 5 0	22	15	6	5	4	44.5	11 15 0
Total ... ..	4,609 9 0	331	227	120	133	75	722	6 3 9

The lowest grade has a dividend of Rs. 2-4-0 per adult consumer only, but as the income rises the dividend per consumer also rises till in the highest grade the income available for consumption per adult consumer comes to Rs. 11-15-0 or practically Rs. 12. The dividend is very small in the grades below Rs. 15 which embraces 208.5 adult consumers or 28.88 per cent of all the consumers. Thus about three-tenth of the consumers residing at the place of work have comparatively a low standard of comforts. In income grades below Rs. 15 decent life is not even approached because necessaries and also social conventions are as persistent in these groups as in the higher income-groups. Below we consider the expenditures on major items.

### A—Food.

For purposes of food requirement resident consumers have been reduced into standard adults and are presented in the table below in relation to their food consumption :—

TABLE No. 20.

Income grades.	Number of adult consumers.	Expenditure on food.	Expenditure on food per adult consumer.	Percentage of expenditure on food to total income available for consumption.
1	2	3	4	5
Less than Rs. 10	107.15	Rs. a. p. 266 14 0	Rs. a. p. 2 8 0	109.20%
Rs. 10 but not Rs. 15	103.0	289 6 0	2 12 11	77.6%
Rs. 15 " 20	130.85	491 14 6	3 12 1	68.33%
Rs. 20 " 30	193.9	797 13 0	4 1 9	59.59%
Rs. 30 " 40	95.67	463 3 0	4 13 3	54.46%
Rs. 40 " 50	47.08	259 14 0	5 8 6	56.15%
Rs. 50 and over	43.7	219 14 0	5 0 0	41.96%
Total	721.42	2,788 14 6	3 13 2	61.84%



It will be noted that food consumption per head in the lowest income grade exceeds the actual income available for consumption with the result that the income is not at all available for meeting other demands of life and even food has to be purchased either out of some non-descript sources or out of borrowings which must be growing at a rapid pace. Even so the food consumption per head is only Rs. 2-8-0 which cannot be regarded as satisfactory. The food consumption in the next higher grade, namely Rs. 10 but not Rs. 15 is only slightly higher than in the lowest grade and is equally unsatisfactory. It is only in grades of income above Rs. 15 that any satisfactory scale of food consumption is noticeable; and only in the income grades above Rs. 20 is the standard at all desirable. The average expenditure on food for the whole population is only Rs. 3-13-0 per adult.

If we notice the percentage of the expenditure on food to the total income available for consumption, we find that it is 109·2 per cent in the lowest income grade, altogether an unnatural state of things. The percentage falls consistently but slowly after the income grade "Rs. 10 but not Rs. 15". In the income grade Rs. 10 but not Rs. 15 about  $\frac{4}{5}$ ths of the total income is spent on food with the result that an incredibly small proportion of the income remains to meet the other demands of life. This shows that families with income below Rs. 15 must be leading a life of cheerless asceticism. In the income grade Rs. 15 but not Rs. 20, 68·33 per cent of all the incomes are spent on food. Thus 341 consumers out of 721 or 47·29 per cent of all the consumers are spending over two-third of their income on food alone. For the next three higher grades the food consumption standard is nearly uniform with a slight tendency to fall as the income rises. Only in the income grade Rs. 50 and over is the expenditure on food at all reasonable to permit of other amenities of life. Altogether at this centre 61·84 per cent or over three-fifths of the total income available for consumption are spent on food. This shows a very poor standard of living indeed.

The expenditure on various components of food for the total population is shown below according to the provinces or states. The actual prices of the various commodities as well as the percentage that those prices form of the total expenditure of the appropriate province or state are shown against each commodity, the top line showing actual prices and the bottom percentage respectively.

TABLE No. 21.

Commodities.	Prices.								
	Bihar.	Punjab.	United Provinces.	North-West Frontier Province.	Central Provinces.	Rajputana.	Nepal.	Bengal.	Total.
1	2	3	4	5	6	7	8	9	10
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rice ... (1)	606 14 0	33 8 0	23 12 0	22 8 0	45 8 0	12 0 0	4 12 0	4 0 0	752 14 0
(2)	34.42	11.35	25.98	11.88	52.17	9.51	11.91	13.52	28.76
Wheat ... (1)	210 9 0 (135)	51 8 0 (16)	12 10 0 (8)	18 0 0 (6)	9 0 0 (4)	46 0 0 (7)	12 4 0 (4)	1 8 0 (1)	361 7 0 (175)
(2)	11.94	17.72	13.80	9.50	10.30	38.45	30.72	5.07	13.81
Other staples ... (1)	112 13 0	0 8 0	2 0 0	...	2 2 0	...	1 2 0	...	118 9 0
(2)	6.40	.17	2.19	...	2.43	...	2.82	...	4.50
Pulses ... (1)	211 11 0	21 4 0	11 14 0	9 8 0	13 2 0	12 12 0	4 0 0	1 10 0	285 13 0
(2)	12.01	7.31	12.98	5.02	15.02	10.11	10.03	5.49	10.92
Vegetables ... (1)	119 11 0	31 8 0	8 2 0	20 8 0	5 0 0	8 4 0	3 12 0	3 0 0	177 13 0
(2)	6.79	10.85	9.12	10.83	5.72	6.53	9.40	10.14	6.80
Meat ... (1)	44 14 0 (59)	9 8 0 (5)	1 2 0 (3)	49 0 0 (10)	...	6 0 0 (2)	1 14 0 (2)	2 0 0 (1)	114 6 0 (82)
(2)	2.56	3.27	1.23	35.87	...	4.75	4.70	6.76	4.34

Fish	(1)	14 1 0 (33)	1 14 0 (3)	0 8 0 (1)	...	...	...	...	2 8 0 (2)	18 15 0 (39)
	(2)	.80	.65	.55	...	...	...	...	8.45	.72
Oil	(1)	107 14 0	11 9 0	5 5 0	1 4 0	3 2 0	2 4 0	1 4 0	0 10 0	133 6 0
	(2)	6.12	3.98	5.86	.66	3.57	1.78	3.13	2.11	5.06
Ghee	(1)	105 2 0 (71)	50 0 0 (18)	10 8 0 (7)	46 8 0 (10)	5 0 0 (4)	22 2 0 (7)	4 0 0 (3)	4 8 0 (2)	247 12 0 (122)
	(2)	5.85	17.21	11.50	24.55	5.72	17.53	10.03	15.21	9.41
Sugar	(1)	15 12 0 (23)	8 3 0 (13)	0 8 0 (1)	2 8 0 (3)	...	1 8 0 (2)	1 8 0 (3)	1 0 0 (1)	30 15 0 (46)
	(2)	.89	2.82	.55	1.82	...	1.19	3.76	3.38	1.18
Milk	(1)	112 10 0 (70)	49 8 0 (2)	10 0 0 (5)	10 0 0 (3)	0 4 0 (1)	10 0 0 (5)	3 0 0 (2)	4 4 0 (2)	199 8 0 (99)
	(2)	6.40	17.00	11.00	5.28	.29	7.92	7.53	14.37	7.64
Tea	(1)	5 15 0 (25)	3 0 0 (9)	0 8 0 (1)	...	...	...	0 3 0 (1)	0 10 0 (1)	10 4 0 (37)
	(2)	.34	1.02	.55	...	...	...	.47	2.11	.39
Spices	(1)	57 12 0	9 4 0	3 2 0	7 12 0	2 7 0	3 12 0	1 6	0 12 0	86 2 0
	(2)	3.28	3.14	3.44	4.09	2.76	2.97	3.45	2.54	3.29
Salt	(1)	33 8 6	3 1 0	1 8 6	1 14 0	1 13 0	1 9 0	0 13 0	0 3 6	44 6 6
	(2)	1.90	1.02	1.73	.99	2.77	1.24	2.04	.70	1.69
Miscellaneous ...	(1)	4 0 0 (4)	6 8 0 (7)	...	...	...	...	...	3 0 0 (1)	13 8 0 (12)
	(2)	.23	1.19	...	...	...	...	...	10.11	.51

NOTE.—Figures (1) and (2) immediately after the commodities indicate respectively actual price and the percentage of the price to the total. Figures within brackets after the amounts indicate number of families reporting consumption of the relevant commodities.

Both in quantity and price, rice leads accounting for 28·76 per cent of all the expenditure on food. Rice is, however, important only in the Central Provinces and Bihar where the percentage of expenditure on it is 52·17 and 34·42 respectively. It is also the major staple food of the United Provinces workers where the expenditure on rice comes to 25·96 per cent of the expenditure on food. In the North-West Frontier Province, the Punjab, Nepal and Rajputana rice accounts for only about one-tenth of the expenditure on food.

Wheat follows with the percentage of 13·81 being the most important for the workers of Rajputana, Nepal and the Punjab. Elsewhere wheat accounts roughly one-tenth of the total expenditure on food. For Bihar the percentage is about 12 being one-third of that of the rice. The item "other staples" includes gram and barley, parched and ground into "Satu" which is an important food of the Bihari workers. It is of minor importance in the United Provinces, in the Central Provinces and in Nepal. It is absent elsewhere. The "other staples" form 4·5 per cent of the total expenditure on food although in Bihar the appropriate percentage is 6·40 or roughly 50 per cent above the general average.

Pulses come next after wheat being consumed uniformly by the workers of all provinces. They account for practically 11 per cent of the total expenditure on food, the percentage being slightly exceeded by Bihar, the Central Provinces and the United Provinces where pulses are an invariable accompaniment of rice.

Vegetables are also consumed uniformly. They include fruits which form a very negligible part of the expenditure, fruits being consumed in 2 Punjabi families only and the total expenditure being only 2 rupees. Practically fruits are not consumed at all. The vegetables account for 6·8 per cent of the total expenditure on food but the percentage is exceeded materially by the Punjabis, the United Provinces workers and the Frontier Pathans in whose cases it practically comes to about 11 per cent. Meat is not at all an important commodity, from the point of view of quantity but from the point of view of price it accounts for 4·34 per cent of the total expenditure. The Bihari workers are mostly vegetarians, families consuming meat being only 59 out of 192 or about 3 families in 10. The greatest consumers are the Pathans all of whom take meat. Among the Pathans, meat consumption forms 25·87 per cent of all the

expenditure on food. Among the Biharis meat consumption comes only to 2.58 per cent of the total expenditure on food.

Fish is altogether of small importance being consumed by 39 families only and the total expenditure on fish is only .72 per cent.

Among fats only mustard oil and ghee have been mentioned. Of these ghee forms 9.41 per cent of the total expenditure on food, while oil only forms 5.06 per cent. The heaviest ghee consumers are the workers from the Punjab, the North-West Frontier Province and Rajputana. Among the Pathans the percentage of expenditure on ghee is as high as about 25, while among the Punjabis and the workers from Rajputana the percentage is between 17 and 18. Among the Biharis it is only 5.85 per cent and it is consumed only in the higher income grades by 71 families out of 192. In oil the Bihar percentage is higher than the general average, being 6.12 per cent. Oil is insignificant among the Pathans and the workers from Rajputana. The expenditure on sugar forms only 1.18 per cent of all the expenditure on food, and it is the lowest among the Biharis and the United Provinces workers where it is .89 and .55 per cent respectively. In Bihar it is consumed only in 23 families out of 192.

Expenditure on milk forms 7.64 per cent but milk is consumed only by 90 families out of 254. The largest percentage of expenditure on milk is found among the Punjabis where it is 17, followed by the Bengali workers where it is 14.37, and the United Provinces workers with their 11 per cent. Bihar has got a percentage of 6.40 which is the lowest of all but that of 2 provinces, Central Provinces and the North-West Frontier Province.

Tea is a rare commodity at this centre, being consumed by only 37 families and even in these only in moderate quantities. It forms only .39 per cent of the total expenditure on food and it is altogether absent among the Pathans, the workers from the Central Provinces, and those from Rajputana. It is insignificant among the United Provinces workers. Only 25 Bibari families out of 192 take tea and spend .34 per cent of their total expenditure on food on this commodity. We leave out salt as an article of inelastic necessity. Spices are also a sort of inelastic luxury accounting for between 3 to 4 per cent of the total expenditure on food. No other items of food have been reported except

unspecified refreshments taken out of doors by a few families and accounting for only .51 per cent of the expenditure on food.

It will be worthwhile to examine the importance of the following food items in the various income grades : rice, wheat, gram and barley-*Satu*, pulses, meat, fish, mustard oil, ghee, sugar and milk. To this end the amount of these foods per adult consumer in seers in each income grade is shown in table no. 22. The amount in annas and pies per adult consumer has been shown in table no. 23 in respect of vegetables, spices, tea and miscellaneous.

**TABLE No. 22.**  
Amount of various foods per adult consumer in seers.

Income grades.		Rice.	Wheat.	Other staples.	Meat.	Fish.	Oil.	Ghee.	Sugar.	Milk.	Pulses.
1		2	3	4	5	6	7	8	9	10	11
		Md. s.	Md. s.	Md. s.	Md. s.	Md. s.	Md. s.	Md. s.	Md. s.	Md. s.	Md. s.
Less than Rs. 10	(1)	38 20	3 2	12 24	0 10½	0 12½	1 ½	0 4	0 4	1 0	5 20
	(2)	14·45	1·14	4·71	·098	·117	·379	·037	·087	·374	2·056
Rs. 10 but not Rs. 15	(1)	45 38	8 2	5 16	0 11	0 8½	0 35½	0 5½	0 2½	1 20	7 5
	(2)	17·84	3·126	2·09	·107	·082	·344	·051	·021	·582	2·767
Rs. 15 but not Rs. 20	(1)	68 15	15 37	8 9	0 36½	0 24	1 12	0 15½	0 5½	3 16	13 5½
	(2)	19·35	4·83	2·51	·278	·183	·397	·116	·04	1·04	4·01
Rs. 20 but not Rs. 30	(1)	72 25	38 0	7 32	2 14½	0 16	2 ½	2 ½	1 3½	11 19	18 13
	(2)	14·90	7·83	1·608	·487	·082	·415	·415	·22	2·37	3·778
Rs. 30 but not Rs. 40	(1)	34 37	14 33	2 33	1 23½	0 31	1 7½	1 12½	0 39	10 12	9 20
	(2)	14·55	6·177	1·177	·864	·323	·495	·549	·406	4·29	3·96
Rs. 40 but not Rs. 50	(1)	17 31	9 4	2 26	0 34	0 7	0 23½	0 31	0 17	7 6	5 3
	(2)	15·12	7·744	2·255	·723	·149	·500	·66	·361	6·08	4·319
Rs. 50 and over ...	(1)	9 34	10 5	Nil	0 30	0 14½	0 23½	0 29½	0 17½	7 38	3 27
	(2)	8·95	9·204	Nil	·682	·307	·532	·662	·375	7·227	3·11
Total ...	(1)	283 0	99 3	39 20	7 ½	2 33½	7 23	5 18	3 8½	42 31	62 13½
	(2)	15·70	5·496	2·19	·388	·157	·420	·302	·177	1·818	3·45

[NOTE.—The figures within brackets immediately after the income grades stand for the following:—

(1)—actual quantity in maunds and seers consumed by each income grade.

(2)—the average quantity in seers per adult consumer in each income grade.]

TABLE No. 23.

Vegetables, spices, tea and miscellaneous per adult consumer in annas and pies per month.

Income grade.	Vegetables.	Spices..	Tea.	Miscellaneous.
	2	3	4	5
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10 ... (1)	12 7 0	6 10 0	0 11 0	...
(2)	0 1 10	0 1 0	0 0 1	...
Rs. 10 but not Rs. 15 (1)	16 5 0	7 11 0	0 5 0	...
(2)	0 2 6	0 1 2	0 0 1	...
Rs. 15 but not Rs. 20... (1)	27 9 0	15 1 0	0 12 0	1 0 0
(2)	0 3 3	0 1 10	0 0 1	0 0 1
Rs. 20 but not Rs. 30 (1)	62 8 0	28 10 0	2 0 0	2 0 0
(2)	0 5 1	0 1 8	0 0 2	0 0 2
Rs. 30 but not Rs. 40 (1)	39 2 0 1 (fruits).	15 13 0	2 8 0	7 0 0
(2)	0 6 8	0 2 7	0 0 5	0 1 2
Rs. 40 but not Rs. 50 (1)	25 10 0	9 0 0	3 0 0	3 8 0
(2)	0 8 8	0 3 1	0 1 0	0 1 2
Rs. 50 and over ... (1)	17 12 0 1 (fruits).	5 6 0	1 0 0	...
(2)	0 6 9	0 1 11	0 0 4	...
<b>Total</b> ... (1)	<b>203 5 0</b>	<b>86 9 0</b>	<b>9 10 0</b>	<b>13 8 0</b>
(2)	<b>0 4 6</b>	<b>0 1 11</b>	<b>0 0 3</b>	<b>0 0 3</b>

[NOTE.—The figures within brackets immediately after the income grades stand for the following:—

(1)—actual amount in rupees and annas spent by each income grade.

(2)—average amount spent per adult consumer in annas and pies.]



An examination of the tables leads to interesting conclusions. In the lowest income grade wheat, meat, fish, ghee and sugar are altogether of negligible importance and these are precisely the commodities that would measure the workers' prosperity. Even oil and milk are consumed sparingly; only about two-fifths of a seer of each of these commodities being consumed by every adult in a month. Rice is of outstanding importance and wheat is about only 7 per cent as important as rice. *Satu* is over four times as important as wheat and about one-third as important as rice in this income grade.

As we rise higher rice tends to increase till the income group of "15 but not 20 rupees" after which it is practically stationary except for the group 50 and over. Wheat rises continuously after the lowest income group, till in the highest income group it is more important than rice. Gram and barley are found in all the income groups except Rs. 50 and over but their importance after the income grade "Rs. 15 but not Rs. 20" is small. Gram is important in the income grade Rs. 40 but not Rs. 50 but not as an article of necessity but of luxury. Meat consumption does not materially exceed a quarter of a seer till we are in the income grade "Rs. 20 but not Rs. 30". And even in the higher grades meat is quantitatively of small importance. Little need be said about fish which is altogether of small importance. It is peculiar that even oil which ought to be an inexpensive necessity tends to rise in importance as we rise in the income grades. But the variations from the average consumption of oil per adult are not greater than 25 per cent. The same is not true of ghee which is negligible up to the income grade of Rs. 15 but not Rs. 20; and is at all important only after that grade. The variation from the general average range as high as 300 per cent. Sugar also rises but is insignificant in the income grades below Rs. 20. Milk consumption ranges from 374 seers in the lowest income group to 7277 seers in the highest income group and rises continuously after the income grade "Rs. 15 but not Rs. 20."

Pulses do not show any great variations. The relative scarcity of ghee, sugar, milk, animal foods and wheat in the income grades below Rs. 20 shows that families with incomes below 20 rupees suffer from lack of variety and from insufficiency of food. The same conclusion is suggested by the tendency of the common staple foods like rice rising with the rising incomes till we reach the income grades above Rs. 20.

It is peculiar that even with rising incomes, the consumption even of cereals and pulses shows consistent rise. That shows

a state of chronic poverty as we are still far from the economic stage when cereals and pulses show a tendency of fall in the consumption scale.

We have still 4 items, vegetables, spices, tea and miscellaneous to consider. These are to be treated as articles of luxury to the workers. The Table no. 23 shows that vegetables rise from Re. 0-1-10 per adult per month to Re. 0-6-9 per adult per month in the highest grades, but is grossly small in grades below Rs. 20 where it does not come even to half a pice per adult per day. Even in the highest groups vegetables which include what little fruits are taken do not reach one pice per adult per day. Tea is scarcely taken at this centre and it is absolutely small for grades of income below Rs. 20 where it is just one pice per adult per month. Even in the highest grades, however, it does not exceed one anna per adult per month. That shows that it is consumed infrequently and not as an important beverage. Spices show no regular trend, but the highest consumption in any grade does not exceed half pice per adult per month. These various conditions show that on the whole a reasonable standard of food consumption is not even approached till we reach income grade "Rs. 20 but not Rs. 30". Families of total income of less than 30 rupees manage to exist at a starvation level.

### B. Clothing.

No census of the articles of clothing possessed by each family of the workers has been attempted. We have only average expenditure on clothing per family per month. The expenditure on clothing shown includes cost of purchase, repair, making and also washing. It would have been interesting to examine each of these items separately but the figures here do not permit of such analysis. The following table gives the expenditure on clothing per family per month in each income grade in annas :—

TABLE No. 24.

Income grades.	Expenses on clothing.	Expenses on clothing per adult.	Percentage of income on clothing for each group to the total.
	Ra. a. p.		
Less than Rs. 10 ...	22 6 0	3-30 annas	9-16
Ra. 10 but not Rs. 15	31 8 0	5-04 "	8-64
Ra. 15 but not Rs. 20	63 5 0	7-82 "	8-78

Income grades.	Expenses on clothing.	Expenses on clothing per adult.	Percentage of incomes on clothing for each group to the total.
	Rs. a. p.		
Rs. 20 but not Rs. 30 ...	103 5 0	8.41 annas	7.72
Rs. 30 but not Rs. 40 ...	60 13 0	10.14 „	7.15
Rs. 40 but not Rs. 50 ...	44 8 0	14.20 „	9.61
Rs. 50 and over ...	29 10 0	10.65 „	5.59
Total ...	355 7 0	7.88 „	7.88

For the purpose of clothing children have been treated as half adults. The table shows that expenditure on clothing per adult rises from 3.30 annas in the lowest grade up to 10.65 annas in the highest grade. There is a continuous tendency to rise except for the fact that in the grade Rs. 40 but not Rs. 50 the expenditure on clothing per adult is 14.2 annas being the highest in any grade. The percentage of income on clothing for each income group to its total available income goes on falling consistently so that even clothing like food shows diminishing proportion as the incomes rise. It points to the fact that clothing is also an article of inelastic demand. It shows that there is no search or scope for variety, once the average standard is attained. The average standard appears to have been attained in the income grade Rs. 30 but not Rs. 40 where expenditure on clothing is 10 annas per adult per month.

### C. Housing.

Housing presents a relatively simpler problem to the industry in this centre. A large percentage of the workers are living in the country side around or in their own homes which although sharing the common characteristic of flimsy village dwellings are freer from effects of overcrowding than those in industrial areas. At the well established centres at Japla and Dalmianagar some sort of municipal services are also made available to the workers. Roughly, the dwellings of workers may be classified as in Table no. 25 according to the materials used in construction. The table classifies the dwellings also according to the income grade and the landlords whether company, private or self have also been noted.

TABLE No. 25.

Nature of housing.	Income grades.							Landlords.			
	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	C.	S.	P.	F.
1	2	3	4	5	6	7	8	9	10	11	12
(a) ..	3(O)	..	4(S)+ 1(F).	..	..	..	..	3	4	..	1
(b) ..	17(P)	..	4(S)	..	..	..	..	..	4	17	..
(c) ..	10(O)	8(O)	17(O)+ 1(P).	14(O)	13(O)	9(O)+ 3(P).	5(O)	76	..	4	..
(d) ..	..	5(O)	4(O)	..	..	..	..	9	..	..	..
(e) ..	13(O)	12(S)	2(S)	16(S)+ 1(F)+ 3(P).	8(S)+ 3(P).	..	3(S)	..	54	6	1
(f) ..	1(O)	..	..	..	..	..	1(P)	1	..	1	..
(g) ..	..	..	1(P)	..	1(O)	..	..	1	..	1	..
(h) ..	..	..	..	11(O)	..	..	..	11	..	..	..

(i)	..	..	9 (C)	3 (O)	12 (C)	..	..	..	24	..	..	..
(j)	..	..	..	9 (C)	1 (P)	6 (C)	4 (C)	3 (O)	13	..	1	..
(k)	..	..	1 (P)	9 (C)	12 (C)	..	..	..	21	..	1	..
Total	..	44	35	46	70	31	16	12	..	..	..	..
Landlords for the various income grades.	}	14 (C)	22 (C)	33 (C)	49 (C)	20 (C)	13 (C)	8 (C)	}	C	..	159
		13 (S)	12 (S)	10 (S)	16 (S)	8 (S)	0 (S)	3 (S)		S	..	62
		17 (P)	1 (P)	2 (P)	4 (P)	3 (P)	3 (P)	1 (P)		P	..	31
		0 (F)	0 (F)	1 (F)	1 (F)	0 (F)	0 (F)	0 (F)		F	..	2

NOTE.—The small letters stand for the following :—

(a)=corrugated sheet sheds ; (b)=mud wall and straw roof ; (c)=all pucca house ; (d)=partly *kutchas* and partly pucca ; (e)=mud wall and tiled roof ; (f)=pucca wall and tiled roof ; (g)=mud wall and tin roof ; (h)=stone wall and corrugated sheet roofing ; (i)=brick wall with corrugated sheet roofing ; (j)=wood huts with tin roofs ; and (k)=wood huts with straw roof.

The capital letters stand for the following :—

(C)=Company ; (S)=Self ; (P)=Private ; and (F)=Friend and relations.

The most numerous dwellings are *pucca* throughout being all practically provided by the companies, almost all of them at Japla, Dalmianagar and Baulia. The next numerous class of dwellings is of those with mud walls and tiled roofs, numbering 61, 54 of which are owned by the workers themselves. Wooden enclosures with straw roof have been reported to be the materials of 22 dwellings and those with tin roofs have been reported in 14 cases all of them being in the *Jangali* areas of Dumarkhar. Brick walls with corrugated sheet-roofing have been reported in case of 24 dwellings all provided by the company.

The materials have varied from place to place. Thus at Dumarkhar the common material of dwellings is wood easily available from the jungles. The roof is either of straw or less often, of tin sheets and corrugated sheets. At Baulia wooden walls are altogether absent, the wall being either of local stone or brick or sometimes of mud. The common roofing material is either tin or corrugated sheets. At Banjari, as at Baulia, the common building material is brick or sometime stone, the roof being either *pucca* or tiled and more rarely of corrugated sheets. Dalmianagar and Japla are almost alike in respect of building materials. At these places the houses are generally *pucca* throughout, sometimes corrugated sheets are used for roofing. For the lowest income grades, however, merely corrugated sheet sheds may often provide the only accommodation.

The largest number of houses for the workers have been provided by the employers, 159 families or individuals examined occupying the company's houses. In 64 cases the workers are the owners of their own houses, accounting for over one-fourth of all the homes. Private landlords also are important suppliers of housing accommodation. 31 dwellings belong to private landlords or about one-eighth of all the dwellings. Only in two cases are the workers living with relations and escape payment of all rents. Of all the 159 dwellings provided by the company a little less than half are *pucca* throughout. These are so particularly at Japla, Dalmianagar and Baulia. 24 dwellings provided by the company are made of brick walls with corrugated sheet roofs; while 11 are made of stone walls with corrugated sheet roofs. 34 of the dwellings are wooden huts practically all at Dumarkhar, having straw roof in 21 cases and tinned roofs in 13 cases. 9 houses are partly *pucca* and partly *kutchra*, while 3 are of merely corrugated sheet sheds, one *pucca* with tiled roofs

and one with mud, walls and tin roof. Of the 64 dwellings provided by the workers, 54 are of mud and tile, and only 4 of mud and straw and 4 of corrugated sheets. Private landlords curiously have put up the flimsiest dwellings possible. 17 of the dwellings or more than half are of mud and straw whose materials occur prominently in the dwellings of the private landlords alone. Mud and tiles are the materials of six of these dwellings while only 4 dwellings are pucca throughout. They have not hesitated in experimenting with wood huts and straw roof and also with tin roofs. One of the dwellings is *pucca* and tile and one of mud and tin.

At Dumarkhar and Baulia all the dwellings are within one mile of the place of work while at Banjari practically all are between one and 2 miles. At Dalmianagar, 63 out of 116 dwellings are less than one mile away from the work place while 53 are between one and two miles. Japla accounts more workers living far off from the work place than any of the other places. Of the 71 dwellings at Japla 20 are beyond 3 miles, 28 between one and two miles; while only 23 are less than one mile away.

Dumarkhar meets all the water requirements from tube wells while Baulia gets water-supply from taps.

Banjari relies upon wells altogether. At Dalmianagar more than half the dwellings or actually 63 get their water-supply from taps while 53 get it from wells. Japla has more varied sources of water-supply. Of its 71 dwellings, 30 get their supply from taps, 34 from wells and 7 from the river.

The accommodation available for the workers is shown in the following table.

TABLE No. 26.

*Accommodation provided by various landlords in square feet.*

Income grade.	Company.	Self.	Private.	Friends.	Total.	Average per adult-dweller.
1	2	3	4	5	6	7
	Income.					
Less than Rs. 10 ...	511	2,060	583	...	3,154	
Rs. 10—15 ...	1,209	2,792	32	...	4,033	

Income grade,	Company.	Self.	Private.	Friends.	Total.	Average per adult-dweller.
1	2	3	4	5	6	7
	Income.					
Rs. 15-20	...	2,464	4,043	181	480	7,173
Rs. 20-30	...	3,560	6,439	422	76	10,497
Rs. 30-40	...	1,294	2,844	210	...	4,378
Rs. 40-50	...	1,808	...	310	...	2,116
Rs. 50 and over	...	1,802	620	41	...	2,463
Total	...	12,646	18,803	1,809	356	33,814

The resident consumers of housing comprise, according to our formula regarding housing in the general preface, 692 adults or 2·724 adults per family. The floor space required for such family comes to 89·892 sq. ft. or roughly 90 sq. ft. The air space necessary for such families comes to 907·092 cubic feet or roughly 907 cubic feet. According to this standard floor space in the income grade less than Rs. 10 falls short by about 25 per cent. In the income grades Rs. 10 but not Rs. 15 the floor space is more than adequate and so also in the higher income grades. For the total population the floor space actually happens to be one and half time the minimum requirements so that there is no question of congestion except in the lowest income grade. The heights of rooms have not been entered correctly but even if we take 10 feet as the normal height, which would be quite generous, the air space will fall short in the income grade less than Rs. 10 but would be adequate and more than adequate in the income grades higher than Rs. 10. On the average the floor space of the rooms provided by the company works out at 74 square feet while that of rooms provided by the workers themselves works up to nearly 90 square feet. In the case of private landlords the average floor space of each room comes to about 52 square feet only. These figures show that housing provided by the workers themselves would be more spacious than those provided by the company, while those provided by the private landlords would



be less spacious. It is, therefore, necessary either to help workers to build their own homes or to get their houses provided by public bodies and not to rely upon agencies whose only motive is to make as much profit as possible.

We shall now examine the cost the workers have to incur on housing. The expenditure by income groups is given below.

TABLE No. 27.

Income groups.	House rent.	Ground rent.	Other rates and taxes.	Total.	Average cost of housing per family.
1	2	3	4	5	6
	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.
Less than Rs. 10	12 13 0	...	...	12 13 0	0 4 9
Rs. 10 not 15 ...	12 1 0(33)	0 3 0(I)	0 1 0(I)	12 5 0	0 5 6
Rs. 15 not 20 ...	23 5 0	0 1 0(1)	4 11 6	28 1 6	0 9 9
Rs. 20 not 30 ...	30 6 6	...	3 2 6	33 9 0	0 7 9
Rs. 30 not 40 ...	33 12 0	...	0 10 6	34 6 6	1 1 9
Rs. 40 not 50 ...	37 0 0	...	...	37 0 0	2 5 0
Rs. 50 and over	15 1 0	0 4 0	...	15 5 0	1 4 5
Total ...	...	...	...	173 8 0	0 10 11

“Other rates and taxes” include *chaukidari* tax whenever it is paid. Practically only houses owned by the workers pay any *chaukidari* tax and even among these owners are immune in income grades “less than Rs. 10” and “Rs. 10 but not Rs. 15”. The cost of housing tends to increase from the lowest to the highest grades but altogether the cost incurred in housing is very small. But the cost is to be related to the amount of housing provided. Altogether the total cost of housing for this centre works at only 3·8 per cent of the total available income of the workers.

### D. Fuels and lights.

The kinds of fuels have not been distinguished. Only the costs have been mentioned. So with lights. The following table shows the expenditure according to the income-grades.

TABLE No. 28.

Income grades.	Fuels.	Lights.	Total.	Average expenditure per family.
1	2	3	4	5
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10 ...	18 6 0	8 1 0	26 7 0	0 9 6
Rs. 10—15 ...	10 5 0	9 1 0	29 6 0	0 13 6
Rs. 15—20 ...	28 10 0	14 12 0	43 6 0	0 15 0
Rs. 20—30 ...	47 11 0	22 2 0	69 13 0	1 0 0
Rs. 30—40 ...	39 15 0	15 3 0	55 2 0	1 12 6
Rs. 40—50 ...	21 0 0	8 13 0	29 13 0	1 6 9
Rs. 50 and over ...	18 4 0	8 5 0	26 9 0	2 3 5
<b>Total ...</b>	<b>194 3 0</b>	<b>86 5 0</b>	<b>280 8 0</b>	<b>1 1 9</b>

The total expenditure on fuels and lights comes to 5.78 per cent of all the available income. The expenditure per family tends to rise with the rising incomes but this rise is mostly due to the rise in lighting cost; homes of workers in higher income grades being better lighted than those of others.

### E. House-hold utensils and furnitures.

House-hold utensils and furnitures have not been catalogued nor have their costs been separately recorded. They have been jumbled together into one head and the cost incurred under

these two heads have been consequently shown together in the following table.

TABLE No. 29.

Income grades.	Cost of house-hold utensils and furnitures.		Average per family in annas and pies.	
	Rs.	a. p.	Rs.	a. p.
Less than Rs. 10 .. ..	2	5 6	0	0 10½
Rs. 10—15 .. ..	4	6 0	0	2 0
Rs. 15—20' .. ..	7	10 0	0	2 8
Rs. 20—30 .. ..	10	13 0	0	2 6
Rs. 30—40 .. ..	6	9 0	0	3 4
Rs. 40—50 .. ..	3	12 0	0	3 9
Rs. 50 and over .. ..	3	9 0	0	4 9
Total .. ..		39	0 6	0 - 3 3

Altogether the cost on utensils and furnitures is almost negligible being incurred mainly for replacement of earthenware. The expenditures indicate that the houses of the workers must be altogether bleak and bare. The total cost of these items is only .87 per cent of all the incomes available for consumption. In the lowest income grade it is less than anna 1 a month per family, while even in the highest it does not exceed annas 4 and 9 pies per family.

#### F. Miscellaneous.

Remittances we have already considered in relation to the dependents living away from the wage-earners. No cost has been incurred on travelling to and from the place of work. People mostly walk the distances from their place to the work place on foot. Provident Fund does not occur at all in the workers' economy.

(a) *Mental and bodily health.*

Data regarding this are only indirect and we shall have to guess the position by examining the expenditure on various factors of mental and bodily health. We shall treat together medicine cost and medical fees, teacher's fee and cost of books and other appliances of education and amusement cost. The table below shows the expenditure per family.

TABLE No. 30.

Income grade.	Medicine and Medical fee.	Education.	Amusement.	Total.	Average in annas and ples per family.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10	0 4 0	...	...	0 4 0	0 0 4
Rs. 10—15 ...	0 12 0	0 8 0	0 8 0	1 12 0	0 0 10
Rs. 15—20 ...	13 0 0	3 3 0	...	16 3 0	0 4 0
Rs. 20—30 ...	4 12 0	0 14 0	1 2 0	6 12 0	0 1 9
Rs. 30—40 ...	9 8 0	4 2 0	1 4 0	14 14 0	0 7 8
Rs. 40—50 ...	0 4 0	8 2 0	0 9 0	8 15 0	0 9 0
Rs. 50 and over...	1 8 0	0 7 0	2 12 0	4 11 0	0 6 3
Total ...	30 0 0	17 4 0	6 3 0	53 7 0	0 3 4

Altogether the workers spend on education only Rs. 27-14-0 and only 15 families have been reported as spending anything on education. That shows, in absence of free and compulsory education, terrible illiteracy among the children of the workers at this centre. Medicine and medical fees do not figure very high not because there are no diseases among the workers but because their power to spend on medicine and medical fees is limited. The small expenditures on mental and bodily health of the workers must affect their efficiency.

(b) *Social conventions and individual habits.*

Expenditures incurred on these accounts have been classed under the following heads:—Drink and drugs; tobacco and

*pan*; religious observances; feasts and festivals; unspecified expenditure, including expenditure on toiletary; and Trade Union subscriptions. No other items occur. The expenditure is shown according to income grades in the table below:—

TABLE No. 31.

Income grade.	Drink and Drugs.	Tobacco and <i>pan</i> .	Religious observances feasts and festivals.	Trade Union subscription.	Unspecified.
1	2	3	4	5	6
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Less than Rs. 10	4 12 0(6)	7 0 0	8 1 0	0 4 0(1)	2 3 0
Rs. 10—15 ...	18 6 0(12)	10 6 0	9 14 0	0 14 0(4)	7 14 0
Rs. 15—20 ...	27 14 0(16)	16 10 0	17 7 0	1 3 0(5)	13 4 0
Rs. 20—30 ...	52 4 0(30)	21 3 0	28 1 0	1 12 6(6)	30 4 0
Rs. 30—40 ...	15 12 0 (9)	19 14 0	15 0 0	1 0 0(4)	25 8 0
Rs. 40—50 ...	9 12 0 (4)	16 0 0	14 9 0	0 12 0(4)	14 0 0
Rs. 50 and over	7 8 0 (5)	6 6 0	6 8 0	Nil	3 8 0
Total ...	135 14 0(82)	97 7 0	92 2 0	5 13 0(24)	96 1 0

Drink and drugs occupy an important place in the expenditure scheme of the workers accounting for about 3 per cent of the total available income of the workers. The number of families reported to drink is 82 or about one-third of all the families. Little need be said about tobacco and *pan* except that it is widespread as a conventional indulgence, the total sum spent on tobacco forming about 2 per cent of all the available income. The trade union subscriptions total Rs. 5-13-0 only; and 24 families only have reported such subscriptions. Trade Union movement is at all important among the workers at Japla and of very little importance at Baulia. Elsewhere it does not exist.

### CHAPTER V.

#### Balance Sheet of the workers' position.

We have examined above almost all the important departments of the workers' income and expenditure. Among expenditure it is likely that we have not given due weight to

events like births, deaths and marriages and so forth which may not occur every month or every year but which are of universal occurrence in our life-time. We have also presumably left out of account economic catastrophes which have to be foreseen as emergencies to be insured against. Instances are periods of sickness and unemployment and earthquakes and floods which may destroy years of patient accumulation. We shall try to see whether the workers are in a position to meet these foreseen and unforeseen events with any degree of resistance after the more clamorous demands of every-day life have been met.

Let us then try to draw the balance sheet of the position so reviewed. The following table is an attempt in that direction :—

TABLE No. 32.

Income grades.								
	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	Total.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Income ...	244 6 0	362 8 0	719 15 0	1,338 15 0	850 6 0	463 2 0	530 5 0	4,509 9 0 after deducting remittance.
A. Food ...	266 14 0	289 6 0	491 14 6	797 13 0	463 9 0	259 14 0	219 14 0	2,788 14 6
B. Clothing ...	22 6 0	31 8 0	63 5 0	103 5 0	60 13 0	44 8 0	29 10 0	355 7 0
C. Housing ...	12 13 0	12 5 0	28 1 6	83 9 0	34 6 6	37 0 0	15 5 0	173 8 0
D. Fuels and light ...	26 7 0	29 6 0	43 6 0	69 13 0	55 2 0	27 13 0	26 9 0	280 8 0
E. Utensil and furni- tures.	2 5 6	4 6 0	7 10 0	10 13 0	6 9 0	3 12 0	3 9 0	39 0 6
F. Miscellaneous—								
(a) Medicine and Me- dical fees.	0 4 0	0 12 0	13 0 0	4 12 0	9 8 0	0 4 0	1 8 0	30 0 0
(b) Education ...	...	0 8 0	3 3 0	0 14 0	4 7 0	3 2 0	0 7 0	17 4 0

TABLE No. 32—concl'd.

	Income grades.							Total.
	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20 but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40 but not Rs. 50.	Rs. 50 and over.	
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
(c) Amusement ...	...	0 8 0	...	1 2 0	1 4 0	0 9 0	2 12 0	6 3 0
(d) Drink and Drugs	4 12 0	18 0 0	27 15 0	52 4 0	15 12 0	9 12 0	7 8 0	135 14 0
(e) Tobacco and pan	7 0 0	10 6 0	16 12 0	21 3 0	19 14 0	16 0 0	6 6 0	97 7 0
(f) Religious obser- vances feasts and festivals.	8 11 0	9 14 0	17 7 0	28 1 0	15 0 0	14 9 0	6 8 0	92 2 0
(g) Trade union subs- criptions.	0 4 0	0 14 0	1 3 0	1 12 0	1 0 0	0 12 0	..	5 13 0
(h) Unspecified ...	2 3 0	7 14 0	13 4 0	30 4 0	25 8 0	14 0 0	3 8 0	96 9 0
Total expenditure ...	353 15 6	415 11 0	726 14 0	1,155 9 0	723 1 6	438 15 0	323 8 0	4,118 10 0
Actual Excess ...	...	...	...	183 6 0	128 4 6	24 3 0	206 13 0	390 15 0
Present Excess ...	...	...	...	19.6	15.1	5.2	39.1	8.7 o/o
Actual Deficit ...	109 9 6	53 3 0	6 15 0	...	...	...	...	...
Percent dficit ...	45.2	14.7	1.0	...	...	...	...	...



The net position shows an excess of Rs. 390-15-0 which is 8·7 per cent of the total income. The size of the excess is considerable but this excess has to provide against social events like marriages and economic emergencies like unemployment. From such consideration workers' reserves against old age and misfortunes cannot be regarded adequate. At best their economic status is only of fair weather character. Besides, workers might have inherited debts and liabilities of their fathers, which also must be discharged out of this reserve.

The excess, however, does not reveal the actual strains and stresses in the various income-grades. If we examine the position of each income group, we find that workers in grades of income below Rs. 20 have actually a deficit balance. The deficit is, of course, small in the income grade of Rs. 15 but not Rs. 20 but rises at incredible rate as we moved down the income-grades. In the lowest income grade the deficit is as high as 45·2 per cent. That shows a deplorable state of chronic poverty.

The deficits in the three income-grades confirm the general conclusion that no family with an income of less than Rs. 20 can be regarded as anything other than indigent. In the higher income-grades we meet excess everywhere, rising slowly in the first instance but rapidly as incomes rise beyond Rs. 50. The above considerations naturally lead us to a discussion of the indebtedness of the workers.

## CHAPTER VI.

### Indebtedness.

The table 33 shows the extent of indebtedness according to income-grades and also the causes of indebtedness while table 34 shows the rates of interest charged on various fractions of the total debt.

TABLE No. 33.

Causes.	Income grades.								
	Less than Rs. 10.	Rs. 10 but not Rs. 15.	Rs. 15 but not Rs. 20.	Rs. 20. but not Rs. 30.	Rs. 30 but not Rs. 40.	Rs. 40. but not Rs. 50.	Rs. 50 and over.	Total.	Percentage.
1	2	3	4	5	6	7	8	9	10
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Birth and confinement ...	...	...	...	...	...	...	...	...	...
Marriage, Betrothal and allied ceremonies.	830	1,125	677	4,605	1,800	415	...	8,952	41.6
Funeral ...	150	140	92	...	50	108	200	740	3.4
Sickness ...	150	45	162	306	210	50	...	923	4.3
Ancestral and other old debts.	...	...	100	200	100	50	500	140	.6
Involuntary unemployment.	...	20	20	100	...	...	...	140	.6
Religious observances, feasts and festivals.	...	140	92	...	...	...	200	432	1.9
Litigation: ...	...	400	300	400	...	55	...	1,155	5.3
Agriculture ...	110	85	120	...	...	...	...	315	1.5

Industry	...	...	150	...	...	...	...	...	150	0.7
Consumption	...	6,525	1,155	305	...	...	...	...	7,985	36.8
Total	...	7,265	3,260	1,868	5,611	2,160	678	900	21,742	...
Debts as multiples of monthly incomes.	...	22.9	7.8	2.3	3.4	2.0	1.0	1.4	3.9	...

TABLE No. 34.

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	No interest.	Rates of interests.								
		0 per cent.—10 per cent.	10 per cent.—20 per cent.	20 per cent.—30 per cent.	30 per cent.—40 per cent.	40 per cent.—50 per cent.	50 per cent.—75 per cent.	75 per cent.—100 per cent.	100 per cent.—150 per cent.	150 per cent and over.
1	2	3	4	5	6	7	8	9	10	11
Actual debt	4,964	250	85	10,789	2,160	1,510	140	70	1,244	530
Percentage of actual to total debt.	22.78	1.15	.39	49.62	10.00	6.94	.64	.32	5.55	2.44

Thus we find that the total debt for this centre comes to Rs. 21,742 which is 3·8 or practically 4 times the monthly income of the families. The volume of debt, thus, is not unduly large but if we examine the multiple that the debt forms of the actual income of the various income grades, the debt position does not appear to be at all reasonable. Thus in the lowest income grade the multiple is as high as 22·9 or practically 23; and in the income grade "Rs. 10 to Rs. 15" the multiple is 7·8 or practically 8. It will be noted that these two grades are precisely the ones which show the largest deficits in their budgets. Already the consumption level of these two grades is irreducibly low and the heavy debts are utterly impossible to repay. The debt position in income grade above Rs. 15 gets more and more reasonable till in the highest two grades the multiple does not exceed 1·4.

The lowering multiples, however, do not hold out much hope for income grades below Rs. 20 a month. In the income grade below Rs. 15 the debt is utterly irrepayable and no measure except complete wiping out of debt and considerable augmentation of their income can help them. The income grade of "Rs. 15 but not Rs. 20" must also find their position impossible with their negative reserve and demands of social conventions and emergencies upon them. They must make considerable sacrifice in order to pay back their debt. Only grades of income above Rs. 20 may be expected to help themselves out of their debt by a struggle. Thus about two-fifths of the total population is inextricably in debt, and about one-fifth of the total population is in a sufficiently difficult position to deserve special State aid in liquidating their indebtedness.

The causes of debt shown above are neither exhaustive nor without over-lapping. But these are the major categories into which causes of indebtedness may be divided for this centre.

The table shows that the most important single cause of indebtedness is marriage and allied ceremonies which account for about  $\frac{2}{7}$  of the total debt at this centre. Among the various income grades, however, this cause does not operate with equal intensity. It is of over-shadowing importance only in the income grade of Rs. 20 but not Rs. 30 in which it is responsible for about 90 per cent of the debt. This grade, however, is the most numerous, embracing 70 out of 254 families. In the lowest income grade this cause is responsible only for about 4 per cent of the debt and is non-existent in the highest income grade.

Curiously birth and confinement are not responsible for any debt at all. Among social ceremonies funerals are the next important cause of debt but their importance is barely 8 per cent as much as that of marriage and allied ceremonies. Sickness is responsible for 4.4 per cent of the total debt and operates in all the income grades. Ancestral and other old debts are slightly more important than sickness as a cause of indebtedness, accounting for 4.5 per cent of the total debt. But this cause does not operate in the two lowest income grades. These poor people inherit no assets and equally no liabilities from their fathers. Litigation is also important as a cause of debt, accounting for about 5.5 per cent of the total debt.

Productive debt amounts to only Rs. 465 in a total of Rs. 21,742. Here agriculture is twice as important as industry as a cause of debt and all the agricultural debts are found only in income grade below Rs. 20.

The deficits in the monthly budgets of consumption is responsible for Rs. 7,985 out of a total debt of Rs. 21,742 or about four-elevenths of all debts. This cause is specially important in the income grade less than Rs. 10 where it accounts for Rs. 6,525 out of Rs. 7,265 or about 88 per cent of all debts. With the rise of income this category of debt becomes less and less important and is altogether absent in the grade of income above Rs. 20 which are also the ones with excess budgets.

The survey shows that the most important cause of debt in income grades of less than Rs. 20 is consumptions while in income grade of above Rs. 20 the most important cause is marriage and other allied ceremonies. The former cause can be remedied only by an economic approach, namely rise in wages, while the latter can be remedied by social education.

Agencies that advanced credit are not very complex in this centre. The shop-keepers are relatively negligible as a source of credit, their importance being only .45 per cent. These supply only Rs. 95 out of all the debts at the centre. Friends and associates are equally of small importance, supplying Rs. 719 or 3.3 per cent of all the debts. Employers sometimes advance credit and in this centre are responsible for the supply of Rs. 1,008 or 4.64 per cent.

All these various agencies do not supply more than 9.45 per cent of all the credit. The most important source of credit are the money-lenders who have supplied Rs. 19,968 or 91.60 per cent of all the debts. This absolute reliance on money-lenders on the part of people with petty incomes must have

caused a large amount of fictitious debts composed of accumulating interest. It is necessary to provide organised institutions to supply credit to the workers at this centre.

Rates of interest charged have been indicated in the table no. 34 above.

It would appear from that table that the most fashionable rate of interest lies between 20 per cent and 30 per cent which is responsible for about half the total debt. On about one-quarter of the debt no interest is charged but it would be attributing an unwarranted nobility to the character of the money-lenders if we imagine that so much of credit was supplied by them free of all interest. Presumably the interest charged is masked by putting in the fictitious figures for actual credit supplied. Rs. 2,160 or about 10 per cent of the total debt carries interest rates between 30 per cent and 40 per cent; while about 5 per cent of the debt or actually Rs. 1,244 carries interest rates of between 100 per cent and 150 per cent. Ordinarily the interest rate charged does not appear to be very high on the major portion of the debt. The figures of interest rates, however, are not convincing because money-lenders must be charging higher rates in masked form.

The payments made towards meeting the debts either in the shape of interest or of principal have not been correctly reported; but even if they had been, they would have shown for the lower income grades only an attempt to substitute new debts for old.

**REPORT ON THE BASIS OF THE FAMILY  
BUDGET ENQUIRY**

**(Jharia, Giridih and Bokaro Coalfields)**

**BY**

**Dr. BAL RAJ SETH, M.A., Ph.D.,  
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## THE JHARIA, GIRIDIH AND BOKARO COALFIELDS.

The present report is the outcome of the family budget enquiry that I made in the Bihar coalfields in the months of June, July and August 1938. In June 1938 the Bihar Labour Enquiry Committee decided to enquire into the family budgets of the workers in industrial centres in the province. Accordingly, with the approval of the Government, the committee appointed four investigators, namely, Mr. Harnandan Prasad, Mr. Deokinandan Prasad, Mr. Rameshwer Dayal and myself to be in charge of Jamshedpur, Jamalpur, Rohtas and Jharia, respectively. We were to be assisted in our work by some senior students of Economics of the Patna College. I was also asked to submit a report on the economic condition of the colliery workers based on the budgets. All the details of the enquiry were settled by the Secretary of the Bihar Labour Enquiry Committee. To begin with, a meeting of all the investigators was held at Patna on the 15th June 1938 to discuss the details of the enquiry. In the evening of the same day I also attended another meeting of the investigators and student assistants, where the plan of work was discussed and student assistants were allotted to different investigators. I was given four students, but on the 16th June when I left for Dhanbad, I was accompanied by only three students as one failed to turn up. One of these three students belonged to the sixth year class (M. A. Economics) of the Patna College, and the other two were graduates in Economics of the Benares Hindu University and Patna College. Immediately after our arrival in Dhanbad the collection of budgets was taken in hand. We collected budgets from the 17th June to the 12th August 1938, when, having collected 1,045 budgets, the enquiry was closed.

The scope of the enquiry was not limited to any particular part of the Jharia coalfield, which embraces an area of 150 square miles. Budgets were collected even in collieries at a distance of 20 miles from Jharia proper. For making a comparative estimate of the work done by the Jharia Mines Board of Health, enquiry was also made in some collieries outside the limit of the Jharia Mines Board of Health. There are more than 200 collieries in the Jharia coalfield, and so it was impossible to collect budgets from workers in all collieries within the time.



at our disposal. Again, in order to make the budgets truly representative of the budgets of the working classes in general, collieries had to be carefully selected and the number of budgets collected for each colliery carefully determined. For this purpose collieries were divided into the following four classes :—

- (1) European managed limited collieries.
- (2) Privately owned non-Indian collieries.
- (3) Joint-stock Indian collieries.
- (4) Privately owned Indian collieries.

Besides the type of management, which is an important factor determining the economic condition of the workers, some other factors, such as the size of the colliery and the quality of its coal were also kept in view in selecting collieries. The number of budgets to be collected for each colliery was based on the number of persons employed in a colliery. In the case of privately owned Indian collieries, at least six budgets were to be collected from each selected colliery employing more than 100 persons and three from others. In the case of other groups of collieries at least budgets of one per cent of the workers were to be collected. The names of the collieries and the number of the budgets collected from each one of them is given in appendix (A) at the end of the report.

Though originally I was asked to collect family budgets only in Jharia collieries, yet later on I was also instructed to visit the Railway collieries in Giridih, Bokaro and Karanpura coalfields. Budgets were collected from all the Railway collieries except one i.e. Jarangdih. To see the difference between the economic condition of the private and Railway collieries, enquiries were also made in private collieries known as Dhori and Sirka working just by the side of the Railway collieries.

Care was also taken to see that the workers selected from each colliery for the enquiry represent as far as possible the different kinds of labour employed in the colliery, such as skilled and un-skilled labour, Hindu, Muslim and Aboriginal labour, high caste and low caste Hindu labour, local and imported labour, time workers and peice workers, contractors and *sarkari* labour and settled and floating labour.

Most of the colliery managers and proprietors generally gave us every help and co-operation in our work. But there were some who proved inhospitable and spied on our movements.

To overcome the fears of the labourers, as well as the suspicion of the employers was not always an easy task. In three collieries the General Managers deputed their managers and their other assistants to take down the budgets as we collected them from the workers. In two of the collieries we were permitted to collect the budgets on the condition that after collection we would submit them to the Agent for examination. But the worst treatment was meted out to us in Kustore Colliery which is one of the outstanding collieries of the Jharia coalfields. The colliery Superintendent did not allow us to visit his Burragarh Colliery. Even in Kustore Colliery we were not allowed to visit the *dhaourahs* (worker's quarters). Some of the *dhaourahs* that he showed to us himself seemed to be the best of the lot. Again, every worker had to be interrogated by the investigators in the presence of the Mine Manager. This compelled the worker to give his income correctly but discouraged him to disclose his debt and his expenditure on liquor and other intoxicants. Lastly, the witnesses that were produced before us, were probably somewhat tutored, and if not tutored, at least did not truly represent the class of workers in the colliery. For instance, in the place of coalcutters and trollymen, it seemed as if they had produced before us their *surdars*. On account of these unexpected difficulties we had to leave the housing portion of the family budget unfilled, and hence all the budgets collected at Kustore were left incomplete. Again, his refusal to permit us to visit Burragarh upset our original scheme of budget collection. We had to make up the deficiency of Burragarh in some other collieries. But the majority, both high and low, were always ready to help us in our work, and I take this opportunity of acknowledging the ungrudging assistance I received from them during my tours of enquiry in the coalfields.

Though efforts were made to stick to the schedule as far as possible, some departure from it proved unavoidable. The chief departures were in the case of Jealgora and Burragarh. In both the cases budgets could not be collected. In Jealgora we could not make any enquiry because of the labour strike, and the difficulties in case of Burragarh have already been explained. But these departures did not affect the result of the enquiry. The deficiency of Jealgora was made up by collecting budgets from another equally important colliery of the same management, and the deficiency of Burragarh was also made good by including in the schedule another important European managed colliery.

As decided in the meeting of the investigators, budgets were collected only of those families whose combined income did not

exceed Rs. 50 per mensem, but some budgets of single men had to be collected to ascertain the economic condition of the following classes of workers :—

- (1) Pensioners who have no families.
- (2) Temporary or non-residential workers who come for a short time to work in the coalfields and do not bring their families.
- (3) Workers who leave their families in their houses on account of their small income in an expensive place like Jharia.
- (4) Workers from the United Provinces and the Punjab who are not accustomed to bring their families to the coalfields.

The number of such budgets was only 26, and most of these workers were persons who were sending a substantial part of their earnings to their families in their native places. Only six budgets were collected of those persons who had no dependents, and this was done to compare their standard of living with that of family men.

The nature of the information collected from the workers is tabulated in the form at the end of the report as appendix B. The form was prepared by the Secretary of the Bihar Labour Enquiry Committee, and it seems to be based mainly on the schedule suggested by the Royal Commission on Labour on page 541 of its report. In the meeting of the investigators it was decided that I should collect 1,000 budgets, out of which at least 800 be such from which definite conclusions could be drawn. I got collected 1,045 budgets and I am glad to report that out of them only 45 budgets were found to be unsatisfactory. Out of 45 only 15 budgets were totally rejected. Most of these 45 budgets were collected during my absence of four days when I was away in Simla on leave. I myself collected nearly 200 budgets, and of the remaining budgets that were collected by the students, I checked about 60 per cent. I could have checked more but for the fact that I had to work for 16 days with only one assistant. The only student who remained with me throughout the strenuous work was Mr. Jadoo Nath Sahai, a 6th year student of the Patna College, whose perseverance and conscientiousness helped me a good deal in keeping up the progress of the work in spite of the shortage of workers. Lastly, I must thank Mr. K. L. Sonak, a post-graduate student of the Nagpur University, who came to Jharia to have training in labour problems for assisting me in my investigation and tabulation work.

*Home, Districts, Religion and Caste of Workers.*

Out of a total of 1,030 families and single men examined, 84.2 per cent came from within the province and the remaining 19.5 per cent from outside the province as is shown in the table no. I.

TABLE No. I.

District and places.	Number of families.	Percentage of total families.
Bihar .. .. .	865	84.2
Central Provinces .. .. .	73	7.0
United Provinces .. .. .	35	3.4
Bengal .. .. .	22	2.1
Orissa ... .. .	14	1.3
Punjab .. .. .	8	.8
Central India .. .. .	6	} 1.2
Cutch .. .. .	2	
Nepal .. .. .	2	
Bundhelkhund .. .. .	1	
Madras .. .. .	2	

The analysis of families coming from Bihar is given in table II.

TABLE No. II.

Districts.	Number of families.	Percentage of total families.
Hazaribagh .. .. .	244	28.2
Manbhum .. .. .	225	26
Monghyr ... .. .	172	19.9
Gaya .. .. .	145	16.8
Bhagalpur .. .. .	21	2.4
Santal Parganas .. .. .	20	2.3

TABLE II—concl'd.

Districts.	Number of families.	Percentage of total families.
Patna .. .. .	12	} 4.4
Palamau .. .. .	8	
Shahabad .. .. .	7	
Arrah .. .. .	3	
Singhbhum .. .. .	3	
Ranchi .. .. .	3	
Chapra .. .. .	2	

From the above statement it is obvious that most of the local labour supply in the Bihar coalfields is drawn from the Central and Western districts of the province. The North and North-Eastern and the South-Western districts' contribution is practically insignificant.

Of the 73 families coming from the Central Provinces, 61 come from Bilaspur, 10 from Raipur and two from Drug. It is interesting to point out that Bilaspur alone contributes 5.9 per cent of the total labour supply, i.e. more than even Bhagalpur and Santal Parganas put together and also more than the joint contribution of seven other districts of Bihar, such as Arrah, Palamau, Patna, Ranchi, Chapra, Singhbhum and Shahabad. Raipur's contribution is also greater than the individual contribution of all these seven districts. The connection of these two important labour supplying districts of the Central Provinces with the Bihar coalfields dates from the days when the workers of these districts were employed as earth-workers on the construction of the track of Bengal-Nagpur Railway, after whose completion they stayed on to work in mines. Their number together with those from the United Provinces began to show a steady increase between 1911 and 1921. In 1921 they were forming 11 per cent of the total labour supply in Bihar coalfields against two per cent in 1911. This increase continued till 1931 when it received a check, partly because of depression and partly because of the exclusion of women from underground work.

Regarding the supply of the United Provinces labour to the Jharia coalfield the census report points out that owing to systematic recruiting in the past for the collieries at Singareni in Hyderabad and in Rewa State, there is now a reserve of trained

labour available. Of the 35 families coming from the United Provinces 11, 9, 3, 3, 2 come from Allahabad, Partabgarh, Rai Bareilly, Jaunpur, Cawnpur and one each from Lucknow, Unao, Fatehpur, Mirzapur, Moradabad, Lakhimpur, Ballia and Banda.

Similarly, 22 families from Bengal 8, 4, 4, 3, come from the adjoining districts of Burdwan, Bankura, Naokhali, Faridpur and one each from Kossipur, Birbhum and Mymensingh.

Analysing the families coming from Bihar by religion and caste we get the following table :—

TABLE No. III.

Religion and Caste.	Number of families.
Bhuiyas .. .. .	160
Muslims .. .. .	127
Manjhis .. .. .	50
Turis .. .. .	52
Dusadhs .. .. .	41
Bauris .. .. .	39
Ghatwals .. .. .	24
Chamars .. .. .	23
Rajwars .. .. .	23
Kahars .. .. .	20
Lohars .. .. .	20
Nonias .. .. .	20
Musahars .. .. .	19
Goalas .. .. .	16
Kurmis .. .. .	15
Ho, Kols, Oraons and Koras	14
Barhis .. .. .	12
Beldars .. .. .	11
Haris .. .. .	10
Mochies .. .. .	9
Kamars .. .. .	9
Mallahs .. .. .	8
Koeris .. .. .	6
Mullicks .. .. .	5
Pujhars .. .. .	2
Total .. .. .	745

Besides the above castes, there were a good many Kumhars, Bhagtas, Sonars, Kayasthas, Chhatris, Brahmjns, Christians,

Pathans, Malis, Rajputs, Rais, Digers, Halwais, Kamars, Bodhis, Mundas, Kanoos, Mahawats, Mochis, Kalals, Hajams, Marricks, Ahirs, Deswals, Modis, Telis, Dcms, Bantias, Sens, Fishermen, Bagtis, Barbers, Dhobis, Bhunias, Tantis, Kewats, Dhanooks, and Bhugtas. The overwhelming majority of the Muslims were Sheikhs and Momins, otherwise called Jolabas. The Bhuiyas and Musahars come from Monghyr, Gaya and Hazaribagh, and the Manjhis belong predominantly to Manbhum and Hazaribagh districts. The Turis have their home chiefly in Monghyr and Hazaribagh districts. The Chamars, Barhi and Kahars are the inhabitants mainly of the Hazaribagh district, the Gbatwas and Rajwars hail from Hazaribagh and Manbhum. Ho, Kols, Oraons and Koras from Manbhum ; the Kurmis, Mullicks, Haris, Kamars and Mochis from Manbhum ; the Beldars and Nonias and Lohars and Mallahs from Gaya, the Dusadhs from Gaya, Monghyr and Hazaribagh, the Koeris and Goalas from Monghyr.

Turning now to the Central Provinces labourers, the chief castes and the number of families belonging to each caste are given below :—

TABLE No. IV.

Caste.	Number of families.	Caste.	Number of families.
Rabidas .. ..	10	Goalas .. ..	3
Satnamis .. ..	15	Muslims .. ..	3
Telis .. ..	7	Kanojias .. ..	3
Kewats .. ..	8	Chamars .. ..	2
Rajwars .. ..	14	Bantias .. ..	2
Pankas .. ..	5	Gours .. ..	2
Gonds .. ..	4		6
Chhatris, Kalal, Dhongov, Dusadh, Lohar and Mallah	1 each.		
		Total .. ..	73

The Chamars, to which category belong about all the Rabidas and Satnami sects, make up 25 or 34·2 per cent of the total supply of labour from the Central Provinces. Three Mohammedans of Lodhi and Pathan families were also found to be coming from the Central Provinces.

Pasis and Mohammedans nearly form 46 per cent of the total workers coming from the United Provinces. Most of them

belong to Allahabad, Partabgarh, Moradabad and Lakhimpur districts and Rampur State.

From the Punjab the Sikhs and the Muslims make up practically the whole labour supply to the Bihar coal mines. In case of workers from Bengal, the Muslims and the Bauris make up more than 50 per cent of the total workers. Out of 27 Bengal families 15 were the Bauris and the Muslims. The Muslims from Naokhali are generally employed as firemen. The Bauris are also given more of skilled than un-skilled work.

Table no. V gives the percentage of various castes and religions as found by the Census, Mr. Bose and ourselves.

TABLE No. V.

	Census percentage.	Mr. Bose's percentage.	Our percentage.
Bhuiyas .. .. .	13	8	15.16
Bauris .. .. .	11	7	4.4
Manjhis .. .. .	12	7.3	5.4
Chamars .. .. .	10	8	2.5
Muslims.. .. .	5.5	11	14.67
Dusadhs .. .. .	4.0	4.6	4.05
Ghatwals .. .. .	4.0	2.7	2.3
Turis .. .. .	4	5.4	5
Kurmis .. .. .	3.5	1.2	1.6

The comparisons with census figures cannot be regarded as perfect, as they represent single persons and our figures represent families. But, nevertheless, the table shows that the depressed classes are present in overwhelming numbers amongst the Hindu families. Out of 802 Hindu families 406 or 50.3 per cent were found belonging to depressed classes.

#### Causes of labour migration.

From the figures already given it is obvious that more than 56 per cent of the workers in the Bihar coal mines are drawn partly from districts other than the coal districts of Bihar and partly from outside the province. Again, of the remaining 44 per cent of the workers, who hail from Hazaribagh and Manbhum, which are the coal districts of the province, a very small minority belongs to places where there are coal mines, that is, Jharia, Giridih, Bermo, Argada, Swang, Kargali and Bhurkunda. Hence an attempt was made to ascertain the causes of labour migration.



The first and the most important cause is the want of employment at home. Out of 683 families which could explain their cause of migration, as many as 404 families, or 59 per cent were landless workers who had to leave their native places in search of employment. Fifty-four families were found to have migrated even when employment was available at home to earn higher wages in the coalfields. The want of employment is both seasonal and permanent. Many repair to the coalfields from the adjoining villages and districts where agricultural operations no longer demand their attention. This is specially the case with the Manjbis, Bauris, Turis and Bhuiyas who work for about six or seven months in the year and spend the remaining months in the coalfields to earn a livelihood.

Another important cause of permanent and semi-permanent labour migration to Bihar coalfields is the pressure on land. As many as 163 families, or 24 per cent were found to be its victims. Pressure on land causes permanent unemployment in villages. When the size of the family outgrows the capacity of ancestral lands to absorb all the members in profitable agricultural operations, the enterprising members of the family migrate to the coalfields to supplement the family income. Pressure of the creditors and landlords is another important cause of labour migration. Twenty-seven indebted families were found to have repaired to the coalfields either to escape the persecution of the creditors or to earn sufficient cash to be able to pay the landlord his dues and their creditors at least the interest on their debts. Out of these twenty-seven, there were six such families whose lands had passed into the hands of the creditors on account of their inability to redeem a mortgage. Such families come to the coalfields to earn sufficient money to enable them to buy new lands and to settle down as cultivators.

Again, the decline of cottage industries has snapped the second string of the bow of an Indian peasant, and is thus not a mean cause of the migration of workers from rural to industrial areas. The village artisan, whether weaver or cobbler or carpenter or *lohar*, is in a still more unfortunate position. For him and for his children the prospect of earning a livelihood in the village is disappearing, and the only alternative that has been left to him is to seek employment in industrial areas. In course of our investigation we found 20 such families who attributed their migration to the coalfields to the decline of the village industries. Other minor causes of migration were found to be outbreak of epidemics at home, quarrel with some relatives, death of some dear one, elopement with a neighbour's wife and attempt to avoid social ostracism.

Lastly, the large proportion of the depressed classes found in the coal mining areas encourages the belief that the scourge of untouchability has induced many a member of this community to escape the indignities of social life in villages by migrating to the coalfields, where they can enjoy a decidedly better status. In the last twenty or thirty years there has been a great awakening among the depressed classes who have always been looked upon with contempt by the higher castes. The humiliations imposed upon them have become so outrageous that they have been forced to seek a new economic and social freedom in industrial towns.

### Character of migration.

But much of this labour migration into the coalfields is temporary in character. The percentage of workers who have permanently settled in the coal mining areas, or who have divorced themselves permanently from their ancestral occupation, that is, agriculture, and have taken to coal mining as their principal occupation, is still very small. The majority of the workers are even now agriculturists first and miners afterwards. They possess lands in their native places and attend to mining work only after the harvesting and sowing seasons are over. Even the local non-residential workers who come to work in coal mines from neighbouring villages are far from regular in their work in mines. They work in the mines when they feel any necessity of supplementing their agricultural income. What to say of workers who possess lands, even the majority of workers without land are not permanently settled. They also return to their villages where they can find remunerative work in the harvest and sowing seasons.

Again even among those who can be regarded as permanently settled in the coalfields there are very few who are miners at heart. Many of them have come to regard the coalfields as their home, as they have been given lands either free of rent or on nominal rent for cultivation.

This is specially the case with workers in Giridih collieries. As regards other permanently settled workers, many of them have indeed taken to mining as their main occupation but do not regard colliery areas as their own home. They always cherish the hope of returning to their country now and then. In course of our enquiries some 56 families were found, who were visiting their homes once in 3 to 5 years and 46 once in ten years. Those who look upon the coalfields as their homes are found to be only a small percentage of the total labour force.

In short, labour supply in the coalfields is still floating and seasonal in character. It varies throughout the year. The

number of workers in the coal mines is at its maximum about the end of February. Thereafter there is a steady diminution as the winter crop matures. The exodus is sometimes checked when there is little agricultural work available, but again begins about the middle of May. The labour supply is at its minimum in the middle of August or July, when the sowing and transplanting of monsoon crops create the biggest demand for agricultural labour. Thereafter a large number of labourers return to the mines and another peak is reached by about the end of September. From this stage there is again a decline and by the middle of November, when the rice crop is harvested, the labour force reaches almost as low an ebb as in the middle of July. Thereafter it rises rapidly throughout the winter to the peak which is reached about the end of February. The following figures will substantiate the above statements.

TABLE no. VI.

Average number of workers employed daily each month during the year 1934 and 1936.

	1934.	1936.
January .. .. .	51,582	64,968
February .. .. .	61,251	70,615
March .. .. .	60,302	67,457
April .. .. .	57,623	68,364
May .. .. .	59,894	67,469
June .. .. .	57,200	61,107
July .. .. .	50,814	56,561
August .. .. .	51,849	52,623
September .. .. .	60,805	64,014
October .. .. .	61,172	59,612
November .. .. .	55,041	47,466
December .. .. .	59,644	52,520
Daily labour employed in 1934 and 1936 ..	57,265	61,064

#### Home visits.

From what we have said before it is clear that the majority of workers in the coalfields have plenty of attachment with their respective villages. To get a rough idea of this contact, we interrogated workers in the Jharia coalfield. The information collected has been examined from the following points of view :—

- (1) Frequency of visits.
- (2) Purpose of visits.

- (3) Length of stay.  
 (4) The time of such visits.

While examining our figures it must be remembered that the enquiry was conducted in June, July and August when most of the seasonal workers had already left the coalfields for their respective villages. Thus, we interrogated mostly non-agriculturist or landless workers, who do not visit their homes for agricultural purposes. Those who had just returned from their villages were very few in number.

Again, in recording the time of the visit it was the last visit of the worker alone on which attention was focussed. Moreover we recorded only the visits of the head of the family and not those of the members of his family, though the latter visit their home during plantation and harvesting seasons when the head of the family does not go and thus maintain contact with cultivation.

Table VII gives the frequency of visits of 590 families, the remaining 440, or 42 per cent of those whose budgets were collected, were found to be not visiting their homes at all. They form the permanent or semi-permanent labour of the coalfields, and the Mohammedans and men from outside the provinces predominate amongst them. In fact 90 per cent of the families in Giridih belong to this category.

TABLE No. VII.

No. of families.				Frequency of visits.
30	..	..	..	.. Daily.
8	..	..	..	.. Once a week.
17	..	..	..	.. Thrice a month.
13	..	..	..	.. Twice a month.
14	..	..	..	.. Once a month.
7	..	..	..	.. Once in two months.
22	..	..	..	.. Once in two or three months.
40	..	..	..	.. Once in four months.
120	..	..	..	.. Twice a year.
228	..	..	..	.. Once a year.
34	..	..	..	.. Once in two years.
28	..	..	..	.. Once in three years.
12	..	..	..	.. Once in four years.
11	..	..	..	.. Once in five years.
6	..	..	..	.. Once in ten years.

The above table gives the figures for the remaining 58 per cent, out of these nearly three per cent are those who are living in adjoining villages and are coming to work daily. 5 per cent are visiting their homes at least once a month; 7 per cent three, four and six times a year; 11 per cent at least twice a year; 21 per cent at least once a year, and 10.4 per cent once in two, three, four or five years. It is needless to mention that those who come from outside the province visit their homes at longer intervals than those who come from within the province.

Table no. VIII gives the causes of visits in the case of 536 families.

TABLE No. VIII.

No. of families.	Cause of visit.	Percentage.
218	To see friends, relatives and members of the family.	40.7
111	For negotiating and attending marriages ..	20.7
66	For harvesting, land cultivation, partitioning of lands, purchasing of lands and sharing agricultural produce.	12.3
40	To see and attend sick relatives and members of the family. ....	7.6
20	To attend festivals .. ..	3.6
19	Owing to own sickness and for change of climate.	3.5
19	For bringing wife, mother, sisters or daughters, and to attend to other domestic matters.	3.3
19	To attend <i>sradh</i> and funeral ceremonies ..	3.5
10	For handing over money to relatives, paying land revenue, borrowing money to liquidate debts.	1.8
10	Owing to unemployment at colliery, recruiting workers, litigation, child birth or pregnancy, and to attend to private business.	1.8
7	For repairing and building houses ..	1.3

The overwhelming majority of non-agricultural causes of family visits has already been explained. Most of the workers visiting their homes to see their friends or relatives go generally once or twice a year. Not a few of them leave collieries for their homes once in two years or once in three or four years.

In table IX we have given the length of stay of 415 workers in their villages at the time of their last visit.

TABLE No. IX.

No.	Length of time,		
23	..	..	.. A week. or less than a week.
119	..	..	.. A fortnight or less.
150	..	..	.. A month or three weeks.
60	..	..	.. Two months or less.
19	..	..	.. Two months or more.
21	..	..	.. Four months or less.
3	..	..	.. Five months or less.
7	..	..	.. Six months or less.
8	..	..	.. Eight months or less.
4	..	..	.. Nine months or less.
7	..	..	.. A year or less.
5	..	..	.. One and half year or less.
1	..	..	.. Two years or less.

Length of stay of different workers depends mainly on the distance of native places from the coalfields and on the purpose of visit. The local workers will hardly stay for a week or ten days whenever they will go home either for festivals, or to see their friends, or to purchase land, or to recruit workers, or to bring their families, or to meet some relatives to hand over money to their dependants, or to pay land revenue, or to borrow money or liquidate debts or for litigation; a fortnight or at the most three weeks for repairing and building houses, or for marriage if it is of some near relative, otherwise a week or so; a month or so for child birth, and from a fortnight to one and a half months for agriculture, or when they are themselves sick and want a change.

In the case of persons from the Central Provinces, the United Provinces and the Punjab the minimum length of stay that was recorded was 10 days. Generally, whenever they go after a pretty long time to see their friends and relatives, they stay for a month or two, and in some cases they prolong their stay to three or four months. This is usually the case with the Central Provinces workers. They spend nearly one-half to two months whenever they go for harvesting or cultivation. For marriage, child birth, litigation, funerals and *sradh*, for bringing families or for repairing and building houses they generally stay from 15 days to one month, or at the most five weeks. In the case of both local

and outside labour the period of the stay may be prolonged to six months, seven months or even more than a year in case of their own sickness, unemployment in the coalfields, or when they are sick and want a change.

The table no. X gives the time of visiting of 520 families.

TABLE No. X.

No. of families.				Time of visit.
27	..	..	..	.. January.
32	..	..	..	.. February.
84	..	..	..	.. March.
77	..	..	..	.. April.
68	..	..	..	.. May.
56	..	..	..	.. June.
82	..	..	..	.. July.
15	..	..	..	.. August.
10	..	..	..	.. September.
26	..	..	..	.. October.
10	..	..	..	.. November.
6	..	..	..	.. December.

From the above table it is obvious that 70 per cent of the families pay visits in five months of the year, that is March, April, May, June and July. In March and April people visit generally for harvesting and marriage purposes. In June and July they repair to their villages for land cultivation and marriage purposes. Again, monsoon months of June and July and August are the most common months for visits to see friends and relatives. This is the slack season of the year both in respect of coal production and labour earnings, and hence even the landless workers seem to think it proper to make visits for such less important purposes as of meeting friends and relatives, or to bring families or repairing or building their houses.

In these months mines become depleted of their labour supply. This was actually found in the course of our visit to the coalfields. Not a few collieries which were visited were found to be working with only half the labour force. The colliery owners were making desperate efforts to get sufficient workers by plying lorries or by poaching one another's labourers. The exodus is much less in the busy months of January, February and March, when miners can make good earnings, but it again increases in the month of November when paddy is cut. In the month of October some families leave collieries for their villages for *puja* and other festivals. The figures for the month of August are far from being satisfactory. They have been considerably underestimated due to the fact that the enquiry was conducted in June, July and August when a considerable portion of the labour force

had already left for their village homes. In conclusion we can say that labour supply is more than sufficient in January, February and first half of March, much less in June, July, August and October, and sufficient in other months.

### Literacy.

An attempt was made to find the amount of literacy among the families whose budgets were collected. Test of literacy for the purpose of this enquiry was the same as the census test, i.e., ability to write a letter and read the answer to it. We only enquired into the literacy of the adult males of the families. The persons who could only sign or read but not write were not taken as literate. Out of 1,251 adult males only 168 passed the test. In other words only 13·4 per cent of the adult males of the families studied were found to be literate. This figure is sufficiently short of the figures calculated by Prof. Bose in 1935 and the India figure of literacy for males aged 20 and over, which are 17 and 18·5, respectively.

I have further analysed these figures and found out the amount of literacy among different classes of workers. For this purpose all the workers have been grouped under 16 heads as given in the following table :—

TABLE No. XI.

*Literacy among different classes of workers.*

Serial no.	Classes of workers.	Literates.	Illiterates.
1	Muslims ... ..	56	131
2	Lohars and Barhis ... ..	21	31
3	Brahmans, Rajputs, Kayasthas, and Chhatris.	16	11
4	Kahars and Goalas ... ..	9	42
5	Dusadhs ... ..	9	57
6	Chamars and Mochis .. ..	7	46
7	Central Provinces workers ... ..	5	81
8	United Provinces workers ... ..	4	32
9	Turis ... ..	4	48
10	Bauris .. ..	5	57
11	Rajwars and Ghatwals .. ..	2	50
12	Manjhis ... ..	2	57
13	Mushars ... ..	2	19
14	Bhuiyas ... ..	2	211
15	Ho, Kols, Oraons and Koras ... ..	---	19
16	Miscellaneous ... ..	24	191
	Total ... ..	168	1,088



From the above table it is obvious that literacy is particularly very low among the Bhuiyas and Musahars, Ho, Kols, Oraons, Koras, Manjbis, Bauris and Ghatwals. It is comparatively high among other classes. Among the Lohars and Barhis as many as 65.6 per cent of their adult males are literate. Higher Hindu castes, like the Rajputs, Kayasthas, Chhatris and Brahmins, come second with 59 per cent of their adult males as literate, and the Muslims stand third with 43 per cent. Again, on classifying the literate adult males according to different income groups we find that literacy increases progressively with the increase in income. The following table bears ample testimony to the fact.

TABLE No. XII.

## EARNINGS AND LITERACY.

Income groups:	Number of literate adult males.	Literate adult males per family.
1	2	3
Below Rs. 5	Nil.	..
Rs. 5 and below Rs. 10	2	.01
Rs. 10 .. 15	24	.07
Rs. 15 .. 20	37	.15
Rs. 20 .. 30	43	.2
Rs. 30 .. 40	35	.47
Rs. 40 .. 50	26	.89

The greater literacy in the higher income groups is due to the fact that most of the workers in these groups are skilled workers, and skilled work requires some sort of education.

## Education of children.

In 1,030 families there were 2,021 children under 15 years of age (1,090 boys and 931 girls), of whom only 142, or 7 per cent, were found to be attending school, including a few cases where children were receiving instruction at home. The following table

gives the number of children among different classes of labourers and the number attending school.

TABLE No. XIII.

Class of workers.	Number of children.	Number of children attending school.
1. Muslims, Christians and Sikh ..	302	38
2. Manjhis .. ..	88	..
3. Bauris .. ..	158	5
4. Dusadhs .. ..	70	5
5. Musahars .. ..	48	1
6. Bhuiyas .. ..	267	8
7. Turis .. ..	72	5
8. Ho, Kols, Oraons and Koras ..	40	2
9. United Provinces workers ..	52	6
10. Central Provinces workers ..	108	7
11. Chamars and Mochis ..	82	6
12. Rajwars and Ghatwals ..	88	1
13. Kahars and Goalas .. ..	83	5
14. Lohars and Barhis .. ..	79	11
15. Brahmans, Rajputs, Ohhatris and Kayasthas.	52	6
16. Miscellaneous .. ..	432	36
Total ..	2,021	142

From the above table it is obvious that in respect of the education of children as in the case of literacy, the Manjhis, Bauris, Bhuiyas and other Hindu local workers are at a great disadvantage in comparison with the Muslims, Lohars and Barhis, Rajputs, Brahmins and the workers from the United Provinces. Even modifying the above table by including only the children of school-going age, 6 to 15 years, we find practically the same results.

TABLE No. XIV.

## NUMBER OF CHILDREN OF SCHOOL GOING AGE.

Classes of workers.	Number of children of school-going age.	Number of girls of school-going age.	Number of boys of school-going age.	Number of children attending school.	
				Girls.	Boys.
1	2	3	4	5	6
1. Muslims, Christians and Sikhs ...	192	87	105	6	32
2. Bhuiyas ...	156	69	87	1	7
3. Bauris ...	92	45	47	...	5
4. Central Provinces workers ...	61	24	37	...	7
5. Rajwars and Ghatwals ...	50	21	29	...	1
6. Turis ...	50	16	34	1	4
7. Kahars and Goalas ...	49	20	29	1	4
8. Chamars and Mochis ...	48	19	29	1	5
9. Manjhis ...	45	19	26	...	...
10. Lohars and Barhis ...	43	24	19	2	9
11. United Provinces workers ...	39	19	20	2	4
12. Dusadhs ...	38	16	22	...	5
13. Musahars ...	30	19	11	...	1
14. Rajputs ...	29	8	21	2	4
15. Ho, Kols, Oraons and Koras ...	27	9	18	...	2
16. Miscellaneous ...	234	96	138	3	33
Total ...	1,183	513	670	19	123

The scholars in this case form only 11·9 per cent of the school-going children. Taking the boys and girls separately, about 18 per cent boys of school-going age were attending school, while in the case of girls the percentage hardly comes to 3 per cent. Lastly, computing the number of children attending school for different income groups we get the following result :—

TABLE No. XV.

	Total no. of children of school-going age.	No. of children going to school.	Percentage of the total.
1	2	3	4
Below Rs. 5 .. ..	230	..	..
Rs. 5 and below Rs. 10 ..	116	4	3·4
Rs. 10 .. .. 15 ..	285	23	8
Rs. 15 .. .. 20 ..	270	37	13·7
Rs. 20 .. .. 30 ..	251	47	18·4
Rs. 30 .. .. 40 ..	83	24	28·9
Rs. 40 .. .. 50 ..	28	7	25
Unclassified .. ..	30	..	..

As in the case of adults so in case of children, we find that percentage of children of the school-going age attending school varies directly with the earnings of the families. Higher the earnings, greater the percentage of the children going to school and *vice versa*. In other words, low earnings constitute an important cause of such a small percentage of children of school-going age attending schools. Though instruction in colliery schools, wherever they have been provided, is supposed to be free of charge, yet quite a number of workers maintained that some small fees are charged by the teachers, say two annas a week or eight annas a month. The poverty of the worker is such, that he thinks that he can find better use for these eight annas a month than spending it over his son's education. In this matter we did

not rely entirely on what the workers told us. We ourselves made enquiries from the teachers while visiting the schools and found that the statements of the workers in majority of cases were correct. Not a few teachers themselves confessed that they were charging some fees both in cash and kind whichever was convenient to the parents of the pupils, without the permission of the colliery management. They held that they could not help these exactions as the salaries attached to their posts were sometimes lower than even what a regular coal cutter can manage to earn.

Again, what to say of incurring expense on the education of children, the low earnings of the families keep them always anxious to get their income supplemented by making their children to earn. In course of our investigation we came across about 46 families of which the children of 9 to 14 years of age were working as cowherds, domestic servants, gardeners, shale pickers, loaders and trammers. The exclusion of woman labour from coal mines and consequent reduction of family incomes has added fuel to the fire.

Besides low earnings, there are many other causes of not sending about 83 per cent of the children of school-going age to schools. For instance, in case of girls there is still a strong prejudice among the working classes against sending them to school. As regards boys an important reason lies in the scepticism of the parents as to the benefits that will accrue by pressing their boys through the lower primary stage of education, for that is easily available within their means. Again, some classes of workers, such as the Santals, Ho, Kols, Oraons and Koras, are too low in the scale of civilization to think of educating their children in schools. Even in case of many other classes of workers, the tragedy of the situation is that the benefits of education are not generally appreciated, except by those who have themselves some education. In fact, we found very few such cases where illiterate parents were sending their children to schools.

The lack of sufficient lower primary and upper primary schools is an important cause of such a small number of children attending schools. In fact, some children, having finished lower primary course, were idling as there was no upper primary school in the close vicinity of the mine. Even lower primary schools were absent from many collieries that were visited. Want of companion for going to school and distance of school were also urged by some families as causes for not educating their children. Again, the schools which have been provided by the employers at

their own cost in big collieries, are looked upon by the working classes as institutions for the education of children of the Babus, i.e., clerks and higher paid employees. This inferiority complex from which the workers suffer together with the discouraging and unsympathetic treatment that the teachers meet out to the workers' children, is greatly responsible for keeping away their children from schools. In not a few schools that were visited, it was found that benches were provided for the Babus' children while the children of the workers were made to squat on bare floor. In three or four schools miners' children were found to be sitting in the corners of the class rooms like untouchables. When some workers were questioned as to why they were not sending their children to schools, they not only complained about the big demand of the masters or their discriminatory and unsympathetic treatment towards their children, but also went so far as to say that the teachers do not pay so much attention to their children as they pay to the children of the Babus or high class skilled workers.

Large percentage of depressed classes in the working population can also be an important cause of such a small number of children of school-going age attending schools. There may be some objections on the part of the caste Hindus to have their children educated in the same school with the children of the depressed classes, and who can say that some moral pressure is not brought to bear upon the depressed class workers not to send their children to schools. Other reasons sometimes urged for not sending their children to schools are, either that some parents do not like their children to be beaten by the school masters, or the children have no inclination to study.

### Size of the family.

A family for the purpose of this enquiry has been taken to mean a group of closely related persons living together, pooling their incomes in a common fund, eating their food from their common mess, and among whom there are either women or children or both. Boarders or relatives living in the families, but contributing fixed sums towards the cost of the food which they take from a common mess, have not been regarded as members of the family. In 1,030 families, of which the budgets were collected, there were 1,251 adult males, 1,220 females, 1,090 boys and 930 girls. The average family thus consists of 1.21 adult males, 1.18 adults females, 1.05 male children and 90 female children. In other words in an average family there were four

persons consisting of 2.41 adults and 1.96 children. The following table indicates the average size of the family in each of the 16 classes of workers :—

TABLE No. XVI.  
SIZE OF FAMILIES.

Classes of workers.		Adult males.	Average size of the family.		
	No. of families.		Adult females.	Boys.	Girls.
1	2	3	4	5	6
1. Bhuiyas ..	162	1.31	1.23	.83	.81
2. Muhammedans, Christians and Sikhs.	148	1.26	1.18	1.18	1.1
3. C. P. workers ..	73	1.17	1.18	1.01	.66
4. Manjhis ..	55	1.08	1.04	.86	.74
5. Rajwars and Ghatwals	53	1.01	1.18	1.01	.64
6. Turis ..	52	1.0	1.13	.88	.79
7. Kahars and Goalas ..	47	1.08	.78	1.02	.74
8. Bauris ..	46	1.35	1.47	1.58	.74
9. Dusadhs ..	42	1.57	1.42	1.0	.66
10. Lohars and Barhis ..	38	1.36	1.81	1.89	1.57
11. U. P. workers ..	35	1.03	.85	.91	.57
12. Chamars and Mochis ..	34	1.56	1.22	1.47	.93
13. Brahmans and Chhatris	25	1.08	.8	1.44	.8
14. Ho, Kols, Oroans and Koras.	20	1.01	1.1	1.35	.65
15. Musahars ..	19	1.16	1.15	1.21	1.31
16. Miscellaneous ..	181	1.24	1.22	1.20	1.01

The above table indicates that the size of the families is the largest among the Lohars and Barhis and this may be partly due to the fact, that as many as 17 out of 38 are joint household families, in which heads of the families support also those who have got no right to be supported, partly to the fact that most of them are permanently or semi-permanently settled, and partly to the fact that they have the highest average earning per family. The adult males are the highest among the Chamars, Mochis and Dusadhs, as they are not particular in migrating with their families. The adult females are the highest among the Lohars and Barhis as most of them

are permanently settled with their families; and is the lowest among the high caste Hindu families, such as the Rajputs, Kayasthas, Chhatris and Brahmmins and the workers from the United Provinces, who generally come alone to the coalfields. Again, children are the fewest among the Manjhis and the United Provinces workers. The former leave their children behind in their village homes, as they mostly belong to the Manbhun district and can afford to pay frequent visits to home. The latter, as already mentioned, generally come alone or at the most with the wives leaving their children in the care of aged persons at home. As regards disparity of sex, the high caste Hindus are topping the list for coming alone to the coalfields. The Ho, Kols, Oraons, United Provinces workers, Dusadhs, Kahars and Goalas are also suffering from this disparity of sex, partly for coming alone and partly for having more male children than female children. The last is the common feature of practically every class of family except of the Mushars. Finally the size of the family is the smallest among the Manjhis for the reasons already explained.

Another important fact concerning the size of the family is that it increases progressively with the increase in income. This is obvious from the following tables:—

TABLE No. XVII.  
Income and size of the families.

Income groups.	No. of families.	Adult males.	Adult females.	Male children.	Female children.	Sole dependants.	Sole dependant per family.
1	2	3	4	5	6	7	8
Below Rs. 5 ...	21	·49	1·09	·80	1·0	1	·05
Rs. 5 and below Rs. 10.	135	1·16	1·04	·77	·75	18	·12
Rs. 10 „ „	316	1·15	1·14	1·06	·77	38	·12
Rs. 15 „ „	241	1·19	1·21	1·09	·97	32	·13
Rs. 20 „ „	215	1·83	1·25	1·16	·99	36	·16
Rs. 30 „ „	73	1·71	1·46	1·12	1·25	22	·30
Rs. 40 „ „	29	1·41	1·10	1·07	·65	18	·62
Rs. 50							

The bigger size of the families in the higher income groups is not due so much to their higher fertility as to the greater



number of adult males of the families. The above figures clearly show the progressive increase of sole dependents with the increase in income.

### Constitution of families.

For tracing the relationship existing between the different members of the families we have divided all the families into two classes, that is, natural families or families consisting of only those persons who generally speaking have the right to be fed, housed and clothed by the head of the family and the joint household families which mean any group of relatives living together as one joint household. Natural families were found to be as many as 724, or 70 per cent of the total families, and the remaining 30 per cent were the joint household families or families of the most mixed type.

The following table would make the position of different classes of workers clear in this respect :—

TABLE No. XVIII.  
Natural and Household Families.

Classes of workers.	No. of families.	Natural families.		Joint household families.	
		No.	Percentage.	No.	Percentage.
1	2	3	4	5	6
Kols, Koras, Ho and Oraons	20	11	55	9	45
Bhuiyas .. ..	162	118	72.9	44	27.1
Muslims .. ..	148	114	70.1	31	29.1
O. P. workers ..	73	50	68.5	23	31.5
Manjhis .. ..	55	50	91.9	5	9
Mushars .. ..	19	12	63.2	7	36.8
Rajwars and Ghatwals ..	53	37	70	16	30
Turis .. ..	52	35	67.3	17	32.7
Kahars and Goalas ..	47	34	72.3	13	27.7
Bauris .. ..	46	34	73.8	12	26.2
Dusadhs .. ..	42	29	69.1	13	30.7
Miscellaneous ..	183	121	66.1	62	33.9
Lohars and Barhis ..	38	38	73.7	10	21.3
U. P. workers ..	35	29	82.9	6	17.1
Chamars and Mochis ..	34	24	64.4	10	35.6
Rajputs, Kayasthas, Brahmins and Chhatris	25	16	64	9	36

Natural families predominated in the case of the Manjhis and the United Provinces workers and the joint household families among the Kols, Koras, Oraons, Chamars, Mochis, Dusadhs, Mushars and the Central Provinces workers.

Again, on classifying the natural and joint household families according to different income groups we find that the number of the joint household families shows a tendency to increase with the increase in income. This is obvious from the following table :—

TABLE No. XIX.

Constitution of families and their income.

Income groups.	Normal families.		Joint household families.	
	No.	Percentage.	No.	Percentage.
1	2	3	4	5
Below Rs. 5 .. ..	20	95	..	..
Rs. 5 and below Rs. 10 ..	114	84.6	21	15.2
Rs. 10 „ „ 15 ..	254	83.6	62	16.4
Rs. 15 „ „ 20 ..	167	69.3	74	30.7
Rs. 20 „ „ 30 ..	121	57.3	94	43.7
Rs. 30 „ „ 40 ..	37	50.8	36	49.2
Rs. 40 „ „ 50 ..	11	37.9	18	62.1

On examining the composition of natural families it was found that out of 724 families about 22 families consisted of the head only, 120 of husband and wife, 290 of husband, wife, sons and daughters, 146 of husband, wife and son, 96 of head, wife and daughter, 13 of mother and son and 37 of father and children.

The following table showing the type of natural families in various income groups is highly instructive.

TABLE No. XX.  
Earnings and family composition.

Family composition.	Income-groups.						
	Below Rs. 5.	Rs. 5 and below Rs. 10.	Rs. 10 and below Rs. 15.	Rs. 15 and below Rs. 20.	Rs. 20 and below Rs. 30.	Rs. 30 and below Rs. 40.	Rs. 40 and below Rs. 50.
1	2	3	4	5	6	7	8
Head only ..	..	7	6	4	5	..	..
Husband and wife..	..	18	54	30	16	1	1
Head, wife and sons and daughters.	1	26	110	72	50	17	2
Father and children	2	23	2	6	2	1	1
Mother and children	9	..	4	..	..	..	..
Head, wife and son.	1	22	55	33	20	7	2
Head, wife and daughter.	..	8	34	25	12	6	1

As regards mixed type of families, it is no wonder that they were as many as 306 because most of the workers in the Jharia coalfield are imported. When males and females are required to work together, and again when an appreciable number of workers come alone to the work in mines, it is quite natural that permanent and temporary alliances outside the matrimonial relationship grow up between the sexes. In the course of our visit to the colliery *dhaorahs* we noted about 200 cases where males and females, quite unrelated to one another, were living together in one room. Even among families, of which the budget was taken, we found 11 persons living with mistresses and in other seven cases mistresses were found living in the family with the wedded wife. Again, in as many as 10 cases workers were found to be keeping two wives. In 10 cases the family

consisted of the head, his wife, children, his mother or father, or both father and mother. Husband, wife, married daughters or sons were forming the family in 23 cases. Unmarried brother was found in the family in 40 cases, and two brothers and their wives were constituting a family in 23 cases. In 12 cases, nephew or grand-daughter or son was found to be the member of the family. Son-in-law was a member of the family in 17 cases, daughter-in-law in 13 cases, mother-in-law in 18 cases, uncle in 5 cases, father-in-law in 3 cases, sisters in 31 cases, brother-in-law in 9 cases, cousin and niece in 7 cases.

#### Workers in the family.

In 1,030 families consisting of 1,251 males, 1,220 females, 1,090 boys and 931 girls we found 1,156 adult male workers, 485 adult female workers and 46 child workers. These figures include both the whole-time and part-time workers. Again, they include persons working outside the collieries as domestic servants, *biri* makers, gardeners, fish hawkers, midwives, carpenters, blacksmiths, cobblers, barbers, but forming members of some families living and working in some collieries. Thus, in an average family of 1·21 adult males, 1·18 adult females, 1·95 children there were 1·12 adult male workers, ·46 female workers and ·25 child workers. In other words 92·2 per cent of adult males, 39·9 per cent of adult females and nearly 2·3 per cent of children were found to be working. In table no. XXI we give the percentage of workers among adult males and females in each of the sixteen different classes of families.

TABLE No. XXI.

	Percentage of adult males who are workers.	Percentage of adult females who are workers.
Rajputs, Kayasthas and Brahmins ..	100	15
Turis .. ..	100	27·1
Ho, Kols, Oraons and Koras ..	100	59·1
Orissa workers .. ..	100	71·9
Kahars and Goalas .. ..	98·1	40·5
Manjhis ... ..	96	66
C. P. workers .. ..	95·4	44·8
Muslims .. ..	92·5	20
Bhuiyas .. ..	92	35·5
Chamar and Mochis .. ..	90·6	23·8
Bauris .. ..	90·3	58·3
Dusadhhs .. ..	98·5	20
U. P. Workers .. ..	83·3	10
Lohars and Barhis .. ..	80·7	20·8
Miscellaneous .. ..	90·8	41

The percentage of women workers is the lowest among the Rajputs, Kayasthas, Brahmins, Chhatris, U. P. workers and the Muslims, as there is great seclusion of women and the heads of the families do not think it proper to allow their women folk to work except when they are compelled to do so by financial difficulties. It is fairly low among the Chamars, Mochis and Turis, but surprisingly low among the Bhuiyas. The percentage of the adult males is the highest among the Orissa workers, Kols, Ho, Oraons, Turis and high caste Hindus.

Again, I have attempted to find out the number of families having more than one earning member among different classes of workers and in different income groups. The results obtained are tabulated below:—

TABLE No. XXII.

Classes of workers.	Number of families having—						Total number of families having more than 1 earner.
	2 earners.	3 earners.	4 earners.	5 earners.	6 earners.	7 earners.	
1	2	3	4	5	6	7	8
Muslims	38	6	...	...	...	...	44
Bhuiyas	77	24	6	...	...	...	107
Maajhis	29	1	...	...	...	...	30
Bauris	21	2	1	...	...	...	24
Dusadhe	9	5	...	...	...	...	14
Turis	5	4	1	...	...	...	10
Mushars	8	1	1	...	1	...	11
Ho, Koras, Kols, Oraons	8	2	2	...	...	...	12
Ghatwals, Rajwars	14	3	...	...	...	...	17
U. P. workers	7	1	...	...	...	...	8
Kahars and Goalas	13	1	1	...	...	...	15
C. P. workers	24	10	1	...	...	...	35
Barhis and Jhars...	11	...	...	...	...	...	11
Chamars and Mochis	5	6	...	...	...	...	11
Rajputs, Brahmins, Chhatris, Kayasthas.	4	1	...	...	...	...	5
Miscellaneous	63	13	7	1	1	1	86
Total	336	80	20	1	2	1	440

TABLE No. XXIII.

## INCOME GROUPS.

Number having	Below Rs. 5.	Rs. 5 and and below Rs. 10.	Rs. 10 and below Rs. 15.	Rs. 15 and below Rs. 20.	Rs. 20 and below Rs. 30.	Rs. 30 and below Rs. 40.	Rs. 40. and below Rs. 50.
1	2	3	4	5	6	7	8
2 earners ...	1	19	108	92	83	23	11
3 „ ...	1	...	11	21	30	16	1
4 „ ...	...	...	1	2	9	6	2
5 „ ...	...	...	...	...	...	1	...
6 „ ...	...	...	...	...	...	1	1
7 „ ...	...	...	...	...	...	1	...
Total ... {	2	19	120	115	122	43	15
	10%	14%	87.9%	44.7%	66.7%	67.4%	66%

It would appear from the first table that nearly 43 per cent of the families have more than one earner. Out of those 43 per cent nearly 33 per cent have two earners, and nearly 8 per cent have 3 earners and 1.7 per cent four earners. Again, proportion of families having more than one earner is the highest in the case of Bhuiyas, Ho, Koras, Oraons, Kols, Mushars and the lowest in case of Turis, followed by the U. P., higher Hindu caste workers and the Muslims. From the second table it is obvious that the proportion of the families having more than one earner increases progressively with the increase in income. So this corroborates another fact that higher incomes of many families are not so much due to the generosity of the employers as to the fact that they have more than one member earning.

## Ages of workers and children.

In Table no. XXIV I have classified the different classes of workers in 1,030 families by their ages.

TABLE No. XXIV.

Age.	Adult males.		Adult females.	
	No.	Percentage.	No.	Percentage.
15 years and under ..	32	2.8	14	2.8
15 " " 20 years ..	105	9.0	45	9.2
20 " " 25 " ..	213	18.5	161	33.6
25 " " 30 " ..	430	33.4	133	27.4
30 " " 35 " ..	243	21.0	66	13.6
35 " " 40 " ..	58	5.0	40	8.2
40 " " 50 " ..	37	3.1	21	4.2
50 " " 55 " ..	11	.9	3	1.0
55 " " 60 " ..	4	.5	3	
60 " " and over ..	2	..	..	..
Unspecified ..	21	1.8	..	..
Total ..	1,156	100	485	100

The above table is highly instructive as it reveals the fact that nearly 81.9 per cent of the adult male workers are in the age period 20 and 35 years, and 60 per cent are in the age period 25 and 35 years. As regards adult female workers, 59 per cent are in the age period 20 and 30 and 73 per cent between 20 and 35 years. Adult male workers of the age of 40 and above formed 4.9 per cent of the male workers between the age of 15 and 40; and adult female workers of 40 years and above were 5.7 per cent of the adult female workers between the ages of 15 and 40. This favourable age distribution of workers, of which the chief feature is the predominance of adults between the ages of 20 and 35, can to some extent explain a lower incident of sickness and mortality among the colliery workers than among the workers of many other industrial areas in India.

The 46 children who were found to be working in and outside the collieries can be thus classified by age.

TABLE No. XXV.

Age.	No. of children working.				
14 years .. ..	..	..	..	..	12
13 .. ..	..	..	..	..	5
12 .. ..	..	..	..	..	15
11 .. ..	..	..	..	..	4
10 .. ..	..	..	..	..	7
9 .. ..	..	..	..	..	2
7 .. ..	..	..	..	..	1
Total .. ..					46

In Table no. XXVI we have classified all the children in 1,030 families by age.

TABLE No. XXVI.

Age.	Boys.		Girls.	
Under 1 year .. ..	..	..	..	..
One year and under 6 years .. ..	..	..	..	..
6 years and under 10 years .. ..	..	..	..	..
10 years and under 13 years .. ..	..	..	..	..
13 years and under 15 years .. ..	..	..	..	..
Unclassified .. ..	..	..	..	..
Total .. ..		1,090	931	

Children under 15 years formed 44.9 per cent of the population of 1,030 families. For every 100 male children there were 85 female children. Lastly, 41 per cent of the children were between the ages of 1 and 6 years, and 58.3 per cent were between the ages of 6 and 15 years.

Besides recording the children living, the number of children who had died before passing the age of 15 years was also enquired into. As many as 327 families, or nearly 32 per cent of the total families, reported the deaths of 523 children. Taking all the families investigated there was a loss of about .5 children per family, but calculating on the basis of 327 families which actually reported the deaths of children, every such family had



lost 1.6 children per family by death. Infant and child mortality classified by the age of the child at death is summarized in the following table.

TABLE No. XXVII.

	Number of children died.
Still-Births .. .. .	8
Just after birth .. .. .	22
Between one month and 6 months .. .. .	128
"    6 months and one year .. .. .	92
"    1- and 2 years .. .. .	70
"    2 and 3 .. .. .	55
"    3 and 4 .. .. .	43
"    4 and 5 .. .. .	31
"    5 and 10 .. .. .	41
"    10 and 15 .. .. .	33
Total .. .. .	523

Infant mortality, that is, deaths within the 1st year of life, works out at 45.8 per cent (including 8 cases of still-births) of the total deaths of children below the age of fifteen. The Jharia Mines Board of Health reported 102 and 108 as the infant mortality rates for the years 1935 and 1936.

#### Occupations of the workers.

We have already stated that in 1,030 families there were 1,156 adult male workers, 485 adult female workers, 32 male child workers and 14 female child workers. The occupations of the workers are tabulated below separately for males, females and children.

TABLE No. XXVIII A.

#### MALE WORKERS.

##### (i) Skilled workers.

Occupations	No. of workers.
(i) Coal-cutters and stone-cutters .. .. .	332
(ii) Winding, haulage, fan pump and screen plant <i>khalasis</i> and drivers.	91
(iii) Propping <i>mistris</i> and line <i>mistris</i> .. .. .	37
(iv) Hookmen, onsetters, clipmen and pointsmen .. .. .	36
(v) Firemen .. .. .	20
(vi) Blacksmiths, turners and moulders .. .. .	20
(vii) Carpenters .. .. .	18

Occupations.	No. of workers.
(viii) Fitters, assistant fitters, electric fitters, power house drivers and rope splicers.	17
(ix) Masons .. .. .	16
(x) Certificated <i>sirdars</i> .. .. .	14
(xi) Shot-firers .. .. .	10
(xii) Tindal <i>coolies</i> .. .. .	8
(xiii) Drillers .. .. .	7
(xiv) Coal-cutters and <i>sirdars</i> .. .. .	5
(xv) Safety lamp checkers.. .. .	4
(xvi) Overmen .. .. .	3
(xvii) Coal-cutting mechanics .. .. .	2
(xviii) Main drivers .. .. .	2
(xix) Ticket distributers .. .. .	2
(xx) Number takers .. .. .	2
(xxi) <i>Chaprasis</i> .. .. .	2
(xxii) Apprentices and tub repairers .. .. .	2
(xxiii) Coke manufacturing contractor .. .. .	1
Total .. .. .	651

(ii) *Unskilled workers.*

	No. of workers.
(i) Coolies :—Bailing <i>coolies</i> , oil <i>coolies</i> , soft-coke manufacturing <i>coolies</i> , lime <i>coolies</i> , wagon shunting <i>coolies</i> , boiler <i>coolies</i> , mason <i>coolies</i> , drilling <i>coolies</i> , fitter <i>coolies</i> , coke oven <i>coolies</i> , packing <i>coolies</i> , road <i>coolies</i> , store <i>coolies</i> and others.	164
(ii) Surface trollymen .. .. .	96
(iii) Underground trollymen .. .. .	68
(iv) Loaders of all kinds .. .. .	123
(v) Hammermen .. .. .	17
(vi) Earth cutters .. .. .	13
(vii) Lampboys .. .. .	6
(viii) Chainmen .. .. .	5
(ix) Safety lamp cleaners .. .. .	5
(x) Gatemen .. .. .	4
(xi) Domestic servants .. .. .	4
Total .. .. .	505

Excluding overmen, certificated *sirdars*, coke manufactures, contractors, ticket distributors, number takers and *chaprasis*, there were 629 skilled workers forming about 54 per cent of the total adult male workers. . . Out of 629 skilled workers 333 or 51.1 per cent were coal-cutters and stone cutters, 13.5 per cent engine-*khalasis* and drivers, 11.2 per cent were *mistris*, hookmen and onsetters, 6.1 per cent firemen, blacksmiths, turners and moulders, 5.2 per cent carpenters and masons, 3.8 per cent tindal *coolies* and fitters, and the remaining 8.7 per cent were shot firers, drillers, coal-cutting mechanics and others. Unskilled workers were only 44 per cent of the adult male workers. Among them the *coolies* and cleaners were predominating by forming 32.4 per cent of the total unskilled workers. The trollymen, both surface and underground, were about 31 per cent, loaders of all kinds 24.4 per cent, hammermen, chainmen and safety lamp cleaners 5.3 per cent, earth cutters 2.5 per cent, and the remaining 4.4 per cent were lamp boys, sweepers, domestic servants and gatemen. . .

TABLE No. XXVIII-B.

## FEMALE WORKERS.

Serial no.	Occupations.	Number of workers.
1	2	3
1	Coal loaders and wagon loaders .. .. .	261
2	Unskilled <i>coolies</i> , such as mason <i>coolies</i> , boiler <i>coolies</i> , workshop <i>coolies</i> , coal screening <i>coolies</i> and lime <i>coolies</i> .	124
3	Shale pickers .. .. .	42
4	Boiler ash cleaners and coal suppliers .. .. .	27
5	Trollymen .. .. .	18
6	Sweepers (Female) .. .. .	5
7	Midwives .. .. .	2
8	Depot cleaner .. .. .	1
9	Domestic servants .. .. .	2
10	Female shop-keeper .. .. .	1
11	Coal cutters .. .. .	2
	Total .. .. .	485

The above figures are highly instructive, as they show that practically all occupations in which women are engaged, except coal cutting and shop keeping, come under the category of unskilled work. They are chiefly engaged in loading and various types of unskilled cooly work on the surface. Out of 485 about 385 or 79 per cent were found to be loaders and unskilled surface coolies, 14·3 per cent were shale pickers and boiler coolies, 4 per cent trolly women and 2·7 per cent coal cutters, domestic servants, midwives, shop-keeper and female sweepers.

### Child workers.

As noted before there were 46 child workers. They were engaged as given below :—

TABLE No. XXVIII.O.

Occupations.	Number of workers.
Loaders .. .. .	9
Shale pickers .. .. .	7
Trolly boys .. .. .	6
Surface coolies .. .. .	5
Coke manufacturing coolies .. .. .	4
Stone loaders .. .. .	3
Domestic servants .. .. .	3
Boiler coolies .. .. .	3
Cow herds .. .. .	2
Road coolies .. .. .	1
Paid apprentices .. .. .	1
Unspecified .. .. .	2
Total .. .. .	46

Though according to the latest Mines Amendment Act children under the age of 15 cannot be employed in coal mines, yet as many as 30 cases were found where children below the minimum age were supplementing their parents' income either by helping them in their tramping or loading work or by working as shale pickers, boiler coolies or coke manufacturing coolies.

Lastly, turning to the occupations of different classes of workers we find that the Bhuiyas are predominantly loaders (158 out of 257, or 60 per cent) and unskilled coolies. The Muslims take chiefly to skilled work other than coal cutting. 95 out of 175

Muslim workers were engine drivers and *khalasis*, lime and propping *mistris*, masons, firemen, fitters, coal-cutting mechanics, shot firers, mining *sirdars*, tindal *coolies*. 75 per cent of the masons come from their ranks. The Muslim workers from Naakhali are well known as firemen. The Mushars, Ho, Kol, Koras, Manjhis, Beldars, Ghatwals and Bauris are mostly coal-cutters and loaders. The Bauries are showing the tendency of giving up coal-cutting in favour of other skilled occupations, such as machine driving. 53 per cent of the Rajwars were engaged in skilled works and 47 per cent in unskilled. Among the Chamars and Mochis 37 per cent of the workers were coal-cutters, 33 per cent other skilled workers and 30 per cent unskilled workers. Among the Turis 42 per cent were engaged in purely unskilled work, 23 per cent in skilled work and 35 per cent in coal cutting. The Dusadhs are mostly unskilled surface workers. Kurmis like Muhammadans take more to skilled work than to coal cutting and unskilled work. Nearly 83 per cent of the workers coming from the Central Provinces were engaged in coal-cutting, quarry-mining and loading. The United Provinces' workers had taken to coal-cutting and other skilled works. Very few of them were working as unskilled *coolies*. The Tantis and Gondrajs from Orissa were coal, earth and stone cutters and loaders to the extent of 77 per cent (20 out of 26). None of the high caste Hindus, such as the Rajputs, Brahmins, Kayasthas and Chhatris was working either as a coal cutter or loader or trammer or unskilled cooly. All were found to be skilled workers. The Barhis and Lohars take generally to their caste profession even in the coalfields as far as possible. Out of 27 carpenters 20 were Barhis by caste, and out of 24 Blacksmiths 16 or 6.6 per cent were Lohars by caste; Kahars and Goalas were working as miners, loaders and trammers to the extent of 61 per cent and rest as skilled workers. Among miscellaneous workers 24 per cent were coal cutters, 26 per cent unskilled *coolies* and the remaining 50 per cent were engine drivers, blacksmiths, onsetters, mistries, carpenters, shot firers, Barhis and Lohars.

#### Regularity of employment.

Among the monthly paid skilled workers other than coal cutters employment is more or less regular, though in the period of slump in the coal trade some of them are thrown out of employment. Among the weekly paid and daily paid workers unemployment and under-employment or irregularity in work are quite common. While dealing with the question of regularity of employment in the coalfields, the Royal Commission on Labour reported that "miners do not work on Sunday.

On Monday very few miners put in appearance. Many are still absent on Tuesday and it is not till Wednesday that good attendance is secured". Reasonable estimates indicate an average of 4 to 4½ days work per week for the individual miner during the weeks he is at work. A written statement about the number of days the labourers worked in some important collieries of Jharia, which was submitted by the Bihar Government to the Royal Commission on Labour, also shows that out of 2,470 workers only 419 or 17·4 per cent attended work on six days, 37·2 per cent on five days, 27·1 per cent on four days, 11·7 per cent on three days, 5 per cent on two days and nearly 3 per cent only one day in a week. On the average 2,470 persons worked for only 4·5 days in a week. In course of this investigation I also attempted to elicit information on this subject and to that effect I collected daily output figures of some regular weeks from some collieries. These figures clearly show that for output Monday is the worst day, Tuesday a day of improvement, Wednesday, Thursday and Friday the best days and Saturday the day of decline. For the shortage of space I am giving below the figures of only six collieries in support of the above fact.

TABLE No. XXIX.  
DAILY OUTPUT IN SOME REGULAR WEEKS.

Name of the colliery.	Days of the week.					
	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
1	2	3	4	5	6	7
	Ton.	Ton.	Ton.	Ton.	Ton.	Ton.
1. Linton Angar Pather, 4th week of June 1938.	47	151	200	232	244	236
2. Bhagaband 13th June to 18th June 1938.	249	414	440	476	549	264
3. Muddidih 13th June 1938.	230	175	234	349	317	202
4. Jitpur 9th June to 13th June 1938.	409	579	598	618	617	593
5. Bhaga Colliery 20th June to 26th.	906	1,024	1,086	1,035	1,113	1,071
6. Kirkend 9th to 13th June.	103	266	297	277	294	258

When the colliery managers were asked about the cause of low output on Saturdays and Mondays they could not give us any other cause but the shortage of workers on Saturdays and Sundays. The majority of miners indulge in hard drinking and thus render themselves incapable of work on Monday. On Saturday which is generally the day of payment, most of the workers work half day in order to reach the colliery office in time to receive their weekly wages. In some collieries even those workers who are not addicted to drink or drink moderately and can attend work on Monday, are not given work as the employers prefer to keep the mines closed even on Monday because the majority of workers are not expected to come to work. Again, when the mines are worked for all the six days of the week many workers, who do not touch liquor or take it with moderation, absent themselves from work either on Monday or Tuesday on the pretext that the work is exhausting and they simply cannot keep up the strain for six days. This belief of theirs is not without any foundation. In some mines where underground workings were also visited the conditions were really so unsatisfactory that it was really too much to expect the workers to work on all the six days of the week. For instance, in Bhadroochuk colliery, where some workers were reported to be badly beaten by the managers or his agents for staying in *dhourahs* and not attending work on all the six days of the week, some parts of the underground workings were found to be as hot as coke ovens, and the few persons who were working in those parts reported that they could not work all the eight hours of the day. After every one hour's work they had to sit for half an hour or so in some water pit. But at the same time I also came across some persons who had worked only for four or five days in a week, as they had earned enough for the week in those days and did not think it worthwhile to tire themselves on the fifth or sixth day. The workers who were indulging in hard drink deluded themselves in the belief that without liquor they could not keep up their energies for the remaining four or five days in a week. Some also believed that the consumption of liquor was essential to keep their bowels free from coal dust which they inhaled in course of their daily work.

The absenteeism on the part of the worker was not only voluntary but also involuntary. Out of 1,030 heads of the families whose budgets were collected, as many as 71 or 6.8 per cent could work only in 3 weeks out of 4 weeks for which their budgets were taken. 35 could get work only in two weeks and

10 were not able to earn for three weeks. Again, in 82 cases complaints were heard that though the workers had got work for all the four weeks yet the available work was not as much as they could do.

This forced unemployment or under-employment was found to be due to multiplicity of causes, such as the sickness of workers, breakdown of some winding or haulage engines, labour strikes in some iron and steel works, shortage of orders, shortage of tubs and railway wagons and too much water in some working places due to inefficiency of pumping. Among male workers the worst victims of this forced unemployment were wagon loaders because of small despatches. Some employers held that though their condition was pitiable in the slack months in which we were visiting the coalfields, yet they were better off in other months of the year. But from my experience of the busy season of the coal trade, that is the months of January, February and March, I can say that their lot is never a happy one, so far as their earnings are concerned. In the busy seasons the employers in their greed for greater despatches very often employ many more men than are necessary and thus their earnings remain low.

But the worst of all the victims of under-employment are the women workers. Their exclusion from underground work has considerably reduced the scope of their employment in collieries. They are now chiefly employed on the surface as loaders or unskilled *coolies*. In a good majority of collieries that were visited, their number was found to be exceeding the jobs that were available. So in order to be just to all the workers of their colliery, the managers and their subordinates had distributed the available work among all their women workers, whose family income was insufficient, in such a way as to enable them to get two or three days' work in a week and add 9 to 12 annas to their weekly family earnings. But in most of the collieries their managers and their staff were far from honest and sympathetic in their dealings with women workers. They were not adopting any plan of distribution of work among them and were allowing them to compete with male workers and among themselves. Those who could grease the palms of loading clerks or other members of the subordinate and supervising staff, or could make some personal sacrifice, were getting work all the six days in a week, and others who were uninfluential and valued their modesty more than anything else in this world, had no other alternative but to keep their family semi-starved.



We also attempted to ascertain the number of days worked by the labourers whose budgets were collected. We enquired only the number of days worked in the past week, as a month was found to be too long a period for the workers to tell us definitely about the number of days they had worked. Some managers and contractors were also kind enough to permit us to see their payment books where the number of the days are recorded. But in most cases it was found to be difficult to make out any thing, as only the names of the *sirdars* and their gangmen were recorded and no mention was made of the individual worker. It was only in a few cases that we were able to obtain some figures. On the basis of these figures and the figures that were collected from the workers we can say, that nearly 28 per cent of the workers were working six days, 39 per cent five days, 26 per cent four days and 7 per cent two days or one day a week.

#### Family income.

As the vast majority of workers are paid weekly, usually on Saturday afternoon or on Sunday morning, and as a month was found to be too long a period for them to tell us their monthly earnings at a time, we enquired their last four weeks' earnings week by week. A few workers were not able to tell their third and fourth week's earning and in their case there was no alternative but to be contented with what we got. We attempted to make up the deficiencies from the books of contractors and colliery offices but failed in majority of cases, as the books usually contain only the record of the output and income of a gang of workers. The number or name of persons in the gang are not recorded. In arriving at the monthly income of workers we have first calculated their average weekly income from their four week's earnings, and then have increased this average weekly income to  $4\frac{1}{2}$  times. This makes the month of  $31\frac{1}{2}$  days which is slightly in excess of a normal month. This fact must always be borne in interpreting the statistics presented here.

Throughout our discussion of income and expenditure we have based our figures on 1,030 families, consisting of 1,251 adults, 1,220 adult females, 1,090 boys and 931 girls, of whom 1,156 were adult male workers, 485 adult female workers, 32 male child workers and 14 female child workers. The aggregate income of all the families totalled Rs. 18,228-13-8 or Rs. 17-11-2 per family. It includes not only the income earned in any capacity in the colliery but also the income earned in any

other capacity not connected with the colliery, such as by working as a cultivator, carpenter, barber, tailor, cobbler, domestic servant, cow herd, etc. Taking the income earned exclusively from the colliery the aggregate amounts to Rs. 17,655-10-2 or Rs. 17-2-3 per family.

The table below gives the average monthly income of all families by income group.

TABLE No. XXX.

**Family earnings according to different income groups.**

Income groups.	No. of families.	Total income of all families.			Average monthly income per family.		
		Rs.	a.	p.	Rs.	a.	p.
Rs. 5 and below ..	21	85	5	5	4	1	10
Rs. 5 to 10 ..	135	1,091	6	3	8	1	4
Rs. 10 to 15 ..	316	3,983	12	11	12	9	7
Rs. 15 to 20 ..	241	4,064	15	0	16	14	1
Rs. 20 to 30 ..	215	5,284	11	8	24	9	4
Rs. 30 to 40 ..	73	2,460	11	9	33	11	4
Rs. 40 to 50 ..	29	1,256	14	8	43	5	6
Total of all groups ..	1,030	18,228	13	8	17	11	2

The Table no. XXXI shows the average monthly income of the workers coming from different provinces.

TABLE No. XXXI.

Province.	No. of families.	Total income of all families.			Average income per family.		
		Rs.	a.	p.	Rs.	a.	p.
1. Workers from the Central Provinces.	73	1,416	3	9	19	14	3
2. Workers from the United Provinces.	35	699	4	10	19	15	7

TABLE No. XXXI—concl'd.

Province.	No. of families.	Total income of all families.			Average income per family.		
		Rs.	a.	p.	Rs.	a.	p.
3. Workers from Bengal	22	436	4	10	19	13	2
4. Workers from the Punjab.	8	226	13	0	28	5	7
5. Workers from Central India.	6	79	1	4	13	2	11
6. Workers from Orissa	14	175	8	3	12	8	7
7. Miscellaneous ..	8	166	5	0	20	12	7.5
8. Local workers ..	864	15,029	4	8	17	9	6

The workers from the Punjab have the highest average income in spite of the fact that they do not allow their families to work. Their higher income is generally due to the fact that they are mostly engaged as well-paid skilled workers, such as, machine drivers, shot firers, and Tindal *coolies*, coal cutting mechanics and carpenters. The United Provinces workers stand second to the Punjabi workers as they also take more to remunerative skilled works, such as of machine driving, shot firing and black-smith, than to low paid skilled works, such as coal-cutting, and unskilled works. The Central Provinces workers are also managing to earn a higher income than the local labourers in spite of the fact that most of them are working as coal-cutters or coal-loaders. Their higher income is due to their greater efficiency which in turn can be attributed to their higher standard of living and greater willingness to exert themselves than the local workers. They drink less: and visit their homes less frequently than the Bihari workers and are decidedly more regular and painstaking in their work. Referring to this type of workers the Royal Commission on Labour remarked that "they look to other parts of India as their home, as their migration is induced by the intense pressure of the population on land. Their chief aim in such distant places as coalfields is to earn not only for their present needs but also to provide against the rainy day; hence they are more ambitious and efficient than the local workers whose only aim is to secure hand to mouth living". Similarly we can explain the higher average income of the Bengal workers. Their high ambitions and firm determination to earn maximum

money possible keep them regular and efficient in their work. Besides this, most of the Mohammadans and Bauri workers do not work as coal-cutters or cheap unskilled coolies but as well-paid firemen, engine drivers, shot firers and other highly paid skilled workers.

The low earnings of the workers from Central India and Orissa are due to the fact that they are engaged mostly in such unremunerative work as earth and stone cutting and unskilled *cooly* work. In case of miscellaneous workers the average income is high on account of the inclusion of three highly paid workers from Madras and Cutch, one of them is a tindal *cooly*, another an overman and the third a clerk. The income of five other workers of the miscellaneous group is much lower than that of the local workers as they are doing cheap unskilled work.

Now turning to the different classes of labourers, the average income of a family of each class is as follows :

TABLE No. XXXII

*Average monthly income of different classes of workers.*

Classes of workers.	Number of families.	Average income per family.			No. of adult workers per family.
		Rs.	a.	p.	
Lohars .. ..	38	26	8	1	1.4
Caste Hindus.. ..	25	25	7	2	1.2
Muslims .. ..	148	21	2	0	1.3
United Provinces workers..	35	19	8	0	1.0
Central Provinces workers..	73	18	6	7	1.6
Dusadhs .. ..	42	17	12	0	1.8
Mushars .. ..	19	17	0	7	1.79
Turis .. ..	52	16	10	11	1.2
Bhuiyas .. ..	162	16	12	10	2.01
Kahars and Goales .. ..	47	16	5	9	1.4
Chamars .. ..	34	18	0	10	1.7
Rajwars and Ghatwals .. ..	53	15	11	4	1.3
Bauris .. ..	46	15	1	11	2.1
Manjhis .. ..	55	14	12	8	1.5
Koras, Kols and Oraons .. ..	20	14	5	2	1.6

The differences in the income of different classes of workers shown in the above table can be explained partly by the nature of occupation of class and partly by the number of adult

workers in each class. The lohars have the highest income. Next to them come caste Hindus, that is, Rajputs, Kayasthas, and Chhatris. They are followed by Mohammedans. The higher income of these groups is all the more remarkable, in that their average number of workers per family is much less than that in any family, except the United Provinces workers. This is mainly due to the fact that they are engaged more in well-paid skilled work such as of shot firing, coal mechanics, blacksmiths, carpenters, engine *khalasis* and *mistris* than in coal-cutting and unskilled workers.

The comparatively higher incomes of the Bhuiyas and Mushars are mainly due to their large number of workers per family. The Manjhis, Koras, Chamars, Kols, Oraon and Ho have the smallest income with a fairly large proportion of workers per family, as they are engaged chiefly in coal-cutting and cheap unskilled work. The lower earnings of the Kahars, Goalas, Rajwars, Turis and Ghatwals is due to their small number of workers per family.

The surprisingly low average monthly income of the Bauris in spite of their highest number of workers per family, is probably due to the large proportion of female workers in their families (For every 10 male workers there are nearly 7 female workers). In other words about 41 per cent of the Bauri workers are women whose average monthly income is Rs. 4 as the maximum.

#### Supplementary income.

The figures in the above income tables also include supplementary incomes earned both in and outside the collieries. They amount to Rs. 573-3-6 for 1,030 families, or about 9½ rupees per family. Excluding Rs. 272-7-9, which were earned by some coal-cutters as commission or *sirdari* in addition to their weekly wages for coal-cutting, and a sum of Rs. 65-12-8 which 44 workers received as overtime pay, bonus, pension, maternity and sickness benefit, *bakhshis* from the employers, we get Rs. 234-3-1 for 34 families or Rs. 2-12-4 per family, or Rs. 3-10-0 per family if calculated on the basis of 1,030 families, as supplementary income earned in capacities not connected with the collieries, such as by working as a cultivator or a carpenter, or a blacksmith, or a domestic servant, etc., etc.

In Table no. XXXIII we have given the number of families earning supplementary income, the sources of such income and the amount from each source.

TABLE No. XXXIII.  
*Supplementary Income.*

Source of supplementary income.	Number of families.	Income.
1	2	3
		Rs. a. p.
(A) Supplementary income from colliery work—		
1. Commission and <i>sirdaris</i> ..	29	272 7 9
2. Overtime pay ..	19	41 4 0
3. Pensions and maternity benefits ..	4	7 12 0
4. Puja festival's and other <i>bakshis</i> ..	18	4 6 0
5. Bonus ..	6	12 6 8
(B) Non-colliery sources of supplementary incomes—		
1. Agriculture ..	52	85 12 6
2. Cow herding ..	2	11 0 0
3. Pig and goat selling ..	5	19 8 0
4. Domestic service ..	3	6 14 0
5. Shop-keeping and shoe repairing ..	2	7 8 0
6. House rent ..	1	6 0 0
7. Cow milk selling ..	7	19 12 0
8. Nursing ..	3	3 8 0
9. Blacksmith ..	1	3 4 0
10. Begging ..	1	2 0 0
11. Barber ..	1	1 8 0
12. Interest on loan ..	2	1 9 0
13. Separating mica leaf ..	1	1 0 0
14. Carpenter ..	1	1 0 0
15. Miscellaneous ..	4	20 4 0
Total ..	156	573 3 6

#### Additional income.

Besides their principal and supplementary monetary earnings, the colliery workers in the Jharia, Bokaro and Giridih coalfields are also receiving certain goods and services free of charge.

They get free house, free fuel, free tools, free medical aid, free water, sometimes free education, if they are inclined to avail

themselves of it, maternity and sickness allowances and free kerosene in some cases. Some employers make presents of cloth to the women workers, blankets to the male workers, small sums of money to children once or twice a year on festive occasions. The value of all these benefits or payments in kinds can hardly be ignored in estimating the real income of the workers. Of course, a proper money valuation of most of these benefits is not an easy matter, but some items can be valued correctly to some extent. In 1930 the Indian Mining Federation in their memorandum submitted to the Royal Commission on Labour calculated the value of some of these benefits as follows:—

				Rs.	a.	p.	
Fuel	..	..	..	1	8	0	per mensem.
Housing	..	..	..	2	0	0	" "
Bakshis	..	..	..	1	8	0	" "
Travelling	..	..	..	1	0	0	" "
Kerosene	..	..	..	0	8	0	" "
Total			..	6	8	0	" "

This estimate is not free from error. A worker hardly consumes fuel worth Re. 0-14-0 a month. Our enquiries from the workers and colliery managers show that a family of four or five persons, i.e., two or three children, one husband and one wife, hardly consumes 6 to 7 mds. of coal in the summer and 7 to 8 mds. in the winter. Taking the mean of the consumption of the two seasons we will find that the miner hardly consumes  $6\frac{1}{2}$  maunds or  $\frac{1}{4}$  of a ton of coal in a month which, according to the present pitmouth value of coal in Bihar is hardly 14 annas. But this would be the value of the benefits of free fuel if we assume that labourers are being supplied with first class or at least good second class coal. But the case was found to be contrary in the majority of the collieries. The workers are usually given stony coal which can hardly find a market. So, even in estimating the value of coal at 14 annas we run the risk of overestimation.

As regards housing, Rs. 1-8-0 will be the proper value of this benefit. Enquiries were made in the Kustore village and Jharia Bazar where a few workers were found to be paying Re. 1 to Rs. 1-4-0 as rent for one or two room houses, but these houses were much worse than the colliery houses and hence a little higher rent should be allowed for the latter.

As regards *bakshis*, charity, maternity and sickness allowances, they are being paid in some collieries. But in most cases

their payment was found uncertain and discretionary. Again in not a few cases the workers were found to be contributing one to two pice a week to certain funds, such as *Gowshala* fund or benefit fund, from which these payments are made. In other words most of the employers who were paying these benefits were incurring very little expense in this respect, and hence we will not be underestimating the value of all these benefits at 4 annas a month, or Rs. 3 a year.

The travelling allowances or expenses of recruiting are not the thing of the past. In course of our visit to the coalfields we found not a few collieries running lorries to bring the workers from their villages and thereby giving the benefit of conveyance, both ways, to the workers. In four or five collieries the monthly cost of bringing a worker from 15 to 16 miles by lorry was ascertained, and it was found to be varying between 14 annas and Rs. 1-4-0. It also includes the cost of food which is sometimes given to the worker free of charge. But as this facility is generally afforded to the workers in the dull months of June, July, August and September, when there is labour scarcity in the coalfields, the value of these benefits should not be fixed at more than 8 annas a month. The benefit of free kerosene, is not enjoyed by all the workers. Hardly 50 per cent of the families were found to be enjoying this benefit. The other 50 per cent of the families were spending annas 4½ to 5 annas a month on kerosene. So, we can easily fix up the value of free kerosene supplied to the workers for domestic purposes at 3 annas a month.

As regards the benefit of free water-supply, its value does not exceed 8 annas per month per worker. This estimate is based on the information contained in the Jharia Water Board Report for the year 1936. In 1936, the Jharia collieries employed daily 61,064 workers and incurred a cost of Rs. 34,493-4-0 a month in getting 372,665,000 gallons of water. Even without making any allowance for the water consumed by the colliery *babus* or managers and their subordinates, a simple mathematical calculation would show that the cost of supplying water was not even annas 8½ per worker. A reasonable allowance of 15 per cent for water consumed by persons other than labourers would bring down the cost of water-supply per worker to annas 7½.

Lastly, the free medical aid can hardly be fixed at more than annas 3½ per worker per month. In some big collieries the worker



might be getting medical aid even worth 4 to 5 annas a month, but in the majority of the collieries it varied between 2 annas to 3 annas per worker.

So, our estimate of the value of the benefit of all the free services and goods that the colliery workers are enjoying comes to this :

	Monthly value of benefits per worker.			Monthly value of benefits per family.		
	Rs.	a.	p.	Rs.	a.	p.
Housing .. .. .	1	8	0	1	8	0
Fuel .. .. .	0	14	0	0	14	0
Free conveyance .. .. .	0	8	0	0	19	9
Water-supply .. .. .	0	7	6	0	10	6
Bakshis, maternity and sickness allowance.	0	4	0	0	6	5
Medical aid .. .. .	0	3	6	0	5	7
Kerosene oil .. .. .	0	3	0	0	4	10
<b>Total .. .. .</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>15</b>	<b>7</b>

In estimating the value of benefits per family we have multiplied the values of some benefits by 1.6, as there are 1.6 workers per family investigated. Housing, fuel and kerosene oil values have not been multiplied as their amount remains practically the same, no matter whatever may be the number of workers in the family. Now, adding the value of additional benefits to the monthly monetary income of Rs. 17-11-2 of a family we get Rs. 22-10-9 as monthly income per family, or Rs. 15-5-4 per worker.

### Expenditure of the family.

#### (a) Food expenditure.

We will discuss the expenditure of the family under four main heads, viz. (1) food, (2) clothing, (3) fuel, light and household and (4) miscellaneous. Taking first food, the monthly expenditure has been calculated by multiplying weekly figures by 4½. The vast majority of the workers in the lowest ranks are paid weekly and their expenditure is reckoned by the week. Hence, they can give fairly correct account of their weekly expenditure but not their monthly expenditure. As most of the labourers do not keep

any account of their expenditure, doubts were felt about the accuracy of their verbal statements. These doubts were set at rest by enquiries from the colliery shopkeepers who usually possess considerable knowledge about the weekly expenditure of most of the labourers who make purchases from them. Note was also taken of the prices of important articles of daily consumption.

The total expenditure on food of all the 1,030 families was Rs. 13,233-1-10½, i.e., 72·5 per cent of the total income. The food expenditure of an average family of 2·4 adults and 1·96 children, or of 3·4 adult males\* with a monthly monetary income of Rs. 17-11-2 was Rs. 12-13-6, which was distributed among the chief articles of food in the following ways :—

TABLE No. XXXIV.

## FOOD EXPENDITURE.

Item.	Quantity per family.	Per adult Male.	Expenditure.	Market price.
1	2	3	4	5
	S. ch.	S. ch.	Rs. a. p.	
Rice ..	72 6	21 5	6 3 5	10 to 12 seers a rupee.
Wheat (flour) ..	6 11	1 15	0 11 11	8 to 9 seers a rupee.
Lentils or dals ..	9 13	2 14	1 3 11	6 pice to 2½ annas per seer.

\*The figures have been obtained by expressing the numbers of the family in terms of adult males according to the index laid down by the Inter-Allied Food Commission, which is as follows :—

Male above 13 years	...	...	...	=1 adult male.
Female above 13 years	...	...	...	=·83 "
Child between 10—13 years	...	...	...	=·83 "
Ditto 6—10 years	...	...	...	=·60 "
Ditto 0—6 years	...	...	...	=·50 "

TABLE No. XXXIV—concl'd.

Item.	Quantity per family	Per adult male.	Expenditure.	Market price.
1	2	3	4	5
	S. ch.	S. ch.	Rs. a. p.	
Meat ..	2 1	0 10	0 15 0	Beef 4 annas to 5 annas a seer. Pork 4 annas to 5 annas a seer. Mutton 6 annas to 8 annas a seer.
Vegetables ..	9 8	2 13	0 14 4	1 to 2½ annas a seer.
Fish ..	0 6	0 2	0 2 8	5 to 7 annas a seer.
Oil ..	1 3	0 5½	0 10 1	8 annas a seer.
Ghee ..	0 3	0 1	0 3 9	18 annas to 20 annas a seer.
Salt and spices ..	..	..	0 12 10	salt 5 to 6 pice a seer.
Milk ..	2 1	0 9½	0 6 5	2 to 4 annas a seer.
Sugar ..	1 4	0 6	0 4 10	3 to 4 annas a seer.
Tea ..	..	..	0 1 2	5 to 6 pice a packet.
Miscellaneous— grams, cheap sweetmeats, eggs, fruit, <i>sattu</i> , biscuits and curd.	..	..	0 3 2	..
Total ..	111 0	31 1	12 13 6	

Rice is obviously the most important article of food. About 48·6 per cent of the total expenditure is incurred on this article alone. It forms the staple food of aborigines, the vast majority of local workers and of workers coming from the Central Provinces, Orissa and Bengal. About 51·2 per cent of families show consumption of wheat. It is largely consumed by the local Mohammedans and the workers from the United Provinces and the Punjab. The Punjabi workers mainly live on wheat. Three of them were not taking rice at all. The workers from the United Provinces, especially those from the western United Provinces, take more wheat and less rice, and of the eastern

United Provinces half rice and half wheat. The consumption of other cereals is too small to be taken into account.

Next important item of food expenditure is *dals*. Every family shows some expenditure on this item. It involves 9·6 per cent of the total expenditure. Different varieties of *dal* are consumed by the same family but very few workers can give separately the money spent on each variety of *dal*. Nevertheless, it can be said confidently that *arhar dal* is consumed by the vast majority of workers and out-weighs in importance all other *dals* put together. Judging its importance by the money spent, *arhar dal* is 8½ times as important as all the other *dals*. *Masur dal* and *khesari dal* stand second in importance. They are used generally as a measure of economy by the low paid workers. *Urd* and gram *dals* are consumed mostly by the Punjabis and the United Provinces workers. There is practically no consumption of *mung dal*.

Another item of food which practically all families purchase, is salt and spices. They account for 6 per cent of the total food expenditure. Salt is consumed by each and every family, but quite a number of families are too poor to afford any spices. In 60 per cent of the families the only spices used are chillies. Black pepper is consumed by hardly 30 per cent of the families. Among other articles of food, vegetables occupy a prominent place. About 94 per cent of the families show some expenditure on this item. There are as many as 60 families which are too poor to afford any vegetable. They pull on with rice, *dal*, salt and a little of chillies. Another ten families, though consuming some vegetables, were not purchasing from bazar. They were growing them in the tiny plots attached to their houses. Again, there are as many as 40 families which show some consumption of vegetables, but which are neither purchased from *bazars* nor grown in their own plots but are collected from the neighbouring jungles. Lastly, 49 per cent of the families purchasing vegetables from the *bazars* consume only potatoes and onion, and no green vegetables. Among the green vegetables brinjal and *kichus* are largely consumed. About 66 per cent of the families take meat. It is quite a common habit with the Mohammedans, Sikhs, Christians and Bhuiyas. Mutton is consumed largely by the well-to-do families. The poor families content themselves with cheap meat like pork and beef. Besides the Mohammedans, beef is also consumed by the aboriginal and low caste Hindu workers. The Goalas and Gossains do not eat meat. Hardly 14 per cent of the families can afford to

buy fish. Some classes, such as Kumhars, take meat and fish alternatively, but most of the classes do not regard it as a necessity.

As regards fat, the vast majority of the workers can afford to purchase only mustard oil. Hardly 13·5 per cent of the families are consuming *ghee*. Even in their case the average monthly consumption hardly exceeds  $1\frac{1}{2}$  seers. No family consumes butter. Milk and curd are consumed only by 25 per cent of the families. Out of 257 families consuming milk and curd, 18 families have their own cows and 28 consume only curd and no milk. So, only 211 families, or 20·7 per cent, purchase milk. The total monthly milk consumption amounts to 2,227 seers or about 2·1 seers per family on the basis of 1,030 families and 9 seers 6 chataks per family actually consuming milk. Assuming that all milk is given to the children in the age periods 1—8 years, when the necessity for milk is greater, we find that the consumption of milk per child would be about 2·6 seers per month. But it is doubtful if even the 60 per cent of this small amount is given to the children in this age period. Local workers, such as the Bhuiyas, Manjhis, Kols, Oraons, Dusadhs, Turis and Mushars, consume very little of either milk or curd. These are largely consumed by the local Muslim workers and the workers from the Central Provinces. Among the local workers mostly well paid families show some consumption of milk. Similar is the case with sugar; its consumption is shown by only 283 or 27·4 per cent of the families. Even out of these 283 families 21 consume only *gur* and 19 both *gur* and sugar. So there are 243 families, or hardly 24 per cent of the families, which consume only refined sugar. It is more habitually consumed by the Muslims, Punjabis and the United Provinces workers. Tea is consumed by as many as 194 families or 19 per cent of the total families. More than half of these families take tea without milk. One family also shows consumption of coffee.

Lastly, 268 families, or 26·0 per cent of the total families, show some miscellaneous food expenditure amounting to Rs. 201-11-3, or Re. 0-3-2 per family, when calculated on the basis of 1,030 families and, 12 annas per family actually showing such expenditure. Out of 268 families, 136 spend a little of their income on sweets made with oil, 106 on grams, 8 on food, 4 on eggs, 3 on *sattu*, 5 on fodder for their cows, 6 on biscuits and one to maintain a sweeper.

The Table no. XXXV shows the food expenditure of different classes of workers.

TABLE No. XXXV.

*Food expenditure of different classes of workers.*

Classes of workers.	Average monetary income (Including supplementary monetary income.)	Average expenditure on food.	Expenditure on food as percentage of the total income.	Persons in the families.
	Rs. a. p.	Rs. a. p.	Per cent.	
1. Lohars ..	26 8 1	15 6 6	58	3.17 adults and 3.36 children.
2. Caste Hindus	25 7 2	15 13 5	62	1.88 adults and 2.24 children.
3. Muslims including Sikhs and Christians.	21 2 0	14 10 6	69	2.44 adults and 2.28 children.
4. United Provinces workers.	19 8 0	13 4 4	68	1.88 adult and 1.48 children.
5. Central Provinces workers.	18 6 7	13 1 5	71	2.35 adults and 1.67 children.
6. Dusadhs ..	17 12 0	12 8 10	71	2.99 adults and 1.66 children.
7. Mushars ..	17 0 7	12 6 5	72	2.31 adults and 2.52 children.
8. Bhuiyas ..	16 12 10	11 4 3	67	2.54 adults and 1.64 children.
9. Turis ..	16 10 11	12 5 4	74	2.13 adults and 1.67 children.
10. Kahars and Goalas.	16 5 9	10 5 10	60	1.86 adults and 1.76 children.
11. Chamars and Mochis.	16 0 10	11 7 4	71	1.78 adults and 2.4 children.
12. Rajwars and Ghatwals.	15 11 4	11 10 4	74	2.18 adults and 1.65 children.
13. Bauris ..	15 1 11	11 2 3	68	2.83 adults and 3.03 children.
14. Manjhis ..	14 12 8	11 0 7	75	2.12 adults and 1.60 children.
15. Kols, Koras and Oraons.	14 5 2	8 8 1	59	2.1 adults and 2.0 children.
16. Miscellaneous	20 0 7	13 4 2	69	2.46 adults and 2.21 children.
Average of all families.	17 11 2	12 13 6	72.1	2.39 adults and 1.95 children.

The above differences in the percentage of food expenditure of different classes can be easily explained partly by the differences in the standard of living, partly by the habit of thrift of certain classes of workers, partly by the differences in the size of the families, and partly by the Engel's Law of Consumption, according to which expenditure on food has a tendency to diminish with the increase in income.

In conclusion, we can say that the food of the local Hindu workers is inferior to that of the workers from the Central Provinces. The staple diet of the latter is also rice and oil, but their higher income enables them to take things of a better quality and consume more vegetables, sugar and milk. They take all kinds of meat excepting beef, and drink less than the local labourers. The local Mohammedan workers and the workers from the United Provinces, especially those from the western United Provinces, take better diet than even the Bilaspuri men from the Central Provinces. They take more wheat than rice, and *ghee* instead of oil. Milk and milk products and sugar form a considerable portion of their diet. But the richest diet is that of the Pathan Muslims and the workers from the Punjab. As compared to the workers from the United Provinces, they take more wheat, *ghee*, milk, milk products and vegetables. Non-Muslim Punjabi workers together with the United Provinces workers are addicted to wine, but the Muslims abstain from it.

### Clothing.

The monthly expenditure on clothing was arrived at by ascertaining the clothing articles being used by the families, their prices and their approximate duration. The total monthly expenditure on clothing of all the 1,030 families is Rs. 1,208-9-9 i. e., 6·4 per cent of the total income.

The average expenditure on clothing of a family consisting of 1·21 adult males, 1·18 adult females, 1·05 male children and ·90 female children works out at Rs. 1-2-1 per month. Calculated per head of adult male it is Re. 0-7-3, per head of adult female it is Re. 0-5-6, per boy Re. 0-2-0 and per girl Re. 0-1-5. Calculating percentages of the total expenditure we find that males account for 49·6 per cent, females for 34·2 per cent, boys 11·0 per cent and girls for 5·2 per cent. It is not at all surprising that the expenditure on clothing for adult males is higher than that for adult females. It is probably due to the fact that there are more male workers than female workers in the families and a worker requires some extra clothing for the work. Most of the females stay in houses and so can pull on with inadequate clothing. The

usual clothing for an adult male for the year is three *dhotis* costing Re. 0-12-0 to Re. 1-0-0 each, two *gamchhas* which the miners use as *dhotis* for their work costing 3 to 5 annas each, and two *kurtas* costing 6 to 10 annas each. About 27 per cent of the families are so poor that their adult males cannot afford to purchase any *dhoti*. They use hardly 2 lungies costing 8 to 10 annas each as substitute for *dhotis*. In 11 per cent of the families adult males have only one *kurta* in a year, in four per cent (43 families) they are too poor to purchase any *kurta* or shirt and in 1.8 per cent families (19 families) their poverty deny them the use of *gamchhas*. In well-to-do families adult males purchase 2 or 3 *lungies* for underground work besides two *gamchhas* for covering their heads or for taking baths. Again, 22 families show some expense on coats and 16 families use turbans and caps.

The usual yearly clothing for an adult female is two to three *saris* costing Re. 1-1-0 to Re. 1-4-0 each, and 2 *kurtis* costing 6 to 8 annas each. A working adult female generally uses one *sari* and one *kurti* more than the non-working female. In as many as 287 families (all Hindus), or about 28 per cent of the total families adult females do not use any kind of bodice, either because of poverty or custom. This is particularly the case with the Manjhis and Bilaspuri females. Again, all the adult females excepting 8 (2 Mohammedans, 2 Sikhs, 2 Rajputs, and 1 Brahmin) do not use any kind of underwear. In 5 Muhammadan families adult females use *burqa*, in 7 Sikh families females (adult) take 2 *salwars* or *pai-jamas* a year besides two *dhotis*. In 4 families adult females use blouse instead of simple *kurtis*, and in 7 families they put on full sleeve shirts. Lastly, a good number of Bilaspuri adult females generally keep one costly *sari* worth Rs. 1-12-0 to Rs. 2-8-0 each, for using at home or on festival or other ceremonial occasions. In some well-to-do Muslim and Sikh families also, females wear one or two *saris* costing 4 to 5 rupees each, which last at least 2 years.

In the majority of the families children below 5 years hardly use any clothing. In well-to-do families female children in this age period use small pieces of cloth which are generally prepared from the old worn out *dhotis* and *saris* of their fathers and mothers. Boys and girls in the age period of 5 to 7 years are given two or three small *gamchhas* costing 2 annas or  $2\frac{1}{2}$  annas each in 12 months. The grown up boys use two *dhotis* (costing 6 to 10 annas each) and 2 *kurtas* (costing 5 to 6 annas each). The grown up girls wear two *saris* (8 to 12 annas each)



and 2 *kurtis* costing 3 to 4 annas each in the same period. Boys were using coats and caps in 4 and 11 well-to-do families, respectively.

As regards the kind of cloth, more than 94 per cent of the families use cotton cloth only. In 5 or 6 families (all Moham-medans) adult males or females use silk cloth. As regards warm clothing, there are hardly 55 families or 5.4 per cent of the total families, which possess some warm clothings. Out of 55 families 37 possess blankets, ten woollen *chaddars*, four warm coats and one woollen cap. It is difficult to bring about the exact amount of the expenditure on warm clothing unless the enquiry is conducted in winter. But from my experience of the winter tour in the Bihar coalfields, which I made in 1934 as a research scholar, I can say that most of the local workers belonging to the Maljhi, Bhuiya, Turi, Bauri, Kole and Kora classes hardly use any warm clothing in the winter. They keep themselves warm by keeping a fire burning in their rooms day and night.

The average expenditure on shoes and sandals works out at 8 pies per month per family if calculated on the basis of 1,030 families, and as.  $2\frac{1}{2}$  if calculated on the basis of 282 families or 27.4 per cent of the total families using shoes and sandals. About 24.6 per cent of families show an average, monthly expense of  $13\frac{1}{2}$  pies per family on umbrellas. An umbrella costs Re. 1 to Re. 1-6-0 and it lasts on the average for 2 years.

As regards bedding, about 75 per cent of the families possess one or more '*charpai*' or cots which are often kept outside the *dhourahs* for want of enough accommodation in their over-crowded rooms. A cot on the average costs 12 to 14 annas. Again, hardly 59 per cent of the families use *chaddars* and 12 per cent carpets or *durries*. In the case of carpets the expense works out at 1.5 pies per family on the basis of 1,030 families, and about 13 pies on the basis of 126 families purchasing *durries* and carpets. A *durri* costs annas 12 to Re. 1-4-0 and a *chaddar* Re. 1 to Re. 1-4-0. The average monthly expense on *chaddar* works out at annas 2 per family purchasing *chaddars*, and fourteen pies per family if calculated on the basis of all 1,030 families. Majority of workers use sacks or *gandras* prepared from worn-out clothes as their beddings. Quilts are used by 18 families, pillows by 7 families, woollen *chaddars* by 10 and blankets by 37. The average monthly expenditure on *chaddars*, *durries*, blankets, pillows, woollen *chaddars*, umbrellas, shoes and woollen caps works out at annas 3 and 5 pies per family on the basis of 1,030 families. As in the case of food so in the case of clothing and beddings, aboriginal and semi-aboriginal local workers, such a

Manjhis, Kols, Oraons, Koras, and Musbars, show the lowest expense. Shoes are very little in use among them, and as regards umbrellas only a few of them purchase cheap bamboo umbrellas during the rainy season. Pillows and quilts are practically unknown to them.

Table no. XXXVI shows expenditure on clothing and bedding of different classes of workers.

TABLE No. XXXVI.  
EXPENDITURE ON CLOTHING AND BEDDING.

Classes of workers.	Average monthly expenditure of a family on clothing.		Average expenditure of a family on shoes, umbrellas, <i>chaddars</i> , etc. etc.	
	Expenditure	Percentage of the average family income.	Expenditure.	Percentage of the average family income.
	Rs. a. p.		Rs. a. p.	
Lohars and Barhis ..	1 9 7	7.1	0 6 6	1.8
Muslims ..	1 9 6	7.5	0 6 3	1.7
Rajputs and other higher caste Hindus.	1 7 5	5.9	0 5 3	1.3
Kahars and Goalas ..	1 4 0	12.6	0 3 6	1.4
Central Provinces workers.	1 3 8	6.6	0 3 8	1.2
United Provinces workers	1 2 4	6.6	0 5 1	1.7
Dusadhs ..	1 2 4	7.1	0 3 11	1.3
Chamars ..	1 2 2	7.0	0 3 5	1.3
Bhuiyas ..	1 2 2	6.3	0 1 10	0.7
Turis ..	1 0 7	6.3	0 2 6	0.9
Bauris ..	1 0 4	6.7	0 2 4	1.6
Kols, Koras, Oraons and Ho.	0 14 9	6.6	0 1 0	0.4
Rajwars and Ghatwals	0 14 1	5.3	0 3 3	1.4
Manjhis ..	0 13 9	5.9	0 1 6	.06
Mushars ..	0 11 1	4.0	0 11 0	.07
Miscellaneous ..	1 0 9	5.2	0 5 4	1.6

Here again we find that the Lohars and Barhis enjoy the highest standard of living. Their expenditure on clothing, *chaddars*, shoes, umbrellas and others is the highest. The Muslims, including Christians and Sikhs, would come second. If Christians and Sikhs are taken out of the Muslim group and are considered separately, the Muslims would stand third and the Sikhs and

Christians would displace the Lohars from the first place. On the average a Sikh and a Christian family spends Rs. 2-0-4 on the clothing and As. 0-10-1 on shoes, umbrellas and bedding requirements excluding cots. Their higher standard of clothing and food is mainly due to their higher income which on the average amounts to Rs. 30-0-6.

### Fuel and Lighting.

The colliery workers generally do not buy any fuel as they are supplied free coal by the employer. Hardly 14 families out of the total of 1,030 families show a small fuel expense of Rs. 8-9-2. Even out of these 14 families, only five families, who live outside the colliery *dhourahs* have to buy coal to the extent of 13 annas a month. The remaining nine families spend about 8 annas a month on carrying their free coal to their *dhourahs*, which are at some distance from the coal pit or the loading depot. The quality and quantity of the coal given to the worker varies considerably from colliery to colliery. In collieries producing inferior quality coal the employers are generally liberal in their allowance of coal to the workers. But in collieries producing first class coal strict supervision is exercised both over the quality and quantity of coal supplied to the workers. In majority of first class collieries the workers are allowed to pick up freely only the refused coal or shale which cannot be marketed. In Giridih collieries a family is allowed one or two baskets of coal a week. In Bhudroochuck colliery I heard workers complaining that their females were insulted if they picked up coal instead of shale for their domestic use. This strictness in the supply of free coal increases all the more in times of high coal prices.

As for lighting, the workers generally use kerosene oil. In majority of the Jharia collieries miners are given free 2 to 4 *chhataks* of kerosene oil daily to burn underground while working, and many of them manage to save 1/8th or 1/10th of the amount which they take to the *dhourah* for lighting purpose. But this allowance is really made to the surface workers in general and to the miners of the gaseous mines, where safety lamps are used instead of open kerosene *kupis*, they have to purchase oil for household purpose. Thus, we find as many as 519 families out of 1,030 families i.e., a little more than 50 per cent of the families showing an average monthly expenditure of annas 4 and 11 pies on kerosene oil. Calculating on the basis of 1,030 families the average monthly expenditure on lighting comes to annas 2 and 5 pies per family.

As regards the means of lighting fire, cow dung is rarely used by any family. Matches are in common use among a good

majority of the families. But most of them cannot give their exclusive expenditure on this item as the vast majority of their adult males are smokers, and matches used for smoking are also used for lighting purposes. About 298 families or 29·2 per cent of the total families, in which case this information is available, show an average monthly expense of Re. 0-1-11 per family. Calculating on the basis of 1,030 families it comes to nearly 7 pies per family. Thus, the average monthly fuel and lighting expense of a family of 1·21 adult males, 1·18 adult females, 1·05 boys, and ·90 girls works out at Re. 0-3-3 or 1·3 per cent of the total income.

### Household Expenditure.

The most important item of the household expenditure is the one on earthen pots which are used nearly by 95 per cent of the workers in the coalfields. About 869 out of 1,030 families reported an average monthly expense of Re. 0-2-5 per family. 26 families use only earthen pots as they are too poor to purchase any metal utensil. Earthen pots are used by the vast majority of the families for cooking food and keeping drinking water. On the average, practically every month, a family has to purchase one or two earthen pots costing one to one and half anna each. 27 families have no pots of their own. They use the pots of their fellow workers. Only 11 families use metal utensils exclusively. The most commonly used metal utensils are given in table no. XXXVII.

TABLE No. XXXVII.

#### Metal Utensils.

Serial no.	Utensils.	Kind of metals.	Price.
1	1 or 2 <i>thalis</i> , or plates	<i>Kansa</i> , aluminium and brass.	As. 10 to Rs. 2-8-0 each according to the kind of metal.
2	One <i>katora</i> or cup ..	Ditto ..	As. 8 to Re. 1-4-0 according to the kind of metal.
3	One <i>lota</i> ..	Ditto ..	As. 6 to Re. 1-8-0 according to the kind of metal.
4	One <i>balti</i> or bucket	Iron ..	As. 6 to as. 7 each.
5	One <i>karahi</i> or cauldron.	Do. ..	As. 4 to as. 5 each.
6	One <i>kachul</i> ..	Iron or wood..	A. 1 to as. 2 each.
7	One <i>knife</i> ..	Iron ..	A. 1 to a. 1 and 6 pies each.

The wheat consuming families also keep a pan or a *tawa* costing annas 2 to 3. The above list is supplemented in well-to-do families by a few additional utensils made of aluminium such as kettles, tumblers and cups. The poor families use very few metal utensils, which are generally a *thali* and a *lota*, which, in not a few cases, are of aluminium. A good number of Mohammedan families also use China clay pots besides the ordinary earthen and metal pots.

The following tables give the number of families using different kinds of utensils and pots :—

TABLE No. XXXVIII.

Kinds of pots and utensils.	Number of families.
1. Only aluminium and earthen .. ..	114
2. Only <i>kansa</i> and earthen .. ..	180
3. Only brass and earthen .. ..	27
4. Aluminium, <i>kansa</i> and earthen.. ..	227
5. Aluminium, brass, and earthen.. ..	6
6. <i>Kansa</i> , brass and earthen .. ..	53
7. <i>Kansa</i> , brass, aluminium and earthen .. ..	147
8. Only <i>kansa</i> .. ..	7
9. <i>Kansa</i> and brass .. ..	3
10. Only brass .. ..	1
11. Only earthen pots .. ..	26
12. China clay .. ..	7
13. Families having no pots and utensils .. ..	27
Total	880

The vast majority of workers know no use of furniture, cots which are possessed by about 75 per cent of the families, are their only furniture. Thirteen families show an average expenditure of 12 annas and 8 pies during the month for which their budgets are taken. Only 10 families possess one or two chairs and 17 families cheap mats costing 2 annas to 2½ annas each. Only 55 families possess lanterns for lighting purposes, and the rest use their kerosene *kupis* costing 6 pies to 1 anna each. A good number of families also possess wooden boxes in which they keep their utensils and some well-to-do families also possess steel boxes.

Now coming to the total average monthly expenditure, we have not calculated the average monthly expenditure per family on utensils and furniture as it is difficult to ascertain their durability because they are purchased at intervals of several years. In their case the monthly expenditure becomes a matter of guess work either on the part of the investigators or the workers. So we have only worked out the

figures in the case of earthen pots used for cooking and keeping drinking water, which are usually purchased every year. This expenditure works out at annas 2 and 5 pies per family per month.

#### MISCELLANEOUS.

In the miscellaneous group we have included all items of expenditure not included in any other important group, namely, food, clothing, bedding, fuel and light and household requisites. The table below gives the average monthly expenditure of a family on miscellaneous items.

TABLE No. XXXIX.

Miscellaneous items.	Number of families incurring expenditure.	Average monthly expenditure of a family calculated on the basis of all the 1,030 families.	Families showing expense.	Percentage of the budget on which the figures in column 4 are based.
1	2	3	4	5
		Rs. a. p.	Rs. a. p.	
1. Liquor ..	659	0 10 3	1 0 6	63.9 per cent.
2. Tobacco ..	977	0 6 8	0 7 1	94.9 "
3. Soda and soap ..	992	0 6 4	0 6 7	98.6 "
4. Religious observances and festivals.	749	0 4 7	0 6 5	72.2 "
5. Interest ..	222	0 4 3	1 4 1	21.5 "
6. Barber ..	980	0 3 2	0 3 5	95.8 "
7. Amusements ..	171	0 0 10	0 5 1	16.9 "
8. Education ..	76	0 0 10	0 11 1	7.3 "
9. Contribution ..	118	0 0 10	0 7 7	11.4 "
10. Pan.. ..	88	0 0 6	0 5 4	8.5 "
11. Land rent ..	49	0 0 6	0 11 1	4.8 "
12. Hair oil ..	179	0 0 5	0 2 9	17.3 "
13. Medical fees and medicine.	98	0 0 4	0 3 4	9.5 "
14. Chewing sticks ..	269	0 0 4	0 1 4	26.1 "
15. Bangles ..	17	0 0 3	0 2 0	1.6 "
16. Postage ..	8	0 0 1	0 1 3	.81 "
17. Money remitted home.	200	0 9 11	3 3 6	19.4 "

Total average miscellaneous expenditure per family Rs. 3-1-9.

Liquor is the most important item of the miscellaneous expenditure in spite of the fact that it is somewhat underestimated. The shyness of workers and the presence of colliery managers and their assistants at the place of enquiry are mainly responsible for this under-estimation. It accounts for nearly 33 per cent of the total miscellaneous expenditure, which forms 3·4 per cent of the total income. Its consumption is less common among the workers coming from the Central Provinces and rarely among the Mohammedans. Hardly 5 out of 148 Mohammedan families are showing the consumption of liquor. The Manjhis, Dusadhs, and Bauris are the worst and the most regular drunkards. Besides 659 families, which report the consumption of liquor, there are 23 families which consume either *bhang* or *ganja* or opium. Out of these 23 about 20 take *ganja*, two opium and one *bhang*. *Ganja* is largely consumed by the Central Provinces workers.

The next important thing that catches the eye in the above table is the expenditure on tobacco. 94 per cent of the families report its consumption. Both males and females are addicted to smoking. Even the children in the age period of 6—12 years can be seen smoking. The Muslims show the highest expenditure on this item.

About 98·6 per cent of the families show expenditure on soda and soap. They are used for bathing and washing clothes. Men working underground have to wash themselves with soap daily in a pond or tank. The vast majority of the families wash their clothes themselves, as they cannot afford to use the services of the professional washermen who generally charge 9 pies to one anna per piece of cloth. Only 24 families report to have engaged washermen. Out of them 10 are Mohammedans, 2 Lohars and Barhis, one United Provinces worker, 4 high caste Hindus, one Chamar, one Kurmi and one Bhuiya. All of them have monthly income of Rs. 25 to Rs. 45. The Bilaspuri workers, even when they can afford, do not give out their clothes for washing by professional washermen. They do their washing themselves. Thirty-eight families cannot purchase even soda and soap. They wash themselves and their clothes with *matti*.

Nine hundred and eight, or about 95 per cent of the families, report an average monthly expenditure of annas 0·3-5 on barber. Here, too, it is interesting to note that workers from Bilaspur in the Central Provinces, especially Rabidas, do not use the services of professional barbers, but shave themselves and have their hair cut by fellow Bilaspuris. Whatever expenditure

they show under this item is the expenditure of blades, razors and soap. Out of fifty families, which have not reported any expenditure on this item, 36 are Bilaspuris, 9 are widows without any male dependant and 5 pay to the barbers in kind or in terms of their personal service.

Only 8.5 per cent of the families take *pan* and *supari*. Among them Mohammedans and high caste Hindus are predominating. Another 70 per cent of the families report an average monthly expenditure of Re. 0-5-0 on amusements. Cinemas, theatres, and periodical carnivals are the most common forms of amusements. Out of 171 families showing some expense on amusements 89 are Mohammedans. Local workers like the Manjhis, Kols, Oraons, Barhis, Dusadhs, and Turis take to these forms of amusements very sparingly. Their usual place of amusement is the grog shop.

Only 77 families are spending on the average annas 11 a month on the education of their children. Calculating on the basis of 1,030 families expenditure on education works out at only 10 pies per family. Though expense on education can hardly be regarded as the index of the number of children taking education, because some collieries are providing not only free schools but also free books and free slates, yet it is an unquestionable fact as already reported, that very few children of the school-going age are attending schools. Majority of the families that are paying some attention to the education of their children are the high caste Hindus and the Muslims. Among the local Hindu workers Turis are the most prominent in this respect.

About 11 per cent of the families contribute about Re. 0-7-7 a month to *gowshala* fund, leprosy fund and benefit fund out of which they receive sickness, maternity and death allowances. The Railway collieries in Giridih and Bokaro have organised benefit schemes on the contributory basis to help their workers at the time of death, birth, sickness and in their old age. In Jharia there is only one colliery (Jealgora) where workers are contributing something to get maternity and sickness benefit.

Two hundred and ninety-eight families, or 29 per cent, show an expense of nearly Re. 0-2-0 a month on caewing stick. One Muslim worker uses tooth paste costing Re. 0-8-0 a month. 17 per cent of the families purchase hair oil worth Re. 0-2-9 a month on the average. Coconut oil is most commonly used as hair oil.

Only 17 families report some expenditure on bangles, and 8 families on postage. This low expense on postage is to some



extent, due to the illiteracy of the workers. Of course, there are professionals to write letters and money order forms, but their charges are somewhat prohibitive. They usually charge Re.0-1-0 to Re. 0-2-0 per letter or money order form. Majority of the families keep themselves in touch with their dependants and hand over money to them, either by visiting their homes personally, or by exchanging messages and sending money through their fellow workers from the same village when the latter visit them. The postal facilities are utilised chiefly by families coming from the more distant parts of the country.

Another important thing that attracts our attention in the table of the miscellaneous expenditure is the average monthly family expenditure on medical fees and medicines which is only 4 pies per family. It works out at Re. 0-3-4 if computed on the basis of 98 or 9.5 per cent of the total families, which show any expense on this item. This low expense on medical aid is mainly due to the fact that practically all the collieries provide it free of charge to their workers. Of course, the proverbial prejudice of the workers against allopathic medicines has been considerably reduced in the last 15 to 20 years under economic pressure but there are still a good majority of workers who have recourse to the indigenous system of treatment and consult *hakim*, *vaids* and quacks. The profession of herbs-vending is still lucrative in the coalfields. In case of serious sickness they leave collieries for their native place. Even among those who consult colliery doctors, many rarely take the medicines taken from the colliery hospitals. They are tempted to come to the colliery doctors by the sickness allowances or *khurakis* which are paid in some collieries on the production of medical certificates from the doctors. Much of this distrust in the colliery medical aid is due to the inefficiency of the cheap colliery doctors, their unsympathetic attitude and partly to the inadequate stocks of medicines usually maintained in the colliery hospitals. In course of our investigation we came across not a few workers who complained that whatever might be their sickness they could get only diluted form of quinine mixture from the colliery hospitals.

The workers also incur some expenditure in travelling to and from home. Of course, the workers coming from the Manbhum and Hazaribagh districts, who have their homes within a distance of 15 to 20 miles, rarely spend anything on this item as they usually go home on foot; but the workers whose homes are situated at much greater distance, have to spend some money in order to visit their homes. Many of them travel to their homes by rail. Their travelling expenses vary directly with the

distance that they have to travel. A worker from Bilaspur or Raipur has to spend at least one month's income per home visit if he travels alone. It is difficult to calculate the average monthly expenditure on home visits, especially when visits are either too frequent or too rare. Complications are further increased by the fact that sometimes the workers visit their homes alone, sometimes they send their children and wives, while at other times the whole family may visit the native place.

#### Rent.

Forty-nine families, or 4·8 per cent of the total families, show an expenditure of Rs. 33-13-0 per month, or annas 11 per month per family by way of land rent or house rent. It works out at six pies per month per family when calculated on the basis of 1,030 families. Of course, the vast majority of workers live in *dhourahs* provided by the employers free of rent. But in some collieries, such as the railway collieries in Giridih and the Kustore colliery in Jharia, the workers have been given land on nominal rent of Re. 0-8-0 to Rs. 2-0-0 a year for building their houses. Again, some workers have also taken land from their employers for cultivation purposes and pay rent amounting to Re. 1-8-0 to Rs. 3-8-0 per *bigha*. This is especially the case with the workers of the Giridih colliery where most of them are the *naukarani* tenants of the company. Lastly, we find 5 families living outside the colliery *dhourahs*, in Jharia bazar and Kustore village and paying monthly rent of Re. 1-2-0, Re. 1-4-0 and Re. 1-12-0 per month.

#### Religious observances, feasts and festivals.

Seven hundred and forty-nine or 72 per cent of the families report an average monthly expenditure of six annas five pies on religious observances, feasts and festivals. Calculating on the basis of 1,030 families it works out at Re. 0-4-7 per family. Of the remaining 28 per cent of the families 11 per cent do not report any expenditure and 17 per cent cannot give us any account of their expenditure, on this item, as they perform all their ceremonies in their homes, the joint expense of their whole family. In collecting this information great care was taken to avoid the recording of clothing expenditure which the families generally incur on ceremonial occasions. The clothing purchased on such occasions is used throughout the year and its expense has already been accounted for in the monthly clothing expense of the family. The above figures represent mostly the expenditure which the workers incur on feasts and sacrifices that they make in worshipping their gods,

### Payment of interest.

Twenty-two families spend Rs. 278-3-1 by way of paying interest on their debts. It works out at Re. 0-4-3 per family per month on the basis of 1,030 families and Re. 1-4-1 per family per month on the basis of families actually incurring this expenditure.

### Remittance to homes.

Only two hundred families make home remittances. The total money remitted amounts to Rs. 616-7-1 which works out at Rs. 3-3-0 per family on the basis of the family actually remitting money, and Re.0-9-11 per family on the basis of all the 1,030 families. From this we should not draw the conclusion that only 19·4 per cent of the families can save something out of what they earn, as all the families saving money do not make home remittances. Again, even those who send money to their dependants do not necessarily remit all their savings. An attempt was made to ascertain as to how the families use their savings. The results obtained are given in the table below :—

TABLE No. XL.

#### Use of savings.

Number of families.	How the saving is used.
318 or 64 per cent .. ..	Keep themselves for rainy day and non-recurring expenditure.
140 families or 28 per cent .	Home remittance.
13 " " "	Land.
7 families " "	Payment of land revenue.
6 " " "	Ornaments.
4 " " "	Clothing.
2 " " "	Cultivation of land.
2 " " "	Religious observances and festivals.
2 " " "	Gambling.
1 " " "	Utensils.
1 " " "	Cattle.
1 " " "	House building and repairing.

These figures should be accepted with some reserve, as they were collected in the months of June, July and August when

most of the migratory workers, who generally send large part of their savings to their homes, had already left the coal-fields for cultivating their lands in their villages.

Now summarising the expenditure of the budget of the family we find that an average family with an income of Rs. 17-11-2 spends the following sums under the different heads:—

TABLE No. XLI.

Item.	Expenditure.			Percentage of total expenses.
	Rs.	a.	p.	
1. Food .. .. .	12	13	6	72·1
2. Clothing .. .. .	1	2	1	6·4
3. Shoes, umbrellas, <i>chaddars</i> , quilts, <i>dohars</i> , blankets, caps, sacks and pillows.	0	3	5	1·2
4. Fuel and lighting .. .. .	0	3	3	1·1
5. Household requisites .. .. .	0	2	5	·8
6. Miscellaneous [liquor, tobacco, soda and soap, religious observances, festivals, interest, barber, amusements, education, medical aid, contribution, <i>pan</i> , <i>suparis</i> , land rent, oil (hair), chewing sticks, bangles, postage, money remitted home].	3	1	9	18·4
Total .. .. .	17	10	5	100

There remains hardly a balance of 9 pies out of the average family income of Rs. 17-11-2. This small balance will also disappear if we take into account the expense of travelling to and from home, which, though it cannot be estimated correctly, is certainly higher than this balance.

How excess expenditure over income is met.

An attempt was also made in our inquiry to find out as to how the workers meet their excess of expenditure over income. The results obtained are given in the following table:—

TABLE No. XLII.

How excess expenditure is met.	Number of families.
1. By credit purchase or loan from shopkeepers ..	552
2. By borrowing from co-workers and friends ..	157
3. By taking advances from the colliery offices ..	70
4. By borrowing from money-lenders ..	53
5. By borrowing from <i>sirdars</i> ..	50
6. From their own savings ..	21
7. By taking advances from contractors ..	16
8. By taking loans from <i>Kabulies</i> ..	9
9. By taking loans from relatives ..	9
10. By curtailing their expenditure ..	8
11. By begging ..	6
12. By getting some help from home ..	5
13. By taking loans from colliery Babus ..	5
14. By taking loans from colliery <i>chaprasis</i> ..	5
15. By selling their pigs ..	4
16. By starving themselves ..	4
17. By immoral means ..	1
18. From agriculture income ..	1
19. Never feeling any such necessity ..	3
Total ..	979

From the above table it is obvious that 56 per cent of the families, in whose case this information was recorded, meet their excess expenditure either by purchase on credit or by taking loan from the shopkeepers. Out of the remaining 44 persons as many as 39 persons overcome this difficulty by borrowing from friends, co-workers, relatives, colliery Babus, contractors, colliery offices, *sirdars*, *Kabulies* and colliery *chaprasis*. Of all these credit agencies the most important is that of co-workers and friends who are responsible for helping 16 per cent of the families in times of their difficulties. Nearly 14 per cent of the families look to the colliery office, contractors and *sirdars* for help in meeting their excess expenditure and hardly 6 per cent to the professional money-lenders. Only

2 per cent of the families meet their excess expenditure out of their savings. A widow was resorting to immoral means to tide over the difficulties of low income.

### Indebtedness.

To complete the study of economic condition of colliery workers some data was also collected regarding the extent of indebtedness, the causes of indebtedness, the source of credits, the rates of interest at which money is borrowed, the nature of security and the terms of repayment. In extracting all this information from the workers we came across some of the difficulties, which Prof. Bose mentioned in his report of the family budgets of the workers in the Jharia coalfields in 1935, but all of them were solved by handling the witnesses a little tactfully. Our inquiry reveals that out of 1,030 families studied, 453 or nearly 44 per cent were in debt, the average indebtedness per family in debt being Rs. 34-0-8, the average debt for all the families being Rs. 14-9-1, and the average monthly income per family being Rs. 17-11-2. The ratio of indebtedness to monthly income for families in debt comes to 1·9, while for all the 1,030 families it works out at ·9.

The indebtedness of indebted families with monthly incomes "below Rs. 5," Rs. 5 and below Rs. 10, Rs. 10 and below Rs. 15, Rs. 15 and below Rs. 20, Rs. 30 and below Rs. 40, and Rs. 40 to Rs. 50 works out at 3·9, 2·4, 2·8, 1·7, 1·5, 1·3, and 3·5 times respectively their monthly income. The following table contains an analysis of indebtedness by income groups:—

TABLE XLIII.

Income Group.	Number of family studied.	Number of family in debt.	Percentage of columns 3 to 2.	Average indebtedness per family actually in debt.	Average indebtedness per family.	Ratio of indebtedness to monthly income.	
						On the basis of all families.	On the basis of families in debt.
1	2	3	4	5	6	7	8
				Rs. a. p.	Rs. a. p.		
Below Rs. 5 ..	21	8	38	16 0 9	6 1 0	1.2	3.9
Rs. 5 and below Rs. 10	135	67	50	19 13 3	9 11 2	1.2	2.4
Rs. 10 and below Rs. 15	316	157	50	34 4 3	17 2 1	1.4	2.8
Rs. 15 and below Rs. 20	241	113	47	28 2 7	13 9 3	.8	1.7
Rs. 20 and below Rs. 30	215	72	33	37 11 5	12 12 9	.5	1.5
Rs. 30 and below Rs. 40	73	27	37	43 8 4	16 1 5	.48	1.3
Rs. 40 and below Rs. 50	29	9	31	155 12 4	46 8 10	1.1	3.5

From the above table it is clear that the burden of indebtedness is the heaviest in case of workers earning Rs. 10 to Rs. 15 and is the lowest in case of workers earning Rs. 30 to Rs. 40.

Analysing the extent of indebtedness among different classes of workers we get the following result:—

TABLE XLIV.

Classes of workers.	Indebtedness among different classes of workers.		
	Number of families.	Number of families in debt.	Percentage of families in debt.
United Provinces workers ..	35	23	65.7
Dusadhs .. ..	42	23	54.8
Muslims, Sikhs and Christians	148	81	64.7
Chamars and Mochies ..	34	18	52.9
Orissa workers .. ..	14	7	50
High caste Hindus ..	25	12	48
Mushars .. ..	19	8	42.1
Bhuiyas .. ..	162	66	40.7
Turis .. ..	52	21	40.4
Manjhis .. ..	55	22	40.0
Rajwars and Ghatwals ..	33	21	39.8
Bauris .. ..	46	16	34.8
Central Provinces workers ..	73	24	32.8
Lohars and Barhis .. ..	38	12	31.6
Koras, Kols, Ho, and Oraons	20	6	31.6
Kahars and Goalas .. ..	47	15	31.1
Miscellaneous .. ..	181	78	43.7

High indebtedness among the United Provinces and Muslim workers is mainly due to their higher standard of living. And among the Dusadhs it can be attributed to their habit of heavy drinking. Orissa workers are heavily indebted because of their low earnings. Similar is the case with the Chamars who like the Dusadhs are also well known for the drinking habit. Among the Manjhis and Bauris the comparatively small indebtedness is probably due to their low and flexible standard of living, which can be reduced to any limit required by any fall in their income. Among the Central Provinces workers low indebtedness can be explained to some extent by their habit of abstaining from drink, and wise spending.



Table no. XLV shows the causes and the proportion in which they contribute to indebtedness.

TABLE No. XLV.  
Causes of Indebtedness.

Causes.	Amount of debt.	Percentage of the total indebtedness.	Number of families in debt.	Percentage of families in debt.	Indebtedness per family in debt.
1	2	3	4	5	6
	Rs. a. p.				Rs. a. p.
Marriage	4,651 8 0	29.9	108	23.9	43 1 1
Business	1,405 2 2	9.4	2	.4	702 0 0
Funerals	1,272 2 0	8.3	43	9.0	30 4 7
Agriculture	1,070 0 0	6.8	24	5.3	44 0 4
Sickness	918 0 0	5.8	60	13.2	15 3 0
Litigation	616 0 0	3.9	14	3.2	59 4 7
Ancestral debts	735 0 0	4.6	6	1.3	122 0 0
Unemployment	631 0 0	4.0	46	10.1	13 11 6
Home visits	206 0 0	1.4	13	2.9	15 15 5
Festivals	388 0 0	2.5	24	5.3	16 3 8
House building and repairing	190 0 0	1.3	7	1.5	27 2 2
To purchase cows and buffaloes.	124 0 0	.8	5	1.1	24 12 10
Payment of former debt	107 0 0	.7	5	1.1	21 0 5
For going on pilgrimage	40 0 0	.5	1	.6	40 0 0
Child birth	17 0 0		2		8 0 0
Ornaments	12 0 0		1		12 0 0
Unspecified	2,843 14 0		18.3		93

It is obvious from the above table that marriage is the most important cause of indebtedness. It is responsible for nearly 13 per cent of the total indebtedness and for the indebtedness of nearly 24 per cent of the families in debt. Sickness and unemployment are although nearly responsible for the indebtedness of as many families as marriage, yet they account for hardly 11 per cent of the total debt. In the unspecified debts which stand second to marriage debts in importance, we have included mostly the debts of the workers towards a shopkeeper for purchasing foodstuffs on credit, the debts which they have incurred for purchasing clothes and utensils and remitting money to their dependants. Among the agricultural causes, which account for nearly 7 per cent of the total debt and for 5 per cent of the families in debt, are payment of rent and land revenue, the purchase of cattle, seeds and lands, and cultivation of lands.

Turning to the source of credit we find that there are as many as 14 different classes of creditors, such as Kabulies, shop-keepers, relatives, local money-lenders, co-workers and friends, village *mahajans*, local Zamindars, goldsmiths, co-operative societies, colliery office, colliery Babus and *chaprasis*, *sirdars* and contractors. Out of 453 indebted families, nearly 26·7 per cent have borrowed from shop-keepers, 14·8 per cent from *mahajans*, about 11·9 per cent from local money-lenders, about 12·8 per cent from Kabulies, nearly 9 per cent from co-workers and friends, nearly 8 per cent from colliery *chaprasis*, 7·8 per cent from *sirdars* and contractors, 4·9 per cent from relatives, 2·6 per cent from local Zamindars, 2·2 per cent from company's office and 2·2 per cent from co-operative societies, goldsmiths and colliery Babus. Of course, in some cases the same family has borrowed from more than one source.

As regards the rate of interest, it is interesting to note that 27 per cent of the total debt has been incurred free of interest. On the remaining 73 per cent the rates of interest charged vary as widely as between nil and 650 per cent. Different rates of interest are charged not only by different classes of creditors but also by the same class of creditors. Table no. XLVI shows the interest rate charged by different classes of creditors.

TABLE No. XLVI.  
Rates of interest charged by different classes of creditors.

Creditors.	Number of families borrowing.	The usual rate of interest charged.	Percentage of cases in which the usual rate is charged.	The range of interest charged.	Other rates.
1	2	3	4	5	6
1. Shop-keepers ...	111	37½ per cent.	33·4 per cent.	10 per cent to 600 per cent.	10 per cent in one case, 25 per cent in one case, 75 per cent in 12 cases, 150 per cent in four cases, 168½ per cent in two cases, 600 per cent in one case and loan without interest in 54 cases.
2. Village mahajans	67	37½ ..	35·8 ..	12 per cent to 300 per cent.	12 per cent in one case, 18½ per cent in two cases, 15 per cent in one case, 15 per cent in eight cases, 75 per cent in 15 cases, 150 per cent in one case, 500 per cent in one case and free work or produce of land in nine cases.

TABLE No. XLVI—concl'd.

Class of creditor.	Number of families borrowing.	The usual rate of interest charged.	Percentage of cases in which the usual rate is charged.	The range of interest charged.	Other rates.
1	2	3	4	5	6
3. Local money-lenders	54	75 per cent	44.9 per cent	18½ per cent to 650 per cent.	18½ per cent in one case, 24 per cent in one case, 28 per cent in 1 case, 37½ per cent in 19 cases, 112½ per cent in one case, 284½ per cent in one case, 325 per cent in two cases, 300 per cent in two cases 150 per cent in four cases and 650 per cent in three cases
4. Kabullies	69	150 ..	37.6 ..	18½ per cent to 337½ per cent	18½ per cent in 2 cases, 37½ per cent in 11 cases, 75 per cent in 19 cases, 93½ per cent in 1 case, 112½ per cent in 7 cases, 235 per cent in two cases, 300 per cent in 5 cases, and 337½ per cent in one case.
5. Co-workers	38	37½ ..	29.3 ..	Nil to 600 per cent.	Free in 20 cases, 50 per cent in one case, 75 per cent in three cases, 18½ per cent in one case, 150 per cent in one case, 300 per cent in one case, 600 per cent in one case.
6. <i>Chaprastis</i>	38	75 ..	46.8 ..	37½ per cent to 650 per cent.	37½ per cent in one case, 150 in five cases 93½ per cent in one case, 300 per cent in three cases, 60 per cent in four cases, 650 per cent in two cases, 112½ per cent in three cases.
7. <i>Sirdars</i> and Contractors.	33	37½ ..	25 ..	25 per cent to 600 per cent.	Free in 22 cases 600 per cent in one case and 25 per cent in one case.
8. Relatives	21	37½ ..	23.8 ..	33 per cent to 300 per cent.	Free in 12 cases, 83 per cent in one case, 150 per cent in one case, 300 in two cases.
9. Local Zamindars	11	37½ ..	38.3 ..	25 per cent to 112½ per cent.	Free in two cases, 25 per cent in two cases, 27½ per cent in one case, 75 per cent in one case, 112 per cent in one case.
10. Colliery offices	10	...	Nil	Free	All free.
11. Colliery Babus	5	75 ..	80 per cent...	75 per cent to 93½ per cent.	93½ per cent in one case.
12. Goldsmiths	4	37½ ..	75 ..	37½ per cent. to 75 per cent.	75 per cent in one case.
13. Co-operative societies.	2	12½ ..	50 ..	12½ per cent to 37½ per cent.	37½ per cent in one case.
14. Others	3	37½ ..	66½ ..	37½ per cent...	Free in one case.

The debt incurred from the shop-keepers is usually the result of purchasing things on credit from him. And although 49 per cent of debt due to him is reported to be free, yet he recompenses himself by charging a higher price for goods sold on credit. The difference between the credit and cash prices varies from 10 per cent to 33 per cent, and even sometime to 40 per cent. *Sirdars*, contractors and colliery offices give free loans to the workers to keep them contented and somewhat permanent in their employment.

Taking all the factors into account, we find that the interest rates range between nil and 650 per cent. The most common rates of interest at which money had been borrowed by the colliery workers are given as below :—

TABLE No. XLVII.

Rate of interest.	Number of families paying these rates of interest.	Percentage of families in debt.	Percentage of families paying interest.
Free of interest	120	27%	..
37½%	129	28.4%	36.9%
75%	90	20%	2.7%
112½%	11	2.4%	3.3%
300%	13	2.8%	3.9%
150%	16	3.5%	4.9%
600%	7	2.2%	3.0%
650	3		

The above rates account for 59.3 per cent of the families in debt and for nearly 81 per cent of the families paying interest. So in summarising we can say that the usual rates of interest for borrowing in the Bihar coal-fields are 37½ per cent and 75 per cent, or roughly 2 pies and 1 anna per rupee per month.

#### Nature of security.

High rates of interest in the colliery area are not to a small extent due to the nature of the security that the borrowers can offer. Out of 453 families in debt as many as 272 or about 60 per cent have borrowed money on personal security alone, and 20.9 per cent have taken loans on the security of hand notes or promissory notes. In other words, only 19 per cent of the families

have furnished some substantial securities against the debt they have incurred. Out of these 19 per cent, about 10 per cent have borrowed against their lands, 5 per cent by pawning their ornaments, 3 per cent by furnishing some securities and only 1 per cent against their houses and other properties.

#### Terms of re-payment:

As regards the terms of re-payment, we find that 225 families or nearly 49·6 per cent of the total families in debt can discharge their debts whenever they can afford. Out of the remaining 50 per cent, about 43 per cent have borrowed money on the condition of regular payment of interest on their debts, weekly or monthly or annually, as settled upon. Only 4 per cent have to repay their debt and interest by instalment, and 3 per cent can repay it in kind, i.e. personal services or the produce of their lands.

#### Housing of workers:

In our enquiry we also made an attempt to study the housing conditions in Jharia, Giridih and Bokaro coal-fields. So while taking down the budgets we recorded the description of houses in which the families were living, and compiled the statistics relating to the extent to which housing is provided by the employers, by the workers themselves and by the private landlords, the distance of *dhourah* from the place of work, nature of accommodation from health view point, water-supply, sanitation, number of persons living in a room and general condition. The figures relating to the number of persons living in a room were collected not only from the houses of the families whose budgets were collected, but also from many other houses of the collieries which were selected for the enquiry.

As we have already stated, a vast majority of workers in the Jharia, Bakaro and Giridih coal-fields live in *dhourahs* (cooling lines) provided by the employers free of rents. Out of 806 families, whose houses were visited, 743 or about 92 per cent were living in colliery *dhourahs* provided by the employers. Out of the remaining 68 families 53 were living in their self-owned *kutcha* thatched huts and 5 in the houses of private landlords. The *dhourahs* provided by the employers are generally of 6 different types, such as country tile roof, Raniganj tile roof, arched roof, plastered flat roof, asbestos roof and tin roof *dhourahs*, which account for 45 per cent, 11 per cent, 39 per cent, 2·2 per cent, 1·3 per cent and 1·5 per cent of the houses provided by the employer.

Excepting the arched roof and the flat roof houses, which are generally of *pucca* masonry work, all others are built of mud and bricks. In Giridih collieries the workers are given only the house building materials, such as bricks, bamboo, mud and tiles, and they have to build their houses themselves.

Majority of the collieries, *dhourahs* are generally situated within half a mile distance from the place of work. Hardly 8 per cent of the families were living at a distance of half mile to 1 mile, 4 per cent at one mile to 2 miles and 6 per cent at more than 2 miles distance. The latter were mostly the families who were coming from the neighbouring villages and were living in their own *kutchas* huts.

As regards the accommodation, nearly 85 per cent of the families are living in one room, 10 per cent in two room, 3 per cent in three room and 2 per cent in four room houses. The majority of 1 room houses are self-owned houses. In collieries there are very few 2 or 3 room houses which are generally given to highly paid skilled workers. Every ordinary worker is entitled to a one room house, no matter whether he is alone or has a family of 8 persons. The same room is used to serve the purpose of store, sitting and bedroom. 93 per cent of the houses have verandahs of 5 × 10 feet and 5 × 12 feet, which are frequently used by workers as kitchens. In case the rooms have no verandahs the labourers either cook their food in the open, just in front of the door or in the room itself. The most common sizes of the rooms are 10 × 10 × 7 feet and 10 × 12 × 7 feet. The first is more common as it is the standard size prescribed by the Jharia Mines Board of Health, which is supervising the housing facilities in the Jharia coal-field. This size has been adopted even by the collieries which are outside the limit of the Jharia Mines Board of Health. In the Giridih collieries where material is given to the workers to build their houses themselves, we found as big rooms as 13 × 30 × 8 feet and as small as 4 × 5 × 4 feet. In the Kargali colliery in the Bokaro coal-field some of the temporary huts of the workers were also as small as 6 × 4 × 4 feet.

Though the regulations of the Jharia Mines Board of Health lay down that a minimum floor space of 33 sq. feet and an air space of 333 cubic feet must be allowed to each adult and half such space to each child under 12, and the minimum dimensions of the room should be such that a family of 2 adults and 2 children under 12 can be accommodated in it, yet we hardly came across any colliery in which these regulations were

observed. In other words majority of the *dhourahs* were overcrowded. The following figures are interesting in this connection.

TABLE No. XLVIII.  
EXTENT OF OVERCROWDING.

Name of colliery.	Number of houses.	Number of adults per room.	Number of children per room.
Bhaga .. ..	58	5.6	.7
Joint Bokaro .. ..	38	5.4	1.9
Jitpur .. ..	46	5.3	.9
Khas Jharia .. ..	6	5.0	2.0
Jamadoba .. ..	140	4.9	1.2
South Kujama .. ..	16	4.3	1.0
Godhar .. ..	14	3.8	1.1
Sirka .. ..	10	3.4	.6
Kusunda Nayadih .. ..	13	3.0	1.4
Bhadruachak .. ..	58	3.0	1.0

In Jharia and also railway collieries it is quite a common sight to see a room packed with 5 or 6 persons. One can also find many instances of 1 room being utilized by 2 families. Overcrowding is still greater in houses inhabited by single persons, where it is not rare to see 10 or 12 men sleeping packed like sardines in one room. In Lodna, Jamadoba, Standard, and some other big collieries some of the houses were found to be overcrowded with as many as 14 to 16 persons. Though insufficiency of accommodation is the main cause of overcrowding, yet sometimes it can also be attributed to the gregarious habits of the Indian miners in security of property in *dhourahs*, and the absence of creches.

Turning to the supply of water we find that 89 per cent of the families were getting free tap and filtered water, 9 per cent well water and 2 per cent tank and river water. Well, tank and river water is mostly used by the families who are not living in the colliery houses, or who are working in collieries outside the limit of the Jharia Mines Board of Health. The Railway collieries have made their own arrangements for the supply of filtered chlorinated and tap water. In Bhurkanda colliery workers are supplied only chlorinated pipe water. The workers do appreciate the free supply of pipe water, yet in the *dhourahs* of not a few collieries there was general complaint

about the difficulty of getting water, either because of too few taps, or because of the distance of the water tap from the *dhourahs*. In 20 collieries where the number of taps and *dhourahs* was recorded the average number of inhabited *dhourahs* per tap worked out at nearly 34. In four collieries one tap was supplied to 75 to 82 quarters.

In respect of sanitation also, the colliery owners and the companies, with the exception of a few who are taking particular care to keep labour quarters sanitary, are not realising their responsibilities. Dustbins are found in use in only 33 per cent of the collieries, and even among them hardly 3 per cent had made adequate arrangements for cleaning them at regular intervals. Labourers ease themselves near about their quarters. Children can be found answering nature's call either behind or in front of their own rooms. Sometimes they use dustbins as latrines. Collieries do maintain some sweepers, but they are either too small in number, or too busy in the official's and Babus' quarters to pay any attention to labour quarters, or too idle to work efficiently, or too clever or easy going to do their work honestly. Pigs, cows and goats, which the workers were found to be keeping in *dhourahs* in some collieries, were making the houses all the more insanitary.

Lastly, taking the general condition of the *dhourahs* or colliery houses in the coal-fields we find that, besides being overcrowded and insanitary, they also suffer from many other defects, such as damp floors, lack of privacy, inadequate ventilation, leaking roofs and vanishing plinths. 90 per cent of the houses had damp and *kutch*a floors and 77 per cent were lacking privacy. As regards ventilation, hardly 48 per cent of the houses had windows, 37 per cent ventilation holes, and 15 per cent a small door of 5×2 feet or of even smaller dimensions in many cases, which hardly allow a man of normal size to enter the room without squeezing himself. Again, whatever ventilation and light are available, can hardly be utilised by the workers because of the absence of privacy. They cut them off by the old kerosene tins, gunny bags and clothes used as screens to protect the privacy of the inner apartment from the vulgar gaze.

Further in many collieries repairs and white-washing are undertaken very irregularly. Vanishing plinth, broken floor, black walls and dilapidated condition in general, were the common features of not a few *dhourahs* that were visited. As many as 34 per cent of the houses had leaking roofs. In Bhadruchak, Joint Bokaro and two or three other collieries,



more than 20 per cent of the quarters had leaking roofs, and there were received not a few complaints from the workers who were passing rainy nights sitting under umbrellas. Lastly, in majority of the collieries no light is provided either inside or outside the *ahourahs*. One may see a good metalled or pucca road running towards the *Sahebs'* bungalows but none towards the *dhourahs* where hundreds of people reside. Labourers have to find their way to their rooms and working places in darkness when they come out of the shifts or go to their work at night. Proper lighting and roads are matters of necessity in the coal-fields where houses are built on uneven levels and subsided areas are fast increasing.

### Welfare work.

In their evidence submitted to the Royal Commission on Labour the Indian Mining Federation stated that the "Federation cannot help confessing that the welfare work among the mining labour is almost absent, whatever scanty efforts have been made, being entirely undertaken by the employers. There has never been any constructive work in the field of welfare works". Except what is being done by the Jharia Mines Board of Health, there is hardly any welfare work worth the name undertaken either by the employer or by the employees. Of course free medical aid is available at all the collieries, and quite well equipped hospitals are attached to some big collieries like Jamadoba, Kustore, Lodna, Bhowra, Loyabad; but as stated before, in majority of cases the available medical aid is inadequate both in quantity and quality. Schools of the lower primary standard have been provided at the expense of the employers at Bhaga, Jealgora, Jamadoba, Kustore, Lodna, Dharmaband, Godhar, Angar Pathar, Chasnala, Bholanbararee, Loyabad and some other collieries, but very few workers are taking advantage of them for the reason already explained. In some collieries, like Bhowra recreation facilities in the form of football game have been provided, but they are largely used by the clerical and supervising staff of the collieries. Bathing facilities are available in most of the collieries, but none, excepting one or two collieries such as Sendra colliery, has provided separate baths for women workers who are usually found taking their bath along with men at the same place in the open air. There are no libraries, no reading rooms and no creches.

Lastly, hardly a few collieries like Kustore, Loyabad, Jamadoba, Bholanbararee area and Jealgora have adopted some definite scheme of sickness and maternity benefits. In Kustore

women workers are paid Re. 1-2-0 a week for a few weeks immediately before and just after child birth, when they are not allowed to work. Besides this, a bonus of Rs. 5 is given to the women workers on the birth of a child. In the event of workers falling ill and being admitted into the company's hospital as indoor patients, an allowance of annas 4 a day is paid to them. In serious cases the patient is also allowed to retain one of the relatives as an attendant in the hospital, in which event an attendant is also paid Re. 1-8-0 a week. In Jamadoba maternity benefit amounting to the actual weekly earning is paid to the women workers during 4 weeks before and 4 weeks after the child birth. In case of serious accidents the patient is allowed to keep an attendant who gets annas 5 a day. In Phaga colliery women workers are paid only Re. 1 on child birth and sick persons are allowed a daily allowance of annas 3. In Bholanbarree colliery women workers are paid a weekly maternity allowance of Re. 1 for 4 weeks, and sick persons get annas 2 to annas 6 according to their financial condition. In Loyabad also a weekly maternity allowance of Re. 1 a week is paid to the women workers for 2 weeks before and 2 weeks afterwards, but sickness allowance of annas 4 a day, or half the wage, is paid only in serious accident cases. In Sirka colliery women workers are paid Rs. 2 on child birth and sick persons get Re. 1 a week as sickness allowance. In Pootkee colliery only a sickness allowance of As. 3 to 4 per day is paid to unmarried workers and As 5 per day to married ones. In Jealgora and other collieries of the East Indian Coal Company, Limited, a scheme of benefit fund has been organised for helping the workers in the event of sickness, birth, death, and marriage on contributory basis. The weekly paid workers contribute one pice per week and monthly paid workers one anna per month. All fines realised from the labour of the colliery for disciplinary purposes is credited to the benefit of this fund. Out of this fund the members are paid sickness, birth, marriage and death allowances at the following rates:—

## Sickness Allowance.

## Weekly.

			Rs.	a.	p.
Men	---	---	1	8	0
Women	---	---	1	8	0

## Part week allowance.

			Rs.	a.	p.
Men	...	...	0	3	0 per diem.
Women	---	---	0	3	0

In case a worker is admitted as an indoor patient, he with his attendant is paid Rs. 2 per week.

### Birth allowance.

An expectant mother is paid a maternity allowance of Rs. 4 at the time of child birth, besides two tins of some suitable food preparation in two weeks immediately preceding birth and free services of wet nurse and trained *dais*. In case of still-birth she gets only Rs. 2, and for 3 weeks after the confinement she is entitled to a sick allowance of Rs. 2 per week.

### Marriage and death allowance.

A funeral allowance of Rs. 4 per head in case of adults and Rs. 1-8-0 in case of a child is paid to the members of the fund. A marriage allowance of Rs. 10 is paid for each recognised marriage between the members or the children of members of the fund.

A similar but better benefit fund scheme is in operation in Giridih and Bokaro collieries. All men pay at the rate of two pice per rupee to the fund and all women and children at the rate of one pice per rupee. The contractors contribute two pice per rupee on all their bills. Besides the fines, unpaid wages are also credited to this fund. The fund is utilised to pay sickness and maternity benefits, death, widow, orphan allowances and old age pension at the following rates :—

#### I. For sickness—

	Rs.	a.	p.
Men per week .. .. .	0	12	0
Women .. .. .	0	12	0
Children .. .. .	0	4	0
II. For living birth.. .. .	3	0	0

#### III. For deaths—

Adults .. .. .	3	8	0
Children not under 3 years old .. .. .	1	0	0

Sickness benefits are paid only for such members of the family who are subscribers. They are not given for less than 6 days certified absence and the payments are—

	Rs.	a.	p.
Men per day .. .. .	0	2	0
Women .. .. .	0	2	0
Children .. .. .	0	1	0

## IV. Old age pension—

Re. 0-12-0 per week for males.

Re. 0-12-0 „ „ females.

## V. Widow allowance—

Re. 0-10-0 per week.

For each child under thirteen Re. 0-6-6 per week.

VI. Orphans of the employees, who may be temporarily destitute either by sickness or through not being of age to get employment in the mines or works of the administration, and who are under thirteen, get As. 6 per week.

VII. Any employee, male or female, who is deprived of his or her powers by accidents or sickness and whose sick allowance is inadequate to support his or her family, or who is technically barred from sickness benefit, gets a disabled allowance of annas 10 per week, besides annas 6 per week for each child dependant.

In joint Bokaro collieries the contribution to the fund is  $1\frac{1}{2}$  per week per male worker and  $\frac{1}{2}$  pice for female worker. The contractor contributes at the rate of 3 pice per rupee on all his bills. Besides granting all the benefits mentioned before, a marriage allowance of Rs. 6 is also granted in each case on the occasion of a first recognized marriage of a colliery Indian employee, or children of such an employee, on the condition that the aggregate payment of such an allowance shall not exceed Rs. 1,500 per annum.

Besides this benefit scheme, the Giridih collieries have an excellent system of education which was also appreciated by the Royal Commission on Labour. There are eleven elementary schools, four lower primary schools, one upper primary school and one mining school. In the event of parents not sending their children to school, a small fine is imposed and this usually has the desired effect. Boys are encouraged to go up for the upper primary standards by offering scholarships of not more than 8 annas per week per head. After leaving the upper primary schools promising boys are taken into the mining school, where the course of practical and theoretical instruction covers three years. In course of these three years they get the following daily allowances:—

				As.	p.
1st year	..	..	..	3	3
2nd year	..	..	..	4	3
3rd year	..	..	..	5	3

These allowances are stopped in case of a student who fails in any examination. Though at present the company is not under any obligation to provide jobs to the students passing the final examination, yet preference is certainly given to them if jobs fall vacant.

Lastly, co-operative credit societies and co-operative stores are conspicuous by their absence in the coal-fields. The advantages of co-operation are still to be taught to the workers. The best agency to pave the way for such institutions by bringing home to the miners their advantages, are labour organizations. At present miners have no organizations worth the name. Of course, there are three labour unions in Jharia, and each claims to have on its list 1,000 to 2,000 members, but I hardly came across any family which was paying anything by way of trade union fees. Again, the internal dissensions and aspirations to become members of Legislative Assembly do not leave any time to the officials of these unions, or so called labour leaders, to guard and promote the interests of the members of their unions. Most of them were found to be self seekers and job-hunters. Their chief aim is generally to organize strikes in some big collieries, either to extract money, or to get jobs for themselves, or their relatives rather than to better the lot of the workers. A clean purge of all such persons and reorganization of strong labour unions by unselfish and honest persons will go a long way in improving the condition of workers.

## APPENDIX A.

THE NUMBER OF COLLIERIES AND THE NUMBER OF BUDGETS COLLECTED FROM EACH ONE OF THEM.

Name of the collieries.	Number of budgets collected.	Name of the collieries.	Number of budgets collected.
A. Joint Stock European managed collieries.—		27. South Balihari ..	28
1. Amlabad ..	20	28. Standard ..	21
2. Angar Pathar ..	20	29. Sirka ..	5
3. Bastacolla ..	6	30. Dhorl ..	5
4. Bhulanbararee ..	15		
5. Bhagatdih ..	6	Total ..	477
6. Bhagaband ..	21		
7. Bhowra ..	21	B.—Joint stock Indian managed collieries.—	
8. Bhadruchak ..	20	31. Angar Pathar ..	12
9. Bhaga ..	22	32. Bhalgora ..	6
10. Chasnala ..	9	33. Bhagatdih ..	7
11. Dharma-Band ..	24	34. Jharia Khas ..	7
12. Gaslitan ..	20	35. Jamadoba ..	30
13. Gopalichak ..	20	36. Kharkhari Maheshpur	14
14. Hurladih ..	14	37. Malkera ..	15
15. Jitpur ..	18	38. Nichitpur ..	8
16. Kendwadih ..	25	39. Sijua ..	22
20. Kankanee ..	20	40. South Tisra ..	4
21. Lodna ..	24		
22. Loyabad ..	20	Total ..	125
23. Muddih ..	15		
24. Murlidih ..	16	C.—Indian privately-owned collieries.—	
25. Pootki ..	20	41. Asha Kutya ..	8
26. Sendra ..	24	42. Alkusa Nayadee ..	6

## APPENDIX A—concl'd.

Names of the collieries.	Number of budgets collected.	Names of the collieries.	Number of budgets collected.
<b>C.—Indian Privately-owned collieries—cont'd.</b>		<b>C.—Indian Privately-owned collieries—concl'd.</b>	
43. Dusserya ..	7	68. Patherdih ..	6
44. Balihari ..	10	69. Sita Nala ..	7
45. Central Kujama ..	3	70. South Kujama ..	6
46. Dharia Joba ..	4		
47. Dhansar ..	7		
48. Dobari ..	3	Total ..	205
49. Gandoodih ..	6		
50. Godhur ..	7	<b>D.—Non-Indian Privately-owned collieries.—</b>	
51. Ganhudih ..	6	71. Basdeopur ..	15
52. Gansodih ..	7	72. Ekra Khas ..	14
53. Industry ..	6	73. Jogta ..	10
54. Indian Jharia ..	8	74. Ganeshpur ..	9
55. Isabela ..	10		
56. Joyrampur upper and lower.	8	Total ..	48
57. Joyrampur Khas ..	8		
58. Kirkend (central) ..	6	<b>E.—Railway collieries.—</b>	
59. Kusunda Nayadee ..	6	75. Giridih collieries ..	60
60. Kendwadih ..	12	76. Argada ..	23
61. Kanta Pahari ..	6	77. Bhurkunda ..	18
62. Khas Gobindpur ..	7	78. Joint Bokaro ..	41
63. Madhuban ..	12	79. Kargali ..	45
64. New Marine Coal Co.	6	80. Swang ..	2
65. New Jeenagora ..	4		
66. Pure Jharia ..	6	Total ..	189
67. Pandebra ..	6		

APPENDIX "B".

FAMILY BUDGET ENQUIRY FORM.

INDUSTRIAL CENTRE.....

(a) Name of the head of the family.....

(b) Religion and caste.....

(c) Province and district of origin.....

If the family comes from a different district or province :

(d) Cause of migration.....

(e) How often do the members visit home?.....

(f) When last visited home?.....

(g) Cause of the visit.....

(h) Length of stay at home.....

2. SIZE AND COMPOSITION OF THE FAMILY.—

Description.	Numbers.				Age of		Number of persons (under 15) dead, with age at the time of death.	Relation-ship to the head of the family.
	Men.	Women.	Boys.	Girls.	Boys.	Girls.		
1	2	3	4	5	6	7	8	9
Wage-earners ...								
Dependents living with wage-earners.								
Dependents living elsewhere								

NOTE.—Persons under 15 years should be treated as boys or girls.



APPENDIX B.—contd.

3. INCOME.—

Occupation of each wage-earner.	Monthly wages.	Monthly over-time pay.	Additional earnings, if any.	Total.
1	2	3	4	5
Men ... ..				
Women .. ..				
Boys ... ..				
Girls ... ..				

Note.—The description of the occupation should be as definite as possible, showing whether the individual is a surface worker or an underground worker, whether a coal-cutter, loader, etc.

4. EXPENDITURE.—

(a) Food (Total).....

FOOD.

Article.	Quantity.	Price.	Total expenditure.	Remarks.
1	2	3	4	5

(b) Clothing.....

(c) Rent.....

(d) Fuel and Lighting.....

(e) Household requisites like the utensils, furniture, etc.....

.....

APPENDIX B—contd.

- (f) MISCELLANEOUS EXPENDITURE (Total).....
- (i) Remittances to dependants.....
- (ii) Travelling to and from place of employment.....
- (iii) Medicine and medical fees.....
- (iv) Drink and Drugs.....
- (v) Tobacco and Pan.....
- (vi) Religious observances, feasts and festivals.....
- (vii) Payment to Provident Fund or Trade Union or Co-operative Society.....
- (viii) Amusement and Recreation.....
- (ix) Education.....
- (x) Interest on debt.....
- (xi) Unspecified.....
- 5. SAVINGS, if any.....
- (a) How are savings invested?.....
- (b) How is the excess of expenditure over income met.....
- 6. INDEBTEDNESS (Total).....

Cause.	Amount borrowed.	Source of credit.	Rate of interest.	Nature of security.	Term of repayment.
1	2	3	4	5	6
1. Festival ...	...				
2. Marriage ...	...				
3. Funerals ...	...				
4. Sickness ...	...				
5. Unemployment	...				
6. Unspecified	...				

APPENDIX B—concl'd.

7. HOUSING.—

- (a) Description of Dwelling  
(materials used in construction).....
- .....
- (b) Landlord,  
(State whether Government, Municipal employer, private land-  
lord or owned by self.).....
- .....
- (c) Distance from place of work.....
- (d) Number of rooms occupied by the family and approximate  
dimension of each room.....
- .....
- (e) Dimensions of Verandah, if any.....
- (f) Water-supply.....
- (g) Sanitation.....
- (h) General condition.....

8. REMARKS BY THE INVESTIGATOR.—

.....

*Signature of the investigator.*

*Date*.....

**VOLUME II.**

**PART B.**

**(Memoranda submitted by the Investigators,  
Bihar Labour Enquiry Committee.)**

## MEMORANDUM

BY

**Mr. HARNANDAN PRASAD, M.A.;**

**Investigator, Bihar Labour Enquiry Committee.**

**(Including the one on minimum wage.)**

Most of the points referred to in the questionnaire of the Committee have been dealt with statistically in our budget inquiry reports. There remain certain facts, mostly a matter of opinion, which we should like the Committee to bear in mind.

### **The unemployed.**

As an inevitable concomitant of capitalistic industrialism, Jamshedpur centre has, on average, a reserve of 25 to 30 per cent of unemployed proletariates. This reserve may be drawn upon or added to with fluctuations in the terms of industry. There is never a lack at least of semi-skilled and unskilled labour. These unemployed workers might have been discharged, dismissed or might be waiting for jobs. Everywhere we went we met these desperate people who resented their exclusion from the scope of the enquiry which included workers in regular employment only. One wonders whether preference in recruitment may be given to such people who have established some sort of a claim to this area. The need for greater industrialisation to absorb these proletariates is manifest.

### **The problems of employed.**

They are essentially the same everywhere, namely, insecurity; arbitrary dismissal, degradation and promotion, jobbery and corruption; and lack of increase in pay with the increase in responsibilities that come with age.

#### **(a) Security of Service.**

##### **Permanency.**

The Committee has treated anyone employed for 6 months or less as casual. There are concerns like the Tatanagar Foundry bulk of whose workers have often worked less than six months in the year and that not continuously. People employed by months and working regularly would not exceed 60 per cent of all the labour employed. The weekly paid cooly labour and the contract workers accounting for about 40 per cent of all the labour live in insecurity, the spectre of unemployment always before their eyes.

The casual workers are also the most ill-paid and can have little reserve against misfortunes which are bound to visit them more often than their more regular and more prosperous brethren. The system of contract labour is the harshest in its operation, as it not only means the lowest wages, but also the most insecure tenure of work. Contractors are certainly casual employers, but if their employment roll shows that they have engaged more than 20 persons on average in the year, they should be obliged to conform to standards of employment in factories. They should be registered and licensed and subjected to periodical inspection, except of course when the contractors are also workers with others, in which case they become merely the chiefs of a group of piece-rate workers.

##### **A suggested machinery.**

#### **A Works Committee; A Labour Commissioner; and A Labour Council.**

The remedy lies in prescribing conditions whose fulfilment would automatically raise the workers into the class of permanent employees. At present few concerns keep a list of their casual workers and there is almost a complete absence of service rules.

The main condition would probably be continuous employment in any capacity in the concern for a period of say a year or 18 months. The worker should, however, be penalised only if the continuity be interrupted by his own slackness, indiscipline

and deliberate withdrawal from work. To ensure that these are the only grounds to prejudice the workers' claims to permanence, there should be a Works' Committee statutorily constituted with three members, a representative of a Labour Council, a nominee of the management and a Government official, not below the rank of a deputy collector. The machinery suggested above will be handy for a number of the other functions which may be easily imagined. We have presumed that there should be at any time invariably one and not more than one statutory Labour Council in a particular industrial area. It is necessary to elucidate the constitution of the Labour Council further.

The Council will be analogous to a local body like a municipality, an education board, or a mass literacy committee. It will be created by a Provincial Act and be given certain definite functions. There will be one council for a certain territorial area. Except for residence of less than a certain duration in the area every worker employed in the concerns named in a schedule, which the Provincial Government may modify from time to time, will be entitled to elect the members of this council and the executive of the council would be responsible to the elected members and ultimately to the labour electorate. The Council may be vested with a limited power of taxation; but there should be no obstacles in the way of its developing into a creative social organ, if workers agree to place funds at its disposal voluntarily for undertaking welfare schemes. To some extent, therefore, it may be a substitute of a trade union but trade unions need not languish and will, like political parties, provide the motive power to the Council. In spite of its limited legal basis such an organisation may grow into a powerful and responsible organ of co-operative enterprise. A single Labour Council for an area need not become a monopolistic and undemocratic body as a single parliament need not be one. Such a Council will lend further cohesion to the workers' movement and is essential in that it will give definiteness to the composition of the Works' Committee.

The Government official will also be a permanent member of the Works' Committee. The management, however, may be represented by one member for each concern that is affected for the time being or by a single representative of the employers in the area.

Interruption on grounds other than those noted above should be ignored. A register should be maintained for this

purpose and every entrant should be recorded serially for each grade. The recall of workers should be in order of their serial number for the particular grade.

## **(B) Promotion.**

### **(i) Grading of workers.**

The gradation referred to above will be a necessary feature of employment. Each worker at any time should belong to a definite grade. The number of grades, their creation and modification should be with the approval of the Government. The management can transfer a worker from one grade to another once he has been placed into a definite grade at the time of his appointment; but if a worker feels that he has been prejudicially affected, he may bring his case to the Works' Committee discussed above. This committee will decide with the aid of an expert's committee nominated by them, but an appeal will lie to the Labour Commissioner.

### **(ii) Wage Scale for each grade.**

There should be a time-scale wage rate for each grade and a worker will ordinarily continue to rise in the scale unless, on representation of the management, the Works' Committee with the aid of the expert committee decides that the worker cannot be allowed to rise further. An appeal will lie to the Labour Commissioner.

In fixing the wage scale, a minimum monthly salary of Rs. 20 for Jamshedpur, and Rs. 16 for Jamalpur and Rohtas centres or its equivalent daily rate should be assured to each worker. This minimum has been suggested on the basis of the statistical inquiry. The discrimination in wages on account of sex or age may, if necessary, be secured by prescribing that only certain grades of employment be open to females and adolescent workers. Such a prescription would be justifiable on more than one ground. With this minimum basis the total amount of the wages bill may be suitably distributed over the various grades. There need not be fantastically large differences in scales of wages between one grade and another.

It will be noticed that under this scheme there would be an automatic augmentation of wages with the length of the worker's service, even if his ability remains stationary. He will continue to rise in the scale appropriate to his grade until the Works' Committee stays him. Transfer to a different



grade with a different time-scale of pay may mean either promotion or degradation; and, if latter, the worker has got a remedy in the Works' Committee. Any objection to this gradation cum time-scale scheme for the permanent workers is untenable because the Railways, the post, the municipal services and the administrative services have found the system not unworkable. It means only that industry will increasingly take on the character of public utility with the handicap that a reasonable profit has to be secured for suppliers of capital.

### **Time rate or piece rate.**

There is a general feeling that piece-rate system tends to over-drive the workers. Under modern conditions of industry the units of output per piece-worker depend on the co-ordination of a number of factors of which the Workers' skill and strength is only one. If the other factors are unequal, piece-rate system is likely to operate harshly. It is curious to note that even where time rate system is supposed to be in operation, a worker may be made to do an allotted amount of work which may compel him to work overtime on pain of dismissal. Among the blasters at the Mosabani mines, for example, such overtime work has been reported to be widely in vogue. It seems that piece-rate work should be discouraged except in cases where the worker's contribution is demonstrably of paramount importance and where the result may be clearly rated. It is necessary, in any case, that spheres in which piece-rate system prevails should be carefully examined. The danger of the maximum output per worker becoming the normal output for purposes of fixing wages should be guarded against.

### **Safety and Mechanisation.**

Mechanisation may easily prove to be the worker's bane by driving him out of his work. But there are certain jobs which no man should be permitted to do and substitution of man by machine would be the most humane measure in such cases. The scraper's work at Mowbandar for instance, deserves such substitution. The Committee will be well-advised to examine the fields where mechanisation is indispensable. Mechanisation in this limited sense has vital bearing on the problem of safety. Other aspects of safety might be suggested by the Inspectors of Factories and Mines.

There are three other points to which I must refer and I have done; namely, housing; medical facilities; and retail supply.

### Housing. .

I have discussed the problem statistically in my inquiry reports where the failure of the employers in this respect has been made abundantly clear. Here it is only necessary to indicate possible solutions. We can do very little to help decent, healthy and cheap housing in case of workers who live scattered over the country-side as at Jamalpur centre. But where the working population is concentrated and a stable volume of employment exists, mass planning is possible. The architecture is for the engineers to decide upon but at least the industrial population should be housed in compact units where self-sufficient life may be guaranteed.

For such a planned provision of genuine housing it is vain to rely upon the good will of the employers. To them housing of the workers is one of the many lines of gain open, and, frankly, it is not the most important line. Often they may be too poor to bear investment on speculative housing. Their pre-occupation with production and sale side of their concerns cannot enable them to specialise in architecture. The provisions of housing on a mass scale should, therefore, be a public concern. A better equipped and vigilant Public Works Department would be the best agency for this work. The necessary capital may be raised by borrowing in the market. No finance department need fight shy of borrowing when it is going to be productive in more ways than one. The balanced budget is the ideal of a complacent society and not of one that is out to pack the progress of centuries into decades.

An expert organisation will be able to make researches into designs, suitability and economy better than isolated grabbing landlords and profiteers. A few standard designs would beautify our industrial architecture better than all the chaos of inaesthetic peculiarities we find today.

Such a department will bring statistics into fruitful service. It will study the fluctuations in the employment rolls, in the number of resident and non-resident workers, hit on a stable average or a rising or falling trend and with a margin of a certain per cent can provide housing numerous enough to be adequate. There is at present such great demand for housing that workers meet certain thwartation from the employers who may introduce all sorts of policies in the disposal of their few quarters among many claimants. A housing department would be easily able to collect the rent by deduction at the source. Thus there is no question of the enterprise being a financial failure and it burdens neither the industry nor the workers.

### Medical Facilities.

As to adequacy or inadequacy of the existing medical facilities, the statistical information on the average number of cases reported weekly, the proportion of serious cases necessitating removal to hospital, the number of doctors, compounders, dressers and nurses etc. in the area, can be easily had. The impression left on me is that the facilities are utterly inadequate. This is most so in respect of serious cases. A worker's home is no suitable infirmary and where a serious case requires delicate nursing, it is futile to expect this at the workers' home. The most important grievance is that a worker who might have no other male member at home, may go without medicine for the mere difficulty of fetching it from the hospital. There have been too many reports of quick discharge of really serious cases from hospital because there are not beds enough for all.

Most often the medical examination of patients who come for consultation is tragically funny. I noticed that one doctor, too overworked since he was the only one in the establishment, summarily dismissed a number of women and children without examination muttering 'purgative' 33 times for 35 patients that came for examination. The incidence of serious diseases like Tuberculosis in the industrial areas is concealed by the method followed by the employers of granting the patients leave without pay and one way fare home, where he may live if chance favours, or die more certainly for lack of treatment. This practice has been reported to be widely in vogue at Mosabani and Mowbhandar. The only remedy is greater medical facility and we cannot escape the cost which is inevitable in the concentrations caused by industrialism.

There is one point which we must note in this connection namely, the system under which a worker has to get certificates of injuries or sickness that may enable him to get either compensation or leave, from doctors who are in the pay of the employers. The response of such a doctor can be imagined. To a worker who appears before him, his first question is whether he can go to work, which is precisely his duty to find out by expert examination.

Now it is a tremendous power for good or evil that lies in the doctor's hands. His definite partiality for the employer (which is inevitable since justice may end in his own starvation) must be disastrous to the worker's well being. An impartial doctor, directly under the Government, must be available for purposes of issuing certificates which are valuable to the workers.

### Retail supply.

The price of consumption goods is markedly high at Jamshedpur centre. This is more so in case of milk and vegetables. The major part of the milk supply comes from cows and buffaloes owned by the individual workmen, cattle and human beings huddled together promiscuously in the inadequate space available for the workers. It results in filth and congestion. The maintenance cost of milch cattle is too high to leave any margin of profit to the individual cattle owner. As to vegetables most of the supply is imported and retailed by individual vendors. Space for stalls is rationed and subject to high rent.

The existence of too many petty retailers and the high rent charged for stalls adds greatly to the cost of retail goods. The individual managing his own milk supply risks his own health and that of his neighbours. The shopkeepers advancing goods on credit add their own share of profit and interest and insurance premium. The state of morality does not ensure genuine goods at genuine prices. We have to admit, therefore, that the existing retail supply is utterly unsatisfactory.

The remedy is co-operative supply of retail goods. What the machinery would be and what attendant changes are called forth if it has to succeed needs further elucidation.

We are creating a supply organisation which will affect the individual supplying his own needs; the petty retailer, mostly selling for cash; and the shopkeeper, often supplying on credit. The organisation will consist of one Central store for an area under the jurisdiction of one Labour Council. There will be a branch store for each district, the district being equivalent to one or more compact labour colonies and forming the electoral constituency of the Labour Council.

Milk supply will be exclusively in the hands of the co-operative store. Individual workers will not be permitted to maintain milch cattle in the residential colony for that would endanger the colony's health. Vegetables and other things will be stocked by these stores, which will also stock commodities like food and drink, beverage and also cloth and other articles of daily use.

The co-operative store will sell to the members for cash, sale on credit being limited to 20 per cent of worker's wage and that not as a matter of right.

Every worker who enters employment shall be recorded and the Labour Council and the central store will be informed.

Every such worker will be free to become a member of the branch store in the district in which he has taken residence. Every change of residence within the area shall be endorsed by the Labour Council and the central store. By this means the worker can be always traced.

The membership, it would appear, is not obligatory but only permissive. Only certain rights are curtailed, like keeping a dairy in his own house, but otherwise the worker is free to purchase where he will. He would be, however, deterred from getting facile credit from shopkeepers, by a law declaring all credits advanced by shopkeepers to workers unenforceable by court. Such a law is likely to cause some hardship because purchase on credit may be necessary if periods of wage payments are too long. Suitable spacing of the wage payments would meet this objection. The reckless purchases that facile credit encourages will, however, be discouraged and none can object to this sensible remedy.

How will the stores be managed and financed? These are matters of detail. The Government may well advance loan to the Labour Council which will also have certain legal powers in respect of the co-operative stores. Such, for instances, would be the power to control and supervise the salesmen and managers of the Central and branch stores. There will be a sub-committee of the Labour Council specifically concerned with the management of the stores. The salesmen will be paid officers. Commodities will be sold for cash at rates which need not be lower than the market rates, the profits being distributed in dividend or deposited into savings bank on behalf of the members.

It will be noticed that we have invested the co-operative store with a limited legal basis. This is essential to ensure proper canalising of individual initiative. The free co-operation of the individuals subsisting on their own good will is an illusory concept. There is neither coercion nor coaxing in our scheme and its success is assured by the sheer logic of facts. The co-operative store need neither introduce a flat uniformity nor limit the choice of the workers. What it will do is to ensure genuine goods at genuine prices over a wide range of necessaries.

### **Minimum Wage.**

In my memorandum I have suggested that a minimum wage of Rs. 20 a month or its equivalent daily rate should be assured to each worker at Jamshedpur centre. By the minimum wage I mean the minimum substantive or primary wage

assuming other earnings to be proportionately constant. This has nothing to do with the profitability or otherwise of the industries or the individual concerns. It is based mainly on a conception of the minimum of necessities and comforts of a working family at this centre. The conception is to a large extent a matter of opinion but I hope it is a reasonable and sober one.

It is necessary to emphasise that we are considering working families and not workers. In the sphere of consumption the family remains the unit in spite of so many disintegrating factors, whose effect has been to shed off the more distant members of the joint family from the worker's reckoning. The family may be with the worker at the place of work or at his native place or partly at one place and partly at another. It none-the-less remains a compact economic unit.

For the purpose of reckoning a minimum wage I have considered conditions in the lower income grades, that is in grades of income below Rs. 30 a month. The basic facts of such income grades are as follows:—

- |  |                    |
|--|--------------------|
| (1) Size of the average family ..                                    | =3.68 adult males. |
| (2) The percentage of dependants living away from the workers.       | =12.9              |
| (3) The percentage share of total income enjoyed by such dependants. | =6.4               |
| (4) Primary earnings as a percentage of the total income.            | =89.95             |
| (5) Size of the portion of the family residing with the worker.      | =3.21 adult males. |
| (6) The average number of worker per family.                         | =1.139             |

The minimum wage for each worker will be given by the formula:—

$$M = \frac{E \times P}{R \times W}$$

Where M=Minimum monthly wage ;  
 E=Minimum monthly expenditure of resident members of the family ;  
 P=Percentage that primary earnings form of the total.  
 W=Number of worker per family ;  
 R=The percentage of the total income consumed by the resident member of the family.

P, R and W are known quantities being equal to 89.95, 93.6 and 1.139. Our task is to compute E.

Now E is made up of expenditure on food, clothing, housing and so forth. We shall indicate the minimum in each case.

## A. Food—

The minimum requirements for the resident members of the family that is for 3·24 adult males are :—

Cereals for 2 meals and refreshment per adult per day.	Monthly require- ment for 3·24 adults.	Money value.
	Mds. srs. ch.	Rs. a. p.
Common rice—8 chataks .. ..	1 9 0	4 7 0
Wheat flour—2 chataks .. ..	0 12 0	1 8 0
Pulses—2 chataks .. ..	0 12 0	1 11 0
Salt .. ..	0 2 4	0 3 0
Fats (mustard oil) .. ..	0 2 0	1 0 0
Vegetables .. ..	..	1 8 0
Spices .. ..	..	0 4 0
Milk for two children $\frac{1}{2}$ seer each per day..	0 15 0	3 3 0
Animal food (meat or fish) once every fort- night.	0 2 0	1 0 0
Tea .. ..	..	0 3 0
Miscellaneous (including occasional use of sugar, ghee and other delicacies).	..	1 0 0
Total ..	..	15 15 0

This works at Rs. 4-14-0 per adult male per month which is lower than Rs. 5 for an adequate diet of an adult according to experts for the Jharia Mines Board.

	Monthly value for 3·24 adults. Rs. a. p.
B. Clothing— The minimum expenditure per adult including washing charges comes to Re. 0-8-7 per month (vide table 41).	2 0 0
C. Housing— “Dwellings of families in grades below Rs. 30 leave much to be desired.” The cost of hous- ing of the grade Rs. 20 but not Rs. 30 accord- ing to formula (2) is Re. 1-11-4 (vide table 50).	1 12 0
D. Fuels and lights— Fuels at rate of 9 pies per day = Re. 1-8-0 } .. Light „ 3 pies per day = Re. 0-8-0 } ..	2 0 0
E. Furniture and utensils as suggested in Chapter IV-E of the Report.	0 8 6

		Monthly value for 3 21 adults.		
		Rs.	a.	p.
F. Health, culture and relaxation—				
Education for two children	Re 1-0-0 per month			
Medicine and medical fees	Re. 1-0-0 ..			
Amusement	.. Re. 0-8-0 ..			
		<hr/>		
	Rs. 2-8-0 ..	2	8	0
G. Conventional indulgences—				
Drink, drugs and tobacco	Re. 1 per month ..	1	0	0
H. Religious observances, feasts and festivals	..	0	8	0
I. Trade unionism	.. ..	0	2	0
J. Sundry other expenses	.. ..	1	0	0
		<hr/>		
	Total ..	27	5	6
		<hr/>		

We leave out of account all provision for future. The total monthly expenditure on this reckoning for 3 21 resident members thus comes to Rs. 27-5-6. Of these we may leave out cost of education which may be provided free under the mass literacy scheme and in the employers' schools; of medicine and medical fees for medical facilities can be made adequate with the aid of the employers and of amusement which may be obviated by cheaper and healthier out of door amusements, games and sports.

We may also leave out half the cost of conventional indulgences as likely to disappear with the introduction of prohibition. All this comes to Rs. 3.

Thus Rs. 24-5-6 remains to be met by the worker for the sustenance of the resident members of his family, without any provision being made for the future.

Our E, therefore, comes to Rs. 24-5-6.

The minimum monthly wage according to our formula will be :—

$$\frac{\text{Rs. } 24-5-6 \times 89-95}{93-6 \times 1-139} \text{ or Rs. } 20-8-6.$$

In round numbers this comes to Rs. 20 a month. Provisions for future have still to be made and certain other comforts to be found. For all this subsidiary occupations must be found for the working families.

HARNANDAN PRASAD.



# MEMORANDUM

BY

**Dr. BAL RAJ SETH M.A., Ph.D.,**

**Investigator, Bihar Labour Enquiry Committee.**

**(Including the one on minimum wage).**

## **The Economic condition of the colliery workers in the Bihar coalfields.**

The vast majority of the workers in the Bihar coalfields come from the province. Hardly 16 to 20 per cent of the workers come from outside the province. Among the local districts, Hazaribagh, Manbhum, Gaya and Monghyr together supply about 80 per cent of the local workers, and from among these four districts the first two are responsible for about 54 per cent of the local workers. Other local districts that supply some workers to the Bihar coalfields are Bhagalpore, Santal Parganas, Patna, Palamau, Shahabad, Arrah, Singhbhum, Ranchi and Chapra. The workers coming from outside the province are recruited mostly from the districts of Raipur, Bilaspur and Drug in the Central Provinces, the districts of Allahabad, Partapgarh, Mirzapur, Rai Bareilly, Jaunpur, Lucknow, Unao, Cawnpore, Gorakhpur in the United Provinces, Ganjam district in Orissa; Burdwan, Bankura, Naokhali districts in Bengal; Lahore and Amritsar in the Punjab and Rewa in the Central India.

Though  $\frac{4}{5}$ th of the workers in the Bihar coalfields are locally recruited, yet the labour force is far from being homogeneous. It consists of more than fifty different classes of workers such as Santals, Bauris, Kols, Koras, Dhangars, Telis, Barbers, Julahas, Nuniyas, Goalas, Rabidas, Haris, Tantis, Chhatris, Muhamnadans,

Ghatwals, Kahars, Turis, Chamars, Dusadhs, Bhumijs, Bhuiyas, Madrasis, Dhanuks, Rajwar, Doms, Brahmans, Kayesthas, Barhis, Satnamies Mochis Koras, Kols, Orsons, Mullicks, Beldars, Nonias, Halwais, Kumhars, Gonds, Kewats, Pnakas, Bantias, Sikhs, Kalas, Mallahs, Kurmis and Ho. Very few workers are literate. Most of them are steeped in superstitions and waste an appreciable part of their income on animal sacrifices and worshipping ghosts. Men for the posts of managers and overmen are generally recruited from the educated middle class and not from among these illiterate workers.

A still more important characteristic of the mining labour of Bihar is that practically the whole of the labour force is drawn from rural areas and consequently a majority of the workers are agriculturist first and miners afterwards. A good majority possess lands in their native places and attend to mining work only after the harvesting and sowing seasons are over. Even those who have no land of their own, are not permanently settled in the coalfields. They also return to their villages where they can find work at harvest and sowing times. Local non-residential workers also form a small fraction. In short, the percentage of workers who have permanently settled in the coalfields and have taken to mining as their principal occupation is very small. Most of the labour supply is floating and seasonal in character. Collieries can attract sufficient labour supply only in seasons other than those of sowing and harvesting of crops and in times of famine or scarcity. A year of good crop means a year of labour scarcity in the coalfields and *vice versa*. Industry itself is in a large measure responsible for its failure in industrialising its workers because the working and living conditions in the coalfields are far from such as may induce the workers to give up their ancestral occupation, that is agriculture, in favour of coal mining.

This floating and seasonal character of the labour supply is responsible for many of the evils such as over employment of workers in some seasons and labour scarcity in others, proverbial inefficiency of the workers and their low earnings, wasteful methods of coalmining, high rates of mining accidents, and shortage of tubs which are hampering the progress of the industry to no mean extent. Besides all this, the floating character of the labour supply makes it difficult to organise any employment agency and allows the employers to pay sub-human wages to the workers to resist the enactment of laws making provisions for old

age pensions and sick allowances, minimum wages, unemployment insurance and other privileges and amenities that a miner enjoys in the western countries. Lastly it makes recruitment a necessity and thus keeps alive the vicious raising contract system which in no way is less responsible for many of the troubles of the colliery workers. The remedy lies in creating a class of permanent miners. The problem of labour supply in the coalfields will be solved if the present "farmer miners" divorce themselves from their lands and take to mining as their only means of livelihood and reside permanently in the collieries in sufficient numbers. But this is too much to expect from the miners unless the coal companies undertake certain reforms such as the improvement of housing and sanitary conditions. Improvement in the working conditions, payment of adequate wages to enable miners to maintain their families without the cultivation of their lands in their villages, arrangements for just and regular payments of wages for the work done, security of employment and protection against arbitrary dismissals, education of the workers, provisions for old age pensions, maternity benefits, sickness and unemployment insurance, holiday with pay and adequate medical facilities. In other words it is not difficult to have a settled community of miners if the working and living conditions in the collieries are made sufficiently attractive and the workers are assured of a more comfortable life in the coalfields than what they enjoy in the villages. Hitherto most of the colliery labourers have remained migratory in character only because neither the work nor the living conditions in the coalfields have been so tempting as to make them give up their hereditary occupation of agriculture in favour of mining. In fact at present they are being forced and not pulled to the coalfields. The agricultural, landless and artisan, workers of the rural areas are being driven to the coalfields mainly by increasing pressure on land, inadequacy of food stuff and income, unemployment in villages and the decline of village industry. If they are assured of sufficient food and clothing in their villages most of them will no longer stay in the coalfields.

### **Methods of Recruitment.**

Though the scarcity of labour, permanent or seasonal, has been the permanent feature of the labour supply in the coalfields since the very inception of coal-mining in Bihar, yet no

organised or scientific method of recruitment has been followed. Even at present the system of recruitment of colliery labour can be characterised as desultory and haphazard. There are no combinations of coal companies for recruitment and no recognised colliery recruiting agency as in the case of the Indian Tea Industry. Government has imposed no restriction on recruitment. Coal companies are free to recruit their labour from any part of India. There is no legislation regulating the process of recruitment. Every colliery has its own way and its own agency for recruitment. The scramble for labour is there. The poaching of one another's labour is quite common among the coal companies. In June, July and August, 1938 when I visited the coalfields to collect the labour family budgets, I found not a few collieries which were not only plying lorries to bring the miners from the neighbouring villages, but were also employing some men either to poach the labourers from other collieries or to guard their own workers from being taken away by the agents of some other collieries. Near Kusunda Bazar two innocent persons were found to be badly thrashed by the *chaprasis* or the agents of some collieries on the suspicion that they were trying to take away some of the workers of their collieries. Even when a company recruits some workers, it is not certain that they will work for it. They may desert it at any time. The deserters are welcomed by neighbouring collieries who are on the lookout for them.

Generally two systems of recruitment of labour are followed in the Bihar coalfields. The first is the *zamindari* and the second is the non-*zamindari*. Under the first, labourers are tempted to the mines by the offer of plots of cultivable land either free of charge or on nominal rents. They hold these lands on condition of working in the mines. In other words, labourers are *Nokarani* tenants and have therefore to do work in the mines as long as they hold the company's lands. This system is responsible for the recruitment of most of the settled workers in Giridih collieries. Even in Jharia some companies have followed this method of recruiting labour. Though, at present, this system is supposed to be defunct because there is not much land in the coalfields to be spared, yet, as the Royal Commission observed, this method is still being utilised indirectly. Contracts for raising coal are given to such persons whose interest in land makes it easier for them to secure labour from their tenants. This system bears some resemblance to the manorial system of England of Norman Days. But it differs from the latter in that under it tenants are paid for the work they

perform for their employers, a practice which was not found under the manorial system. This method was denounced by the Royal Commission on Labour as undesirable. It is not only so but also an uncivilised method of recruiting labour. It is a method of compulsory recruitment and has a savour of serfdom. Besides this, it has defeated its own object. Far from helping the collieries in increasing their output and to expedite the development of industrial efficiency it has caused a serious setback in both respects. Both the written and oral evidences submitted to the Coalfields' Committee of 1920 bear ample testimony to this fact. The labourers devote too much of their time to the cultivation of plots and if they are compelled to put in a minimum period of work, they will leave the colliery. Nothing can induce them to go to any other mine under the same management. They work at a place for which they take a fancy. Moreover this method has not proved to be a remedy of the evil of the seasonal movements of the workers. Above all, in some cases, specially in the days of depression, the *Nokarani* tenancy compels the workers to accept low wages which they would have not accepted otherwise. Besides all this, it is frequently found that such an arrangement involves the colliery-owners in costly litigation. Lastly Mr. Burt is not wide of the mark when he says "All our efforts should be directed towards obliterating all agricultural ideas out of the miner's head. It is a miner we want, and until we have a miner class entirely apart from agricultural class, our production chart will be like the peaks of the Himalayas. The time spent in cultivating these proposed plots is the time lost and should be spent in the mine."

Under non-*zamindari* system the companies and colliery-owners obtain their labour supply through some paid agency or system of contract and not by offering plots of cultivable land. This system of recruitment is itself of two kinds (1) the direct method of recruitment and (2) the indirect method of recruitment. The former has been adopted by most of the Indian collieries, small European collieries and by some big first class European collieries. Under this system companies have their own recruiters. They maintain salaried *jamadars*, *chaprasis* and labour *sardars* for recruitment and bear the whole expense of bringing the labourers to the mines. The whole labour force of the company is under the control of the manager and the company is the pay master of its labour. In other words there is a close connection between the employers and the labourers.

Under the indirect method the company makes contracts for the supply of labour. These contractors are usually of three kinds, that is, (1) recruiting contractors, (2) managing contractors and (3) raising contractors. The recruiting contractors supply labour for which they get a commission of one to four annas per ton of coal raised by the workers recruited by them. Four annas per ton is paid only when the contractors bear the entire expense of bringing the workers. The managing contractors not only supply labour but are also responsible for raising coal for the company at a certain rate per ton despatched. The contractors bear the cost of recruitment, the cost of raising coal and much of the cost of management. They bear the cost of maintaining supervising staff and meet even the salary of the manager up to Rs. 500 per month. But they have not to bear the cost of depreciation of the plant, interest on capital invested, cost of marketing the coal and other charges concerning the fixed capital. Such contractors are chiefly found in the Raniganj and Central Provinces coalfields and hardly any in the Jharia coalfield. The third and the most common type of contractors, that are found in the Jharia and Railway coalfields, are the raising contractors. Their function is to recruit labour at their own expense, to raise coal out of the pit, incline or quarry and to load it into the wagons. They differ from the managing contractors as they have to bear only the cost of cutting and loading coal in addition to the expense of recruiting the labour and not the cost of management. They are paid per ton of the coal despatched but their rate is less than that paid to the managing contractor. In June, July and August, 1938, the raising contract rates were found to be varying from Re. 1 per ton to Re. 1-5-0 per ton in the Jharia coalfields, Re. 1-2-0 per ton to Re. 1-4-0 per ton in Giridih Railway collieries, Re. 0-7-3 per ton to 11 annas per ton in Bokaro, Kargali, Swang and Argada collieries, and it was Re. 1-8-0 in Sirka, a private colliery working by the side of Argada colliery.

The strength and efficiency of a raising contractor largely depend upon the labour force he commands. Every contractor has got his recruiters and *sardars* who are sent to the villages where it is possible to get labour. There they tempt the people with food and money. Feasts are arranged for the villagers and due advantage is taken of these gatherings for recruitment, *bakhshis* are given to the persons, and sometimes advances, over and above this sum, are paid either to relieve them

from debts or to enable them to discharge their social obligations. Such advances are called *Dadan*. It is paid only when labourers are badly needed and cannot be obtained without it. All expenses of the journey to the mine are paid by the contractors including a daily *khoraki* of annas four to annas six per head. On arrival they are paid annas four per family for purchasing cooking pots and annas four per head for that day's food. Occasionally the latter sum rises to Re. 1. They are also given sufficient money for food until they get their wage. In some cases contractors deduct all these sums from the labourers wages in small instalments. Some contractors have also purchased lands to strengthen their labour force. Under this system the contractor is the pay master of the labourers. The employment and happiness of the workers depend upon the smile of the contractor. Labourers are not the servants of the company but of the contractor. Most of them leave the colliery when their contractor leaves it.

Of late, this system of raising contract has declined in importance. In the last four or five years many big collieries in the Jharia coalfields have given it up in favour of the direct system or *Sarkari* system of getting the labour supply as the latter has proved to be decidedly more economical than the former. The raising contract system was also condemned by the Royal Commission on Labour which recommended its gradual abolition. In fact, this system of getting the labour supply is more of a hinderance than a benefit to the industry. The contractor is an unnecessary wedge between the employer and the employees. The interest of both the employers and the employees demand a direct relation between them. This is more true of the coal industry than of any other industry. The manager of a colliery, both in law and in practice, is responsible for the safety of the miners. The law holds the manager responsible for compliance with the provisions of the Mines Act in respect of hours, holidays, the employment of women, the housing and other matters affecting the welfare of the employees. Yet he has ordinarily no hand in the selection of the workers, the distribution of their work, the payment of their wages or even the number employed. For the discharge of his responsibilities all these functions should be entrusted to him and closer connection between the manager and the workers should be established. Very few contractors treat their workers justly both in taking work from them and in paying their dues. All sorts of corruptions and bribery are found more in collieries

running on contract system than in the collieries under the *Sarkari* management. In fact, in course of our investigation workers were found to be more contented and happy in the latter type of collieries than in the former. In the railway collieries, in the Bokaro and Karanpur coalfields, much of the miseries of the miners can be attributed to the contractors who have accepted very low rates for raising coal and are making desperate attempts to make some profit by sweating their workers. Lastly, the raising contract system cannot encourage the stability of the labour force in the coalfields which only can solve the problem of labour supply. On the other hand, it can be doubted that the raising contractors and their unjust treatment of the workers stand in the way of creating a permanent class of miners. It is to the interest of the contractor that the labourers do not settle down in the collieries. He is wanted only so long as the collieries do not get sufficient labour. The greater the scarcity of labour the better the contract rate he gets, and thus who can say that he does not counteract all the forces that might increase the number of settled workers in the collieries.

To do away with all these evils I am of opinion that there should be established a central recruiting agency which should supply labour to all the collieries in Jharia on payment of a certain recruitment fee. This agency should not be profiteering body and it would be still better if it can be established in the form of a co-operative society organised by the coal companies themselves. The supervision of labour in the colliery should be the direct concern of the managers. In other words, the collieries should have the *Sarkari* system of management. This system is beneficial to both the employers and the employees, as it would alone assure justice to the employees which would go a long way in creating permanent class of miners. Again it suffers comparatively less from many of the corrupt practices which accompany the contract system such as bribery, prostitution, under payment and exploitation of workers and helps the colliery managers to discharge their duties properly.

Of course, the work of the managers is likely to increase under the *Sarkari* system, especially in big collieries, but this difficulty can easily be solved if the collieries engage employment officers or labour officers who should be directly responsible to the management for the supervision of labour, both in and outside the mines. The main duties of such persons should be to employ workers with the approval of the manager, to hear their complaints and redress their grievances. The persons selected



for these jobs should be well-paid, literate, honest, sympathetic and generous in their treatment of the workers. Some big collieries running on *Sarkari* system, have employed labour and employment officers but hardly in any colliery a right type of person was found. In some collieries (e.g. Sijua) these jobs have been utilised to purchase some so-called labour leaders and in others (e.g. Giridih collieries) they are held by the unqualified persons who, far from meting out generous and sympathetic treatment to the workers are bossing over them and take pleasure in bullying them. Such persons are dangerous to the peaceful working of the collieries and the sooner they are replaced by the right type of persons the better.

### Wages.

Labourers in the coalfields are generally classified under three heads, namely, underground workers, quarry workers and surface workers. The first two classes of workers can be further subdivided into six classes that is, overmen and supervising staff, miners, loaders, other skilled workers, other unskilled workers and female workers. Female have now been excluded from underground work, but they are still working in quarries. The surface workers also can be classified into four groups that is clerical staff, skilled, unskilled and female workers.

As to the system of payment both time and piece wages are adopted. But the piece-rate workers are predominating. The form nearly 70 per cent of the workers employed in the coal mines. This is the case not only in the Indian coalfields but also in the coalfields of Germany, Ruhr, Lower Silesia, Austria, United States of America and Japan. This predominance of piece-rate workers has been ascribed to the fact that the usual system of employment on the time rate basis is not possible in the case of underground workers, since the working places are usually scattered over a large area and an efficient supervision of the work is difficult. The Indian employers further attribute this predominance of piece wage system of payment to unsteadiness, carelessness and idleness of the Indian colliery workers. In their opinion the Indian miner hardly works for five to six hours out of 8 or 9 hours which he spends underground. An Indian coal-mining engineer has described the Indian miner as one who works a little, sings a little, smokes a little and jokes a little. One can hardly deny this habit of the Indian miner who works

by fits and starts but the miner himself can hardly help it as this habit of his is due partly to his poverty and low standard of living, partly to the insanitary and unsatisfactory condition of underground working in the coalfields and partly to the climatic condition.

### **Time and piece-rate workers.**

Piece wages are generally paid to the coal-cutters, earth-cutters, stone-cutters, loaders of all kinds, surface and underground trammers, main-drivers, coke-manufacturers, coal screeners, miner's and trollymen's *sardar*, banksmen, masons, boiler coolies and drillers. Sometimes coal-cutting machine-drivers and their assistants are also paid piece wages. In some collieries trammers, drillers, stone-cutters, main-drivers, banksmen, on-setters, boiler coolies, hookmen and masons were found to be getting time wages. The latter are generally paid to the supervising staff, skilled workers, such as firemen, engine-drivers, mistries, carpenters, shot-firers and the ordinary unskilled workers. In one colliery in Tisra and Jayrampur side a haulage driver was also getting piece wages.

### **Fixation of wage rates.**

In the Bihar coalfields no average or normal wage which a worker ought to get, is decided upon in fixing wage rates. The employers prepare their list of particular payments for every type of work, piece by piece or time. There are no such things as national agreements, district agreements, or Government legislation fixing the wages in the Indian coalfields as in many foreign countries. There are no strong trade unions to negotiate on behalf of their members. No written agreements are concluded and no written assurances are given against the reduction of wages. The rates are generally dictated by the employers as they are in a better position to do so than the helpless and financially bankrupt villagers who come to work in the coalfields. Their only consolation is that they know the rates of wages they will get before they take to work, as they are fixed before they are employed. The rate of wages in the adjoining collieries are the main factors which the employers keep in view in fixing their rates of wages. The other factors which sometime influence the wage policy of the employers are the nature and condition of work and fear of labour scarcity.

**Prevailing rates of wages.**

In appendix (A) at the end of the memorandum I have given the rates of piece and time wages of some important classes of workers of 55 collieries of Jharia, and the railway coalfields. These statistics were personally collected on the spot in June, July and August 1938, when I was deputed by the Bihar Labour Enquiry Committee to collect family budgets of the colliery workers in the Bihar coalfields. Pay registers of most of these companies and of their contractors were fully utilised. In a few cases where these facilities were denied reliance had to be placed on the verbal statements of contractors, managers, agents and labourers. Labourers and their *sardars* were personally interrogated even in cases where the managers were generous enough to show their pay registers. The table below shows the minimum and maximum rates of wages and the usual variation in the rates of wages of different classes of workers in 55 collieries of Jharia and railway coalfields.

## Wage rates.

		Minimum rate.	Maximum rate.	Usual rate.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
Coal-cutters Pit	{ Machine coal ...	0 4 0 per tub	0 4 6	0 4 0
	{ Pick coal or Blast- ed coal.	0 4 9 "	0 10 0	0 6 0 to 0 7 0
	Quarry ...	0 1 9 "	0 5 0	0 4 0 to 0 5 0
	Miners' sardar's commission ...	0 0 3 "	0 0 9	0 0 6
	Underground trollymen ...	...	...	
	(Contract rate) ...	0 0 4 ½ "	0 2 0	0 0 6 to 0 1 0
	(Daily rate) ...	0 6 0 "	0 10 0	0 6 0 to 0 7 0
	Surface trollymen ...	...	...	
	(Contract rate) ...	0 0 3 "	0 2 0	0 0 6 to 0 1 0
	(Daily rate) ...	0 6 0 "	0 10 0	0 6 0 to 0 7 0
	Winding engine <i>Khalasis</i> (monthly)	12 0 0	20 0 0	14 0 0 to 18 0 0
	(Daily)...	0 8 0	2 0 0	0 8 0 to 0 10 0
	Haulage <i>khalasis</i> (monthly) ...	12 0 0	30 0 0	12 0 0 to 16 0 0
	(Daily) ...	0 7 0	1 1 0	0 7 0 to 0 10 0
	Pump <i>khalasis</i> (monthly) ...	11 0 0	30 0 0	12 0 0 to 16 0 0
	(Daily) ...	0 7 0	0 13 0	0 7 0 to 0 10 0
	Firemen (monthly) ...	10 0 0	30 0 0	14 0 0 to 16 0 0

			Minimum rate.	Maximum rate.	Usual rate.
			Rs. a. p.	Rs. a. p.	Rs. a. p.
Firemen	(Daily)	...	0 6 9	0 15 0	0 7 0 to 0 15 0
Blacksmith	(monthly)	...	16 0 0	50 0 0	20 0 0 to 30 0 0
	(Daily)	..	0 8 0	1 8 0	0 10 0 to 0 12 0
Masons	(Daily)	...	0 8 0	1 4 0	0 10 0 to 1 0 0
Line mistics	(monthly)	...	15 0 0	40 0 0	17 0 0 to 23 0 0
	(Daily)	...	0 6 0	1 4 0	0 8 0 to 1 0 0
Propping mistics	(monthly)	...	15 0 0	25 0 0	19 0 0 to 25 0 0
	(Daily)	...	0 7 0	1 4 0	0 7 0 to 0 14 0
Carpenters	(monthly)	...	15 0 0	38 0 0	20 0 0 to 35 0 0
	(Daily)	...	0 8 0	1 8 0	0 10 0 to 1 0 0
Stone cutter	(Daily)	...	0 8 0	0 12 0	0 8 0 to 0 12 0
(Contract rates)	...	...	4 0 per 100 c.ft.	12 0 0	4 0 0 to 12 0 0
Shot firers	(monthly)	...	15 0 0	35 0 0	20 0 0 to 35 0 0
	(Daily)	...	0 7 0	1 0 0	0 8 0 to -1 0 0

	Minimum rate.	Maximum rate.	Usual rate.
Banksmen, outsetters and hookmen (daily).	Rs. a. p. 0 6 0	Rs. a. p. 0 14 0	Rs. a. p. 0 6 0 to 0 8 0
Hammer men (daily)	0 5 6	0 10 0	0 6 0 to 0 8 0
Chainmen (daily)	0 5 6	0 12 0	0 6 0 to 0 8 0
Certificated <i>sardars</i> (monthly)	15 0 0	75 0 0	20 0 0 to 35 0 0
(Daily)	0 10 0	2 0 0	0 12 0 to 1 0 0
Head fitters (monthly)	20 0 0	85 0 0	35 0 0 to 60 0 0
Assistant fitters (monthly)	14 0 0	45 0 0	20 0 0 to 35 0 0
Wagon loading <i>coolies</i> :- coal	0 1 0 per ton	0 2 6	0 1 3 to 0 1 6
Coke	0 2 0 per ton	0 4 0 per ton.	0 2 6 to 0 3 6
Main drivers	0 6 0 per foot	5 10 0	0 8 0 to 2 8 0 per foot.
Coke manufacturing (a) contractor's soft coke.	0 3 6 per ton	0 5 0 per ton.	0 3 6 to 0 4 6
Hard coke	1 0 0	2 0 0	1 0 0 to 1 8 0
(b) ( <i>Coolies</i> daily)	0 5 0	0 7 0	0 6 0 to 0 7 0
Coal screening <i>coolies</i> contract rate	0 1 6 per ton	0 2 6 per ton.	0 1 6 per ton.
Daily rate	0 5 0	0 7 6 per ton.	0 6 0 to 0 7 0

	Minimum rate.	Maximum rate.	Usual rate.
Coal screening <i>khalasis</i> (daily) ...	Rs. a. p. 0 6 6	Rs. a. p. 1 1 0	Rs. a. p. 0 7 0 to 0 11 0
Underground unskilled <i>coolies</i> (daily).	0 5 0	0 9 0	0 6 0 to 0 8 0
Surface unskilled <i>coolies</i> (daily) ...	0 4 0	0 9 0	0 5 0 to 0 7 0
Female surface ...	0 2 6	0 5 6	0 3 6 to 0 4 0
Bailing <i>coolies</i> (daily rate) ...	0 5 0	0 8 0	0 5 0 to 0 6 0
Boiler <i>coolies</i> (daily rate) ...	0 5 0	0 9 3	0 5 0 to 0 7 0
Contract rate ...	1 4 0 per boiler	4 8 0	1 8 0 to 3 0 0
Sweepers (male) ...	0 4 0	0 8 0	0 6 0 to 0 7 0
(Female) ...	0 3 0	0 5 6	0 3 0 to 0 4 6
Drillers (daily) ...	0 7 0	1 0 0	0 12 0 to 1 0 0
(Contract) ...	0 1 0 per hole	0 2 0	0 1 6 per hole.
Lampmen (daily) ...	0 5 0	0 10 0	0 5 0 to 0 8 0
Gatemen (daily) ...	0 5 0	0 8 0	0 5 0 to 0 7 0
Coal-cutting machine drivers (daily).	1 8 0	1 12 0	1 8 0 to 1 12 0
His assistants (daily) ...	1 0 0	1 4 0	1 0 0
<i>Coolies</i> (daily) ...	0 12 0	0 12 0	0 12 0

The wide variation in the tub rates of miners and their carriers are mainly due to the differences in the size of tubs and the methods of cutting coal such as pick mining, blasting and machine cutting. The piece wages of the surface and underground trammers vary directly with the length of lead or the distance on which they have to carry the tubs. The stone-cutters and main drivers are given high and low rates of wages according as the stone and the coal that they cut are hard and soft; wagon loading rates also vary according to the distance on which the loaders have to carry coal in order to load it into wagons. The time wages and other piece wages are the lowest in the private-owned collieries, particularly Indian, are comparatively higher in the joint stock limited concerns, particularly in the Tata and first class European collieries and are the highest in the railway collieries.

Maximum rates given in the above table are paid only in the railway collieries. But in some of the railway collieries such as Bokaro, Kargali, Swang and Argada coal-cutters and their carriers are being treated not even half as fairly as the time-wage workers. Their rates of wages and weekly or monthly earnings are decidedly lower than those of the coal-cutters in Jharia. In Bokaro colliery, though the contractor is paying Re. 0-5-0 per tub, yet for five annas he is really taking  $1\frac{1}{2}$  tubs if not  $1\frac{1}{2}$  tubs partly by getting the tub overloaded and partly by getting two extra baskets of coal for every tub of coal.

In Argada colliery where the coal rate is only seven pice per tub, even if a coal-cutter and his carrier cut and load 6 tubs per day which was found impossible in the vast majority of cases, each of them can hardly earn five and quarter annas per day or not even Rs. 8 per month, even if they put in continuous work for all the six days in the week.

Not a few miners were found who were earning only Rs. 4 and Rs. 5 per month. This miserable plight of the miners in the railway quarries can be attributed partly to the contract system and mostly to the tender system of the Railway Board. The tender system compels the contractors to compete among themselves and quote the lowest rates. In Bokaro, Swang and Argada the contractors are raising coal from the quarries at Re. 0-7-0 to Re. 0-7-3 per ton of coal which is lower than even the tub rate of many Jharia collieries. In Kargali the contract rate is only 11 annas per ton for both pit and quarry workings. These low contract rates together with the desperate effort of the contractors to make some profit are mostly responsible for the low



earnings of the workers. The remedy lies obviously in the abolition of both contract and tender systems.

Turning to the earnings of the colliery workers in general we found that 1,030 families, representing all classes of workers of which the budgets were taken in June, July and August 1938, have a total monthly income of Rs. 18,330-2-2 or Rs. 17-11-2 per family or Rs. 11-12-9 per worker in the family, both from colliery and non-colliery works. The monthly income, exclusively from colliery works, amounts to Rs. 17,996-15-1 or Rs. 17-7-4 per family or Rs. 11-8-2 per worker in the family. Taking the families by income group we obtained the following results :—

TABLE.

Income group.	Number and percentage of families.		Average monthly income per family.
	Number.	Percentage.	
Rs. 5 and below ..	21	2	Rs. a. p. 4 1 10
Rs. 5 to Rs. 10 ..	135	13.1	8 1 4
Rs. 10 to Rs. 15 ..	316	30.6	12 4 7
Rs. 15 to Rs. 20 ..	241	23.4	16 9 4
Rs. 20 to Rs. 30 ..	215	21	24 9 4
Rs. 30 to Rs. 40 ..	73	7.1	34 11 4
Rs. 40 to Rs. 50 ..	29	2.8	43 5 6

Again taking important classes of piece wage workers who form more than 60 per cent of the workers of the families investigated, we find that on the average a coal-cutter or his carrier was earning Rs. 10-3-2 per mensem, a surface or underground trolleyman Rs. 9-2-1 per mensem, a stone-cutter Rs. 9-1-8

per mensem, a loader Rs. 6-13-7 per mensem and an earth-cutter only Rs. 6-6-8 per mensem. All of them, taken together, had an average monthly income of Rs. 8-8-0 per worker.

As compared to miners in foreign countries, the Indian miner's earnings are indescribably low. In Great Britain, in the last quarter of 1932, the average earning of a miner was 9 shillings  $2\frac{1}{4}$  pence per man shift or Rs. 6-2-0 per day. In the same year in Giridih and Jharia according to the Chief Inspector of Mines report, a miner was earning annas  $9\frac{3}{4}$  per day. Of course, the Indian miner is paid not only in cash but also in kind. He gets free house, free coal, free tools, free medical aid, free water and some occasional monetary allowances which are generally not given to the British miners. The value of all these benefits, as estimated in my report on the economic condition of the colliery workers, comes to only Rs. 4 per worker per mensem. Even adding the value of these benefits we still find that an Indian miner's earning is only a fraction of that of the British. Again the Indian miner is not the only recipient of these payments in kind. The British miner also receives some payments in kind besides the monetary payment. In his case such payments come to 8·4 pence per shift. After adding to his daily income we find that the Indian miner is earning  $\frac{1}{4}$ th of the British miner's income. On comparing with the earnings of the miners of some other countries we find that his earnings are only  $\frac{1}{6}$ th of the French miner,  $\frac{1}{3}$ rd of the Japanese,  $\frac{1}{5}$ th of the Polish,  $\frac{1}{2}$  of the American,  $\frac{1}{6}$ th of the Canadians,  $\frac{1}{3}$ th of the Dutch,  $\frac{1}{7}$ th of the upper Silesian,  $\frac{1}{8}$ th of the Belgians,  $\frac{1}{8}$ th of the Saar worker and less than half of the South African native miner. Of course, the Indian miner is much less efficient than the foreign miners and the pit mouth value of foreign coal is also greater than that of the Indian coal but the differences in the efficiency and pitmouth values are not so great as to explain such wide difference in the earnings of Indian and foreign miners. In India labour cost of producing coal amounts to 31 to 34 per cent of the total cost of production against 69·4 per cent in Great Britain, nearly 54 per cent in the United States of America, 50 per cent in Canada and 37·1 per cent in South-Africa. Such a low share of the Indian colliery workers in the pit mouth value of coal is due to their weakness in bargaining as they are without trade union organization. In other countries strong labour organizations are enabling the workers not only to maintain their higher standards of living but also to raise them to a still higher level. In England they have been enabling them to obtain high wages even in times of low coal prices.

Not to speak of foreign miners, Indian colliery workers are earning much less than even the labourers engaged in other organized industries of Bihar and Bengal, such as jute, metal and tea. Statements and evidence submitted to the Royal Commission on Labour bear ample testimony to this fact. Again even if the colliery wages are higher than the agricultural wages, as most of the colliery employers assert, it is questionable if they are so high as to compensate for the higher cost of living in the colliery areas, and provide the miners with more nourishing diet while doing strenuous mining work and living in the foul, congested, insanitary and unnatural atmosphere of the coalfields than what he requires in the free and natural life of the village to maintain his physical and mental efficiency. So, even if the nominal earnings of the colliery workers are higher than those of the agricultural workers, it is doubtful if the former are better off in respect of real earnings.

Lastly, the labour earnings in the Bihar coalfields are not only low but are also so uneconomic and inadequate that in majority of cases it is difficult for the labourers even to maintain their hopelessly low standard of living. Their diet of rice, salt, chillies or a little of vegetable or dal on three or four days in a week and a little of meat once a week or fortnight can hardly be called nourishing. Their clothes are often nothing but rags. Their home can hardly boast of any bed. Most of the workers are considerably in debt to the shop keepers or the colliery *chaprasis* or *kabulis* or other money-lenders and insufficiency of wages is not an unimportant cause of indebtedness. To crown all, there is the increase of drunkenness. Not a few drink to forget the drudgery of mining life and domestic cases.

#### **Measures to increase labour earnings.**

The first and the most obvious step to increase labour earnings in the coal fields should be to increase the present piece and time rates of wages which are undoubtedly inadequate. An unskilled worker who is paid only five to seven annas per day can hardly earn Rs. 7-8-0 to Rs. 10-8-0 a month even if he works all the six days in a week. A miner who usually gets six annas to seven annas per tub will hardly manage to make Rs. 13 to Rs. 15 a month if he works all the six days of the week and cuts and loads with his carrier on the average three tubs daily which in course of our investigation was found to be unusual in majority of cases. The rates can be increased as the coal trade is no longer suffering from trade depression or low prices. The increase in rates ought to be such as to enable the workers to earn at least Rs. 15 per month.

But still more important means of increasing the labour earnings is to improve the efficiency of the workers. Mere increase in rates will hardly solve the problem of low earnings as majority of the workers in the coal-mines are piece-rate workers. Their present low earnings are as much due to their low output per head as to the low rates of wages. The annual coal output per colliery worker is hardly 130 tons in India against 283 tons in Great Britain, 350 tons in Ruhr, 381 tons in Upper Silesia, 190 tons in France, 324 in Netherland, 370 in Poland, 2,231 in Saar, 150 in Japan, 786 in the United States of America, 532 in Canada and 499 in South Africa. This inefficiency of the Indian miner is due to many factors such as the floating character of labour, the poor standard of living, the unhealthy and insanitary condition of life in the coalfields resulting in greater sickness, the unenterprising and unambitious character of the workers, the unsatisfactory condition of underground work, the inadequate use of labour saving appliances and labour saving devices, and irregularity of work or absenteeism and the defective internal organization, management and supervision. Of all these the last two deserve our special attention.

#### **Irregularity of work or absenteeism.**

Among the monthly paid skilled workers, other than coal-cutters, employment is more or less regular, though in the period of slump some of them are thrown out. Among the daily paid workers unemployment, under-employment or irregularity in work are quite common. Generally very few of them attend work on the first day of the week. Many remain absent on the second day. It is on the third, fourth and fifth day of the week that good attendance is secured. The sixth day is again the day of decline as it is generally the pay-day. Roughly, hardly 10 per cent of the daily paid workers work for all the six days of the week, 45 per cent for five days, 25 per cent for four days and the rest for three days, for two days or one day. On the average the miners work only for four or five days in a week. This absenteeism is attributed generally to the drinking habit of the workers. They indulge in so heavy drinking on the pay-day and the rest day that it becomes difficult for them to attend work on the first or second day of the week. The chief cause of this drinking habit lies in the exhaustive nature of mining and the want of other healthy and cheap means of recreation. Workers indulging in hard drinking delude themselves in the belief that without liquor they cannot keep-up their energies for even the remaining four or five days in a week. Some also believe that the consumption of liquor is essential to

keep their bowels free from the coal dust which they inhale in course of their daily work.

Not only drunkards but also teetotallers hardly work for four to five days in a week. They believe that the mining work is so strenuous that they simply cannot keep the strain for all the six days. Of course, in course of our investigations we also came across some persons who worked only for four or five days in a week, as they had earned enough for the week in those days and did not think it worthwhile to tire themselves on the sixth day. Much of this problem of voluntary absenteeism can be solved by educating the miners, by improving the underground working conditions and by providing healthy and cheap means of recreations such as tea stalls, indoor games, libraries and reading rooms.

Labour earnings suffer not only from voluntary absenteeism but also from forced unemployment or short work or involuntary absenteeism which is not uncommon. In course of our investigations we heard complaints of short work from one or other class of workers in not less than 35 collieries out of 80 that were visited. The usual causes of forced unemployment are breakdown of some haulage or winding engine, labour strikes in some iron or steel works or other industrial undertakings which are the chief consumers of coal, shortage of orders, shortage of tubs and railway wagons, too much water in some underground working places due to inefficiency of pump arrangements and some other underground difficulties due to the presence of fire or gas. Among the male workers the worst victims of short work are the wagon loaders. This difficulty of low wages due to short work can be solved by the creation of "Wage Equalization Fund" which is as much needed as a general reserve fund. The employers and the workers being the two indispensable classes for the success of a business enterprise, it is necessary that the business should provide something which both of them can look up to and fall back upon, in times of difficulty. At present times capitalists often safeguard themselves against risks of business by various depreciation and sinking funds and the general reserve funds go to some extent to ensure the safety of their investments. When the capitalists have a reserve at their back it is also desirable that the worker should have some such funds as the "Wage Equalization Funds" to make good their deficiency in wages in periods of slump and consequent idleness. The annual premium for this fund should be charged against the profit and loss account of the business before the net profits are declared for distribution to the share-holders. If in a lean year

there is no profit, then it should be carried over to the next year like the debit balance of the profit and loss account and treated as a business liability.

In order to find out actual deficiency of wages due to short work the average of the wages of the past one normal month should form the basis of calculations. If a worker loses a part of his wages for his wilful idleness, it is but fair that he should be compensated for enforced idleness.

Turning to the vital defects in the management and supervision of colliery workers which are in no way less responsible for the inefficiency of the Indian miner we may mention here only one of them which is typical, namely, tub shortage. The tub is the unit of measure of work of the coal-cutters and loaders who are paid piecewages. The daily earning and output of both are determined by the number of tubs that they cut and load and this capacity of theirs depends largely upon the time and adequate supply of tubs. The shortage and irregular or unusual supply of tubs is the most common complaint which one is likely to hear in each and every colliery in busy months of December, January, February, March and also April. The Royal Commission on Labour also reported that every worker that they examined complained of this (tub) shortage (page 120, Royal Commission on Labour Vol. I). They attributed this evil to the seasonal variation in production, the inability of the employers to adjust the number of tubs to the seasonal production and their tendency to admit more workers than can be fully employed. Besides this, there are two other factors responsible for this shortage i. e., mal-distribution of tubs and inefficient movement of tubs which clearly show the inefficiency of the managing and supervision staff. Tubs are distributed among the miners either by overmen or by *sardars* and the latter make much money from this job. A gang of miners which can grease their palms will get more than sufficient tubs and will not have to wait for a long time before they get the tubs. Those who are uninfluential and cannot afford to pay, get not only insufficient number of tubs but also have to wait for a pretty long time before they get them. Some get them towards the end of the shift when there is left insufficient time to load them. This evil was found in most of the big collieries in course of my visit to the coalfields in 1934.

As regards inefficient movement of tubs it is recorded by some eminent Indian Mining Engineers like Mr. Farquhar and Mr. J. Macre that in their colliery a tub has a turn over of only

1.33 to 1.50 trips per 24 hours. In Great Britain according to Mr. J. Macre, in the colliery in which he worked, a tub was having a turn over of 5 trips per shift. This was for a single 8 hours shift and the tubs had a travel of not a distance of some yards as in the Indian mines, but a distance of three miles in a return trip. So if the length of the trip may also be considered, the ton mileage per tub of an English mine is many times more than an Indian one.

Mr. Farquhar holds the miners entirely responsible for the slow movement of tubs as they are alleged to hold up their coal until the end of the shift and to refuse to cut it till they get the tubs. But unfortunately he seems to be ignorant of the carelessness and dilatory tactics of the underground supervising and managing staff which are also no less important causes of the small turn-over of the tubs. The miners and the loaders work together and the cutting and loading of coal go side by side.

Hence if the *sardars*, overmen and tub checkers perform their duties actively, there is no reason why the tubs should remain underground long after they are loaded. In not a few mines that I visited in 1934, the loaded tubs were seen standing at the coal faces for hours together because no *sardar* or tub checker had gone there to check them. His complaint that the miners do not commence work until tubs are available is, of course, true. But to great extent miners are justified in adopting this attitude on account of irregular and uncertain supply of tubs. There are days on which they do not get even a single tub. In such cases it is useless to cut coal because if they do not get tubs their efforts in cutting coal will probably not be rewarded at all as their coal is likely to be stolen by the men of the second shift. The remedy of all these evils relating to the supply of tubs lies in increasing the number of tubs, in reducing seasonal over employment, in improving the internal organization of the collieries so as to assure the proper distribution of tubs and their greater turn over, and in supplying at least one tub to the miner at the commencement of the shift and assuring him that another tub will be available immediately the first tub is loaded.

#### **Standardisation of tubs and payment by weight.**

With all other improvements the present defective system of measuring the daily work of coal-cutters and loaders needs to be improved. At present the daily work of coal-cutters and loaders is measured by the number of tubs of coal that are cut

and loaded and not by the actual weight of the coal loaded into the tubs as is the practice in England. These tubs vary in sizes. In 1929 or 1930 an enquiry conducted by the Chief Inspector of Mines revealed that while tubs of 30 c. ft., capacity were used at 256 collieries out of 296 collieries examined, other sizes were used, exclusively or in combination by 210 of these collieries. No less than 107 collieries used two or more sizes of tubs and 2 used as many as 6 different sizes of tubs. In June, July and August 1938, I collected such information from 53 collieries which were using eight different sizes of tubs that is, 27 c. ft., 28 c. ft., 30 c. ft., 33 c. ft., 36 c. ft., 37 c. ft., 38 c. ft., and 40 c. ft. Of these 30 c. ft. and 36 c. ft. are the most common sizes. Out of 52 collieries 21 collieries were using one size, 24 two different sizes, 6 three different sizes and 2 five different sizes. Not only does the size vary but the standard load of the one and the same size varies from colliery to colliery. For instance, in case of 30 c. ft. tub standard load varies from 10 to 16 c. ft. This variation in the sizes and capacities results in the overloading and underloading of tubs and the consequent penalties which the labourers have to bear. Deductions are made for underloading but no bonus or extra payment is made if they are overloaded. The value of the surplus coal is either distributed among the official and supervising staff or is credited to the company's or contractor's accounts. In course of my family budget enquiry I found that 36 collieries were making proportionate deduction for underloading and in 10 collieries  $\frac{1}{2}$  to  $\frac{1}{3}$  tub was deducted even if there was suspicion of slightest underloading. The latter were chiefly the collieries running on contract system. Again 30 collieries were found to be keeping regular record of surplus coal which varied from 2 to 25 per cent of their total output. Out of 30 collieries, 6 such as Bhowra, Amlabad, Kankanee, Bansdeopur, Pootkee and one more, were granting to their supervising staff a bonus of anna 1 to annas 4 per ton of surplus coal. Complaints of over-loading were also heard in many other collieries, especially in Indian collieries which were not keeping any account of the surplus. Justice demands that when miners are penalised for underloading, they should also be rewarded for overloading. Their earnings will, of course, improve if they are paid properly for the work that they do. In Japan an additional amount is paid to the worker where the tub has been filled above the standard level. In other countries the misappropriation of surplus coal is avoided by the system of paying to the labour according to weight rather than according to tub or car. Some countries also pay the miner according to lineal



measurement. In India, one or two collieries do weigh the coal when it comes on the surface but they are few. The payment by lineal measurement is also quite common in the Central Provinces, Hyderabad and the Punjab. In Bihar and Bengal too, the work of main driving is paid by the lineal measurement. This system obviates all the difficulties arising out of the tub system. The only possibility of robbing the miner under this system is the wrong measurement of the space cut. This complaint was heard frequently in the Central Provinces coalfields.

Complaints were also heard from the employers that the labourers also do not leave any stone unturned in cheating them by underloading tubs by placing big pieces of coal at the bottom of the tub. The only thing that can prevent both the parties from cheating each other is payment according to weight. It will solve the question of underloading or overloading. The objection that payment by weight rather than by tubs will lead to irregularity in payment as the miner does not know much of calculation, is not tenable. If payment by measurement can be successful why should payment by weight fail? Both involve some sort of calculation. Mr. R. R. Simpson, the late Chief Inspector of Mines, in his paper on "The social Conditions of Miners in India" has considered the weighing of tubs as the most satisfactory solution of all the difficulties which deprive the miner of his legitimate earnings. The Royal Commission on Labour also observed that "the introduction of a system of check weighing may be practicable in the larger mines and the possibilities of instituting such a system should be explored. To make this system successful the size of tubs should be standardized and the weight of empty tubs must be calculated in order to pay to the worker the net content of a tub".

### **Fines and Deductions.**

Another step to improve the labour earnings should be to minimise the incidence of fines and deductions which take away not a small part of the income of the workers. The most common deduction that is made from the wages of the workers is for bad loading or for loading shale into tubs. Out of 46 collieries from which this information was collected about 13 were deducting one full tub for even a small quantity of shale in the tub, 22 were deducting  $\frac{1}{4}$ th to  $\frac{3}{4}$ th of the tub and the remaining collieries were punishing loading of shale into tubs either by imposing fines, or by getting the tubs re-loaded,

or by suspending the workers for a day or two. In France and Germany badly loaded tubs are treated as under-loaded tubs. Deductions for impurities are made according to their amount. It is generally forbidden to count less in such cases than the actual amount sent. In Japan, too, the deductions are made according to the amount of rubbish contained in the tubs. For this suspected tubs are actually weighed. No deduction is made for impurities where they do not exceed 5 per cent. Such a practice should replace the present practice of arbitrary deductions and fining in the Indian coalfields where the coal faces are badly lighted and make it difficult for the loaders to distinguish between coal and shale.

Again in many Cutchis and Bengali collieries deductions of 3 pies to 12 pies per week are made from the earnings of each worker for *Gowshala* and *Kali Puja* funds. Though in one or two collieries, such as Argada, such funds are used for giving sick and birth allowances, yet in majority of the collieries they are used for charitable purposes or for meeting expenses of labour recruitment. Such deductions should be made illegal as the workers cannot afford to be charitable to others when they themselves depend upon the charity of the employers.

Lastly, majority of the collieries are resorting to fines to maintain discipline. They fine the workers for robbing pillars, for entering prohibited areas, for coming late, for breaking tools and for sleeping underground. The maximum and minimum limit of fine per fault was found to be varying between annas eight to rupees ten, and annas four to annas eight respectively in collieries examined. In railway collieries the amount of fine imposed is limited to 2 pice per rupee. Some collieries punish their workers not by fine but by suspension and dismissals. The latter punishments are worse than the fine and should be resorted to as rarely as possible. But at the same time the amount of fine should also be limited to 5 or 7 per cent of the income in a month. The application of the Payment of Wages Act of 1936 should also be extended to the coalfields. Again it is improper to use fines realised from workers for the recreation of the *Bidus* or the supervising staff as is the practice at present in most of the European collieries. It should be returned to the miners in some other form. In Giridih, all fines are credited to the benefit fund. In some Indian collieries, fines realised are adjusted against extra payments like *bakshis* made to labourers on festival and other ceremonial occasions.

### Corruption and Bribery.

Again arrangements should be made to enable the workers to get exact remuneration for their work. At present the worker is not getting what he earns. He is being robbed in several ways. This is more frequent in collieries running on contract system. Firstly, the miners are victimised by the *Munshis* who record the number of tubs that each man can fill. It was complained in some collieries that the *Munshis* transfer one or two tubs of one miner or gang to the name of another who is willing to pay them a share out of the remuneration of those tubs. Some collieries of Bird and Company have adopted a ticket system to stop this kind of corruption. The miners are issued some tickets bearing a number when they go down the pit or incline. The numbers of the tickets are recorded against their name in a register in the office. They place these tickets in holes near the bottom of the tub before loading it. A tub without number is not accepted. This ticket system has put an end to this corruption to a great extent.

The second kind of robbery is committed when payments are made to the workers. In collieries running on contract system, contractors are the paymasters of the majority of the workers. In some such collieries the workers were found complaining that the contractors deduct one or two tubs on one pretext or another, from their weekly number of tubs. Again in such collieries the workers are generally paid either through their gangmen or *sirdars* and cases are not rare where a gangman or a *sirdar*, instead of distributing the money among his men, wastes it in gambling or disappears with it. Even in collieries making direct payment to the workers, pay clerks and cashiers were found to be making mischiefs during disbursement. The collieries of Bird and Company and some railway collieries have adopted wage box system of payment to stop this kind of corruption. According to this system each worker is issued a ticket bearing a number. For each ticket there is a box bearing the number. The dues of each man are placed in the box bearing the number of his ticket. On pay day he produces the ticket and gets the box. In a few collieries labourers are also given cards which contain all the necessary details about their dues.

Again in some collieries, such as Bhagaband, Sendra, Lodna, Joint Bokaro and Hurrladih, the contractors were reported to be further robbing the workers by paying their wages

in the form of slips directing certain shopkeepers to give to the bearers so much rice and so much *dal* and some other necessaries of life. In other words they were paying the workers in kind instead of in cash. The shopkeepers, to whom the workers were directed, were usually the relatives or the friends of the contractors. In some other collieries, too, though the contractors or *sardars* were not paying the workers by issuing slips, they were coercing them to purchase their necessaries of life from the shop of their friends and relatives. These shopkeepers were fleecing the workers either by overcharging, or by under-weighing or by supplying inferior stuff. Contractors and *sardars* have their due share in this loot.

Lastly, the colliery workers are subjected to bribery and other corruptions from which hardly any colliery seems to be free. Here below I give a few complaints of bribery and corruptions that I and my student Assistants heard in some collieries.

*Dharmatand Colliery*—It is reported that the workers have to pay Re. 1 to the time-keeper to get their females employed and they have to grease his palm after every one or two months to keep them in continuous employment.

*Pootkee*.—It is reported that in female employment a great preference is given to the Bauri women who can suffer the jokes of the *munshis* or time-keepers and can satisfy their immoral demands.

*Argada*.—It was the complaint of the workers that the overman gives employment only to the husbands of young and beautiful women. Again such persons are given more than sufficient number of tubs to cut and load. The contractor's *munshis* give regular work only to those female workers who can satisfy their immoral demands. Doctor is also bribed by the contractor for not recommending *khorakis* to the sick workers frequently. Some workers also complained that they do not receive anything for over-time work.

*Joint Bokaro*.—It was a general complaint that hardly any body can get employment in the workshop without greasing the palm of the head mistry or litter with money or women. I personally interrogated a witness who reported that he could not get employment in the workshop even on the recommendation of the General manager as he had nothing to bribe the man in charge of the workshop. Again the *munshis* and the supervising staff were taking much bribe in distributing tubs.

Lastly, it was the general complaint of not only the workers but also of some persons holding responsible jobs in the colliery that so long as there was one petty contractor in the colliery the honour of young and good looking women was not safe.

*Kargali.*—It was reported that miner's *sardars* were not being paid their full commission. Complaints of bribery in the workshop were also heard.

*Sijua.*—It was the complaint of the stone-cutters that they are declared absent and late unjustly. Again workshop of the colliery was found to be the hot bed of corruptions. No new man could get work without bribing the fitter. One was required to renew the bribe after two or three months to keep himself in employment. We recorded the names of three persons who had bribed the fitter to get employment and who were now dismissed as some body else had bribed the fitter to get their places. Again we came across eight or nine persons who could not get their full week's wages.

All these names were shown to the manager who seemed to be helpless and a puppet in the hands of the engineer.

*Kustore colliery.*—Some *Hazari coolies* complained that besides doing their colliery work, they were required to do the private domestic work of some colliery *babus* free of charge. Those who do not do this additional work were either not employed or given low wages. Again one gateman reported that he had to pay Re. 1 as bribery for getting appointment.

*Giridih collieries.*—It was the general complaint that the weekly income of the gangs of miners or loaders and trammers was shared not only by the members of the gang but also by the *sardars* and deputy overman. Again some workers were found who were paying regularly some Re. 0-4-0 to 0-8-0 per month to the *sardars* because they regarded them and not the company as their employer. Again some workers complained that they had to give bribe of Rs. 4 to 5 in order to get the land from the company. It was also reported that a piece worker could get his *hazari* if something was paid to the contractor or his subordinates.

In about 19 collieries the managers admitted the possibility of bribery and other corruptions but showed their inability to detect the cases. But, in my opinion, a direct contact between the workers and the managers or other officials of the company,

coupled with strict supervision, will go far in removing all these corruptions. In some collieries the managers informed that the workers had direct access to them and they heard their complaints patiently; but when we questioned the workers, they replied that when they complained of bribery and other corruptions to the managers they were rebuked and turned out by the office *chaprasis* and sometimes they were dismissed. Such an attitude of the authorities is undoubtedly responsible for many corrupt practices in not a few collieries.

Again, provision should be made to enable the workers to get their wages regularly. In Sijua colliery the workshop workers were not receiving their wages regularly. In times of depression the number of such collieries increases. But it is a matter of great importance to the labourers who live from hand to mouth that they should be paid regularly. If they are not, they have to buy their necessaries of life on credit and consequently get things which are smaller in quantity and poorer in quality. They run into debt, the interest on which in course of time becomes quite a burden on them. The remedy lies in extending the application of the Payment of Wages Act, 1936, which provides for the regularity of payments, to the coal-fields.

The last but not the least important solution of the wages problem is to guarantee a minimum wage to every worker. In fixing wages, a minimum rate of pay ought to be established which will ensure the subsistence of the worker and his family in health and reasonable comfort. The minimum wage for the worker ought to include not merely the cost of maintenance for himself but also for supporting his family, clothing them, housing them, educating them and giving them the privileges incident to their standard of living, besides the provision for still something more in the way of saving.

As the expenditure under various heads is likely to differ with a rise or fall in the price, it is expedient that before determining the wages of a worker the fullest consideration should be given to the increase in the cost of living index. Such cost of living indices should be prepared by the Department of Industries every month or atleast every quarter of the year and the amount of wages should be regulated according to the cost of living index.

As for the system of determining rates, both time and piece wage system should be followed. There should be a fixed time wage for all the workers ensuring a living wage and over and above this, there should be additional payments for extra work done according to piece wage rates. Thus the ambitious as well as

efficient and quick workers should have ample opportunity of bettering their lot by extra work. On the other hand, in order to safeguard against wilful negligence and waste of time on the part of the workers, there should be standardization of work by means of time and motion studies for every single job in industrial operations as far as possible and every worker should be required to do a fixed quota of work per day as determined by such methods of scientific management. In collieries there will not be felt great difficulty in standardising work. Nearly 70 per cent of the labourers are piece wage workers and in their case it is easy to determine what a man's output should be. By a time study and by making a large allowance, it is further possible to get at a satisfactory standard of output for a day, and taking into account the factor of skill, to arrive at a rate which will express with fair accuracy the amount of skill and exertion that goes into a job and how much is to be expected from the man in the job in return for the wage.

As regards the minimum wage to start with, in my opinion it should not be less than Rs 15 per month. It has been estimated in my report of Family Budget Enquiry in the Bihar coal-fields that an average family of 2.4 adults and 1.96 children with 1.5 workers has an average monthly earning of Rs. 17-11-2. In other words the average monthly earning per worker is only Rs. 11-12-1. On the expenditure side the same average family spends Rs. 17-10-3 per month on different items as follows:—

TABLE III

	Per cent of the total expenditure.		
	Rs.	a.	p.
1. Food .. .. .	12	13	6
2. Clothing and shoes, umbrellas, chaddars, quilts, dohars, blankets, caps, sacks and pillows	1	5	6
3. Fuel and lighting ... ..	0	3	3
4. Household requisites .. ..	0	2	5
5. Miscellaneous, (Liquor, Tobacco, Soda and Soap, religious observances and festivals, interest on debt, barber, amusements, education, medical aid, contributions, <i>pan supari</i> , land rent, hair oil, chewing sticks, bangles, postage and money remitted home).	3	1	9
<b>Total ..</b>	<b>17</b>	<b>10</b>	<b>5</b>

72.1

7.6

1.1

8.

18.4

100.

The above expenditure does not include his expenses which he incurs in purchasing metallic utensils, and cots and in travelling to and from home. Again the saving does not amount to even one anna per month. Lastly, in spite of the fact that the family spends practically the whole of the income, it is doubtful if the family members are getting even sufficient to eat and clothe themselves. First, taking food, the above expenditure is enabling an average adult male to have the following kind of diet per day :—

Commodities.	Amount in ounces.			
Rice .. .. .	..	..	..	.. 23.
Wheat .. .. .	..	..	..	.. 2.
Meat .. .. .	..	..	..	.. .5
Pulses .. .. .	..	..	..	.. .3
Vegetable .. .. .	..	..	..	.. 22
Milk .. .. .	..	..	..	.. .5
Fish .. .. .	..	..	..	.. .1
Ghee .. .. .	..	..	..	.. .05
Oil .. .. .	..	..	..	.. .4
Sugar .. .. .	..	..	..	.. .08
Amount diet per day .. .. .				.. 32.13 ozs.

The above diet is far from nourishing. According to Mr. Maccarrison, the standard diet for an Indian worker should contain 100 grams of protein, 80 grams of fat (of which half should be animal fat) amounting to a total energy value of 3200 calories. In the light of the investigation of the basal metabolism at Lucknow, Maccarrison's estimate seems to be too high. According to this investigation, the standard diet should contain 85 grams of protein, 60 grams of fat, 375 grams of carbo-hydrate and 2400 calories. But this estimate is for the man working in the field. For the colliery labourer whose work is more strenuous than any other work except that of the dock-labourers, a somewhat higher standard is required to enable him to maintain his physical efficiency. Hence it would not be wrong to assume for them a diet of a slightly higher standard containing 100 grams of protein, 60 grams of fat, 500 grams of carbo-hydrate and 3000 calories. Compared to this standard, the above diet of an average adult male suffers from deficiency in protein, fat and calories, though it contains more than the required carbo-hydrates. The above diet contains 75.88 grams of protein, 22.4



grams of fat, 551.75 grams of carbo-hydrates and 2694.39 calories. If we calculate on the basis of per adult instead of per adult male, then we find that an adult is getting a diet containing 71.42 grams of protein, 21.18 grams of fat, 518.73 grams of carbohydrate, and 2518 calories. The above diet is much worse than the diet of the Punjab cultivator, the Punjab Jails diet, that of the United Provinces Mill workers, the Chinese factory hands and the Industrial workers in India, as the following table will show:—

TABLE IV.

	Protein.	Fat.	C. H.	Calories.
Punjab cultivator (Kartar Singh) ...	110.2	54.9	769.8	4014.
United Provinces Mill worker ...	90	45	530	2600
Punjab Jail diet ...	113.4	26.8	612.8	2890.
Chinese factory hands (Ting-an-Ji) ...	92.1	35.2	551	2899.
Industrial workers in India ...	100	100	550	3390.
Colliery workers per adult male ...	75.88	22.	551.75	2694.35
Colliery workers per adult ...	71.42	21.18	518.73	2518.

The diet of the colliery workers suffers from all the three defects, that is inadequacy of calories, fat and protein, and lack of proper balance and uniformity. The result of this maldistribution of food is malnutrition. A diet consisting of rice, a little of dal and vegetable and condiments which is the diet of the majority of the workers in the coalfields is the least satisfactory of all the Indian diets. Such a diet is associated with the lowest grade of efficiency and health in India and as Mr. Maccarrison says, its defects are poverty of protein, excess of starch, deficiency of certain mineral elements, deficiency in Vitamin A and B. Such a diet makes the labourer an easy victim to diseases like dysentery, diarrhoea, epidemic dropsy and beriberi. Lastly a defective diet is not an unimportant factor responsible for the inefficiency of the worker.

Turning to clothing and bedding, we find the inadequacy of the expenditure of Rs. 1-5-6 from the fact that this is the average expenditure of a family when nearly 95 per cent of the families do not use any warm clothing, about 72 per cent any

shoe or foot wear, 75 per cent any umbrella, 41 per cent any *chaddar*, 88 per cent any carpet or *dari*, 95 per cent any blanket or woollen *chaddar*, 97 per cent any quilt or pillows and 99 per cent of the families use only cotton clothing. The poor standard in respect of cotton clothing is also quite obvious from the fact that the average clothing expense per adult works out at Re. 0-6-4 per month or Rs. 4-11-0 per year.

With Rs. 4-11-0 an adult male will hardly be able to purchase three *dhotees* costing annas 15 each, two *kurtas* costing annas 12 each and only two *gamchhas* costing annas 3 each. An adult female will not be able to purchase with this sum even three *dhotees* costing Rs. 1-2-0 each and three *kurtis* costing annas 8 each in a year.

As regards fuel and lighting expense Rs. 3-1-0 is the average expense of the family when about 98 per cent of the families are getting their fuel free and when only 50 per cent of the families incur some expense on lighting. The average monthly household requisites expenditure of 2 annas and 5 pies per family represents only the recurring expenditure of the family on earthenpots which they have to purchase practically every month. We have not calculated the average expenditure which the family incurs periodically in purchasing metallic utensils, cots and the household requisites.

Lastly, Rs. 3-1-9 is the average miscellaneous expenditure per family when 36 per cent of the families are not taking liquor, when not even 50 per cent of the indebted families are paying interest on their debt regularly and when 17 per cent, 7 per cent, 11 per cent, 3.5 per cent, 4.8 per cent, 17.3 per cent, 9.5 per cent, hardly 1 per cent, 19.4 per cent, 26.1 per cent and 1.6 per cent of the families show expense on amusement, education, contribution to any fund, *pan* and *suparis*, land rent, hair oil, medical fees and medicine, postage, home remittances, chewing stick and bangles respectively.

All the above facts leave no doubt about the inadequacy of the present family earnings and the resulting low standard of living. An increase in the monthly earnings per worker from Rs. 11-12-1 to Rs. 15 will enable him to have atleast somewhat better food, better clothing and some other necessaries of life besides saving a few annas for the rainy day. In other words the increase in his earnings will go far in improving his present low standard of living which is in no way less responsible for his proverbial inefficiency.

### Other measures to improve the standard of living of the workers.

Improvement in the standard of living of the workers, which is absolutely necessary to increase their present productive capacity, can hardly be brought about by an increase in the monetary earnings unless they are taught and enabled to spend their income more economically and effectively. Mis-spending or unproductive spending is as much responsible for the hopelessly poor standard of living of the workers as inadequate earnings. Of course, there are some other causes of the low standard of living of the workers such as, ignorance, illiteracy, religious restrictions on the consumption of certain kinds of food, customs and traditions affecting dress and mode of living. But the force of these factors has been weakening, since the local labourers who came in contact with the imported labours have got a comparatively higher standard of living. The local labourers have not only imitated them in dress but also in diet. Moreover, by propaganda and educational work all these social difficulties can be overcome.

### Liquor consumption.

The first step to reduce mis-spending must be to minimise the labourer's expenditure on liquor. As already stated in my report of the Family Budget inquiry, nearly 64 per cent of the families examined consume liquor worth Rs. 1-10-6 per month on the average. It forms nearly 6 per cent of their total average monthly income and 33 per cent of their average miscellaneous expenditure. The drunkenness has increased since the introduction of the outstill system which has greatly cheapened liquor. The liquor expenditure is undoubtedly unproductive and is a great drain on the miner's income which is even too low to keep them physically fit. Liquor is not a food as it contains neither protein, nor fat nor carbo-hydrate but only produces calories at the rate of about 30 per oz.

Instead of being a food, *mahua* liquor, which is most commonly sold by these outstills, reduces appetite and thus affects the health and physique of the workers and consequently their earning capacity. Again, liquor consumption, in the opinion of most of the colliery managers, is responsible for much of the voluntary labour absenteeism or irregularity in work which is an important cause of the low earnings. Besides affecting health and efficiency of the workers, liquor consumption is also affecting the morals of the workers adversely. Not only the adult males and females but also children of five and six years were found sharing liquor with their parents.

Girls in their teens were found selling their chastity for one or two bottles of liquor. Again Mrs. Thomas, a health visitor of the Jharia Mines Board of Health reported to Miss J. E. Copeland that " Many abortions are brought on by drink. " Hence, if the efficiency, health and morals of the colliery workers are to be improved, this drink evil will have to be eradicated. The reform should be carried out gradually otherwise it would drive away many aboriginal and semi-aboriginal classes of workers and thus would cause serious labour shortage. To begin with, the present outstill system should be stopped. It should be followed by reduction in the number of liquor shops, their removal from the neighbourhood of the collieries, raising the price of liquor and finally by total prohibition. To make this reform successful it is important that anti-drink propaganda is also carried on among the workers and some provisions for healthy means of recreation and relaxation such as tea shops, periodical free cinema shows and labour clubs providing both indoor and outdoor games, are made. Not a few miners take to cheap liquor and other drugs because of their poverty and the monotonous, strenuous, dirty, squalid, unnatural, desocialised and unhumanized life that they are made to live in the coal-fields. They drink because they find no other cheap means of recreation to relieve their fatigued and over-worked minds in the absence of a good home and healthy means of relaxation. An uncomfortable and foodless home will always drive them to a grog-shop.

### Indebtedness.

The second important means of enabling the workers to spend their scanty income effectively is the reduction of their expenditure by way of interest paid to their creditor. In course of our family Budget Enquiry, we found nearly 44 per cent of the families in debt and the average indebtedness per family was nearly twice the average monthly income of the family. In case of families having income of below Rs. 5 and between Rs. 40 and 50 it was nearly equal to their 4 and 3½ months pay respectively. Not a few workers had debt of more than Rs. 100. Out of 44 per cent, nearly 35 per cent of the families had borrowed on rates of interest varying from 12½ per cent to 650 per cent. Again out of 44 per cent, about 21·5 per cent of the families were paying regularly Rs. 1-4-1 per month or nearly 7 per cent of the total income or 40 per cent of the total miscellaneous expenditure as interest on their debts. Not a few cases were found where the labourers were handing over their whole income to the colliery *chaprasis*, shopkeepers and *kabulis*

in payment of the interest on their debts who returned only a small part of it to enable the workers to purchase rice, *dal* and salt.

Besides lowering the standard of living, indebtedness is also exercising a harmful effect on the efficiency of the workers. It has a tendency to destroy incentive to work. When a man knows, whether he earns Rs. 5 a week or more, he will only get a subsistence allowance and the rest of his income will be taken away by his creditors, he will not exert himself more than to earn what is necessary to maintain himself. The Royal Commission on Labour also observe that "The tyranny of debt degrades the worker and impairs his efficiency." The chief causes of indebtedness are marriage, festivals, sickness, unemployment, funerals, irregular wage payment, credit dealings, litigation, land, building and business investments.

The remedy lies in the institution of benefit funds to help the miners at the time of death, birth, marriage and sickness and to give occasional loans, regular and adequate wage payments in cash and in making private lending business unprofitable. The last will be the most effective remedy. The Indian miner is spend-thrift, short sighted and ignorant. Easy access to borrowing is likely to prove very harmful to one who is prepared to mortgage his future only to have some conventional necessities of life. This can be done by making the wages of the labourers unattachable in lieu of their debt and by abolishing imprisonment of the indebted labourers except, of course, in the case of those who are proved to be able but unwilling to pay. The entry of the *kabulis* in the colliery areas to harass the workers has already been stopped in many collieries. But the managers or the colliery employees will do much good to the workers if they would also stop their *chaprasis* and *jamadars* from lending money at the exorbitant rate of 300 to 650 per cent. Such measures will prove a success if the labourers are at the same time educated in wise-spending and if the management makes it compulsory for employees to save something by initiating some form of provident benefit scheme. As regards their present debts, colliery owners or managers should help them by advancing loans either free of interest or at a rate of interest not exceeding 5 per cent, the company making it a point to realise it in small instalments.

There is also a third way of making the present earnings of the workers more effective and this is by saving them from

the exploitation of the colliery shopkeepers. The prices of these shops are, in practically all cases, higher than the bazar prices by 10 to 15 per cent. If articles are purchased on credit a further increase of 5 to 10 per cent is made in prices. Majority of these shops are owned either by the colliery contractors or their relatives or friends, or relatives of the colliery *Babus* and in not a few cases the workers are practically compelled to purchase their daily necessaries from these shops. In one or two cases it was found that labourers were fined if they did not make purchases from these shops. In cases the workers are free to buy anywhere they like and the colliery shopkeepers find it impossible to charge higher prices, they exploit the workers partly by underweighing and partly by selling adulterated food stuff. Again these shops encourage credit dealings in order to entangle the workers as their permanent customers, hanging over them the threat of demanding immediate payment of debts. The remedy lies in the replacement of these shops by the colliery stores or co-operative stores. These stores should discourage credit dealings and should sell standard quality of goods at *bazar* rates.

The Jharia Mines Board of Health can also prove to be of great assistance in raising and combating the personal and social factors responsible for the low standard of living by educating the workers and doing propaganda work among them. Further the classes that are being held at some welfare centres for teaching the art of sewing and knitting may be utilized to teach the workers' women folk the art of cooking and keeping their houses neat and clean. Again the Board can find out a model diet for the miners and popularise it among them.

Lastly, the standard of living of the workers can be improved and the workers can be made ambitious if some hopes of being promoted to the rank of *sardars*, overmen or managers are held out. In England a labourer has got such chances of advancement. The standard of living of a *sardar* is certainly higher than that of a coal-cutter. He raises his standard of living partly because he can afford to do so and partly because he thinks it necessary to maintain his position of *sardarship*.

#### **Exclusion of woman labour from underground.**

Women workers have been totally excluded from underground work since October 1937. Of course, this exclusion was followed by some increase in the tub rates of the miners but they could not derive any benefit from this increase as the

size of the tubs was also increased from 30 c.ft. to 36 c.ft or 40 c.ft. in many collieries. So, really speaking, the exclusion of woman labour from underground has decidedly worsened the economic condition of the colliery workers. Even in other respects the reform has been defeated in its object. Instead of raising the social status of woman, it has degraded it; instead of improving labour efficiency, it has reduced it; instead of removing the evil of floating labour, it has intensified it; lastly, instead of improving the home life of the labourers, it has demolished it. In course of the family budget enquiry I also tried to ascertain the effect of this reform and the common replies of the colliery managers and agents to my question were as given below :—

1. The number of the Bilaspuri and Santal workers has been considerably reduced since the total exclusion of women workers from underground workings.
2. Many local workers are not bringing their families to the coalfields as they have no surety that their women will get work in the coalfields. Hence the reform has increased sexual disparity and has deprived many workers even of the poor home that they were having before. So, it is no surprise that drunkenness has increased.
3. The moral condition of the colliery workers has deteriorated.
4. Labour absenteeism has increased and the workers are visiting their homes more frequently to see their families.
5. In some collieries it was found that output per head has diminished since the total exclusion of woman labour from underground works.
6. The collieries are suffering from labour shortage which in turn is telling upon their output.
7. Lastly, the economic condition of women workers has decidedly gone from bad to worse. They are getting practically the same rates of wages i.e,  $2\frac{1}{2}$  to 4 annas per day, as they were getting in the days of depression. Again as the number of the works in which women can be employed has been

considerably reduced, the competition among them for the limited number of jobs has increased. Very few women were found to be getting work for all the six days without bribing the time-keeper and other members of the subordinate staff.

### Housing.

The vast majority of workers in the Jharia and Giridih coalfields are living in houses provided by the employers. I have already discussed the types and different features of the colliery *dhourahs* in my report on the Family Budget Enquiry. Practically all labour quarters are built in lines and most of them are back to back. Again nearly 90 per cent of the houses are one room houses. One room for one family or one room for one worker is the general rule followed in allotting rooms to the labourers. An individual worker without any family will be given one room, a widow one room, even if both of them are working at the same colliery, and lastly a family of eight persons will be given one room. The same room is used to serve the purpose of kitchen, store, sitting and bed room. Many *dhourahs* possess verandahs which are frequently used by the miners as kitchen and bath rooms. To the colliery workers, a separate kitchen, a bath room and a latrine are unthinkable. Men, women and children have to ease themselves in the surrounding areas. They take their bath either in dirty pools or with pit water pumped out of the mines into the tanks provided near about the shaft of the colliery. There are no separate baths for women. Besides this, most of the colliery *dhourahs* suffer from all sorts of defects of industrial housing. They are over-crowded, insanitary, damp, sun-proof and dark, lacking in privacy, ill-ventilated, roadless, and with foul atmosphere and unhealthy surroundings. Of course, there is the Jharia Mines Board of Health which is supervising housing, sanitation and health arrangements in the coalfields and has laid down some regulations relating to the minimum size of the room, verandah, white-washing and ventilation etc., but this body seems to be impotent and is hardly receiving any good co-operation from the employers. The helplessness of the Board is generally attributed to the substantial representation of the employers and the supervising absence of true representatives of the labourers on the Board and partly to the light fines that are imposed for the breach of the bye-laws.



Again, the minimum standard of housing laid down by the Jharia Mines Board of Health can hardly be regarded as satisfactory. According to their standard a house should consist of a room and a verandah of the following dimensions:—

1. One room with (a) floor space—100 square feet,  
(b) cubic capacity—1,000 cubic feet,  
(c) width of the room—8 feet,  
(d) Average height—7 feet,
2. A verandah with a (a) floor space—40 square feet,  
(b) width—5 feet.
3. (a) Door—5 × 2 feet.  
(b) Windows and adequate and independent ventilator.

The Board also lays down that a minimum floor space of 33 square feet and an air space of 333 cubic feet must be allowed to each adult and half such space to each child under 12. The inferiority of this standard of accommodation can be realised by comparing it with the English, German and American standards. In England the Whitley Act of 1924 provides for no more than 8 houses per acre in the agricultural parishes and 12 per acre in the towns. The three bed room cottage is being advocated and considered essential for a normal family. Only for newly married couples or old men whose children have left them is the humble two bed room cottage tolerated. The minimum area within the walls cannot be less than 150, 100 and 65 square feet respectively according to the new health requirements, and apart from the bed rooms, there must be the bath room, the coal store, the kitchen, scullery, larder and parlour. In Germany too, a typical house of a colliery labourer consists of three bed rooms, one living room, a kitchen, a latrine and a bath room. The American standard of minimum house accommodation according to John Nolen's report on the Bridge-fort Chamber of Commerce is four rooms, that is, a living room, two bed rooms, a kitchen and a bath room. Generally five rooms are preferred, that is, a living room, kitchen, three bed rooms and a bath room. In France a miner is supplied with a bungalow and an attached garden.

In the Indian coalfields, a house for a family of two adults and two children should consist of two rooms, a verandah and wall compound to give adequate privacy and a kitchen in one of the corners of the compound. Each room should have a window and a

roof ventilator. Both the rooms and the verandah should have *pucca* floor. Single room houses can be given to non-family workers and such houses should be built after the model of the new houses of the Jamadoba colliery. All these houses should be built in blocks of three to four houses instead of back to back to assure sufficient sun-light and ventilation. Each of these blocks should be fitted with good *pucca* drains to carry out foul water. In their vicinity there should be adequate arrangements of water-supply for both bathing and drinking. Further there should also be provided a sufficient number of latrines, each of the type approved by the Jharia Mines Board of Health. Again each block should be provided with dustbin which must be cleaned, if not daily, at least on alternate days. Much of the problem of the disposal of foul water and rubbish will be solved if each house is provided with a small plot of land for growing vegetable, and flowers. Such gardens will secure to the labourer some degree of spaciousness in his life. Lastly, between three or four blocks of houses an electric or kerosene oil light-post should be installed. Such a scheme of house can be readily adopted in railway collieries, particularly in Giridih where housing condition was found to be the worst. In Giridih, labourers are given material to build their own houses according to their liking. There is no standard prescribed by the company. Consequently workers were found to be living in houses hardly better than pig-holes.

### Health.

The colliery areas abound in practically all sorts of diseases such as respiratory diseases including pneumonia, asthma and pulmonary tuberculosis, bowel diseases such as dysentery, enteric fever, diarrhoea and others, influenza, malaria, pyrexia, gonorrhoea syphilis, smallpox, cholera, leprosy, eye and skin diseases, as the following figures will show:—

TABLE V.

Number of cases of different diseases.	No. of cases.	
	1936.	1937.
Pneumonia .. .. .	498	..
Asthma .. .. .	620	..
Pulmonary Tuberculosis .. .. .	39	..
All others .. .. .	11,417	14,568
Dysentery .. .. .	3,027	3,504
Enteric fever .. .. .	159	171

Number of cases of different diseases.	No. of cases.	
	1936.	1937.
Diarrhoea ..	2,641	2,321
All others ..	18,253	..
Influenza ..	6,522	5,097
Malaria ..	33,680	..
Pyrexia ..	10,142	8,332
Gonorrhoea ..	158	..
Syphilis ..	34	..
All other venereal diseases ..	25	..
No. of cases of leprosy ..	22,984	..
Cases ..	1,12,135	33,893

The rate of sickness is more than 100 cases per 100 of population. It is very difficult to draw any conclusion from these figures as they are hardly reliable. They represent, at the most, those cases which are reported to the colliery doctor. It is an established fact that a good number of workers do not go to the colliery hospitals till they are seriously ill.

It is estimated that the colliery doctors hardly come to know 60 per cent of the cases. Though prejudice of the workers against allopathic medicines has been considerably reduced in the recent years, under economic pressure, yet there is still a good majority of them who take recourse to the indigenous system of treatment and consult *Hakims*, *Vaids* and quacks. Women still prefer native drugs to hospital treatment. This tendency on the part of women can be partly explained by the absence of women doctors. Again, there are diseases such as deficiency diseases, hook-worm and venereal diseases which are found in abundance in the colliery area but of which the colliery doctors do not come to know even 5 per cent cases. In not a few collieries we were reported, in course of our Family Budget Enquiry, that 40 to 90 per cent of the workers were suffering from venereal diseases, 25 to 60 per cent from deficiency disease and a good many from hook-worm and T. B.; yet when we consulted the registers of the colliery doctors, we found hardly 2 or 3 per cent of the workers suffering from these diseases. It is possible to obtain some reliable figures of these shameful and hidden diseases and the general state of health if the collieries hold medical examination

of all their workers and their dependants and submit the report to the Jharia Mines Board of Health.

Again an improvement in the quality and quantity of the medical aid provided in collieries will not only improve the state of health but also enable the collieries to keep and submit to the Jharia Mines Board of Health more reliable figures relating to all sort of sickness among their workers. At present practically all collieries have made some arrangements for providing free medical aid to their workers, but this medical aid, in the majority of cases, is deficient both in quality and quantity. Most of the Indian collieries are keeping part-time doctors. In not a few cases, a doctor was found to be serving 6 to 7 collieries, each paying him Rs. 15 to 20 per mensem. Such over-worked doctors, even if they are efficient, can hardly give their best under the circumstances. They rarely visit all the collieries regularly. Again, the vast majority of the collieries cannot boast of indoor arrangement and their dispensaries are mostly pocket dispensaries containing a few bottles of medicines. Turning to the non-Indian collieries, many of them possess whole time doctors and tolerable dispensaries. Some of the European managed collieries possess well equipped hospitals with indoor arrangements. But here too the doctors were found to be discharging their duties rather inefficiently. They are supposed to supervise also the sanitary arrangements of the collieries besides their medical arrangement. Many of them visit the labour quarters irregularly and whenever they do, they go like autocratic bosses. Instead of patiently educating the illiterate and ignorant labourers in clean living based on sanitary habits, they take pleasure in bullying the workers to maintain their dignity worth not even three weeks' wages of a British miner. Again, in some of the collieries, doctors are kept busy either at the Sahib's Bungalow or the houses of Indian subordinates who are their friends. Of course, there are some doctors who try to work honestly but cannot suggest any reform for fear of being dismissed by the colliery proprietors or companies who usually aim at bad economies. In course of our family budget enquiry, I heard not a few complaints from the doctors of big collieries that their hospitals were understaffed. Many workers of such collieries were also found complaining that they could not get anything from the hospital but quinine mixture, no matter what might be their sickness. Such complaints were also heard in railway collieries. In Bhurkunda colliery the workers were badly complaining about the inefficiency of the doctors. Lastly, we will not gainsay that in Jharia coalfield some of the coal

companies seem to have the tendency to keep less qualified and inefficient doctors who accept low salaries and are easily accommodating.

Matters will improve if all the colliery doctors are appointed by Jharia Mines Board of Health at the expense of the collieries. If this is not possible, the Jharia Mines Board of Health should lay down the minimum qualification of a colliery doctor and a minimum stock of medicine that a colliery should maintain. Again the Board should supervise and check the work of the doctors. In case of small collieries which are unable to maintain whole-time doctors, it should lay down minimum number of collieries that can have a common doctor.

### Welfare works.

The first and the most important welfare work that should receive the serious attention of all the well-wishers of the colliery workers is that of making the workers and their children literate. Considering the character of the labour available in the coalfields, one can hardly under-rate the importance of educating them and their children. Without education we should never hope to improve the efficiency and standard of living of the workers who are unambitious, superstitious, caste-ridden, and ignorant. Moreover, it is necessary to have a disciplined, intelligent and literate class of workers in order to reduce the avoidable accidents in mines and to enforce effectively the Mines Act and its amendments for the benefit of the workers and employers. The stamping out of illiteracy is an important means to these ends. Of course some collieries have provided Lower Primary schools but all these are being utilised chiefly by the children of the *Babus* and highly paid skilled workers. The children of the low class workers are hardly encouraged to attend these schools. In my opinion, Jharia coalfields should have the system of education of Giridih which I have already explained in the report of the Family Budget Enquiry. The establishment of about 100 schools will serve the purpose in the Jharia coalfield if they are properly located and organised. For their maintenance the poorly paid labourers should be spared. The Government and District Board, together with the colliery owners and the Royalty receivers, should take up this burden. Besides these 100 schools, there should be about 10 industrial schools. Some scholarships and stipends should be awarded to the boys of the industrial school. The children of persons earning more than Rs. 50 a month should be required to pay fees. Special instructions should be issued to the teachers for encouraging miner's

children to attend these schools. Besides rendering financial help, the Government must also assist in overcoming the prejudice of the miners against education by making primary education compulsory as has been recommended by the Royal Commission on Labour.

Again, not only children but also adults should be educated. At present very little provision exists for this education. Only Loyabad colliery was found to be holding classes for adult workers. What to speak of literary education, even the provision for technical and vocational education is inadequate. The Dhanbad school of mines which is turning out surveyors, managers and overmen, is meant chiefly for rich and middle class educated people. For the training of *sirdars* and overmen the Government have provided evening vernacular classes in the Jharia coalfield. It is needless to say that this provision is hardly adequate, considering the number of labourers working in Jharia. As for other skilled works such as hauling and winding coal and working coal cutting machines, some collieries take high caste men as apprentices. Most of the Indian Collieries depend for the skilled work on men who have been dismissed from the European Collieries. As regards coal cutting and main driving, ignorant villagers are sent underground, untrained and uneducated to work at the coal faces. The collieries may maintain a large staff to look after the miners underground but the condition at the face changes so quickly that the safety of the miner depends to a great extent on his skill and experience. Matters will improve if colliery managers or trained overmen and surveyors devote two or three hours in a week to give lectures to the miners in suitable vernaculars and thus train them for the post of managers, overmen, *sirdar* and other high skilled workers. The miners department should not hesitate to hold an examination to enable the miners to qualify themselves for the higher jobs. Their long practical training will make them better managers, overmen, *sirdars* and surveyors than the educated men who rely mostly on their theoretical study.

#### **Sickness, maternity benefit and old age pension.**

The poor earnings of the colliery workers warrant the institution of some schemes which may help them to provide for the non-earning periods of their life, brought about by sickness, child-birth and old age. It is not unusual to find workers borrowing either from *Chaprasis* or from *Kabulis*, or from fellow workers, or from shopkeepers, at exorbitant rates of interest to pass these difficult days of theirs. There is no definite scheme of sickness insurance, maternity benefit and old age

pension adopted by any colliery except by Jealgora, Giridih and Bokaro collieries. Of course, some collieries in Jharia are paying either sickness benefit or maternity benefit or both. But all these payments are discretionary and uncertain. In some cases, where doctors are allowed to recommend the allowances in deserving cases, they make their recommendation rather grudgingly to keep themselves in the good books of the colliery authorities. The absence of adequate provision to tide over difficult periods of sickness and child birth is not only increasing indebtedness of the workers but is also adding to their floating character. During serious sickness men retire to their villages because there is no body to support them in the coalfields. Similarly, women migrate to the villages when their period of confinement approaches because they get neither any financial nor any suitable medical help in the coalfields.

#### **Benefit Fund.**

A State Social Insurance scheme could have solved the whole problem. But so long as it is not forth-coming, employers should organize their own welfare funds on contributory basis after the model of the Giridih welfare funds which I have already described at length in my report on the Family Budget. Enquiry. An ordinary male labourer should be required to pay two pice a week and woman one pice a week. Labour contractors should pay two pice per ton of coal raised. High and well paid skilled workers and clerical and supervising staff should contribute one anna or six pice per week according to their pay. Employers or companies should contribute at least two pice per ton of coal despatched. Again to this Benefit Fund must be added all the fines realised from the labourers and the staff and also the income from the surplus coal if it is not distributed among the miners. The small collieries can make their workers contribute on a graduated scale i.e. two pice or one pice per rupee of the wage they receive in a week. This fund should be utilized primarily for giving sickness benefit, maternity benefit, old age pension and marriage, birth and death allowances.

*Sickness allowance.*—It should be paid at the rate of Rs. 1-4-0 a week to a man and Re. 1 to a woman. If one becomes so seriously ill that he is taken as an indoor patient, he should be given, in addition to the weekly allowance, diet worth 5 annas daily and annas 3 should be paid to his attendant. The maximum period for sickness insurance should be one month in a year on full allowance and one on half. These benefits should be granted only if the patient attends the colliery hospital regularly or produces a medical certificate.

*Death allowance.*—If a person dies, his relatives should be paid Rs. 5 for the funeral expenses of an adult and Rs. 2-8-0 for those of a minor. If his widow has got no one to support her and cannot work herself because she has got an infant, she should be given annas 12 and annas 4 per child per week, not exceeding Rs. 1-8-0 per week, till the children attain the age when they can work. Her own allowance should be stopped where it is found that she can leave her children safely at her place and can go to work.

*Maternity allowance.*—A woman worker should be paid Re. 1 per week for four weeks before and four weeks after the confinement and Rs. 5 on child birth to meet extra expenses which the family will have to bear. If a colliery has provided maternity wards and the expected mother joins the hospital for delivery, she should be given free food for at least seven days after the delivery.

*Marriage allowance.*—A worker should be paid Rs. 5 as marriage allowance if he marries himself or his children within 10 or 12 miles distance from the colliery.

All these allowances should be paid only to those workers who have put in a regular service of at least 6 months and have been contributing to the fund regularly.

*Old age pension.*—If a man has served the colliery for 20 years or has reached the age of 50 years (after serving 15 years, he should be given a pension of annas 14 a week. In filling posts his children should be given preference.

*Disability allowance.*—If any employee who may be deprived of his powers by accident or sickness and who does not come under the rule of pension or whose sickness allowance is inadequate to support his family, he should be entitled to a disability allowance of Re. 0-12-0 per week and Re. 0-6-0 per week for each child dependant.

The fund should be further utilized, in case if its financial condition allows, for advancing loans for providing cinema shows, lantern lectures, reading rooms, papers and booklets, clubs with both indoor and outdoor games, annual sports and other means of recreation which will go far in lessening the drinking habit of the miners.

A legal enforcement of such a benefit scheme is not very difficult. It can be easily done through the Jharia Mines Board of Health. Every colliery should be required to submit a



monthly statement about its Benefit or Welfare Fund containing the following particulars :—

1. Number of labourers, males and females employed.
2. Amount of money paid by way of wages or salaries.
3. Amount of coal raised and despatched.
4. Total monthly income of fund.
5. Number of persons, males and females, fallen sick and the amount of money given by way of sickness allowance.
6. Number of births and deaths and the amount of money paid on each account.
7. Number of persons getting pension, disability allowance, orphan and widow allowance, and the amount of money paid on each account.

The collieries should be prosecuted if they commit any irregularity in their accounts of the funds. A good deal of mischief will be reduced if the colliery doctors, as suggested before, are appointed by the Jharia Mines Board of Health at the expenses of the collieries and are asked to submit a monthly statement about the work of the Welfare Fund. Their statement will be more trustworthy, as they will be responsible to both the Board and the collieries for their accuracy. It should be their duty to see that no woman is allowed to work within a month before and a similar period after the child birth. Managers and colliery-owners should also watch closely the conduct of doctors, compounders and dressers. They should discourage bribery as much as it lies in their power and take interest in seeing that labourers receive their benefit properly.

### **Safety.**

Every year the colliery work is taking the lives of hundreds of people and is depriving still more of their one limb or another. In 1936 as many as 420 persons were killed and 714 were injured seriously against 264 persons killed and 613 seriously injured in 1935. Between 1933-36 death rate per 1,000 persons employed has increased from 0·86 to 2·58 and the death rate per million tons of coal has also shot up from 6·83 to 20·4. As regards the causes of accidents, 58 per cent of the fatal accidents were due to falling of roofs and sides, 14 per cent to haulage, 8 per cent to surface accidents, 6 per cent to explosion, 4 per cent to shafts and 10 per cent to miscellaneous causes. Turning to the responsibility for accidents, we find that in 1936

nearly 69 per cent of the accidents were attributed to misadventure, 13 per cent to the fault of subordinate officials, 11 per cent to the fault of the deceased, 45 per cent to his fellow workers, 2 per cent to management and nearly  $\frac{1}{2}$  per cent to the fault of material. As compared to the foreign countries, the Indian accident rate is decidedly higher though the geological conditions of the Indian coalfields are more favourable. The higher rate of accidents in India is due partly to natural causes such as the thickness of seams, partly to the bad economies practised and the method of employment. In Great Britain coal mining is recognized as a skilled occupation whether the actual cutting of coal is done by hand or by machines. The British miners enter the mine as boys and work for sometime before they are allowed to work at the coal face. They are made to work under a skilled miner for a number of years before they are considered competent to take charge of a working place. A similar procedure is adopted in the mines of Margherita in Assam. But in Bihâr and other Indian coalfields a cultivator is allowed to work on his first day at the coal face. Safety at a working place depends to a great extent on the skill and experience of the miners themselves. It is almost impossible to foresee the endless dangers that may arise through ignorance and foolhardiness and even in England surprising examples can be quoted. Small wonder then that the Indian miners, unlettered and fresh from woods and forests, fail to perceive the danger of accidents to which they sometime expose themselves. The condition at the face changes rapidly and the danger cannot be entirely obviated only by maintaining a large staff of trained men to look after the safety of the miners.

Again the lack of discipline among the workers and their illiteracy and ignorance hardly allow them to perceive the danger to which they sometime expose themselves by sleeping in the shadow between the railway wagons or in the vicinity of train lines, or entering fenced off areas or robbing loosely held coal from the sides of the pillars, mishandling of explosives, riding on running tubs, greasing and oiling machinery in motion, returning to the coal faces before all the charges are exploded, crossing the bottom of the shafts instead of the bye-passes where provided, drying gun-powder over the open fire, lighting match in prohibited gaseous areas and, in short disobeying the instructions given by the management. The written order sheets of the managers are nothing but so many blank papers to the illiterate miners.

But the illiteracy and ignorance of the miners are not the only causes of accidents in the coal mines. There are many othe

factors such as the contract system of raising coal, the system of paying commission to the underground supervising staff, inadequate light and ventilation in the pits, overemployment, unscientific methods of working, frequent changes in managerial and supervising staff, the appointment of cheap and incompetent surveyors, the hasty and inefficient inspection of the working places, haste and over-familiarity on the part of the individuals, careless handling of explosives and inefficient shot firing which are also responsible for many of the accidents in coal-mines. So the remedy lies not only in making the workers disciplined and literate but also in removing the above mentioned defects and mal-practices.

### **Workmen's Compensation Act.**

Of course, the victims of the accidents are compensated according to the Workmen's Compensation Act, 1923 and its subsequent amendments, but not all. According to section 3 of the Act, no compensation is to be paid in cases where the accident could be attributed to (1) Drink or drugs (2) Wilful disobedience to an order expressly given for the purpose of securing safety of the workmen (3) Wilful removal or disregard by the workmen of any safety guard or devise. The last two are the most frequent grounds on which the employers deny their liability for compensation. The limitations are operating very harshly and the sooner they are done away with the better. The Commissioner for Workmen's Compensation at Dhanbad himself admitted before the Royal Commission on Labour that "it is difficult to distinguish between disobedience and wilful disobedience". Again it is not rarely that an accident due to the negligence of the management is attributed to the wilful disobedience of the labour. It is easy for the management to prove that the workman disobeyed some rule or some order verbally or in writing given to him, especially when a man is killed. It is extremely difficult for dependents to rebut evidence that the accident was caused by the deceased worker's misconduct. The Commissioner for Workmen's Compensation also admitted that instances had come to his notice in which miners were allowed to rob coal inside the fenced or prohibited areas with the knowledge, consent and approval of the subordinate staff. Again cases had also been produced which had raised suspicion as to whether the fence was put before or after the fatal accident. A fence consists of only a steel wire and it does not take five minutes to put it round prohibited areas. Lastly, in case of a fatal or serious accident, the worker has already paid the highest penalty, a penalty which is altogether

out of all proportion to what he could have suffered for the disobedience of an order. It is not humane to punish him further by depriving him or his dependants of the little compensation the employers are required to give.

Another defect of the present Compensation Act is its low scale of compensation. In spite of the enhanced scales granted by the Workmen's Compensation Amendment Act of 1933, hardly Rs. 750 were paid on the average for a case of fatal accident and Rs. 28 for every non-fatal case.

Lastly in my opinion, it will be better if it can be made compulsory for each and every colliery to insure its workers against accidents. The facilities for insurance are sufficiently provided by a number of leading insurance companies. The most important are the claim bureaus in Calcutta and Madras. The former represents many of the leading insurance companies operating in India and deals with a large number of claims. The small colliery owners can co-operate among themselves, and can organize a mutual Insurance Association with the object of insuring members against liability to pay compensation or damages to workmen or their dependants for accidents, fatal or otherwise, arising out of or in course of employment. This has been actually done in Bombay by about sixty textile mills. Compulsory insurance, besides ensuring proper compensation to the workers, will also have the effect of reducing the chances of accidents.

### **Other welfare works.**

Some other important works which the employers can undertake for the welfare of their workers are the establishment of creches, bathing and washing facilities, organization of co-operative credit societies and co-operative stores, facilities for the celebration of religious festivals and ceremonies and organization of labour clubs providing both in-door and out-door games.

### **Intelligence.**

At present the only publication that can give us some idea about the economic and general condition of the colliery workers in Bihar are the annual reports of the Chief Inspector of Mines and the Jharia Mines Board of Health. I have already pointed out the unreliability of the sickness and health figures

of the report of the Jharia Mines Board of Health. In the Chief Inspector of Mines report statistics are published on the basis of returns submitted by the colliery managements. Their accuracy is doubted by the Chief Inspector of Mines himself. In his report of 1924 he observed that "It is to be feared that no great reliance can be placed upon the figures etc." The Royal Commission on Labour also doubted the reliability of the figures relating to earnings and wages. Matters will improve if some Labour Office after the type of Bombay Labour Office is also organized for the whole of Bihar with its head office at Dhanbad. This office should collect figures relating to labour earnings, cost of living, housing, labour turnover, absenteeism or unemployment, working hours and other aspects of the economic life of the labourers and should issue annual reports based on these figures.

### Minimum Wage.

I herewith submit to the Committee full statistical data on which my conclusions regarding Rs. 15 per month as a living wage are based. I would like to inform that these conclusions have been based on the data collected on the spot during the family budget enquiry in June, July and August 1938. All this data has been presented as lucidly as possible in my report on the Family Budget Enquiry. A fact to which I would like to draw attention is that in my memorandum I have suggested a living wage of Rs. 15 per worker and not per family and that too I have suggested on the assumption that in a family there are 1.6 workers—a fact which I have already pointed out in my report and memorandum. So, really, I have suggested a living wage of Rs. 24 per month per family. In my memorandum I have already pointed out the extent to which the average monthly earning which has been estimated at Rs. 17-11-2 per family or Rs. 11-1-0 per worker, is inadequate to enable an average family to satisfy its minimum requirements in respect of food, clothing, household requisites and other miscellaneous items. I have suggested Rs. 15 per worker or Rs. 24 per family as a living wage as it represents the cost of minimum amount of food, clothing and other requirements of an average family which must be satisfied to enable the family members to maintain their physical and mental efficiency. Here below I am giving

the details as to what are the minimum requirements of an average family of 3.4 adults (the average family of my Family Budget Enquiry Report) consisting of husband, wife, one boy of 10 years a girl of six years and a boy of 4 years, which ought to be satisfied.

*Food.*

Items.	Minimum requirements per adult per day.	Total monthly requirements of the family.	Total monthly expense of the family.	Retail prices as found in June, July and August 1939.	Remarks.
1	2	3	4	5	6
	Oz.	Sr. ch.	Rs a. p.		
1. Rice ...	22*	70 2	6 0 6	11½ seers a rupee average.	Wheat eaters take half seer per day per adult and their family hardly a seer of rice per month and thus their cereal expense comes to the same as that of the rice eaters if the wheat expense of the latter is also taken into account.
2. Wheat ...	1.5	4 13	0 9 7	8 seers a rupee	
3. Vegetables—					
(a) Green vegetables.	3.	12 12	0 12 9	2 annas a seer.	
(b) Potatoes ...	2.	6 6	0 11 0	7 pice a seer	
(c) Onion ...	.6	2 0	0 3 0	6 „	
5. Oil ...	.8	2 9	1 2 6	7 annas a seer.	
6. Salt ...	.6	2 0	0 2 6	5 pice a seer.	
7. Spices ...	.23	0 12	0 4 0	6 annas a seer.	
8. Meat ...	.6	2 0	1 0 0	8 „	
9. Fish* ...	.47	1 8	0 9 0	6 „	
10. Milk† ...	3.53	11 4	1 13 9	6 seers a rupee.	
11. Sugar ...	.6	2 0	0 10 0	5 annas a seer.	
Total ...	40.88	129 10	15 9 7		

\*If one does not take fish he would take at least 12 *chataks* of meat after every seven or eight days.

†Two *chataks* of milk should be given to each and every child.

## CLOTHING

*Adult male.*

Clothing.	Number of units required in 12 months.	Cost per unit.	Total annual expense.
1. Dhotis .. .. .	3	Rs. a. p. 1 0 0	Rs. a. p. 3 0 0
2. Gamchhas .. .. .	3	0 4 0	0 12 0
3. Shirts or Kurtas .. .. .	3	0 12 0	2 4 0
4. Shoes .. .. .	2 pairs	0 12 0	1 8 0
5. Woollen coat, second hand and ready made.	1 for two years.	2 8 0	1 4 0
6. Cap .. .. .	1	0 3 0	0 3 0
Total .. .. .	..	..	8 15 0

*Adult female.*

1. Saris .. .. .	3	1 4 0 each.	3 12 0
2. Kurtis or Jhulas .. .. .	4	0 8 0 each.	2 0 0
3. Underwears .. .. .	2	0 6 0 each.	0 12 0
4. Woollen Chaddar for winter.	1 for two years	4 0 0	2 0 0
Total .. .. .	..	..	8 8 0

*For a boy of 10 years.*

Dhotis .. .. .	4	0 8 0	2 0 0
Kurtas .. .. .	4	0 6 0	1 8 0
Shoe .. .. .	1	0 8 0	0 8 0
Cap .. .. .	1	0 2 0	0 2 0
Woollen coat, ready made, second hand.	1 for two years.	1 8 0	0 12 0

*For a boy of four years.*

Clothing.	Number of units required in 12 months.	Cost per unit.	Total annual expense.
Small Kurtas .. ..	4	0 2 0	0 8 0
Small pieces of cloth .. ..	4	0 1 6	0 6 0
Total for two boys .. ..	..	..	5 14 0

*For a girl of six years.*

Gamchhas .. ..	3	0 3 0	0 9 0
Kurtas .. ..	4	0 2 0	0 8 0
Woollen Sweater .. ..	1	0 12 0	0 12 0
Total .. ..	..	..	1 13 0

*Other clothing requirements.*

	Number of units.	Age.	Cost per unit.	Total yearly expense.
			Rs. a. p.	Rs. a. p.
1. Umbrella .. ..	1	2 years ..	1 2 0	0 9 0
2. Carpets .. ..	3	2 „ ..	1 0 0	1 8 0
3. Chaddars .. ..	3	1 year ..	1 0 0	3 0 0
4. Pillows .. ..	3	1 „ ..	0 4 0	0 12 0
5. Blankets or quilts ..	3	2 years ..	4 0 0	6 0 0
Total .. ..	..	..	..	11 13 0



*Total annual clothing expense of the family.*

			Rs. a. p.
Adult male	..	..	8 15 0
Adult female	..	..	8 8 0
Two boys of 10 and 4 years	..	..	5 14 0
One girl of 6 years	..	..	1 13 0
Others	..	..	11 13 0
Total			36 15 0
Total monthly clothing expense of the family..			3 1 3
Monthly clothing expense per adult			0 14 5

*Household requisites like utensils, etc., including lighting.*

	Cost per unit.	Age.	Monthly expense
	Rs. a. p.		Rs. a. p.
Lighting (Kerosene oil)	..	..	0 7 6
3 cots	0 12 0	3 years	0 1 0
Repairing cost	0 6 0	1 year	0 1 6
Metallic utensils	..	..	0 4 0
Earthen pots	0 1 0	..	0 2 0
2 mats	0 4 0	..	0 0 8
Total monthly expenses	..	..	1 0 8

*Miscellaneous requirements and their cost.*

		Monthly expense.		
		Rs. a. p.		
1. Religious observances, festivals and feasts	..	0	8	0
2. Postage	.. ..	0	1	6
3. Tobacco, 1½ pice daily	.. ..	0	11	3
4. Education	.. ..	0	8	0
5. Soda and soap, average 1½ pice daily for bathing and washing.		0	11	3
6. Barber	.. ..	0	3	6
7. Chewing stick	.. ..	0	1	3
8. Hair oil	.. ..	0	2	3
9. Recreation	.. ..	0	4	0
Total monthly cost of miscellaneous requirements		3	3	0

*Total monthly cost of minimum requirements of the family.*

1. Food	.. ..	15	9	7
2. Clothing	.. ..	3	1	3
3. Household requisites	.. ..	1	0	8
4. Miscellaneous	.. ..	3	3	0
Total		22	14	6

The remaining Re. 1-1-6 will be used for contributing to some welfare fund, for visiting home once in two or three years and for keeping as saving for rainy day or for consuming liquor if he cannot do without it.

The above estimate of the minimum requirements of the worker is based on the evidence of the workers taken during our Family Budget Enquiry. We not only enquired from the workers as to what they get actually but also what they require. The retail prices of different commodities given in the above estimate were personally collected from the colliery shops and the main bazars of the coalfields. Lastly the above estimate is based on the assumption that the workers will continue to get free housing, free water, free medical aid, free facilities for

educating their children, free fuel and other free goods and services that they are getting at present.

Comparing with the expenditure that an average family is, at present, incurring on all these necessities of life (which I have discussed in detail in my report of Family Budget Enquiry), we will find that the above estimate represents an increase of 35 per cent in food, 129 per cent in clothing, and 200 per cent in household requisites; and we take into account only those miscellaneous items which are given above. The increase of 35 per cent in food expenditure will enable the worker to have a standard, uniform, well-balanced and nourishing diet containing more than 90 grams of protein, 60 grams of fat, 575 grams of carbo-hydrates and 3,200 calories suggested in my memorandum rather than the present deficient diet containing only 76 grams of protein, 22 grams of fat, 556 grams of carbo-hydrates and 2,700 calories. An increase of 129 per cent in clothing expense has been suggested to enable the families to use headwears, footwears, some *chaddars*, carpets, quilts, woollen-clothes, umbrellas and pillows which a worker must use to protect himself from the scorching heat of the summer months and freezing cold of the winter, but which at present are being used only by 2 per cent, 28 per cent, 59 per cent, 12 per cent, 3 per cent, 5 per cent, 25 per cent and 3 per cent of the families, respectively. Besides this, the increase would effect the required improvement in the standard of general clothing of workers and their families.

The increase of 200 per cent in household expense has been suggested to enable the workers to use cots, metallic utensils, one or two mats which at present are not being used by 25 per cent, 89 per cent and 98 per cent of the families, respectively. The increase of 115 per cent in miscellaneous expenditure will enable the workers to provide for the education of their children (only books and stationery expense), to use sufficient soap for cleaning their clothes and themselves, to take some recreation, celebrate festivals and perform social and religious ceremonies.

Lastly, according to the above estimate a family will be able to save a little more than a rupee per month either for home visits or for rainy day. This is in strict accordance with the principle of living wage, as the latter ought to include not merely the cost of maintenance for the worker and his family but also the provision for something in the way of saving.

BAL RAJ SETH.

## **MEMORANDUM**

**BY**

**MR. DEVAKI NANDAN PRASAD, B.A.,**

**Investigator, Bihar Labour Enquiry Committee.**

True to the avowed policy of bettering the lot of the down trodden, the popular Government of our province has spared no time to set a Labour Enquiry Committee to look into the conditions of the labouring masses which was long overdue. Specially in the sphere of industrial labour everything seems to have been unfortunately neglected so far, for one reason or the other, and it has not until now received the care and attention it deserves. The magnitude and worthiness of the task can never be over-estimated. The appointment of the Labour Enquiry Committee has evoked new enthusiasm amongst the workers and they wait with calm resignation to see their genuine and legitimate grievances redressed. We cannot but be grateful to the Labour Enquiry Committee for their providing us this unique opportunity of studying the labour problem of the province in its naked and true form.

I shall be failing in my duty if I do not appreciate and thank the Jamalpur authorities for the valuable help, co-operation and facilities provided by them for our investigation work. The present D. C. M. E. is an enlightened and sympathetic officer who controls everything with much judgment and with a straightforward mind. I cannot also help, thanking the authorities of the Monghyr Tobacco factory for their help, though a bit constrained. I am equally thankful to the local unions and the workers for their spontaneous and ungrudging help.

After a careful and exhaustive survey of the condition of labourers in the factory and at their houses in villages and towns, we have been able to compile this report to present their socio-economic picture with a view to facilitate reforms and remedies.

There is no denying the fact that the workers are saddled with many encumbrances and they have been and are still working under various grievances and disabilities. They generally belong to the class of landless labourers, having no other source of income than that derived from the factory. They can ill afford to support a large and increasing number of family—the legacy of joint family system—with their scanty means. Unemployment among the grown up members of the workers' families prevails in a chronic state. We have approached the problem of uplifting the condition of the labourers and the responsibilities thereof by an appeal to four bodies, viz.:—(1) the authorities of the factories, (2) the Government, (3) the Unions and (4) the workers themselves.

### **The Authorities of the factories.**

The amelioration of the workers' lot depends primarily with the authorities of the factories. They can feel their pulse and interpret the symptoms of their unrest in as much as they are in concrete and constant touch with their every day work. However, as it is, the present scale of wages at Jamalpur Workshop needs revision. It cannot be compared with that at Jamshedpur or Lucknow under the same management. The same work is paid a higher wage at Lucknow and Lillooah under the plea that living at these places is higher. Living may be cheap here, at Jamalpur area, but the wages do little justice to it. More so, owing to the downward course of the New scale, the unskilled workers' pay stands at Rs. 17, in spite of the difference in their nature of work; those performing hazardous nature of work ought to get more than the ordinary pay. Most of the second class *mistries*, who are recruited from outside have no lift or prospect after Rs. 27. But those trained at the Workshop and doing the self-same job get a lift up to Rs. 54. Their wages have also been lowered recently. There should not exist so much disparity among the same class of workers. Discontent is rather acute on this unmerited difference, there being about 1,500 sufferers. Even when they shoulder the work of a higher paid hand, they are not paid more than Rs. 27.

The scale of pay of the *Chaprasis* is Rs. 13—18. No overtime allowance accrues to them. They should either be provided with free quarters or their pay be raised up to Rs. 20. The fang of economy has not even spared the poor scavengers. The uniforms which they used to get, have been stopped. This has hit them hard.

The pay of the time-checkers is not properly adjusted. It should be on a par with that in force at Lucknow and Lilloah under the same management.

The scale of pay of the clerks, which had already been meagre, has been lowered still by the new scale. It is doubtful if their position is at all reckoned, belonging as they do to the middle educated class of our society. They should at least get a living wage wherewith they might meet the barest necessities of life.

Apart from these economic draw-backs, there are several physical difficulties with which the workers are handicapped. The rate of the piece workers at Permanent Way Foundry, General Iron Foundry and Rolling Mill should be moderately raised in view of the very heavy and hazardous nature of their work. This increased rate may either be utilised in benefitting the workers directly or in employing extra hands to give them source of relief and respite. Something should be done for their hands which become badly bruised and disfigured like those of apes, as they have to constantly carry heavy mass of molten iron from blazing furnaces. They should be provided with necessary protective equipment, especially those working in the Rolling Mill, General Iron Foundry and Permanent Way Foundry. The tin roof of the Permanent Way Foundry should also be raised as the workers get suffocated when gas and ashes rush forth at frequent intervals.

The *coolie* train should be made to stop at Chota Asikpur wherefrom numerous workers come to work at Jamalpur. They should be equipped with latrines, light and shutters on the model of the Mela Rake trains as the coolies have to return home in utter darkness at night and whenever it rains on the way, they are badly drenched.

There is no free primary school for the children of the workers ; they have no free reading room either. Either a new branch of the hospital be opened or the existing branch from near the Railway Institute be shifted to gate no. 6, which is the common passage for entrance and exit for the workers. The doctor should not hesitate to offer a humane treatment to the workers. In Lilloah too, the hospital is situated at the common gate for the facility and convenience of the workers.

There are some foremen, supervisors and clerks, who still adhere to the old regime mentality which is so detrimental to

a wholesome atmosphere, though the present D. C. M. E. is a sympathetic and unbiassed officer. Many workers though injured on duty are declared not so by the officer-in-charge only to deprive them of half of their pay so long as they are not fit for work.

The present system of distributing cinders (used coals) according to pay be so modified that the poor workers may get more than what they are receiving at present. It can be so done at a little sacrifice to the high salaried officers.

There is no Labour Officer employed by the Railway Workshop at Jamalpur, though there are such officers engaged by other workshops of E. B., B. B. and C. I. and G. I. P. railways. The Employment Officer, who is also an establishment officer is in charge of labour affairs. Already overworked with heavy files, he scarcely finds any time to devote himself to labour questions, though the present Employment Officer is very keen about labour welfare. Therefore, there ought to be one Labour Officer or Inspector exclusively in charge of labour welfare, as, formerly, there was one almost for the same purpose. It is unpleasing to note that this workshop, being the biggest of its kind and having the greatest number of workers, is not yet keeping a Welfare Officer, though there is one at Lucknow under the same management.

The Safety Committee of the workers should be made elective. So far, the members of the said committee have been nominated by the authorities which is hardly expected to do some real work.

The Government, as the supreme power in the province has a prominent part to play in controlling the country's labour problem which, of late, has become more complex and unwieldy problem owing to the surging tide of unrest among the workers. The workers entertain high hopes and look forward to the Government to allay their miseries, more so, as the present Government is the Government of the people, by the people and for the people. The Money-lenders' Bill, as it stands at present, should be strictly enforced in order to save the workers from the grip of undesirable usurers, exacting an exorbitant rate of interest. For this, Co-operative Credit Societies should be started at the initiative of the Government to facilitate the giving of loans to the workers. With all their scanty incomes, the workers' indebtedness is colossal and if they are made immune from paying a high rate of interest, it would give them the much

needed relief. It is imperative that the Government should appoint Labour Officers to adjust labour demands, varied and numerous as they are. They will serve as a bridge between the workers and the authorities on the one hand and between the authorities and the Government on the other. They can always keep the Government informed in detail about the affairs of the industrial centres of the province in the light of which the Government may decide to act in a particular way for the upkeep of industrial peace and harmony, purging away the discordant elements. Many a strike and ugly incidents would have been nipped in the bud had there been a Government agency to look into the grievances of the labourers and the attitude of the management towards them.

It is high time for the unions to increase the number of their members and train them to sound manners of discipline and order. These should inculcate in them the habit of thrift, temperance and hygiene and should ask them to desist from taking undue debts on occasions like marriage, funerals, festival, etc. They should be asked to put their grievances in an ordinary way. The unions should draw the attention of the authorities and the Government from time to time when occasion requires. The local unions are conducted by capable and eminent workers from inside the factories and equally under the able guidance of some good executives from outside. It is expected that these unions will work as a model to other places of the province.

The workers should combine to put their grievances in a mannerly way not being influenced by undesirable persons from outside. They should not take recourse to strikes in ordinary matters. These should be resorted to when every effort for a solution has failed. Once they launch a strike, they have to stick to it in thick and thin unless their object is achieved. It is encouraging that the workers are sending two representatives from each shop to the *Faid-e-mand Panchayat* inaugurated by the railway authorities under the recommendation of the Whitley Commission.

The condition of the labourers of the Monghyr Tobacco and Printing factory is far from satisfactory. The workers are normally low paid in as much as their wages sometimes go down to Rs. 5 a month. What to speak of security of service, there is neither any service code, nor any grade of pay; all the labourers are casual workers, daily rated and monthly paid with no fixed wage. There is neither any provident fund system,



nor any loan co-operative society to save its employees from the tyrannies and tortures of the professional heartless usurers. The management pay gratuity but to one in a thousand and deprive many deserving employees on one plea or the other such as discontinuity in service, insubordination, bad health etc. There is quite a good number of female workers (about two hundred) but there is neither any lady doctor for them nor any maternity leave or arrangement of crèche for their children. The cases of harassment and ill-treatment are not rare ; the foremen and officers in general and the doctor in particular are rough in their behaviour ; some of the clerks also are not an exception to it. The factory has no hospital of its own, neither any school nor play ground. In short, the entire management requires complete overhauling with a view to ameliorate the wretched plight of its poor employees.

DEVAKI NANDAN PRASAD.

# MEMORANDUM

BY

**MR. RAMESHWAR DAYAL, M.A., B.L.,**

**Investigator, Bihar Labour Enquiry Committee.**

The Rohtas Industries get stone from Dumarkhar which is situated in the dense forest. There are about 3,000 labourers engaged in supplying stone. There are about 5,000 labourers engaged in the quarries for supplying stone to the Japla Cement Factory.

The total labouring population of the Rohtas and Japla Industries is about 10,000. The labourers live partly in quarters built by employers and partly in private *bustees* or mohallas which are covered with houses either unfit for human habitation or in great need of improvement. Most of the houses consist of a single room 10' x 12' with a verandah and such dwellings are frequently shared by two or three families. It is not uncommon for the floor to be below ground and drainage level.

Factories.	No. of workers.
Cement Factory (Rohtas Industries Limited, Dalmianagar).	1,500
Power Plant (Rohtas Industries Limited, Dalmianagar)	314
Workshop ditto ditto	200
Paper Factory ditto ditto	135
Sugar Factory ditto ditto	18
Dumarkhar (Stone supplying concern of the Rohtas Industries Limited).	282
Sone Valley Portland Cement Company of Japla	908
Boulia and Chunhatta (Stone supplying concern of Japla)	3,882

The labour is migratory and unwilling to settle down definitely to factory work.

The jobber known by different names, such as *Sardar*, *Mukaddam* or *Mistry*, is almost ubiquitous at the Rohtas and Japla Industries and usually combines in one person a formidable series of functions.

The workmen and apprentices are excessively worked with sometimes no weekly holiday. These factories and mills are not generally whitewashed and do not possess cemented floors. Many of them do not have latrines or urinals.

I was given a number of estimates of the hours of actual work during the day. The Manager of the Cement Factory of the Rohtas Industries placed this at 9 hours, the Manager of the Sone Valley Portland Cement Company, Limited, Japla at 7 hours and the Manager of the Stone Supply Company, Limited of Dumarkhar places actual hours of work at 8 to 8½ hours daily. They say that the workers generally spend a considerable part of their time in the compound smoking, loitering and eating their meals.

At Dalmianagar the average monthly earnings of unskilled labourers such as *coolies*, *khalasis*, cartmen, helpers, scavengers and so on are from Rs. 6 to Rs. 10. While the average monthly earnings of skilled labourers such as Tindal, Welders, Drivers, Turners and so on vary from Rs. 15 to Rs. 45.

One thing which struck me greatly during my investigation at the Rohtas Industries is the injustice which is done especially to Bihari labourers in matters of wages. For the same kind of work a Bihari labourer gets Rs. 7 while a non-Bihari (such as Jains, Baniyas and Marwaris) get Rs. 15. As a matter of fact the Bihari labourers are as much efficient as non-Bihari labourers. It is not in matters of wages only but in other things also, which I will deal subsequently, that great injustice is done to Bihari labourers.

While coming to Dumarkhar which is stone supplying concern of the Rohtas Industries, we find that things are worse there. The average monthly earnings of men stone-cutters are from Rs. 7 to Rs. 14 and those of women stone-cutters are from Rs. 6 to 12. It is very sad to note that the figures are as low as Rs. 5 and 6 for men and women.

When we come to Japla, we find that the average monthly earnings of unskilled labourers such as *coolies*, *khalasis*, cartmen, helpers and so on are from Rs. 10 to Rs. 16. While the average monthly earnings of skilled labourers such as Tindal, Welders, Turners, Fitters and Runners and so on vary from Rs. 20 to Rs. 60.

At Boulia and Chunhatta there are about five thousand workers and we find things worse there. The average monthly earnings of men stone-cutters are from Rs. 5 to Rs. 16 and those of women are from Rs. 4 to Rs. 13. It is heart rendering to note that girls of tender age under 14 get between Rs. 3 to Rs. 5 per month.

~~labourer~~ labourer why he wants his wages. The poor labourer says that he has to buy foodstuffs. Whereupon the master says "You cannot get your wages in actual coins at present. Take this *purja* from me to such and such shopkeeper and he will supply you all that you need". Rs. 3 is due. The master gives him *purja* for Rs. 2 and thus keeps Re. 1 in his hand. The poor labourer goes to the shopkeeper and gets foodstuffs from there. Who is that shopkeeper? He is the man of the contractor and the shop belongs to the contractor himself. And all those things are sold at an exorbitantly high price.

In many families the minimum wage level must be lower than Rs. 15 per month, when we consider the fact that the monthly income of many adult males falls below that figure and that women are unable to earn in such families. This income is not sufficient enough for the worker to lead a life of health and efficiency. The natural families with income varying from Rs. 15 to Rs. 20 per month, just need balancing their budgets. The condition of workers working in quarries are still worse. At Dumarkhar and Boulia and Chunhatta, of the families studied 86.75 per cent were indebted, the average indebtedness per family in debt being Rs. 222-12-7. The workers as a class are unable to meet the daily wants of themselves and their families.

If we take the average rate of pay it comes to a very low figure, as in the case of leave due to illness and other reasons they do not get any pay; on the other hand, they have to pay some sort of remuneration in shape of "*dasturi*" from annas 2 to annas 8 per head to their *jamadars*.

The next most serious and objectionable thing that I noticed at Dumarkhar, Boulia and Chunhatta is that there is no fixed time and day for payment of wages. Wages are paid on the day which is convenient to the head *jamadars*.

I was simply shocked to learn that hardly any compensation is paid to the injured workmen at these two big industrial centres. At Dumarkhar and Boulia I personally saw a few workmen who had sustained injuries and got no compensation. I met Hira Chamar, a labourer at Boulia who got an injury while working in the quarry, but was left to starve in hut without any compensation. On personal enquiry I also learnt that

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The Rohtas and Japla Industries employ thousands of old workers. Nevertheless none of them has made any sort of provision for its old workers.

In the humid heat of Dalmianagar and Japla bathing is very essential after a day's work. But as yet no special facilities for workers are provided at the factories. The different factories have a few limited number of water pipes which serve the purpose for both bathing and drinking water.

At Dalmianagar, in the labourers' quarters, where more than one thousand workers live, there are only three pipes. Things are worse at Dumarkhar. There the labour population is more than three thousand. There are only four pipes and a few wells working in proper order. Workers have to go one mile away to fetch water. At Japla we find the same condition. In labourers' quarters, where the population is 1,530, there are only four pipes. There are only eight pipes at Boulia where the labour population is more than 4,000. Labourers off from duty rush like anything and sometimes *marpit* occurs among the workers who are in a hurry to fill up their buckets earlier.

The sugar mill at Dalmianagar gave out an offensive odour when I took up the investigation. The atmosphere in the cement loading department at Japla and Dalmianagar is dust laden and affects the health of labourers adversely.

At Dalmianagar where the labour population is more than four thousand, including men and women, we find no hospital in its real sense. The hospital of Dalmianagar consists of two small rooms and one small verandah, one M.B., B.S. and one L.M.P. and five compounders (two compounders trained and three untrained) and a limited stock of medicines; no bed for patients and no lady doctor for female workers.

At Dumarkhar where the labour population is five thousand there is one small hospital. There is one L.M.P. from Ajmer. There is also one Ayurvedic Dispensary under one Ayurvedic physician who also belongs to the Punjab. There are six beds for patients. The daily attendance of patients is 122.6. There

The medical arrangement at Boulia is unsatisfactory. There is one tiny hospital under one L.M.P. who is an old gentleman from Bengal. Three tin shaded small rooms are set apart for the indoor patients which are awfully dirty and miserably lack in proper ventilation. The poor patients who are admitted in these wards have to cook their own meals for which no kitchen is provided. They are to cook under open sky in sun and rain. The contractors' labourers are not given the facility to utilise the hospital as freely as the company employees. They have to produce slip from their different contractors before they can get medicine. This is another evil of the *purja* system.

At Chunhatta where there are about one thousand workers, we find no hospital. The injured and the sick have to walk for miles and miles for treatment.

Dumarkhar, Banjari, Boulia, Chunhatta, Dalmianagar and various other places which are stone-supplying concerns and where about eight thousand workers are working, have got no school at all. It is only at Japla that we find one lower primary school and one night school but attendance in these schools is not satisfactory.

While visiting coolie lines I was told by the Secretary of the *Majdoor Sabha* that out of 500 men and women 40 per cent take opium and *charas*, *bhanga* and liquor. Mostly all the workers utilise their spare time in liquor and toddy shop.

The housing of the factory labourers at the Rohtas and Japla Industries is a problem by itself. They live partly in quarters and partly in villages. Many quarters such as Gawal Toli and *Khalasi* lines at Dehri are situated much below the level of the public road. There water collects in pool during the rains. The rooms in which workers live have no ventilation. In some houses there are windows but even those windows are usually kept closed and labourers remain pent up in their cells after the factory hours. There is very little privacy.

At Boulia, Japla *coolie* lines, at Dehri more than 80 per cent of the houses are without latrines.

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At Dumarkhar we find that the Company has not yet built quarters worth living for labourers. The Company has given free land and the employees have themselves built their huts. The huts are too small. It is 8' x 10' and 4' in height. These huts are built of mud wall and some of the walls are built of tree leaves with tin sheds. In summer season the tin sheds become very hot and it is difficult for employees to stay inside their huts.

At Japla we find the same condition. There are limited number of quarters. At Chiria Tanr I found 18 rooms in all. Each room is 15' x 8' and one verandah 10' x 5'. These 18 rooms are meant for 230 labourers.

At Boulia the Company has tried, no doubt, to provide quarters for its employees. The quarters of *Babus*, that is the members of the staff, are beautifully constructed and decently decorated. But those of the labourers are worst than the caves of wild beast. After the working hour was over, I went round all the quarters and found on average six to ten persons living in one small room measuring 10' x 10'.

RAMESHWAR DAYAL.