# REPORT ON AN ENQUIRY INTO THE FAMILY BUDGETS OF INDUSTRIAL WORKERS IN MADRAS CITY 

MADRAS
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## INTRODUCTION.

It was not until about the middle of the nineteenth century that interest was roused in many countries in questions as to the standard of living of different sections of the community, especially of the working classes. It was gradually realized that the most satisfactory method of obtaining information in regard to the standard of living of a class of the community was by means of a budget enquiry, which aimed at the collection of information not only as to the earnings of the families comprising the class, but also as to how the income of the families was expended, and how far it was sufficient to meet their needs.
2. The earliest investigations were very tentative in character and were conducted mostly by private individuals, some of whom were research workers merely interested in making comparative studies of the standard of living of different sections of the community, while others were social workers who embarked on the enquiries with the avowed object of focussing public opinion on the evils which they believed to exist, and of urging the need for the adoption of remedial measures. Mention may be made in this connexion of the enquiries of Le Play which are typical of the researches of the early investigators, who followed what is called the intensive method of investigation. The characteristic feature of this method of enquiry was that the enquirer confined himself to an investigation of the conditions of living in a few families with whom he came into direct personal relations, and sometimes spent a considerable period of time, eliciting from them all the desired information and recording his own observations bearing on the day-to-day lives of the families. The one serious drawback in such an enquiry was that any generalizations from it were liable to criticism on the ground that the data on which the generalizations were based were not really representative of the group which they were supposed to pepresent.

As time went on, the need was therefore felt to so conduct the enquiries as to make their results representative of the general conditions in the group. It was necessary for this purpose to conduct the enquiries on a much larger scale than those of the early investigators, and in order to meet this need, the Governments of different countries and also various public authorities began to conduct budget enquiries. The distinctive feature of these enquiries was that an attempt was made in them to secure information from a sufficient number of families with a view to ensuring that the effect of abnormal cases disappeared as far as possible from the averages of the different characteristics in the group. The information obtained was not usually so detailed as in the case of the
intensive enquiries, but it had undoubtedly a greater claim to representativeness.
3. The ideal method of conducting a statistical investigation is of course the method of the census by which information is sought to be obtained in respect of all the cases covered by the investigation in all the detail in which it is desired. But this is clearly impracticable in a family budget enquiry. The alternative is to restrict one's investigation to a sample of the total number of families selected in such a way as to be representative of the ' universe 'from which the sample is drawn.

In the resolutions on the representative method adopted by the sixteenth session of the International Statistical Institute held in Rome in 1925, two chief methods by which a representative sample may be drawn from the whole have been defined. The first is the method of random selection, according to which the units are drawn in such a way that each unit in the 'universe' has an exactly equal chance of being included in the sample. The second method is what is called the method of purposive selection. According to this method, groups of units are so selected as to yield in their entirety nearly the same characteristics as the 'universe ' from which the units are drawn. In the case of a family budget enquiry, the practical application of either of these methods is attendant with difficulties. For, in the first place some of the families selected according to the first method might be either unwilling or unable to supply the required information and an attempt to substitute some other families in their place or to discard them altogether will detract from the accuracy of the calculations. Secondly the selection of groups of families according to the second method presupposes a knowledge of some of the broad features, for example the frequency of families of different size, income, etc., in the larger 'universe ' from which the families are selected. Any inaccuracies or gaps in that knowledge are therefore bound to react on the accuracy of the results emerging trom a study of the sample. In practice, however, it has been found convenient in most budget enquiries to adopt a method of selection which combines certain of the characteristics of both purposive and random selection.
4. Apart from furnishing information as to the standard of living of different sections of the community, family budget enquiries will be of value in providing data for the determination of weights to be used in the construction of cost of living indices. The weights have to be determined on the basis of the relative consumption of the different commodities by the familhes. Some commodities are corsumed more than others, and when measurngg changes in the cost of living, greater importance should be attached to price changes in a commodity which enters largely into consumption than in one, the consumption of which is small. Just how much importance should be attached to the different commodities can be determined only on the basis of information as to the actual quantities consumed of the different commodities.

## Scope of the enquiry.

5. The Royal Commission on Labour in India had recommended that thorough conquiries into family budgets of industrial workers should be undertaken in Madras for the purpese of obtaining reliable information about the cost of living of the workers. The Government gave careful consideration to this recommendation and ordered in G.0. No. 294, L. Ms., dated 4th Febrüary 1935, that I should be entrusted with an investigation of the family budgets of industrial workers in Madras city under the direction of the Commissioner of Labour, that I should be helped in the investigation by three research students on a salary of Rs. 75 each per mensem, who were to be guided in their work and controlled by me and that I should also be given the clerical assistance of a clerk in the office of the Board of Revenue who was to hare a remuneration of Rs. 10 per mensem for attending to the clerical work connected with the enquiry in addition to his other duties. The scheme was sanctioned in the first instance for a period of one yoar and the question of extending its duration was to be considered with reference to the results obtained during the year.

As regards the methods of work, Government ordered that the enquiry should be in two directions simultaneously. In the first place, an intensive study of two or three unorganized industries within a limited area was to be made, and the budgets of all the workers in that industry within the area collected. Secondly, family budgets of labourers employed in organized industries were to be collected by the method of random sampling which was to involve ' the selection of the industrial looality, the marking of working classes houses therein and getting the completest information possible in respect of every $n$th family.'
6. The first step was to work out in consultation with the Commissioner of Labour the details preliminary to the starting of the enquiry. As regards organized industries the chief industries in Madras City are (1) Cotton Textiles, (2) Railway workshops industry, (3) Printing, (4) Engineering Works, and (5) Oil installations. The number of wurkers employed by the several factories engaged in each industry in 1934 is shown in the fullowing statement.

## Statement of large industrial establishments in Madras <br> City for 1934.




It was decided to collect in all a thousand budgets relating to workers in organized industries and to distribute the budgets under the several industries as follows:-

| Industry. |  |  | Nurnber employed. | Number of budgets to be collected. | Resulting value of ( $n$ ) [the ratio of the flgure in col . (2) to the figure in Col. (3)]. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) |  |  | (2) | (3) | (4) |
| Cotton Textiles | * | . | 11,187 | 373 | 30 |
| Railway Workshops | . | . . | 5,036 | 231 | 22 |
| Engineering Works | - | . | 1,332 | 133 | 10 |
| Oil Installations | - | . | 536 | 107 | 5 |
| Printing Presses | - | - | 3,116 | 156 | 20 |
|  |  |  |  | 1,000 |  |

The last column of the above statement shows that it was intended to collect the budget of one worker out of every thirty employed in cotton mills, of one worker out of every twenty-two employed in Railway Workshops and so on. Since the value of ' $n$ ' is not constant in the above distribution, the one thousand budgets collected in that manner cannot be a representative collection. Representativeness can be secured only by keeping ' $n$ ' constant. But the above distribution of the number of budgets
under the different industries has however this advantage, that as the number of budgets proposed to be collected under each industry is sufficiently large, the results of the enquiry relating to individual industries can claim to be representative.

For purposes of securing a representative collection of budgets of workers in organized industries as a whole, it was decided to select at random a sub-sample of 641 budgets from out of the bigger sample of 1,000 budgets. The value of ' $n$ ' had to be constant in this case and the proposed manner of distribution was as follows :-

| Industry. <br> (1) |  |  | $\begin{aligned} & \text { Number } \\ & \text { employed. } \end{aligned}$ <br> (2) | Number of budgets proposed to bo collected. <br> (3) | Value of ( n ). <br> (4) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cotton Textiles . | - | - | 11,187 | 338 | 33 |
| Railway Workshops | - | - | 5,03S | 153 | 33 |
| Engineering Works | $\cdots$ | - | 1,332 | 40 | 33 |
| Oilinstallations | . | - | 536 | 16 | 33 |
| Printing Presses .. | - | - | 3,116 | 94 | 33 |
|  |  |  |  | 641 |  |

## Limit of Family Income.

7. The Royal Cummission on Labour in India was in favour of restricting family budget enquiries to families whose combined income did not exceed Rs. 50 per mensem. The imposition of a limit of this kind would necessitate the sampling out of such families only fur investigation as do not earn in the aggregate more than Rs. 50 per mensem. In the conditions obtaining in this city the mest feasible method of sampling the families is, as will be explained below, to sample the names and addresses of the main wage-earners in the families from the wages roll maintained by the factories employing the workers. As at the time of such sampling the combined family income would be an unknown factor inasmuch as it might be made up not only of the earnings of the wage-earner from his main occupation but also of the earnings of himsolf as well as others in his family from subsidiary occupations, it was decided to impose a limit of Rs. 50 to the earnings of the main wage-earner in one month.

## The 'nth' Method of Sampling.

8. Government laid down that the family budgets of labourers in organized industries should be collected by the method of random sampling which should involve the selection of the industrial locality, the marking of working class houses therein and getting, the completest information possible in respect of every 'nth' family. On a casual survey of the localities in which the working classes have their dwellings it was found that labourers in the Madras City, especially those in organized industries were not
living in any olearly defined localities. Their houses were found scattered in a number of streets in different localities. There were therefore practical difficulties in the application of the ' $n$th ' method of sampling as defined by Government. The difficulties were proposed to be surmounted in the following way: As the ' $n$ 'th method consists.in essence in selecting every 'nth' employee from a list of workers eligible for the investigation arranged in a continuous series, it was decided to, first of all, make out for each industry a list of labourers in it who did not earn above Rs. 50 per mensem and to arrange them according to a continuous series of their wages. Such a list was, in the first instance, to be made out separately for each factory engaged in the industry and the lists for factories were later to be consolidated into one list for the industry. If the number of workers in the consolidated list was N and if families of r workers were to be investigated, ' n ' would be equal to the nearest integral value of $\mathrm{N} / \mathrm{r}$, and the application of the 'nth' method of sampling would consist in sampling out every ' $n$ th' individual from the consolidated list for the industry. As ' $r$ ' suoh individuals would by that means be sampled out, the families of the ' $r$ ' sampled workers were to be taken up for investigation in so far as the particular industry was concerned.

It was also decided to test the adequacy of the sampling method in the case of a few industries by comparing the average wage of the workers included in the sample with the a verage wage as worked out from the consolidated list of workers arranged according to a continuous series of their wages from which the sample originated.

## Unorganized Industries.

9. For the purpose of the intensive enquiries it was decided to collect family budgets of (1) beedi makers, (2) tailcrs and (3) Street porters (hand carts) and Harbour coolies. Beedi making and tailoring are two chief unorganised industries in this city and Harbour coolies and handcartmen are representative of the very large volume of unorganized casual labour in the city. As the intensive enquinies were to be conducted within a limited area, the Triplicane area was chosen as a suitable centro fur the collection of family budgets of beedi-makers, and portions of the Georgetown, Triplicane and Thousand Lights areas were selected for the purpose of investigation into the family budgets of tailors. As regards Harbour coolies and handcartmen though it was first docided to conduct the enquiry solely in the Georgetown area near the Harbour premises, the area of enquiry had later to be extended so as to include portions of the neighbouring Rayapuram and Washermanpet areas as well. It was decided in each case to conduct the enquiry within as compact an area as pcissible. As in the case of the organized industries, about a thousand budgets relating to unorganized industries were in all to be collected with an almost equal number under each of the three industries.
10. A suitable questionnaire was drawn up in consultation with Dr. P. J. Thomas, m.a., D. Perl. (oxon.) Ph.d. (Lond.), Professor of Economics in the Madras University. The questionnaire is shown in Appendix I, and with it will be found a set of instructions which were specially issued to the investigators explaining to them how the 'nth' method of sampling should be applied and directing their attention to some of the important points arising from the questionnaire. (Enclosure to Appendix I.)

B3fore the enquiry actually started, the authorities of various industrial concerns in the city were addressed explaining to them the nature and purpose of the enquiry and requesting their co-operation in the conduct of it, particularly in regard to the sampling of the names and addresses of the workers from the registers of wages maintained by the concerns.
11. Three investigators were appointed with effect from Ist April 1935. All the three were graduates in Economics, and though none of them could claim any previous experience of family budget enquiries, each had to his credit a certain amount of research work in Economics done under the guidance of the University Professor of Economics. For the first two months, the investigators were busy interviewing the heads of various concerns, sampling the names and addresses of workers from bocks made available to them and making a preliminary survey of the areas selected for the conduct of the intensive enquiries. The regular collection of budgets commenced only from the beginning of June 1935. The progress was very slow in the initial stages. The enquiry beng the first of its kind in Madras City, a considerable amount of time had tc be spent by the investigators in convincing the worker, his family people and the interfering neighbours of the harmless nature and object of the enquiry. In many cases, two or more visits had to be paid either becarise the person competent to give the necessary information was absent, or because the particulars furnished were so vague and suspicious, especially in the matter of supplementary sources of income and the consumption of liguor.
12. The unorganized industries presented special problems of their own. As regards Harbour coolies and handcartmen, the co-operation of the Port Trust authorities who were apprcached for help in the enquiry was, no doubt, most valuable so far as the coolies directly employed by them were concerned. But the Port Trust coolies form a comparatively small proportion of the entire labour force in the Harbour. The large majority of the coolies work under contractors and most of them do not attach themselves to any particular company or contractor. The contractors, who were approached for help in the enquiry, were evasive and reluctant to offer any help as they felt highly suspicious of the object of the enquiry. The investigator had therefore to fall back upon his own resources, and approach the coclies directly himself. The coolies were at first not in the least dusposed to
listen. But the investigator deoided to persevere in the attempt. Then followed daily visits to the harbour premises, accosting of every individual coolie, and explanation of the harmless, but possible beneficial nature of the enquiry. These processes were repeated for some days, and gradually they began to produce some effect.

The difficulties experienced by the investigators in their attempts to tackle the beedi workers and tailors were even more formidable. In the majority of cases these workers were found to be prejudiced against an enquiry into their family conditions. In spite of the best efforts of the investigators, very few budgets could be collected during the first few weeks. Their repeated overtures frequently met with rebuffs, and the difficulties they had to face seemed at one time insuperable. It was soon realized that it was hopeless to attempt tackling the beedi workers and tailors directly, and that the best way to tackle them was to approach them thrcugh some agencies to whom they owed some sort of allegiance. It was decided to enlist the co-operation of somo of the leading bsedi merchants in the city and also some tailorcontractors who supplied clothing on indent to Government Departments and the Railways. Effurts in this direction proved successful. Khan Bahadur Abdul Kareem Sahib, one of the leading beedi merchants in the city, when approached, very kindly came forward with help and deputed two of his men to accompany one of the investigators in his daily visits and help him in the collection of budgets of beedi workers. Some of the tailor-contractors were also helpful, and they instructed the tailors working under them to afford all facilities to the investigator.

Though the, investigators were more successful in their work during the later part of the year, when the difficulties whick they had to face during the first few months of the enquiry had been in a measure surmounted, the number of budgets wbich they had collected during the whole year fell short of the number originally proposed. This was largely due to a deficiency in budget collection which characterized the earlier stages of the enquiry. The work was reviewed at the end of the year when the number of family budgets collected of workers in both organized and unorganized industries totalled nearly 1,200 . It was considered sufficient to collect another 600 budgets and employ two investigators on the work for a further period of six months from lst April 1936. Government were addressed on this proposal and they accepted it in their order Ms. No. 812-L., Development, dated the 28th March 1936. The enquiry thereupon continued with two investigators up to the end of September 1936. During the last three months of the enquiry, the two investigators were attached to the office of the Director of Industries as all statistical work had been transferred to this office from the Board of Revenue with effect from lst July 1936.
13. In all, 1828 budgets were collected, but of these 12 budgets were rejected as they were found unsatisfactory. Of the accepted
budgets, 932 related to workers in organized industries and 884 to workers in unorganized industries. The following table shows the frequency distribution of the budgets which were accepted. for final tabulation according to industries:-

Organised Industries.

| Industry. |  | Number of family budgets finally accepted for tabulation. |
| :---: | :---: | :---: |
| Cotton textiles |  | 338 |
| Railway workshops |  | 232 |
| Engineering works |  | 112 |
| Oil installations |  | 107 |
| Printing presses | .. .. | 143 |
|  | Total .. | 932 |
| Unorganized Industries. |  |  |
| Industry or labour. |  | Number of family budgets finally accepted for tabulation. |
| Beedi | .. $\quad$. | 310 |
| Tailoring |  | 291 |
| Harbour coolies and $h$ | d-cartmen | 283 |
|  | Total .. | 884 |

I checked 64 budgets in all. The facts recorded by the investigators were found to be fairly accurate.
14. The results of the enquiry are shown in two sections. The first section deals with an analysis of the family budgets of workers in organized industries, while the second one is devoted to an analysis of the budgets of workers in unorganized industries. While some of the statistical tables are presented in the body of the report, the majority of them are shown in a separate appendix.

## Compilation of Results.

15. The first section is confined to an analysis of the representative sample of six hundred and forty-one budgets of workers in organized industries which has been singled out for study. The statistical tables which appear in this section should be taken as pertaining to workers in organized industries as a whole, but separate tables for individual industries are provided in the Statistical Appendix.
16. In presenting the results of enquiries, it is desirable not only to calculate general averages covering all the families of workers, but to classify the families according to some basis and give separate averages for each class. The need for such averages arises when we have to study the variation in the standard of living from one class to another. The budgets may be classified according to race, occupation, industry, income or size of the family, but the most usual
basis of classification is income of the family. The adoption of such a classification has, however, certain disadvantages. For example, families in the higher income classes are as a rule found to be of larger size than those in the lower income classes, and it is quite conceivable that the standard of living of the former might be actually lower than that of the latter. One possible way out of the difficulty is to take into account the number of persons in each class of income and to calculate averages for the different classes with reference to one person in each class. But even this is not a satisfactory solution of the difficulty as a 'person' is not an exact unit in the sense that the consumption of persons of different age and sex is not the same.

Some other method has therefore to be adopted to bring the families of different size into comparison with one another as regards their standard of living. Several methods of reducing data for families of different size in terms of a common unit are in vogue and an account of the scales employed in such reduction is given in the report of the International Labour Office on 'Methods of Conducting Family Budget Enquiries' Studies and. Reports, Series N (Statistics) No. 9, 1926. Most of these scales have been based on the food requirements of persons of different age and sex. In the present enquiry the Lusk scale which was established by Professor Lusk of the Medical School, Cornell, United States of America, on the basis of physiological requirements of food has boen used. This scale was used in connexion with the Bitish Family Budget Enquiry of 1918, the Egyptian Enquiry of 1920, the Bombay Labour Office Enquiry of 1921-22 and the Rangoon Family Budget Enquiry of 1926. The Inter-Allied Scientific Food Commission also adopted it for converting the populations of different countries in terms of average adult males. According to this scale, an adult male is taken as unity, a woman as $\cdot 83$, a child of ten but under 14 years as 83 , a child of six but under ton years as $\mathbf{- 7 0}$ and a child under six years as -50.- Where the expenditure per unit on any item pertaining to any income class has been given in the accompanying tables, it has been obtained by dividing the total expenditure on the item incurred by all the families falling into the particular income class by the size of the families as expressed in terms of units with reference to the Lusk scale.

It may be pointed out in this connexion that in so far as the Lusk scale has been constructed by its author on the basis of physiological requirements of food of persons of different age and sex, its applicability to groups other than food, such for instance as houserent, housing accommodation or lighting charges is open to question. But no suitable scales have so far been devised for the latter groups, due largely to difficulties in the way of elaborating a satisfactory scale for such groups, for, while for groups like food or clothing, the construction of a scale is comparatively easy, as consumption in these two cases is individual in character, with regard to other groups it is difficult to assess what proportion of the total expenditure.
in any family should be allotted to its different members. In the absence, therefore, of scales which can be suitably applied to other groups than food, the Lusk scale has been adopted. In all the tables which follow men and women have been taken to be 14 years of age and over.

## SECTION I. Organised Industries. Religion and Caste.

17. An analysis of the family budgets by religion and caste shows that $92 \cdot 36$ per cent of the workers in organized industries are Hindus, 4.68 per cent are Christians, $2 \cdot 65$ per cent are Muslims and the remaining 0.31 per cent are Anglo-Indians. Of the Hindus, $72 \cdot 30$ per cent belong to the various Non-Brahman communities such as Mudaliyar, Nayudu, Nayakar, etc., and the remaining 27.70 per cent are Adi-Dravidas. The following table gives the distribution of the families by caste according to income groups :-


## Constitution of the Family.

18. In view of the great importance of ascertaining to what extent the chief bread-winner of the family is called upon to support not only his wife and children, but his other relatives as well, the families have been divided into two classes-(i) Natural families and (ii) Joint households. A natural family has been taken to be one comprising the head of the family, his wife and his unmarried children. A joint household, on the other hand, denotes a group of relatives living together as one household. The following table shows the number of natural families and joint households by income groups:-


It will be observed from the above table that the great majority of the working class families, i.e., as many as 77.22 per cent of the total number of families are joint households. This is in striking contrast with the position revealed in the last fam ly budget enquiry conducted in Bombay where only 38.05 per cent of the families were found to be joint households. Natural families constitute 22.78 par cent of the total in Madras, and with the exception of the last income group, the percentage of natural families is found to decrease and of joint households to increase as the income of the families inoreases. It is clear from this that the greater the income of the workers' family the greater the temptation for his relatives to seek refuge in his household and be dependant on him for their sustenance. It cannot be denied at the same time, that the fact that a family is a joint household, may, in itself, be one ot the causes contributing to its higher income.

## Literacy.

19. In the course of the enquiry, information was obtained as to the literacy of the main wage earners in the families. It was found that 69.27 per cent of the main wage earners were literate. This is indeed a high percentage of literacy when compared with the literacy figures yielded by the 1931 census for the adult male population of 15 years and over in Madras City. The relevant figures are furnished below :-


The percentage of literacy in the adult male population of 15 years and over in Madras City is thus $55 \cdot 26$ as against $69 \cdot 27$ per cent for the industrial workers in organized industries in Madras. This suggests that the degree of literacy among regular industrial workers is higher than among the large body of casual workers found in the city.

An analysis of literacy among the main wage earners by income groups is furnished in the table below from which it will be observed that there is in general a tendency for the percentage of literacy to increase as the income of the families increases:-

Literacy amongst the heads of families by income groups.

| Income groups. |  |  | Literates. | Illiterates. | Total. | Percentage of |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Litcrates to total. |  |  |  | Illterates to total. |
| ${ }^{\text {Belown }} \mathrm{R}_{5} 20$ |  |  |  | 26 | 21 |  |  |  |
| Rs. 20 to Rg, 30 | .. | $\because(a)$ | 109 | 51 | 47 167 | 65.32 65.27 | $44 \cdot 68$ 34.73 |
| Rs. 30 to Rs. 40 | $\cdots$ | $\because(a)$ | 127 | 71 | 168 | $65 \cdot 27$ 64.14 | $\mathbf{3 4 - 7 3}$ $\mathbf{3 5}$-86 |
| Rs. 40 to Rs. 50 to Rs. 60 | . | (a) | 92 | 26 | 118 | $64 \cdot 14$ 77.97 | $35-86$ 22.03 |
| Rs. 60 to Rs . 70 | . | $\because(a)$ | 57 | 12 | 69 | 82.61 | 17.39 |
| 0 O er Rs. 70 | - | $\cdots$ (a) | 15 | 5 | 20 | 75.00 | $25 \cdot 00$ |
|  |  | - | 18 | 4 | 22 | 81.82 | 18.18 |
|  | Total | - | 444 | 107 | 641 | 69.27 | 30.73 |

## Composition of tne Family．

20．The composition of the families of workers in organized industries as revealed by an analysis of the sample of six hundred and forty－one budgets which has been taken up for study is shown in the table below：－
Organized industries－Analysis of family composition by income groups．

| Income group． |  | A verage number of persons per family． |  |  |  |  |  | 능 <br> 会芭 <br> 品合 <br> （9） |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  |  | 易 | $\begin{aligned} & \text { 吕 } \\ & \text { 吕 } \end{aligned}$ | 敻 | 刍 |  |  |  |  |
| （1） | （2） | （3） | （4） | （5） | （6） | （7） |  |  | （10） |
| Below Re． 20 | 47 | 1.21 | 1.51 | 0.49 | 0.43 | $3 \cdot 64$ | 3.03 |  | 1.21 |
| Rs． 20 to Rs． 90 | 167 | 1.50 | 1.73 | $1 \cdot 04$ | 090 | $5 \cdot 17$ | $4 \cdot 19$ | 0.32 | 1.20 |
| Rs． 30 to Rs． 40 | 198 | 1.74 | $1 \cdot 89$ | $1 \cdot 16$ | 1.19 | 5.98 | 489 | 0.20 | 1．46 |
| Res． 40 to Rs． 50 | 118 | 1.77 | 2.07 | 1.20 | 1.34 | $6 \cdot 38$ | $5 \cdot 20$ | 016 | 1.55 |
| Rs． 50 to Rs． 60 | 69 | 2.28 | $2 \cdot 14$ | $1 \cdot 74$ | 1.38 | $7 \cdot 54$ | 6.15 | $\cdots$ | 1.93 |
| Rs． 60 to Rs． 70 | 20 | $2 \cdot 85$ | 2.95 | 1.70 | 170 | $9 \cdot 20$ | $7 \cdot 63$ | 0.05 | 2.35 |
| Over Rs． 70 | 22 | 2.82 | 2．91 | 1.59 | 1.18 | $8 \cdot 50$ | 7.08 | 0.23 | 2.68 |
| All incomes | 641 | 1.78 | 1.95 | $1 \cdot 18$ | $1 \cdot 12$ | 6.03 | 4.92 | 0.18 | 1.51 |

The average number of persons residing with the family is 6.03 ， made up of $1.78 \mathrm{men}, 1.95$ women， 1.18 boys and 1.12 girls．In addition， 0.18 persons are dependent on the family and receive regular or occasional monetary help from the head of the family though they live away from it，frequently outside the city limits． Thus the economic responsibility of the head of the family pertains to 6.21 individuals．It $\mathbb{x}$ ill be interesting to note that in the Bombay I abour Office enquiry of 1932－33，the average number of persons in a worker＇s family was found to be 3．70，and the average number of dependents living outside 0．65．The Madras Labourer has，therefore， a much bigger family to support than his confrere in Bombay；and in fact，Madras is unique in this respect among cities in India in which enquiries into tamily budgets of industrial workers have been conducted as will be clear from the statement belcw：－

| Name of city． |  |  |  | Year in which the family budget enquiry was conducted． | Average size of the family excluding dependents． |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sholapur | ．．－ | ． | ． | 1925 | $4 \cdot 57$ |
| Ahmedabad | d | ． | ． | 1924 | $3 \cdot 87$ |
| Bombay | ．．．． | ． | $\cdots$ | 1932－33 | 3.70 |
| Rangoon | ．．． | ． | ． | 1926 | 3.71 |
| Madras |  | ． | ． | 1935－36 | 6.03 |

The system of family life that obtains in Madras，where，as has been seen already，there is a great preponderance of joint house－ holds over natural families is partly responsible for the bigger size of the worker＇s family．

Though the Madras Labourer has, on an average, a bigger family to support than, for instance, the Bcmbay Laburer, he has fewer dependents outside the family to look after. Thus, while for every hundred persons living in workers' famulies in Madras, there are only three dependents living outside, in Bumbay there are as many as eighteen dependents.

It will be noticed that the size of the family increases with the income except in the last income group. The average number of equivalent adult males per famly resulting from an application of the Lusk scale to the distribution of siz and composition of families is 4.92 for all the 641 families and increases from 3.03 for families in the lowest income group to 7.63 for familes in the Rs. 60 to Rs. 70 group and then falls to 7.08 for families in the highest income grcup. The average number of persons gainfully employed per family is 1.51 for all familes. Except for a fall in the second income group which is almost negligible, there is a progressive increase in the average number of persons gainfully employed from $1 \cdot 21$ in the lowest income group to $2 \cdot 68$ in the highest.

## Age Distribution.

21. A study of the distribution of age of persons covered by the enquiry, especially of earners in the families is of some interest. From the table below it will be observed that the bulk of the male earners ( 70.53 per cent) are between the ages of 20 and 45. The age distribution of female earners displays more evenness and a not inconsiderable number of them, in fact as many as 34.92 por cent fall beyond the age group 40 to 45 , while the corresponding percentage for male earners is only 16.56 .

Distribution of persons covered by the enquiry by age and sex distinguishing earners from non-earners.

Age groaps.
(1)

|  | (1) |  |  |  | (2) | (3) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Below 6 | - | - | - | - | - | 307 |
| 6 to 10 | . | . | $\cdots$ | - | 1 | 217 |
| 10 to 14 | . | . | . | - | 19 | 179 |
| 14 to 20 | - | - | - | . | 97 | 90 |
| 20 to 25 | - | . | - | - | 124 | 50 |
| 25 to 30 | . | . | .. | - | 142 | 20 |
| 30 to 35 | . | - | - | . | 120 | 8 |
| 35 to 40 | $\cdots$ | - | .. | . | 141 | 1 |
| 40 to 45 | . | . | . . | . | 112 | 2 |
| 45 to 50 | . | .. | - | . | 75 | 7 |
| 50 to 55 | $\cdots$ | . | . | -. | 44 | 14 |
| Over 55 | - | - | $\therefore$ | .. | 31 | 92 |
| - |  |  | Total | - | 908 | -901 |



| (4) | (5) | (6) | (7) |
| :---: | :---: | :---: | :---: |
| - | . 270 | - | 583 |
| $\cdots$ | 225 | 1 | 442 |
| 1 | 100 | 20 | 360 |
| $\cdots$ | 241 | 97 | 340 |
| 6 | 181 | 130 | 231 |
| 6 | 161 | 148 | 181 |
| $8^{*}$ | 112 | 128 | 115 |
| $11{ }^{*}$ | 118 | 152 | 119 |
| $0^{\circ}$ | 82 | 121 | 84 |
| 10 | 60 | 85 | 76 |
| 0 | 80 | 53 | 100 |
| 3 | 164 | 34 | 256 |
| 63 | 1,005 | 960 | 2,890 |

It will be interesting to compare the age distribution of persons covered by the enquiry with the distribution of age in the population of the Madras city as revealed by the census of 1931. The following table gives the distribution of age in the two cases :-

|  | Ago group. |  |  |  | Number of persons in Madras city according to the census o 1931. | Percentage of total population. | Number of persons in workers' families. | Percentage of total number of persons in the familles. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) |  |  |  | .(2) | (3) | . (4) | (5) |
| Below 10 | $\cdots$ | - | . | . | 144,429 | 22.32 | 1,026 | 26.55 |
| 10 to 20 | . | - | $\cdots$ | $\cdots$ | 133,622 | 20.65 | 826 | 21.37 |
| 20 to 30 | . | -• | -• | . | 140,257 | 21.67 | 690 | 17.85 |
| 30 to 40 | - | - | -• | -• | 105,818 | 18.35 | 514 | 13.30 |
| 40 to 50 | . | - | $\cdots$ | $\cdots$ | 65,980 | 10.19 | 366 | $0 \cdot 47$ |
| Over 50 | -• | -• | - | - | 57,124 | 8.82 | 443 | 11.46 |
|  |  |  | Total | .. | 047,230 | 100.00 | 3,865 | 100.00 |

A comparison of columns (3) and (5) of the above table shows that according to the census of 1931, 48.21 per cent of the total population were between the ages of 20 and 50 in the Madras city, while the corresponding percentage in the case of persons covered by the enquiry is only 40.62 . The difference between the two percentages is a little striking and part of it is apparently due to the fact that the population of Madras city should have included a fair number of adult males resident in the city at the time of the census, but living away from their families. No such thing has happened in the case of the family budget enquiry as the enquiry has related exclusively to fomilies, there having been no occasion to come across budgets of single men. The percentages exhibited in column (3) of the table when compared with those in column (5) show a deficiency at the two extreme groups of the age distribution and a slight deficiency in the 10 to 20 age group. The total deficiency in these three age groups is no doubt balanced by the excess in the other three age groups, but the important question to be answered is whether such differences in the percentages as have been observed in the different age groups can be ascribed mainly to the inclusion in the Madras population, of adult males living singly in Madras or whether the differences are due to fundamental differences in the age distributions of the two populations. It is difficult to answer this question in the absence of information as to the number of male adults in the different age groups who were living singly in Madras at the time of the census. A comparison of the age distribution of the persons covered by the erquiry with the age distribution in the total population of the Madras Presidency, however, shows that
the two distributions are very similar. In the table below are set out the percentages in the different age groups rolating to the two populations : -


There is a very close correspondence between the percentages in the different age groups. Such differences as there are betweon them are clearly insignificant.

## Income of the family.

22. The various items of income are analysed in the table below:-

Analysis of monthly income per family by source.


The average income per family, taking all the 641 families is Rs. $37-5-11$; 95.06 per cent of this sum is derived from omployment. The greatest single source is the earnings of the husband amounting to 78.33 per cent. The wife is responsible for 0.57 por cent of the earnings, the children for 2.89 per cent and other members of the family for $13 \cdot 27$ per cent. The average income from other sources amounts for all families to Rs. 1-13-7 and represents 4.94 par cent of the total. The most important item in this group is the income from houses which accounts for 3.04 por cent of the total income. The other items in the group are (i) land which accounts for a meagre 0.29 per cent, (ii) gifts and presents which account for only 0.22 per cent, (iii) support from relatives and fr.ends accounting for a bare 0.39 per cent, and (iv) others (unspecified) accounting for 1.00 per cent.
23. It is interesting to note that the relative contribution of the husband's earnings to the total income of the family tends to decrease as the income of the families increases. In the lowest income group, the husband's earnings constitute $94 \cdot 18$ per cent of the total income, while in the highest, they account for only $41-26$ per cent. The relative contribution of othcr members of the family on the other hand increases as income advances. Though no definite trend is noticeable in the contribution of the wife and of the children, the percentage contribution of other members increases as the income of the families increases except in the last income group where there is a slight fall.

As regards income from other sources the only item which reveals a definite trend is income from houses. The relative contribution of this item to the total family income increases from 0.18 per cent in the lowest income group to 11.81 per cent in the highest. The average income per fam.ly from houses is Rs. 1-2-2. Of the 641 families, as many as nincty fam.lios derive incomo from this source and the average income per family from this source for these ninoty families is Rs. 8-0-2. Houses are an important source of income in the higher incomo groups. For families with income above Rs. 50 per month, they account for as much as 6.88 per cent of the total income.
24. A study of the variation in the avcrage income pcr equivalent adult male in families in tho different grades of income will be of considerable interest from tho point of view of the standard of living of the workers. The table below summarizes the position in this case :-


Taking the average income for all fanilies as 100 in the two cases, the following distribution of indices of average income for families in the diffcrent income groups is obtained. This distribution will be of value in bringing the families in the d:fferent income groups in statistical relation to a family of average income, and will show at a glance the extent to which the average income per family or per equivalent adult male, as the case may be, for families in each income class varies from the average income pertaining to anl families.

## Income group.

Below Rs. 20

| Below Rs. 20 | . | 46.9 | 76.1 |
| :---: | :---: | :---: | :---: |
| Rs. 20 and below Rs. 30 | . | $67 \cdot 6$ | 79.4 |
| Rs. 30 and below Rs. 40 | $\cdots$ | 91.0 | 91.6 |
| Rs. 40 and below Rs. 50 | $\cdots$ | 118.7 | $112 \cdot 4$ |
| Rs. 50 and below Rs. 60 | $\cdots$ | 145.4 | 116.3 |
| Rs. 60 and below Rs. 70 |  | $172 \cdot 4$ | 111.2 |
| Over Rs. 70 | . | 231.2 | $160 \cdot 6$ |
| All incomes | . | 100.0 | 100.0 |

From the above distribution of indices of average income, it will appear that the variation in the average income per family is much more pronounced than the variation in the average income per equivalent adult male. Thus the index in the first case varies from 46.9 to $231 \cdot 2$ or by nearly 393 per cent for families in the different income groups, whilst in the second case, it varies only from $76 \cdot 1$ to $160 \cdot 6$ or by nearly 111 per cent. The smaller variation in the second case is clearly due to the tendency for the size of the families to increase as income advances. The effect of this factor on the sixth income group in the above table, i.e., the group in which the income varies from Rs. 60 to Rs. 70 is strikıng. The average income per equivalent adult male for families in this income group is actually found to be less than that for families in the two groups above it, i.e., those in the fourth and the fifth income groups although, having regard to the average income per family, the families in the former income group appear much more prosperous than those in the latter two. This is just an instance of how misleading an analysis of family incomes can be if it has no relation to the differing size of the families.

## Expenditure.

25. The table below gives the details of average expenditure on (i) food, (ii) housing, (iii) clothing, (iv) fuel and light and (v) miscellaneous items, for families in the different income classes. It also compares the average expenditure with the average income for the families in each class.

## Analysis of average expenditure per family by income groups.


II. Expenditure
in relation to income.

 Cantin hand
Total income
 100017 (c) Including expenditure on llyuor, tobaco, etc.
(b) Inoluding expenditure on utensils, oto.
(c) Includes expenditure amounting to Be . $0-14-6$ or 54.47 per cent of the total expenditure on clothing on account of clothing of females.
(d) Includes expenditure amountiag to Ro. 0-2-2 or 3.29 por cent of the total expeniture on honsing on account of utenilla, etc.

Taking all families into account and comparing the average expenditure with the average income, there is found to be an average surplus of 5 as. 9 ps . which amounts to 0.96 per cent of the average income. Except for the first two income groups, i.e., groups of income below Rs. 20 and between Rs. 20 and Rs. 30, all other groups reveal a surplus, and there is a progressive increase in the surplus ranging from 0.58 per cent of the average income to 5.38 per cent. Of the families included in the stady, 366 or $57 \cdot 1$ per cent of the total number show a surplus, 267 or 41.7 per cent show a deficit and the remaining 8 or $1 \cdot 2$ per cent are just able to balance their budgets. The average surplus for families which show surplus budgets is Rs. 2-8-5, and the average defict for families whose budgets reveal a deficit is Rs. 2-9-7. The deficits are financed mainly by borrowings from money-lenders. The exorb,tant rates of interest which the familes are obliged to pay on the loans and the inability of the families to refund them in full naturally give rise to social problems of a grave nature.

## General Expenditure.

26. The average expenditure per family, taking all the six hundred and forty-one families into account, is Rs. $37-0-2$. The percentage expenditure on food is $52 \cdot 63$ per cent for all families, falling from 57.06 per cent in the lowest income group to 48.58 per cent in the highest. The percentage expenditure on housing is $11 \cdot 14$ per cent for all families and falls with income from 16.34 per cent for families in the lowest income group to 10.06 per cent in the Rs. 60 to Rs. 70 group and then rises to $12 \cdot 14$ per cent for families in the highest income group. Clothing accounts for 4.5 per cent in all families and the percentage expenditure on it fluctuates narrowly for families in the different income classes, the range of fluctuation being from 4.31 per cent to 4.89 per cent. Expenditure on fuel and light which for all families accounts for 6.67 per cent of the total expenditure ranges from 5.62 to 9.34 per cent, generally falling with increasing income except for minor fluctuations noticeable in the last two income groups. The last item 'Miscellaneous', unlike others, reveals an upward trend except for a slight fall in the highest income group. The percentage expendirure on 'Miscellaneous' is 25.06 per cent for all families and varies between 12.49 per cent and $30 \cdot 76$ per cent for families in the different income classes.
27. The following table compares the percentages of expenditure on the different groups of items obtained in the present enquiry with those revealed in the enquiry into the family budgets of working classes in the Bombay City conducted in 1932-33.

*The percentage for Bombay is comprised of 0.13 per cent, on account of bedding and house-
hold necessaries and 12.81 per cent on account of house rent.
The Madras families appear to spend rolatively more on food and less on the other itenus. The percentage expenditure on ' Miscellaneous' is more or less the same for the two sets of families, but that on "Clothing" is strikingly less in the case of Madras. The percentages of expenditure on 'Housing ' and 'Fucl and light ' are also slightly less for the Madras families.

Ernst Engel was probably the first economist to make a serious study of the relationship between income and the percentage expenditure on the main groups of items. From a study of data collected by the Belgian Statistical Commission in 1852 and 1854, he formulated a law which is now known as Engel's law. Stated briefly, the law is to the effect, that as the income of a family increases, 'the expenditures on different items of the budget have changing proportions and the proportions devoted to the more urgent needs (such as food) decrease while those devoted to luxuries and semi-luxuries increase'. It will be interesting to examine how far this law holds good in the present case. From the table which gives the percentages of expenditure on groups of items, it will appear that the percentage expenditure on food steadily decreases as the income of the families increases. The percentages of expenditure on 'housing' and 'fuel and light' show also a decreasing tendency on the whole. The percentage of expenditure on (clothing) however fluctuates within very narrow limits and may be said to be almost constant. On the other hand, the percentage expenditure on 'miscellaneous'- which comprises such items as education, recreation, amusements, etc., steadily increases with income except for a slight fall in the last income group. The truth of Engel's law is thus fairly well substantiated by the budgets of the Madras labourers.

Food.
28. The more important details of the food consumption of the average family are set out in the table below : The details comprise the monthly expenditure per family and per equivalent adult male on (1) Cereals and pulses, (2) Vegetables, (3) Meat and fish, (4) Milk, (5) Ghee and oils, (6) Condiments, (7) Salt, (8) Sugar and jaggory, (9) Coffee and tea, (10) Liquor, (11) Tobacco and (12) Other foods including refreshments, pansupari, etc.

Chart showing the relative importance of 'food ', 'housing', 'fuel and light' and ' miscellaneous 'in the family budgets of workers in organized industries in Madras City.


Analysis of Monthly Food Expenditure per Family and per Equivalent Adult Male.


A characteristic feature of the above budget is the very high proportion of expenditure given to cereals; as much as 43.74 per cent of the total food expenditure is for this group. The most important item of expenditure which in fact dominates the whole budget is rice which accounts for 40.08 per cent of the total expenditure. Meat and fish account for 11.18 per cent of the total expenditure and vegetables for 7.57 per cent. The percentages of expenditure on the other items are 5.53 per cent for milk, 6.31 per cent for ghee and oils, $5 \cdot 78$ por cent for condiments, 1.02 per cent for salt, 2.46 per cent for sugars, 1.37 per cent for coffee and tea, 5.05 per cent for liquor, 2.27 per cent for tobacco and 7.72 per cent for other foods including refreshments, pansupari, etc.
29. In order to show the variation of the expenditure on food as income advances, the table below has been prepared. The details of expenditure given in the table are per equivalent adult male or per unit of consumption as it is sometimes termed. It will be observed from the table that there is a tendency for the percentage expenditure on cereals and. pulses to decrease as income advances. The same applies to the group of condiments and salt and to a less extent to the group of vegetables. On the other hand, there is a noticeable increase in the relative importance of (1) milk, (2) ghee and oils and (3) other foods as income advances. The relative expenditure on meat and fish displays no pronounced tendency and fluctuates within narrow limits, the range of fluctuation being from 11.20 per cent to 14.94 per cent, but broadly speaking the tendency is for the percentage expenditure to be higher in the higher income groups.

Analysis of monthly expenditure on food per equivalent adult male by income groups.


- Excluding tobacoo and liquor.


## Nutritive value of the diet.

30. As expenditure on food constitutes so large a proportion of the cost of living in a working class family, it has been considered worthwhile to make an analysis of the nutritive value of the diet of the workers in order to see whether it provides adequately for the maintenance of physical efficiency. On a perusal of the working class budgets it was found that in the case of certain items of food, for example vegetables, the quantities consumed had not been recorded and that in such cases only the values of the food consumed had been given. Details of the varieties of vegetables consumed by the families had also not been recorded in the budgets. It was therefore necessary to first of all make enquiries as to the varieties of vegetables most commonly consumed by the labourers, and the relative proportions of the quantities of consumption of the difierent varieties and then to arrive at a fair distribution of the quartities of $\mathrm{th}_{\boldsymbol{e}}$ different kinds of vegetables consumed by the families in the several income groups on the basis of data as to the prices of the several kinds of vegetables, and the total amount spent on vegetables by the families.

For all the six hundred and forty-one families, the distribution of the average quantities of the different kinds of vegetables consumed per family per month was as follows :-

| Kind of vegetables. |  | Quantity consumed per family per month. LB. | Value. |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | A. |
| Brinjal .. | . |  | 4.629 |  |  |
| Beans .. |  | 3.086 |  |  |
| Ladies finger | $\cdots$ | 1.543 |  | 1 |
| Elephant yam | . | 3.086 |  | 2 |
| Pumpkin.. | $\cdots$ | $3 \cdot 857$ |  | 1 |
| Radish .. | . | 6.171 | 0 | 2 |
| Drumstick | . | 0.500 | 0 | 1 |
| Green leafy vegetables. $\quad 2.500$ |  |  | 0 | 2 |
|  | Total | . | 1 | 0 |

In the case of meat and fish also, only the values of the food consumed had been given in the budgets, and here again the quantities consumed had to be calculated on the basis of the prevailing prices.

The next step was to calculate from the data of the average quantities of the different food items consumed per family per mensem, the average quantity of each item consumed per equivalent adult male or per unit of consumption per diem. This was done for the families in each of the income groups. The quantity was in each case calculated in ounces to three places of decimals. On the basis of data as to the quantities of the several food items consumed
por unit of consumption per diem，an analysis of the nutritive properties of the diet of the workers was attempted．In making this analysis，the table of food values given in Col．Robert Mc Carri－ son＇s primer on food has been made use of in the case of all food items except drumstick，for which details of food values were not available in this table．Details in respect of this item were however available in＇Health Bulletin No． 23 ＇published by Doctor W．R． Aykroyd，Director，Nutrition Research Laboratories，Coonoor．

31．Tebles giving details of the analysis made in respect of the food consumed by all the 641 families as well as familics in the several income groups are shown in Appendix X．The results are shmma－ rized in the table below ：－

Analysis of the nutritive value of the food consumed per unit of consumption per day．

| Item of food value． | Families with a monthly income of |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ＊sofiluvg IIV |  | $8{ }^{\circ}$ | 0 | 8 | ¢ | 8 | $\stackrel{\circ}{8}$ |
|  |  |  |  |  |  |  |  |  |
|  |  |  | 0 | 8 | 8 | 8 | 9 | ${ }^{\circ}$ |
|  |  |  | 앙 | $\stackrel{0}{\circ}$ | 앙 | 8 | 8 | $\underline{4}$ |
|  |  |  | － | 0 | ＊ | － | $\dot{9}$ | 鞓 |
|  |  |  | － | 界 | 蔦 | 年 | \％ | 0 |
| Proteins | $47 \cdot 30$ | $45 \cdot 20$ | 41－28 | $40 \cdot 41$ | 49.68 | 48.33 | 47.82 | 59.90 |
| Fats | $25 \cdot 36$ | 20.24 | 20.59 | 23.67 | 28.41 | 26.78 | 33.85 | 99．78 |
| Carbohydrates． | 495．92 | 491－15 | 439－21 | $503 \cdot 30$ | 518.37 | $515 \cdot 10$ | 498.23 | $560 \cdot 69$ |
| Calorific value． | 2，404．13 | 2，330－76 | 2，108．73 | 2，415－49 | 2．5S0．65 | 2，497．09 | 2，486．64 | 2，845．55 |

N．B．－In the above table，proteins，fats and carbohydrates are given in grammes and the calorific value in calorfea．

Before proceeding to comment on the above statistics it would be well to point out that contrary to reasonable expectations，the calorific value of the diet does not increase uniformly with the increasing income of the families．This is due to two reasons． Firstly，as has been noticed already，a rise in income is associated with an increase in the size of the families，and secondly it has also been observed that with an increase in the income of the families， the proportion of the expenditure devoted to food tends to decrease． Owing to the combined effect of these two factors，the avcrage expenditure on food per equivalent adult male fails to increase uniformly with the increasing income of the families，and in conse－ quence，the calorific value of the diet does not reveal a rising trend．

32．Colonel Robert McCarrison in his primer on food has observ－ ed as follows：＂A well balanced diet for a man is one in which the amount of proteins is 90 to 100 grammes，the amount of fats 80 to 90 grammes and the amount of carbohydrates 360 to 450 grammes； in which also the proteins and fats are derived from both animal and vegetable sources，the mineral salts and vitamins are present in abundance，and in which there is enough cellulose for the propcr action of the bowels．＂The same authority points out that not less than one－third of the proteins and about one－half of the fats should be derived from animal sources，and that in estimating the calorific value of a diet， 10 per cent should be allowed for waste．
33. In the calculations shown above, no deduction has been made for waste as it has been considered that such a deduction might be covered by the calorific values of the unspecificd foods for which expenditure has been shown in the budgets but which have not boen taken into account in the analysis of food values which has been attempted. It is difficult to say what exactly would be the normal calorie requirements of an industrial worker in Madras. An expert Commssion of the League of Nations * has drawn up a schedule of energy requirements on the following lines :
" (a) An adult, male or female, living an ordinary everyday life in a temperate climate and not engaged in manual work is taken as the basis on which the needs of other age groups are reckoned. An allowance of 2,400 calories net per day is considered adequate to meet the requirements of such an individual.
(b) The following supplements for muscular activity should be added to the basic requirements in $(a)$ :-

Light work .. Up to 75 calories per hour of work. Moderate work .. Up to 75-150 calories per hour of work.
Hard work .. Up to 150-300 calories per hour of work.
Very hard work .. Up to 300 calories and upwards per hour of work."

Quoting the above schedule, Dr. Aykroyd observes as follows in his Health Bulletin No. 23 of 1937. "India is mainly an agricultural country and 'the average Indian man' is engaged in a manual occupation. Thore are justifiable reasons for reducing ' basic' calorie requirements in a warm country in which the diet consumed is largely vegetarian, below the League of Nations standards. Let us suppose that an Indian male of sedentary occupa--tion, requires some 2,150 calories a figure 10 per cent below that -of the League Commission. Six hours moderate work at the lowest reckoning will involve an increase of requirements to roughly 2,600 . We shall not be very far out if we reckon the minimum calorie needs of an average Indian, engaged in ordinary easy going agricultural or coolie work as $2,500-2,600$ calories per diem. Those who perform heavy manual work will probably require about 2,800 3,000 calores per day, as is indicated by the League Commission's figures; if the agriculturist is to work very. strenuously on his holding, he must have a correspondingly high calorie intake, etc."
34. We have now to estimate the calorie requirements of an industrial worker in Madras. He "works 'on an average" for about eight hours a day, but his work is not so strenuous as that of an agricultural labourer or a coolie. The excess of requirements over

[^0]the basic figure of 2,150 calories which has been assumed by Dr. Aykroyd to be fair for an Indian male of sedentary habits may be estimated at about 100 calories an hour for the industrial worker in Madras and at this rate his calorie needs would work out to 2,950 calories per day on working days. But there are days on which he does not work. Holidays are mostly days of relaxation for him, and on these days his calorie needs may be estimated at the basic figure of 2,150 calories. It would be fair to assume the numbber of holidays in a year to be a quartor of the number of working days. Making allowance for holidays, the calorie needs of the industrial worker would amount to $\frac{2,150 \text { plus }(2,950 \times 4)}{5}$ calorics or 2,790 calories per day. We may estimate the average requirements at 2,800 calories.
35. Judging by the above standard of calorie requirements it will be observed from the table given previously that except for the families in the highest income group, i.e., those whose income exceeds Rs. 70 per month, none of the other groups of families attains to the standard. The families in the highest income group exceed the standard by about 2 per cent and those in the other groups attain to only about 75 to 90 per cent of the standard. The average calorie content of the diet of all the 641 families is about 14 per cent bolow the standard.
36. We have next to examine with the available material how far the diet of the worker is balanced. Taking all the six hundred and forty-one families into account, the quantity of proteins is only 47.30 grammes per day per unit of consumption ; only abovt 15 per cent of this is of animal origin and cereals account for noarly 69 per cent of the total supply. The intake of fat is again low, amounting to only $25 \cdot 36$ grammes per unit of consumption per day. Thore is on the other hand a disproportionately large supply of carbohydrates in the diet, the supply amounting to 495.92 grammes per day per unit of consumption. Almost the whole of tbis and in fact as much as about 93 per cent is derived from cereals and pulses.

The quality of the diet is on the whole low. It is both insufficient and ill-balanced and is characterized by an excess of carbohydrates and a deficiency of proteins and fats. The amount of prateins is much below the physiological minimum requirements, that of fats is barely a third of the amount needed and the proportion of carbohydrates is too high.
37. In his Health Bulletin No. 23 already referred to, Dr. Aykroyd has suggested the following as an example of an adequate and well-balanced diet:-

|  |  |  |  |  |  |  | Quantity in <br> ounces per <br> unitof |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Raw milled rice |  |  |  |  |  |  |  |
| consumption |  |  |  |  |  |  |  |
| per day. |  |  |  |  |  |  |  |


|  |  |  |  | Quantity in ounces per unit of consumption per day. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pulsos (Dhal arhar) .. <br> (Blaokgram) .. | $\ldots$ |  | $\cdots$ | $\cdots$ | $\begin{aligned} & 1 \mathrm{oz} . \\ & 2 \mathrm{oz} . \end{aligned}$ |  | 3 |
| Non-leafy vegetables- |  |  |  |  |  |  |  |
| Brinjal .. | - | - | . |  |  |  |  |
| Ladies finger | . | . | . |  | 1 oz . |  |  |
| Snake gourd | . | .. | . |  | 1 oz . |  | e |
| Cluster beans | . | . | . |  | 1 oz . |  |  |
| Drumstick .. | . | . | . |  | 1 oz . |  |  |
| Leafy vegetables- |  |  |  |  |  |  |  |
| Amaranth leaves .. | $\cdots$ | - | - |  | 2 oz . |  |  |
| Drumstick leaves | . | . | . |  | 1 oz . |  | 4 |
| Spinach . |  |  | . |  |  |  |  |
| Gingelly oil .. | . | . | . | . | . |  | 2 |
| Fruit- |  |  |  |  |  |  |  |
| Mangoes . . | $\cdots$ | .. | . |  |  |  |  |
| Ripe plantains .. | . | . | . |  | 1 oz . |  | 2 |

The calorie content of the above diet is stated to be 2,590 calories, and in order that it may reach the 2,800 level, which we already saw would be a fair estimate of the calorie needs of an industrial worker in Madras, the quantities of the several items included in the above diet will have to be increased proportionately.

The diet so adjusted (Diet No. 1) is exhibited below side by side with the ill-balanced diet of the Madras Industrial worker (Diet No. 2) and the composition of the diet is also given in each case.

Diet No. 1. Diet No. 2.


Diet No. 2 contains besides, 0.42 oz . of tamarind, 0.19 oz . of sugar, 0.37 oz . of jaggery, 0.42 oz . of meat and 0.61 oz . of fish.

The composition of the diets is as follows:-
Diet No. 1. Diet No. 2.

| Protein |  | 79 gms. | 47 gms . |
| :---: | :---: | :---: | :---: |
| Fat |  | 80 gms . | 25 gms . |
| Carbohydrate |  | 441 gms. | 496 gms . |
| Calories | . | 2,800 | 2,404. |
| Caloium |  | $1 \cdot 10 \mathrm{gms}$. | 0.28 gm . |

DIET No. 1.
The Model Diet (2,800 Calories).


DIET No. 2.
The insuffiotent and ml-balanced diet of the Madras Industrial worker (2,404 Calories).


Diet No. 1. $\quad$ Diet No. 2,
Phosphorous .. .. 1.59 gms . 1.03 gms .
Iron .. .. .. 47.57 mgs . 19.04 mgs .
Vitamin A (Interna- Over 7,568. Nearly 800. national units).
Vitamin B.1 (Interna- Over $432 . \quad$ Nearly 546. tional units).
Vitamin C (Interna- About 184 About 36 tional units).
mgs.
mgs.
The composition of diet No. 1 has been arrived at by adjusting the values given by Dr. Aykroyd for the model diet already quoted, so as to increase the calorific value of the diet to 2,800 . The values for calcium, phosphorus, iron and Vitamins A, B-1 and C for diet No. 2 have been arrived at by making use of the food value tables published by Dr. Aykroyd in his Health Bulletin No. 23.
38. The defective nature of diet No. 2 has already been discussed to some extent with reference to the quantities of protein, fat and carbohydrate found in the diet. The diet is also greatly deficient in calcium and Vitamin A and does not contain enough iron. The minimum daily requirements for an adult are stated to be 68 gm . of calcium (which allows a high " margin of safety ') a little more than 1.0 gm . of phosphorus, 20 mgs . of iron, 3,000 international units of Vitamin A, 300 international units of Vitamin B-1 and 30-50 mgs. of Vitamin C. It will be observed that diet No. 2 contains more Vitamin B-1 than diet No. 1. This is due to the fact that "rice" in diet No. 1 is raw milled rice, while in diet No. 2 it is milled parboiled rice (the kind of rice most commonly consumed by the industrial workers) the Vitamin B-I content of which is nearly four times that of raw milled rice. The deficiency in proteins, calcium and Vitamin A in diet No. 2 is due to the scarcity of the so-called " protective foods" in the diet such as milk, green vegetables, eggs, fruits, etc., which are rich in proteins, vitamins and mineral solts and thus, to quote Dr. Aykroyd "protect the body against the ills which result when the diet is largely based on less nutritious foods, such as milled rice."
39. We have now to consider the question whether the average industrial worker in Madras can afford a diet, such as diet No. 1. The cost of the diet comes to nearly Rs. 5-9-0 per month on the basis of prevailing prices, but as it contains no condiments and salt, we have to make some allowance for these. A reference to the table at page 25 which gives the percentages of expenditure on the several groups of food items incurred by the working class families shows that the expenditure on condiments and salt amounts to 7.33 per cent of the total expenditure on food. If we allow for the same percentage on account of condiments and salt in estimating the cost of diet No. 1 inclusive of these items, the cost of the diet comes to exactly Ris. 6 per unit of consumption per month.

The amount spent on food exclusive of drink and tobacco per unit of consumption per month is actually as follows for the families in the different income groups:-

|  |  |  |  | Amount <br> spent on ford <br> per unit of <br> consumption <br> per month. |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Income group. |  |  |  |  |

It will be seen from the above statistics that none of the groups cf families spends up to Rs. 6 per unit of consumption per month on food. Even the families in the highest income group spend at the rate of only Rs. 5-3-0 per unit of consumption per month on food. There does not therefore seem to be any prospect of the working class families being able to afford such a costly diet as diet No. 1 under the present conditions. But it seems likely that a section of the working class families will be able to afford a diet approximating to diet No. 1, if (i) their savings together with the amount which they at present spend on drink are diverted to food and (ii) they obtain relief from their indebtedness which is at present a great drag on their means of livelihood. The following statistics are illustrative of the above point of view :-

| Income group. (1) | Amount spent on food per unit of conper month. <br> (2) | Savings per unit of consumption per month. <br> (3) | Expendituro on drink per unit of consumption per month. <br> (4) | Expenditure incurred on repayment of debts per unit of consumption per month. | $\begin{gathered} \text { Total of } \\ \text { columng } \\ (2),(3),(4) \\ \text { and (5). } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | RS. A. P. | RS. A. P. | Rs. . ${ }^{\text {(4) }}$ | (5) | (6) |
| Below Rs. 20 | 35 |  | 0 0 8 | 05 | 3113 |
| Rss. 20 to Rs. 30 | $\begin{array}{llll}3 & 5 & 8\end{array}$ |  | 01 | 00 | 4011 |
| Rs. 30 to Rs. 40 | 3881 | 0 0 8 | 0314 | 013 | 492 |
| Rs. 40 to Rs. 50 | 3148 | 0110 | 037 | 15 | 59 |
| Rs. 50 to Rs. 60 | 3120 | 058 | $\begin{array}{llll}0 & 5 & 4\end{array}$ | 17 | 514 |
| Rs. 60 to Rs. 70 | 3102 | 0509 | $\begin{array}{llll}0 & 3 & 9\end{array}$ | 311 | $\begin{array}{lrr}5 & 8 & 7\end{array}$ |
| Over Rss. Ris. 70 | 530 | 010 6 | 149 | 1 1010 | 7130 |
| All incomes . . | 3108 | 012 | 032 | 101 | 415 |

40. From the above table it will appear that families whose income is above Ris. 40 per month can afford a diet costing aboveRs. 5-8-0 per unit of consumption, per month, provided they do not have to make any payments towards the repayment of their
debts, and their savings together with the amount which they spend on drink are set apart towards expenditure on food. The families in the highest income group can of course afford a diet which is even costlier than diet No. 1. But the real question is whether even if the families can afford a diet as costly as diet No. 1, they can be expected to go in for the right kind of diet if left to themselves. What is needed in these matters is intensive educative propaganda among the working classes. A 'food circle ' composed of enthusiasts in food reform can devote itself to a study of all the relevant literature on food, and endeavour to educate public opinion on this important question, by arranging to deliver lectures and distribute leaflets written in popular style among the working classes. If the leaflets are so worded as to appeal to the popular mind, and if they suggest reasonably good diets which will be within the means of the several sections of the working class families, they will indeed be very useful and the working classes will not be slow to respond to the appeal in the leaflets :-

## Miscellaneous Expenditure.

41. Next in importance only to 'food,' the miscellaneous group accounts for 25.06 per cent of the total monthly expenditure of the family. It is of course true that the expenditure shown under 'miscellaneous' cannot claim to be as complete or exact as that shown under other groups of expenditure, but the margin of error is not likely to be considerable, especially when the averages of the expenditure on the different items shown under 'miscellaneous' are based on the budgets of a number of families. The following table gives the average monthly expenditure on the different items for (i) all the 641 working class families and (ii) families actually incurring the expenditure :-

Expenditure on miscellaneous items.


The items which call for special comment are (i) repayment of debts, (ii) payments to provident funds, trade union subscriptions, etc., (iii) education and (iv) remittance to dependants living elsewhere. No less than 76.44 per cent of the families make payments averaging to Rs. 6-7-4 per month towards repayment of thoir debts. This item alone accounts for nearly 53 per cent of the total expenditure on miscellaneous items. Next in importance comes ' payment to provident funds, trade union subscriptions, etc.', to which $46^{\circ} 02$ per cent of the families are committed, the monthly a verage expenditure on this account constituting nearly 15 per cent of the total expenditure on miscellaneous items. 40.25 per cent of the families spend varying amounts on education, and the average expenditure per family in respect of this item, taking all the families into account is As. 6-6 which is a little over 1 per cent of the total family expenditure and a little over 4 per cent of the total expenditure on miscellaneous items alone, but taking only the families which incur expenditure on education, the average expenditure comes to Re. 1-0-2 per month per family. In the analysis of the composition of the workers' families it was observed that fur every hundred persons living in workers' families there were three dependants living outside. The number of families who contribute towards the upkeep of their dependants furms 8.58 per cent of the tutal, and the average monthly expenditure on remittance to dependants living elsewhere is As. 4-4, taking all the families and Rs. 3-2-5 taking only the families which incur expenditure on this account. This is no doubt a heavy drag on the slender resources of the main wage earner, but it has the advantage that it tends to maintain his link with his village, where he can always go and be assured of help from his relatives in times of stress and difficulty.

The other items under 'Miscellaneous' call for very little comment. A little expenditure is incurred by the workers in travelling to and from place of work, and only $21 \cdot 06$ per cent of the families show expenditure on this item, the average expenditure per month being As. 13-8 for the spending families. $46^{\circ} 96$ per cent of the families have reported expenditure on medical fees and medicine. The average expenditure on this item comes to As. 3-9 per month for all families and As. 7-11 per month for the spending families. Religious observances, feasts and festivals account for 64.43 per cent of the families, the average expenditure on this item being As. 4-3 per month for all families and As. 6-8 per month for the families which observe these ceremonies. Indulgence in amusements is not uncommon amongst the working classes. The most common form of amusement is the cinema, and no less than 43.27 per cent of the families show expenditure on amusements. The average amount spent on a musements is As. 3-8 per montb taking all the families into account and As. 8-6 per month taking only such of the families as show expenditure on this item.

## Housing.

42. The frequency distribution of rents paid by the families according to income groups is shown in the table bolow :-

Statement showing frequency distribution of rents paid by families according to income groups.

| Monthly rent | Familles with a monthly income of |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| actually pafd by the family. | below <br> 13s. 20. |  | $\begin{aligned} & \text { Rs. } 30 \\ & \text { to } \\ & \text { Rs. } 40 . \end{aligned}$ | $\begin{gathered} \text { Ins. } 40 \\ \text { to } \\ \text { Rs. } 50 . \end{gathered}$ |  | $\begin{aligned} & \text { Rs. } 60 \\ & \mathrm{R}_{\mathrm{to}}^{\mathrm{to}} 70 . \end{aligned}$ | $\xrightarrow[\mathrm{Over}]{\mathrm{O}}$ Rs. 70. | $\underset{\substack{\text { i }}}{\mathbf{T}}$ |  |
|  | d | 12 |  |  |  |  |  |  |  |
| Below Rrs. 2 bel $\because 9$ | 118 | 31 24 | 36 15 | 14 | 7 2 | $\stackrel{4}{4}$ | $\cdots$ | 102 | 16.91 |
| Rs. ${ }^{\text {che }}$, ${ }^{\text {and below }}$ |  |  |  |  |  | 1 | d | 50 | ${ }_{9.20}^{10.20}$ |
| Rs. 3 and below Rs. 4 . | 19 | 38 | 48 | 10 | 6 | 1 | - | 122 | 10.03 |
|  | 7 | 36 | 38 | 26 | 12 | 2 | - | 121 | 18.88 |
| Rs. 5 and below | 3 | 22 | 24 | 21 | 14 | 1 | 2 | 87 | 13.57 |
| Rs. 6 and below $\mathrm{H}_{\mathrm{s}} 7$. | - | 1 | 16 | 15 | 4 | 2 | - | 88 | 5.83 |
| ${ }_{\text {Rg. }}{ }_{\text {R }} 78$ and below | . | 3 | 7 | 10 |  | - | 2 | 31 | 4.84 |
| $\mathrm{Rs}_{\text {Rs }} 8$ g and below | . | . | 4 | 7 | 5 | 4 | 4 | 24 | 3.74 |
| Rs. 9 and below Rs. 10. | - | - | - | - | 2 | 1 | - | 3 | 0.47 |
| ${ }_{\text {Rs. }}{ }_{\text {Rs. }} 10$ and below | . | - | 1 | 8 | 3 | 8 | 3 | 18 | 2.08 |
| Rs. 11 and below Rs. 12 | . | -• | - | 1 | - | - | - | 1 | 0.16 |
| Ris. 12 and over .. |  | . | . | . 0 | 1 | 1 | 7 | 9 | 1.40 |
| Total | 47 | 167 | 108 | 118 | 69 | 20 | 22 | 641 | 100.00 |
| Percentage to total. | $7 \cdot 33$ | 26.05 | 30.89 | 18.41 | 10.77 | $3 \cdot 12$ | $3 \cdot 43$ | 100.00 |  |

Of the 641 families, 161 or nearly 25 per cent pay a monthly rent of less than three rupees. These families are generally found to be occupying one room tenements or huts with low mud walls. The rooms are almost devoid of ventilation, and the entrance to some of these is so low that one has nearly to double oneself for entering them. The rooms have also very little light, and things inside can be seen only with the aid of a lamp even during day time. Sometimes the floor is on a lower level than the street and rainwater would find its way into the house and render the floor damp and unfit for habitation. Washing and drainage facilities and latrines are scarcely provided for. Washing and bathing are done in the streets or lanes which consequently are rendered very dirty. The dimensions of the one room tenements generally vary from 8 feet by 5 feet to 8 feet square.

Three hundred and thirty families or nearly 51 per cent pay a monthly rent of three rupees and more but less than six rupees. They occupy usually a room with a small verandah and a portion or whole of a small 'kudam' according to the rent paid. Sixty nine families or nearly ll per cent pay a monthly rent of six rupees and more but less than eight rupees, generally occupying two rooms. Fifty families or nearly 8 per cent pay a monthly rent of eight rupees and more, and the accommodation commanded by this rent usually
consists of two rooms, a 'kudam' and a verandah varying in size according to rent. The remaining 31 families or nearly 5 per cent pay no rent and live either in their own houses or in the houses of obliging relatives.
43. A room used as a dwelling is considered to be overcrowded when the number of inmates is such that the amount of floor space available is less than forty square feet per adult inmate. Judged by this standard there is great overcrowding in the houses occupied by the working class families. There is a close connexion between housing and health and bad housing conditions in Madras are responsible not only for the rise in the incidence of respiratory disjases which rose from 5.1 per mille in 1913 in the city to 11.7 per mille in 1936 but also for the high death rate in general and infantile mortality in particular. The evil effect of an insanitary dwelling is most keenly felt in the case of a newly born baby. More th an a quarter of the total number of deaths in Madras City occurs amongst infants under one year.

One noteworthy feature is however the housing facilities afforded to its workers by the Buckingham and Carnatic Mills Company in Madras City. Referring to these facilities the Royal Commission on Labcur have observed as follows in their report. "The one pleasing feature of the situation in the Presidency is the housing scheme carried out by the Buckingham and Carnatic Mills Company in Madras City. This company has already built three villages with 459 houses and another village of 200 houses is in course of construction. The usual type of house consists of a living room, a kitchon and a washing place with a front verandah and yard. The layout is made as spacious as possible and all roads are lighted with electricity, although lighting is not carried into the houses. A piped watersupply is obtained from the municipal mains and all charges for lighting, conservancy and water are paid by the company. A nominal rent of Rs. 1-8-0 per month is charged and neither subletting nor occupation by tenants in other employ is permitted. We have inspected these model villages and consider that the improved housing conditions and the new opportunities for recreation are bound to make their occupants more healthy and contented. Every credit must be given to the company for its efforts, but the difficulty of obtaining suitable sites and the high cost of land and buildings make provision on an adequate scale a slow and expensive undertaking. Only 10 per cent of the mill workers have so far been accommodated, and the great majority still live in houses rented from private landlords or crowd into huts erected by themselves."
44. As regards rent, it is seen that the average expenditure on rent per family taking all the 641 families is Rs. $3-15-9$ which represents 10.77 per cent of the total expenditure of the family. Although expenditure on rent is found to increase as income increases, the percentage expenditure on this item more or less varies inversely with the income. Thus it generally decreases from
16.05 per cent in the lowest income group to 9.74 per cent in the Rs. 50 to Rs. 60 group and thereafter shows a slight tendency to rise, the percentage expenditure in the highest income group amounting to $11 \cdot 16$.

## Indebtedness.

45. The Royal Commission on Labour in India have observed that among the causes responsible for the low standard of living of the worker, indebtedness occupies a prominent place. An analysis of the family budgets of the industrial workers shows that nearly 90 per cent of the families are in debt and that the average amount spent towards repayment of debts each month is nearly 13.2 per cent of the average monthly income. The following table gives an analysis of indebtedness of the families by income groups :-

Analysis of indebtedness by income groups.


| Bolow Rs. 20 | 47 | 30 | 82.98 | HS. | $\begin{array}{r} \text { A. P. } \\ 155 \end{array}$ |  | $\begin{gathered} \text { 4. } P \\ 6 \end{gathered}$ | 8 | ES. | 8. | P. 3 | $5 \cdot 26$ | 4.36 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rs. 20 and bolow Rs. 30. | 107 | 148 | $88 \cdot 62$ | 177 | 210 | 157 | 0 | 4 | 25 | 4 | 5 | 7.01 | 6.21 |
| Rs. 30 and below Rs. 40. | 108 | 180 | 00.91 | 205 | 57 | 180 | 101 | 11 | 84 | 0 | 4 | 6.04 | $5 \cdot 49$ |
| Rs. 40 and below Rs. 50. | 118 | 105 | 88.98 | 354 | 711 | 315 | 7 | 1 | 44 | 6 | 0 | 7.90 | $7 \cdot 11$ |
| Rs. 50 and below Rs. 60. | 60 | 67 | $97 \cdot 10$ | 423 | 31 | 410 | 1410 | 0 | 54 | 5 | 5 | 7.79 | 7.56 |
| Rs, 60 and below Rs. 70. | 20 | 20 | 100.00 | 425 | 00 | 425 | 0 | 0 | 64 | 7 | 1 | 6.59 | 6.59 |
| Es. 70 and over. | 22 | 18 | 81.82 | 681 | 45 | 475 | 9 | 0 | 86 | 6 | 2 | 6.73 | 5.51 |
| All incomes. | 641 | 577 | 00.02 | 262 | 311 | 236 | 1 | 0 | 87 | 5 |  | 7.02 | 6.32 |

There is no indication in the above table that as the income of the families advances, indebtedness tends to be less. The highest income group is however somewhat of an exception in that not only the percentage of the families involved in debt is less than in the other groups, but the ratio of the amount of indebtedness to the monthly income is also not so high as in some of the other income groups. Taking all the six hundred and forty- one families, the average irdebtedness per family is Rs. 236-1-0 which is 6.32 times the average monthly income of the families, and taking only the indebted families, the average indebtedness per family is Rs. 262-3-11 which is 7.02 times the average monthly income.
46. The causes of indebtedness have been analysed in the table below-

## Causes of Indebtedness.



Ordinary everyday needs of the families have been the most frequent cause of indebtedness. Marriage comes next accounting for 27.70 per cent of the number of instances. The other important causes according to their frequency of occurrence are sickness ( 11.75 per cent), funerals ( 10.43 per cent), old outstanding debts ( 9.23 per cent), and housebuilding or repairs ( 6.36 per cent).
47. The total amount of debt incurred by all the six hundred and forty-one families is nearly a lakh and a half. The percentage contribution of the different causes to the total indebtedness is respectively as follows: Marriage 36.53, ordinary wants 20.61 , housebuilding or repairs $15 \cdot 19$, old outstanding debts $12 \cdot 89$, sickness $7 \cdot 02$, funerals 6.80 , purchase of lands 0.43 and other causes 0.53 .

The rate of interest charged on loans depends to a large extent on the nature of security offered. The most frequent type of security furnished is 'Personal security.' Sometimes debts are incurred even without security. The rate of interest charged on loans is found to vary from 12 per cent to 150 per cent per annum, the most frequent rate being 75 per cent per annum or one anna per rupee per month.

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## SEOTION II.

## Unorganized Industries.

48. Before proceeding to an analysis of the family budgets of workers in unorganized industries, it would be well to give a short account of the salient features relating to each industry. The following paragraphs are devoted to a discussion of the salient features.

## The Bidi Industry.

49. The making of the bidi or the indigenous cigarette is one of the chief unorganized industries in the city. The main problems that arise in connexion with it are the unduly long hours of work, the glaring inadequacy of the wage rate, the employment of children of even very tender years of age and the wholly unwholesome conditions in which the work is carried on.

## Organization of the Trade.

50. The business is dominated by a small band of capitalists. Thus in Madras city, there are not more than four or five persons in control of the industry. They purchase the tobacco and the leaves and distribute them among the large number of bidi-makers scattered all over the city and concentrated mostly in the Triplicane and Washermanpet areas. There is no direct contact between the employer and the employed. The proprietors deal mestly with a comparatively small set of middlemen. It is the business of the latter to employ the workers, pay them wages and in other ways regulate the conditions of their work. The middleman contractor ultimately takes the bidis manufactured to the proprietor and receives payments from him on a piece-rate basis. There are of course differences in detail in the methods employed by the different proprietors, but they do not affect the substance of the statement that there is no direct contact between the employer and the employed. The feature of the bidi industry above outlined has produced serious evils and has moreover introduced a condition which makes it difficult, if not impossible, for these evils to be held in check. It is easy to pass legislation aiming at the removal of these defects, but extremely difficult to enforce it under the conditions prevailing. These latter conditions are the result of the absence of direct touch between the master and the workmen. We may consider for instance the conditions under which the actual processes of bidi-making are carried on.

Speaking of the workshops in which bidi is manufactured, the Royal Commission on Labour in India have observed as follows :-
" Many of these places are small airless boxes often without any windows, where the workers are crowded so thickly on the ground that there is barely room to squeeze between them. Others are dark semi-basements with damp mud floors unsuitable for manufacturing processes, particularly
in an industry where workers sit or squat on the floor throughout the working day. Sanitary convenionces and adequate arrangements for removal of refuss are generally absent."
This description cannot be improved upon. The conditions in this respect have not improved since the Labour Commission reported. It is a well-understood principle that the surroundings in which workers are placed must be conducive to their health and efficiency. In the bidi industry we find a complete negation of this principlo.

## Hours of work.

51. For almost the whole day and usually for part of the night also, the bidi worker has to live in the deplorable surroundings mentioned above. For, there is no regulation of the working hours either by the state or the employer. As the Whitley Commission say, 'the hours are too frequently unduly long, the length of the working day being determined by the workers' own poverty and the comparatively low yield of the piece-rates paid.' This is true especially of full-time workers, i.e., those not using bidi making as a supplementary source of income. In all these matters, regulation has been rendered difficult because of the absence of direct control on the part of the proprietors over the actual workers.

## Employment of Children.

52. The worst evil to society wrought by the bidi industry lies in the employment of child labour. The Royal Commission on Labour in India were convinced that conditions in this respect "recall some of the worst features of child apprenticeship in England at the time of the agitation prior to the passing of the first Factory Act." They go on to observe, "In many cities large numbers of young boys are employed for long hours and discipline is strict. Indeed there is reason to believe that corporal punishments and other disciplinary measures of a reprehensible kind are sometimes resorted to in the case of the smaller children. Workers as young as five years of age may be found in some of these places working without adequate meal intervals or weekly rest days and often for 10 or 12 hours daily, for sums as low as two annas in the case of those of tenderest years."

The present enquiry has revealed not only that the use of child labour is widely prevalent but that the tendency is even increasing. With the depression in the industry consequent on the increased competition both in the city and the mufussal, the work is sought to be done more and more through child labour. The adult worker is finding that even as a whole-time job, bidi-making does not pay and he is leaving it consequently for other ocoupations whenever he can find any. Here is a tendency then, for the bidi-industry to be founded mainly on child labour, a tendency which has already begun to gather momentum.

A feature of the employment of child labour which makes it even more obnoxious and harmful is that many of the parents of these children are indebted to the middlemen employers. The parents therefore, are not in a position to enforce the minimum conditions consistent with the safety and health of their children. The parents themselves are not to be found anywhere in the neighbourhood of the bidi workshops in which their children are employed; many of them may not be bidi-workers and in cases where they are, the shops in which thoy work may be different from those in which their children work. The number of children below ten years of age employed in certain shops by middlemen contractors is quite large ; fifty per cent is usual and in some cases it may be as much as 65 to 70 per cent. Of those below ten so engaged, as much as half the number might consist of childrea below seven. In some big shops there are only one or two adult workers the rest consisting of children below fifteen, the large majority of whom are below ten.

The evil is assuming alarming proportions. The dangers to society inherent in the practice need not be emphasised. The children of to-day are the men of tomorrow and if they have to grow up under conditions that undermine their health and vigour, there is no doubt that the fate of generations is involved. The effects are highly cumulative here.

## Illiteracy.

53. The employment of child labour is largely responsible for the high degree of illiteracy that is noticeable among the bidiworking class. The pronouncements of the Whitley Commision on this matter are weighty and desorve great attention. They observe :
"As far as the parents of the child workers typical of these industries are concerned, we realize that we are here dealing with a class wholly illiterate, exceedingly poor and only too often hesvily indebted. It is inevitable that to these the child's right to its childhood and even to such education as may be available should make no appeal comparable to that of its learning capacity, however small. There would appear in their case, as in that of employers no course open but that of compulsion by means of legislation so framed and so applied as to achieve the neeessary end with the minimum of dislocation and hardship."
Conditions in most respects have deteriorated since the Royal Commission on Labour in India reported. The number of proprietors in the industry has increased greatly in recent years in the Presidency attracted as they have been by the large profits made by the pioneers in the field. Trichinopoly, Vellore, Calicut, Mangalore and Palghat have all developed into important centres of bidi-making. The consequence has been that there has been a tendency to over-production and the position of the industry in Madras city has been vigorously challenged.
54. The reaction of the bidi proprietors to these changed conditions has been in various ways but from the point of view of the actual workers the effect has been a distinct worsening of the position. Wages are paid on the piece-wage basis and are generally at the rate of 12 annas per thousand bidis produced and attempts at reduoing these rates have been made notably in Vellore and Madras. In many cases the working days of the week have been reduced by two or three. This latter step means tbat workers are kept in compulsory idleness for a substantial pericd in the month and therr montbly earnings have in consequence suffered a soricus fall. The proprietors in the city are not, of course, wholly to blame for this state of affairs. A severe blow has been dealt to their own prosperity by mufussal competition. Pieviously, they had the city and a great part of the Presidency as their market ; now mufursal centres are becoming not only self-sufficient, but the bidi manufactured there is finding its way into Madras oity itself. Things have come to such a pass that some action on the part of all con-cerned-the workers, the proprietors and the State seems to be urgently called for. The element in the situation that causes the greatest anxiety is that bidi-making as a whole-time job, does not give the adult worker an income that can by any means be described to be adequate for supporting his family and himself. Greater and graater reliance is therefore placed on child labour, exploited labour and to a minor extent on casual or part-time labour. It is difficult to escape the conclusion that the industry as at present organized and conducted rests on unstable foundations.

## The Tailoring Industry.

55. Among the unorganized industriss in the City of Madras, the tailoring industry occupies a prominent place. The following figures furnish us with an idea of the extent of employment provided by the industry both in Madras city and the Presidency as a whole. According to the census of 1931 the number of persons engaged in the industry was 53,799 including earners and working dependants of whom 10,874 were to be found in the important towns, i.e., about 20 per cent. There were 3,744 tailors in Madras city. In other words about 34 per cent of the urban tailors were concentrated in Madras city alone. Compared to other towns, Madras had the largest number of tailors; the other towns were very far behind, Coimbatore accounting for the largest number with 942 tailors.
56. We shall now proceed to a study of the conditions under which the industry is carried on in Madras city. Although tailers are to be found everywhere in the city, Triplicane and Georgetown are the two centres where the industry can be said to be localised. It is easy to explain this phenomenon by the fact that these two are the chief centres for the trade in clcth, which forms the raw material for the industry.
57. A survey of the people engaged in the industry shows that it is not the monopoly of any particular community. But the most predominant are the Muhammadans. Next come the Bhavasara Kshatriyas; there are a few belonging to other non-Brahman communities and some Christians but they constitute a very microscopic minority. So far as the Georgetown and Thousand Lights areas are concerned, the Muhammadans form the majority of the tailors ; on the other hand, the Triplicane area is the stronghold of the Bhavasara Kshatriyas. To the Muhammadan population of the city, the tailoring industry is very important coming next to the sister unorganized industry, viz., the bidi.
58. The most striking feature of the organization of the industry is its small scale character. In contrast to the bidi industry, the big entrepreneur is the exception. The largest number of employees including boys in a tailor shop in Georgetown area does not exceed 25 and there are only a few shops employing 15 to 25 workmen. The majority of the entrepreneurs have under them less than 5 men while there are many shops in which tailors are found working singly.

While this is the general feature, we have, however, to note an exception in the case of tailor contractors who at certain seasons employ as many as 50 men . But the work is only of a seasonal character lasting for not more than six months at the most. The conditions of service.in this case are those of sweated industry. The severe competition between a few prominent contractors is the cause of the prevailing conditions.

It may be a pertinent question to ask why the industry has been conducted only on a small scale and why the more enterprising and bigger firms have not swallowed up the smaller ones. There are many reasons for this. For one thing, the same causes that ensble the corner shop to thrive in the face of the big departmental stores also operate in favour of the small tailor. It is true that the big firm with its large resources can give the best service. But while one may utilize that service which is often a bit costly for stitching one's best clothes, he is generally satisfied with the less skilful and cheaper tailor for making articles of ordinary ware. Secondly, the small tailor at the next door is at one's beck and call and gives prompt service. Apart from this advantage, another cause and perhaps, the more important one, is that the industry does not require a large capital to run it. During the course of the survey, it was found that there were a large number of people running a shop without employing any one else or with the help of only one or two tailors. : All the capital that such a business undertaking needs is a sewing machine and some liquid capital to purchase the needle, thread, etc., and to pay the one or two tailors at the end of the week. A sewing machine can be purchased for about Rs. 200 and with a capital of some Rs. 50 a tailor can set up a small shop. It is not even necessary that he should possess the
capital required for purchasing the sewing machine in a lump sum, for the machine can be bought on credit and the amount paid in about 20 to 25 monthly instalments. Thus any tailor with average skill and local influence can set up a shop and become a captain of industry in miniature. No wonder that the small scale establishments not only hold their own but thrive and multiply.
59. The vast majority of the tailoring establishments employ only a few workers, generally about 2 to 5 in number. But the employment is not always of a permanent character. Even in some of the most flourishing shops in the Georgetown area, there is no guarantee of permanent employment. It is true that the labourers are paid by the day. But there are also the characteristics of a piece work system so that even if a man works for 6 days in a week, he may be paid only 4 days' wage if he has executed. only so much piece work. There is no guarantee of work for any length of time. A day's work being defined as stitching so many shirts, or suits, the worker is paid only on the basis of what he has actually done. In the case of continued under employment, the master tailor does help the worker sometimes with advances without interest and these are deducted from his future wages.

The insecurity and unsteady nature of omploymont naturally makes the labourers migratory. They do not and cannot stick to any establishment permanently. The present economic dopression has hit the tailoring industry hard and has accentuatod this tendency. It has been the misfortune of the tailors that fow of them are employed for a whole month together. Work for 15 to 20 days a month seems to be the lot of even the most fortunate employed in the best firms in Georgetown area.
60. Most of the establishments pay their workmen weekly and it is one of the good features of the organization of the industry. In the case of the tailors the majority of whom are poor and have little resources to fall back upon, or to sustain them for a month, the weekly payment is certainly a great boon. Payments are made usually on Saturday which is the last working day of the week. Sunday is observed, as a holiday in most of the establishments except where there is urgent work. For work on Sundays, there is however no overtime pay.
61. The rate of wages varies a good deal dopending upon the efficiency of the worker. Small boys who are just learning work, are generally paid one to two annas per day while the most efficient adults are paid even up to Rs. 2 per day. The normal wage is between Re. I and Rs. 1-8-0 per day. Thus most of the tailors getting work for no more than 15 to 20 days earn only from Rs. 15 to Rs. 30 a month.
62. Work begins in most of the tailoring establishments of the city at 8 a.m. and ends by 7 p.m. There is, however, no hard and fast rule. It should not be understood that there is work during all the eleven hours. The labourers are paid by piece work and the
time required for earning a day's wage according to the pieco rate is said to be about 9 to 10 hours. However, as we saw, the majority of the labourers get only 15 to 20 day's work a month and sometimes even less; hence thore is no lack of leisure.
63. A feature of the industry is the employment of small boys in many of the establishments. These boys gentrally attend to some of the minor items of work. They are paid very low wages and have to work for long hours. Some of them are mere apprentices and are not paid any wages. But the employment of children is not so widespread in the tailoring industry as in tho bidi industry nor are the conditions of their work so hard.

## Dock Labour in Madras.

64. Madras is one of the principal ports in India, though the trade passing through her cannot bear comparison with that of, say, Bombay or Galcutta. The control of the Madras Port is, as in the case of other ports, vested in a Port Trust constituted under the provincial Act and this Trust consists of representatives of shipping and commercial interests and a few official and nominated members. Though the Port authorilics exercise control in the matter of employment of labour and the regulation of the conditions of its work, it is very rarely that they maintain a permanent establis/ment under their direct control. As the Whitley Commission remark, "the bulk of the labour engaged in loading and unloading is casual and is employed indirectly through stevedores or other contractors." This is true of all the major ports of the country. In Calcutta, most of the dock labour was found by the Labour Commission to be supplied by one firm of contractors. In Bombay, the casual dock labourers are employed through toliwalas, who are paid by the Port trust at piece-work rates on the tonnoge handled. In Karachi the loading and unloading on the docks is entrusted to stevedores who employ jemadars or headmen to provide the necessary labour. In Rangoon, with the exception of a few labourers employed in the ware houses who are on monthly wages, no dock labourers are employed on the staff of the Port Commissioners.
65. Conditions are not different in Madras. The same absence of direct employment and cirect control and contact is to be found here also. When the Whitley Commission reported, the Port Trust had on their rolls about three hundred labourers and most of the handling of the cargo was done by contract labour. Since then, the greater part of the Port Trust staff has been disbanded and at present their number is perhaps a bare hundred. For the handling of the cargo therefore, greater reliance than ever before is placed on contract labour. The contractor employs the labourers, distributes the wages and in other ways regulates the conditions of their labour. Besides the labour employed by or on behelf of the Port Trust, there is the labour employed by companies or stevedores. Ralley \& Co., Gordon Woodroffe \& Co., the South Indian Export Company, the Imperial Chemical Industries, Limited,
all these have extensive godowns in the port premises and make their own arrangements for the handling of cargo.
66. There are, then three distinct groups of labourers comprised under 'Harbour coolies', the subject matter of the present enquiry. They are (1) the coolies employed directly by the Port Trust,' ( ${ }^{(2)}$ the coolies employed on behalf of the Port Trust by its contractor and (3) the coolies engaged by or on behalf of the various companies trading through the Madras Port. Each group has its own problems of hours of work, of prospects, pay and of regularity of employment and no generalization can be made which would hold good of dock labour as a whole. It is obvious, therefore, that the problems of each group have to be considered separately in order that our discussion might yield results of some value. But before proceeding to do so, it would be well to focus attention on a matter which is of prime importance to all groups alike and with which the welfare of all is intimately bound up. It is no other than the position and importance of the Madras Port in the foreign and coasting trade of the Province. In this respect, the annual reports of the local port authorities for the last few years tell a sorrowful tale and the prospects before the dock labourers seem anything but encouraging. Already they have been hard hit by the diminishing trade of the port. The following figures are highly instructive :-


The total trade of the Madras Presidency fell from 106,60 lakhs in 1929-30 to 65,76 lakhs in 1933-34, i.e., by $38 \cdot 3$ per cent. Thereafter there was no doubt a gradual recovery in the trade, but the total trade in 1936-37 was still $23 \cdot 1$ per cent below its level in 1929-30. There was a general diminution in the relative oontribution of the Madras Port to the total trade of the province. In 1929-30 the Madras Port accounted for $47 \cdot 5$ per cent of the total trade of the Presidency; the percentage contribution in 1936-37 was only $38 \cdot 7$. This is the direot result of the increased competition of other ports for the trade of the province, notably Cochin and Vizagapatam. The former especially, by its position, its natural advantages and its nearness to the west is bound to grow in importance in the year ahead.

The following figures which have been kindly supplied by the Traffic Manager, Madras Port Trust, 'show clearly how there has been a decline in the tonnage of goods handled at the Madras Port in recent years.

The tonnage of goods (imports and exports) handled at the Madras Port during the years 1929-30 to 1936-37.-

| Year. |  |  | Imports. (2) | Exports. (8) | Total. (4) | Index of tonnago of total goods handled at the Madras Port on the assumption that the tonnage handicd in $1020-30$ is 100. (5) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | TONS. | tons. | tons. |  |
| 1929-30 |  | $\cdots$ | 10,89,635 | 4,26,928 | 15,16,563 | 100 |
| 1930-31 |  | . | 9,20,646 | 3,41,761 | 12,62,407 | $83 \cdot 2$ |
| 1931-32 |  | . . | 8,24,274 | 3,31,474 | 11,55,748 | 76.2 |
| 1032-33 | . | . | 7,81,013 | 2,29,877 | 10,10,890 | 66.7 |
| 1933-34 | . | . | 7,27,989 | 2,81,203 | 10,09,192 | $66 \cdot 5$ |
| 1934-35 | . | - | 8,72,158 | 2,86,718 | 11,58,876 | 76.4 |
| 1935-36 | .. | . | 7,71,305 | 2,48,255 | 10,19,560 | 67-2 |
| 1930-37 | . | . | 6,68,600 | 3,44,257 | 10,12,857 | 66.8 |

The last column of the abcve table shows the variation in the tonnage of goods handled in the different years as compared with the tonnage handled in 1929-30. The tonnage fell uniformly up to 1933-34 when the deoline amounted to 33.5 per cent as compared with 1929-30. In the following year there was an inorease of tonnage due mainly to increased imports of rice and thereafter the tonnage took a downward course and in 1936-37 it was 33.2 per oent below its level in 1929-30.
67. The Madras Port has suffered in common with cthers in the general slump in business and trade, and there is also the additional factor of a decline in the relative importance of this port which has been already referred to. The combined effect of these factors has been a great diminution in the cargo to be handled at the port, less of work for the dock coclies, and less by way of income for them. This fact is writ large on the face of every coclie and handcartman. Each one has his own tale of woe to tell. He is never tined of comparing his present deplorable oonditions to the better conditions of the past. Though not te the same degree, the depression in trade has affected all classes of labourers, the Port Trust coolie, the contractor coolie and the company workman. Following the diminution in trade, the number of coolies on the staff cf the Port Trust has been greatly reduoed and their monthly income which was in the neighbe urhood of rupees twenty-five is now muoh less, amounting to about eighteen rupees. Many of those thus thrown out tried to seek employment under the contractor, but large numbers inevitably met with disappointment. The oontractor coolies have suffered not so muoh by a compulsory reduction in their strength as by a diminution in their earnings which in recent years has been quite significant. The conlies employed by componies like Ralley and Company, Gordon Woodroffe, etc., have also been adversely affected; many of them have been disbanded and the few that are retained now earn much less than before.

## Contractor Coolies

68. "The demand for dock labour is intermittent; it depends upon the arrival and departure of vessels and the size and nature of their cargo as well as on seqsonal and cyclical fluctuations. In India, the monsoon is an additional factor affecting both shipping arrangements and the amount of produce available for export. In all ports, therefore, there is usually labour in excess of immediate requirements and the tendenop is fcr employers to encourage larger reserves than necessary in order to provide ample margins against emergencies." Thus reported the Royal Commission on Labour in India early in 1931. The condition of the dock labourer has become much worse since then, especially in Madras. The number of contractor coolies has not gone down much but the amount of work available for them has declined appreciably. The average monthly earnings of a contractor coolic have in consequence suffered a considerable decline, amounting in some cases to about ten rupees. The contractor coolies are divided into various gangs each gang consisting of about 16 to 18 people being placed under the immediate supervision of a maistry. Each gang works as a unit and receives its earnings on the piece-rate basis. The main problem is that of under-employment. The labourers complain that they are unable to seoure adequate employment to maintain themelves and their families. There is no doubt that these complaints are to a very large extent founded on faots. Over the vear, the contraotor coolies do not find work for more than 12 or 13 days on an average in the month. The Port Trust authorities have no direct dealings with these coolies. The contractor wields dictatorial powers over them. His powers are absolute and there is praotically no interference with them on the part of the Port Trust authorities. This makes the coolies an easy prey to exploitation. With an excessive number offering for employment, with heavily reduced amount of work to do and with the diotatorial powers of the contractor middleman, the lot of this cooly is indeed a hard one. Added to this, he is addioted to the drink evil and spends a substantial pertion of his income on drink. He has thus very little of his income left, for necessaries of life. Many of the contractor coclies, even some of the married ones, have no houses of their own to live in and spend their days and rights in streets or verandas of buildings. A very large number more erpecially the Adi-Dravidas, live in small hute huddled together in places that are exiremely insonitary and unhealthy. In short, the conditions of life of these contraotor coolies are highly demoralizing and the effects are oumulative so that generations of workers reem to be doomed to a life of misery and suffering. Direct contraot with the Port Trust authorities follc wing elimination of the middleman contractor and the deoasualieation of their work followed by registration of coolies suited for werk as dock labourers are the twint remedjes that can be suggested in this connection. Even then it is olear that all the coolies cannot find adequate employment, in view of the fact that Madras is declining in importance as a port.

## Port Trust Coolies.

69. Though the condition of these coclies has deteriorated to some extent within the last few years they are still the happiest and the mos! prosperous of the dook labourers of the present day. Their number at present is not even a hundred. They are assured of steady employment by the Port Trust and their earnings average to about Re. 18 to 20 a month. They belong to the permanent staff ot the Port Trust and though their wages are on a daily basis, their monthly earninge as a whole do not suffer much on this account, as they are more or less free from the evils cf unemy loyment cr of under employment. In all these respects, their position is the object of envy on the part of the contractor coolies and the hand cartmen. The Port Trust coolies usually work for 26 doys a month and a working day for them oonsists of 10 hours with one hour for interval.

In intelligence, literaoy, etc., the Port Trust coolies have been found to be superior to every other group of labourers met with in the dock premises. Most of them come from the Chinglepu't district ; some of them also own small plots of land in their districts. The ownership of land has maintained almost in taot their ties with their villages; they make a point of visiting their country heuses at least once in a year. In Madras they live very near the Harbour in the streets and lanes of Kachaleswarar division. They form a homogeneous lot. They are not addioted so much to drink as the contractor coolies nor are thev sc heavily irdebted. Their housing conditions are also decidedly superior to those of the contractor coolies.

The Port Trust does not accord to them the privileges of pension or provident fund; but gives some gratuity either to them wher they retire or to their families in the event of their death earlier.

## Company Coolies.

70. There are many firms ond companies in South India wbich do business through the Madras Port. Some of these have extensive godowns in the port premises and emplry labourers to load and unload their own cargo. The shrinkage of trade in the port has forced them to effeot serious retrenchment in the labour force. The coolies employed by these firms form a heterogeneous lot. Here again is noticed the absence virtually of direot employment and direct contact between the employer and the employee. The companies employ foremen or gang maistries. Each of these brings one or more gangs of dock labourers who work under his supervision and receive their wages from him. The companies pay the foreman for the work done and leave it to him to distribute the amount among his men. It need not be repeated here that this practice leads to the exploitation of the ccolies.

## Hand Cartmen.

7l. The harbour handcartmen again form a heterogeneous lot. Some have their own carts, but the vast majority use hired carts. Some of the handoartmen are attached to particular firms and
ecmpanies, while the others-an overwhelming number of them owe allegience to no particular individual or firm and are preparcd to work for all and sundry. There is material difference in the eoonomio condition ot the men who own carts and those that do not, and again in the condition of those who are attached to particular firms and those that are not so attached.

The vast majcrity of handcartmen ply the trade on their own account and with hired carts. The lct of these is indeed pitiable. They assemble in the port premises early in the morning with the carts and wait for some customers tc turn up and enlist their services. It is not often that they succeed. The slump in the trade of the Madras Port has hit the handoartmen also. It has meant less of cargo to be handled by them. On many days, the handcartmen have to wait in vain for people to turn up and ask for their services and they leave the port premises with not a single pie in their hands. The number of really busy days in a month for them can be put down as five or six and no more. On these occasions their earnings might amount to Rs. 1-8-0 per day. Then there are daye when they might get anything from a paltry amount of two cr four amnas to one rupee. On an average, their monthly earnings rarely exceed Rupees fifteen; that is to say, during the busy seasons of the year.

But while the income of these handcartmen is sc indefinite and uncertain, the outgoings are fairly well definite and in many cases settled in advance. There is, first cf all, the hire oharge to be paid for the cart. This is usually two rupees and in some cases may go up to three or even four rupees. It is the first charge on the handoartman's income and it has to be paid whether his earnings in a particular month are small or large.

Most of the handcartmen come from the reighbouring distriots of Chingleput and North Arcot. Some belong to South Aroct and a few to Trichinopoly and far off Madura. Many have not permanently settled themselves in Madras. It was learnt on enquiry that when the rainy season commences and the agrioultural operations begin some of them go baok to their villages. It cannot be otherwise ; their earnings here are not sufficiently attractive to keep them all the year round and tr make them think of permanently settling down in the city. It is only when there is no work in the village and consequentlv no source of livelihood that they wander to the city, hire a cart and ply their trade as handoartmen. And everything that comes in from the new profession is regarded as a net gain by them.

The condition of the handcartman who has his own cart if better in that he has not the claim of the owner to meet. The cart belonge to him and everything he gets out of it can be retained by himself. But there is not much work forthooming nowadays, and the owner handcartman probably feels that $\mathrm{i}^{+}$was not a wife investment he made when he originally purchased the cart, unless of course he deoides to give it for hire to some of his less fortunate brethren.

There are a few handcartmen in the Madras Harbour who are employed by firms and companies. They are not engaged on a monthly basis, but they get steadier work and higher earnings than others. Whenever the firms have to load or to unload oargo these men have to work for them ; at rither times, they are free to be engaged by others. But suoh cpporturiries of emplcyment in the depressed conditions of trade in the Madras Port very rarely ocour. The componies themselves have at present only very small numbers on their rolls. Whenever pressure of werk is too great for this small staff, there is always a vast bcdy of men, unattached to any individual or firm, which is at their disposal and the servioes of some cf there men are enlisted.

In the oase of these company handcartmen again, the worst feature is the absence of direct emplcyment and direct contact between the master and the werkman. The middleman contractor inevitably lifts his head here also ; he employs the handcartmen, pays them wages and is responsible for the movement of cargo between the port ond the company godewns.

These handcartmen are perhaps the most heavily worked the least organised and the poorest paid workers of the world. The conditions of their life are demoralising in the extreme. Their housing oonditions are most deplorable; large numbers of them spend their time in the streets-many of them lead a life of drunkenness ; almost all are illiterate. The pity of it is that the evil effects which suoh conditions produce are highly oumulative and are spread over generations.

## Family Budgets.

72. Some of the important features revealed in the analysis of the family budgets of workers in unorganised industries are summarised below. All the usual information has been emtodied in as detailcd a manner as possible in the tabulsir statements shown as appendices to the report.
73. The number of budgets on which the analysis is based is 310 in the case of bidi workers, 291 in the case of tailors and 283 in the case of harbour coolies and handcartmen. The following statement shows the distribution of the families by caste in each case.

| Caste group. |  | Bldi workers. |  | Tailors. |  | Harbour coolles and handcartmen. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| Hindu Non-Brahman |  | 43 | 13.87 | 71 | 24.40 | 213 | $75 \cdot 27$ 24.38 |
| Hindu Adi-Dravida |  | 6 | 1.94 | 2 io |  | 69 | 24.38 |
| Muslim |  | 259 | 83.55 | 218 | $75 \cdot 26$ 0.34 | 1 | $\cdots$ |
| Chistian |  | 2 | $0 \cdot 64$ | 1 | $0 \cdot 34$ | 1 | $0 \cdot 35$ |
| Total .. | $\cdots$ | 310 | $100 \cdot 00$ | 291 | $100 \cdot 00$ | 283 | $100 \cdot 00$ |

The great majority of the families of bidi workers as also of tailors is of Muslims. In the case of harbour coolies and handcartmen, nearly three quarters of the families are of Hindu NonBrahmans.

## Composition of the family.

74. Appendices XVII (a), XVII (b) and XVII (c) relate to composition of the families of workers in unorganized industries. The average number of persons residing with the family is 4.31 ( $1 \cdot 60$ men, 1.34 women, 0.64 boys and 0.73 girls) in the case of bidi workers, 5.16 ( $1.57 \mathrm{men}, 1.80$ women, 0.88 boys and 0.91 girls) in the case of tailors and $4.00(1.37 \mathrm{men}, \mathrm{l} .3 \mathrm{I}$ women, 0.63 boys and 0.69 girls) in the case of harbour coolies and handcartmen. The average size of a working class family was noticed to be 6.03 in the oase of workers in organized industries. This is nearly one and a half times the average size of families of harbour coolies and handoartmen and 1-1/6th times the average size of tailors' families.

There are practically no dependents living outside the familics in the case of bidi workers and tailors, but in the case of harbour coolies and handcartmen there is an average of 0.18 persons per family living elsewhere and dependent on it.

The average number of equivalent adult males per family resulting from an application of the Lusk Scale to the distribution of size and composition of families is 3.67 for bidi workers, 4.22 for tailors and 3.34 for harbour coolies and handcartmen. The average number of persons gainfully employed per family is 1.59 in the case of bidi workers, 1.58 in the case of tailors and 1.66 in the case of harbour coolies and handcartmen.

## Income of the family.

75. Appendices XIX (a), XIX (b) and XIX (c) are devoted to an analysis of the income of the families of workers in unorganised industries. The average income per family per month is Re. 20-5-10 for bidi workers, Rs. 26-15-10 for tailors and Rs. 23-4-7 for harbour coolies and handcarimen. Comparcd with the average income of Rs. 37-5-11 per family per month for workers in organised industries, the average income of the bidi workers' families is deficient by nearly 45 per cent and that of tailors by nearly 18 per cent. 98.08 per cent of the income of the bidi workers' family is derived from employment. The corresponding percentage for tailors is 97.32 and for harbour coolies and handcartmen 97.63 . The average income from other sources derived mainly from houses and lands is very meagre in all the three cases and ranges from only Re. 0-6-3 per family for bidi workers to 0-11-7 per family for tailors.

The average contribution of the main wage earner to the family income is 66.44 per cent of the total income in the case of bidi workers, 79.20 per cent in the case of tailors and 79.81 per cent in the case of harbơur coolies and handcartmen.

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Chart showing the relative importance of 'Food ', 'Housing ', 'Fuel and Light' and 'Miscellaneous' in the fami y budgets of workers in unorganized industries in Madras City.


## Expenditure.

76. Appendices $\mathbf{X X}(a), \mathbf{X X}(b)$ and $\mathbf{X X}(c)$ give the details of average expenditure on (i) food, (ii) housing, (iii) clothing, (iv) fuel and light and ( $v$ ) miscellpneous items, for families in the different income groups. It als compares the average expenditure with the average income for the families in each class.

Taking all families into account, there is found to be an average surplus of 13 annas 3 pies per family in the case of bidi workers, 6 annas 10 pies per family in the case of tailors and 7 annas 2 pies per family in the care of harbour corlies and handoartmon, the average surplus amounting to 4.25 per cent, 1.58 per cent and 1.92 per cent respectively of the average income.

The pereentages of expenditure on (i) food, (ii) housing, (iii) olothing, (iv) fuel and light and (v) miscellaneous are given in the table below for the families of each of the three classes cf workers alongside of the percentages found in the case of workers in crganised industries.

77. The comparatively high percentages of expenditure on focd and low peroentages ot expenditure on ' miscellaneous' found in the oase of workers in unorganised industries in general and in the case of bidi workers and harour coolies and handcartmen in particular point to the very low standard of living attaincd by these workers. The percentage expenditure on food is unusually high for harbour coolies and handoartmen and this is partly the result of expenditure on drink which is abnormally high for these workers being shown under food. In fact the expenditure on drink incurred by these workers amounts to 31.25 per cent of the total expenditure on focd.
78. Appendices XXI (a), XXI (b) and XXI (c) and XXII (a), XXII (b) and XXII (o) show the details of expenditure on food and on miscellaneous items.

## Indebtedness.

79. Indebtednessis analysed in appendices XXIV ( $a$ ), XXIV $(b)$ and XXIV (c). The peroentage of families in debt is 58.06 for bidi workers, $75 \cdot 26$ for tailors and $49 \cdot 12$ f.or horbour coclies and handcartmen. The corresponding percentage for the families of workers in organised industries was found to be $90 \cdot 02$. The average indebtedness per family for the families of workers in unorganised industries is also less than for the families of workers in organised
industries. It is Rs. 41-4-8 for bidi workers, Rs. 115-7-1 for tailors and Rs. 34-9-1 for harbour coolies and handcartmen as against Rs. 236-1-0 for workers in organised industries. The smaller indebtedness per family in the case of workers in unorganised industries is olearly due to their low borrowing capacity which is the result partly of the slender resources at their command and partly of the insecurity of their employment. Considered in relation to income, the average indebtedness per family is 2.03 times the average monthly income for bidi workers, 4.28 times the average monthly incoms for tailors and 1.48 times the average monthly income for harbour coolies and handcartmen. In the case of workers in organised industries, the average indebtedness per family was found to be 6.32 times the average monthly income.

## Expenditure on Drink.

80. The expenditure on drink incurred by the families of bidi workers and tailors is very small. It amounts to an average of only Re. 0-3-3 par family in the oase of bidi workers and Re. 0-1-2 per family in the aase of tailors. But the low expenditure in these two oases is in striking contrast with the large amount spent on drink by the families of harbour coolies and handcartmen. The average per family in the latter case is Rs. 5-5-1 and it a mounts to $31 \cdot 25$ per cent of the total family expenditure on food inclusive of drink and tobacco. The average expenditure on food exolusive of drink and tobaoco for harbour coolies and handcartmen is Rs. 11-5-8 per family or Rs. 3-0-6 per equivalent adult male. If these families esohew the drink habit, there will be a gain of Rs. 1-9-6 per adult and the amount that can be devoted to food proper is Rs. 4-10-0 per adult. This is indeed a great gain and the families of these workers will thereby be in a position to consume more and better food and lead a better existenoe. As it in, they spend very little, a bare Rs. 3 per adult per month on food. Indebtedness is not a sericus problem in the case of these workers; on the average it does not amount to more than $1 \frac{1}{2}$ times the average monthly inoome of the worker's family. But the real problem in their oase is the deplorable condition of their living consequent on their meagre and unsteady earnings and their addiction to drink. There oan be no salvation for them unless they are freed from the drink habit.
81. In oonclusion, it is my pleasant duty to express my thanks to the heads of various industrial conoerns in the city for affording facilities to the investigators in the matter of sampling the names and addresses of workers from the registers of wages maintained by the ooncerns. Without their co-operation, it would not only have been impossible to obtain a representative sample of workers in organised industries, but it would also have been extremely diffioult to collect the family budgets of workers.

> Office of the Direotor of Industries, Madras, Sth May 1938.

N. K. ADYANTHAYA, Statistical Officer.

## Appendix I.

Enquiry into the famtly budaets of industrial workers in Madras City.

Name of the investigator-
Name of the industry-
$\left\{\begin{array}{l}\text { General No. } \\ \text { Date }\end{array}\right.$

1. Name of the head of the family-

Address-
2. Caste and religion-
3. Occupation and distance to place of work-
4. (a) Size and composition of family and extent of literacy-

|  | Nembers. |  |  |  | Age. | condition. | Relationship to head of family. | Literacy |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men. | Women. | Boys. | Girls. |  |  |  |  |
| Wage earners.. |  |  |  |  |  |  |  |  |
| Dependents rosiding with wage earners |  |  |  |  |  |  | - |  |
| Dependents residing elsewhere. |  |  |  |  |  |  |  |  |

(b) Normal monthly income-


Note.-1. Occupation.-The description of the occupation should be as definite as possiblo. Thus the term "Cotton-mill Worker" is too generaj. The particular occupation should be specifled, e g., cotton weaver, cotton spinner or again not " mechanic " but fitter, blacksmith, etc., whatever it is.
2. Family income.-The monthly wages should include all bonuses regularly received but overtime pay should bo ontered in the column separately, provided. In the column for additional earnings should be entered any earnings by members of the family which were recelved otherwise than in the regular course of employment.

## 5. Normal monthly expenditure of family on-

(a) Food-


- State whether boiled, huaked or mill polished.
$\dagger$ Grain used may be speolfied.
(b) Fuel and lighting-



Difference between monthly income and expenditure
Bavings, if any, in the course of the year; how invested .. ..
Debts, if any; from whom and on what security .. .. ..
Terms of repayment; when incurred and for what purpose .. m

## (Endolosure to Appendix I.)

Instructions for the Investigators:
The investigator should first explain to the labourer that the enquiry has nothing to do with taxation or rates, but that it is undertaken to enable the Government to have an idea of the earnings and expenditure of certain classes of labourers.
2. The labourer should be informed tbat all particulars obtained from him will be treated as strictly private and confidential.
3. Information should be collected for the most recent month because of the necessity of obtaining exact information.
4. Special mention should be made of labourers who maintain regular accounts of their income and expenditure.
5. In the case of organised industries wage earners selected should be those who are normally employed for the whole month.
6. There may be a tendency to overstate the expenditure and to understate the family income. Where the expenditure adds up to more than the family income the investigator should make further enquiries. In some cases the excess of expenditure over income in one month may be met out of previous savings. If so, this should be stated.
7. Special attention should be paid to the prices actually paid by the families for articles consumed by them. They will be capable of check in the office with the current market quotations. The investigators also should satisfy themselves about the correctness of the prices quoted by the labourers.
8. If the labourer purchases things on oredit it should be ascertained what articles are so purchased and what the total value is. The statements of the labourer should, if possible, be verified from the credit accounts of retail merchants.
9. Olothing.-Generally the expenditure under this head can be ascertained only for the whole year. In such cases the average monthly expenditure is arrived at by dividing the total expenditure on each article of clothing by its estimated duration.
10. Against religion state among Hindus-Depressed classes.
11. Against 'Remittances to dependants living elsewhere' should be reported-Number of persons for whose benefit remittances are sent. Number of dependants living away from Madras should be carefully ascertained and entered.
12. Liquor.-The expenditure under this head should be very carefully ascertained as there will be a tendency to hide facts or give unreal figures.
13. Rent.-When labourers live in their own houses, the rent value of the house or portion of the house occupied by them should be ascertained and the amount added both to income and expenditure.

## Method of sampling.

The several processes involved in sampling are summarised below for convenience.
(1) Find out the number of workers in an industry, (e.g., printing) whose income does not exceed Rs. 50 per mensem, the number of suoh workers should, in the first instance, be collected separately for each press.
(2) Having fixed the size of the samples to be investigated, find out the value of ' $n$ '.
(3) Take out from a list of workers relating to each press a sample whose size is equal to $1 / n$ of the number of workers in the press. In drawing the sample, care should be taken to see that the workers have been arranged in a continuous series of their wages-say in ascending order of their wages. Every ' $n$ 'th individual from such a series should then be sampled out. The samples for the several presses should finally be combined.

It is important that the adequacy of the sampling method should be tested with regard to some known characteristios before the sample is finally accepted for the enquiry. The average wage worked out from the sample may be compared with the average worked out for the population. This requires that a frequency distribution of wages should be formed for both the sample and the population. The frequency distribution oan be in the following form:-

Wages for month.
Less than Rs. 15
16 to 25
26 to 35
36 to 45
46 to 50

If the average for the sample closely approximates to the average for the population, the sample may be regarded as adequate.

## Appendix II-(a). <br> Statement showing the distribution of families ly oaste.

(Families of workers in Cotton mills.)

| Income groups. | Hindu. |  |  |  | $\begin{aligned} & \text { Muham- } \\ & \text { dan. } \end{aligned}$ | Christian. | AngloIndian. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Brahman. | NonBrahman | AdIDravida. |  |  |  |  |
| Below Rs. 20 |  | - | 20 | 4 | 2 | 2 | - | 28 |
| Rs. 20 to Rs. 30 | . | . | 37 | 45 | 3 | 4 | . | 89 |
| Rs. 30 to Rs. 40 | $\cdots$ | . | 43 | 58 | 6 | 7 | $\cdots$ | 114 |
| Rs. 40 to Rs. 50 | . | . | 28 | 17 | 3 | 2 | . | 50 |
| Rs. 50 to Rs. 60 | $\cdots$ | . | 19 | 11 | .. | 4 | $\cdots$ | 34 |
| Rs. 60 to Rs. 70 | . | . | 6 | 4 | $\cdots$ | 1 | $\cdots$ | 11 |
| Over Rs. 70 | . |  | 8 | 2 | 1 | 1 |  | 12 |
| Allincomes | . |  | 161 | 141 | 15 | 21 |  | 338 |
| Percentage to tot |  | - | 47-63 | 41.72 | 4-44 | 6.21 | . | $100 \cdot 00$ |

Appindix II-(b).
Statement showing the distribution of families by caste.
(Families of workers in Railway workshops.)

| Income groupn. | Hindu. |  |  | Muhammadan. | Christian. | AngloIndian | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Brahman. | NonBrahman. | $\underset{\text { Dravida. }}{\text { AdI- }}$ |  |  |  |  |
| Below Rs. 20 | - | 4 | - | . | . | - | 4 |
| Rs. 20 to Rs. 30 | . | 33 | 5 | .. | 1 | . | 39 |
| Rs. 30 to Rs. 40 | . | 58 | 5 | 2 | 1 | . | 66 |
| Rs. 40 to Rs. 50 | . | 59 | 3 | 2 | .. | $\cdots$ | 64 |
| Rs. 50 to Rs. 60 | . | 36 | 4 | . . | $\ldots$ | . | 40 |
| Rs. 60 to Rs. 70 | . | 8 | 1 | - | . | . | 9 |
| Over Rs 70 | . | 10 |  | . |  |  | 10 |
| All incomes |  | 208 | 18 | 4 | 2 |  | 232 |
| Percentage to tot | - | $89 \cdot 66$ | 7.76 | 1-72 | 0.86 | . | $100 \cdot 00$ |

Appendix II-(c).
Statement showing the distribution of families by caste.
(Families of workers in printing presees.)

| Income groups. | $\overbrace{\text { Hinda. }}$ |  |  | Muham-madan. | Christian, | AngloIndian | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Brahman. | Non- <br> Brahman | Adf |  |  |  |  |
| Below Rs. 20 | - | 10 | 1 |  |  |  | 11 |
| Rs. 20 to Rs. 30 | . | 43 | 6 | . | 2 |  | 51 |
| Rs. 30 to Rs. $40^{\circ}$ | . | 36 | 1 | . | 2 | . | 38 |
| Rs. 40 to Rs. 50 | . | 29 | .. | . | 1 | . | 30 |
| Rs. 50 to Rs, 60 | . .- | 7 | $\cdots$ | . | . . | $\cdots$ | 7 |
| Rs. 60 to Rs. 70 | - | 1 | - | .. |  |  | 1 |
| Over Re. 70 | $\cdot$ | 2 | 2 |  | 1 |  | 5 |
| All incomes | , | 128 | 10 | . | 5 |  | 18 |
| Percentage to tota | -•• | 89•51 | 6.99 | . | $3 \cdot 50$ | . | 100.00 |

## Appendix II-(d).

Statement showing the distribution of families by caste.
(Families of workers in Engineering works.)

| Inoome groups. | Hindu. |  |  | 3uhammadan. | Christian. | AngloIndran. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Brahman. | $\underbrace{\text { ner }}_{\substack{\text { Non- } \\ \text { Brahman, }}}$ | $\begin{gathered} \text { Adi- } \\ \text { Dravida. } \end{gathered}$ |  |  |  |  |
| Below Rs. 20 | - | 15 | 3 | $\ldots$ | 3 | . | 21 |
| Rs. 20 to Rs. 30.. | .. | 28 | 2 | 1 | 2 | . | 33 |
| Rs. 30 to Rs. 40. . | . . | 24 | 1 | 2 | 5 | 2 | 34 |
| Rs. 40 to Rs. 50. . | . | 8 | . | 1 | . | . | 9 |
| Rs. 50 to Rs. 60.. | . | 6 | $\cdots$ | . | 1 | 1 | 8 |
| -Rs. 60 to Rs. 70.. | . | 3 | $\cdots$ | . | . | . | 3 |
| Over Rs. 70 |  | 3 |  | .. | 1 |  | 4 |
| All incomes |  | 87 | 6 | 4 | 12 | 3 | 112 |
| Percentage to total. | . . | 77.68 | $5 \cdot 36$ | 3.57 | 10.71 | $2 \cdot 68$ | 100.00 |

## Appendir II-(e.)

Statement showing the distribution of families by caste. (Families of workers in oil-installations).

| Income groups. | $\overbrace{-}^{\text {Hindu. }}$ |  |  | Muhammadan. | Christian. | Anglo-Indian. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Brahman. | $\overbrace{\text { Brahman. }}^{\text {Non- }}$ | AdiDravida. |  |  |  |  |
| Bolow Rs. 20 | $\cdots$ | 15 | 5 | . | 1 | . | 21 |
| Rs. 20 to Rs. 30.. | 1 | 43 | 8 | . | - | . | 52 |
| Rs. 30 to Rs. 40. | . | 14 | 1 | . | $\cdots$ | $\cdots$ | 15 |
| Rs. 40 to Rs. 50. | $\ldots$ | 9 | 3 | $\cdots$ | $\cdots$ | . | 12 |
| Rs. 50 to Rs. 60. . | . | 3 | . | 1 | $\cdots$ | . | 4 |
| Rs. 60 to Rs. 70. | - | 3 | - | - | - | - | 3 |
| Over Rss. 70 |  |  |  |  |  | - | $\cdots$ |
| All incomes | 1 | 87 | 17 | 1 | 1 | . | 107 |
| Percentage to total | . 0.83 | 81-32 | 15•89 | 0.93 | 0.88 | -• | $100 \cdot 00$ |

## Appendiy III-(a). <br> Frequency distribution of Natural Families and Joint <br> Households by Income groups.

(Families of workers in cotton mills.)

| Income groups. |  |  |  | Number of natural families. | Number of joint households. | Total familles. | Percentage of natural families to total. | Percentage of households to total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 10 | 18 | 28 | 35-71 | 64.29 |
| Below Ra. 20 Rs, 30 |  | . | $\because$ | 20 | 69 | 89 | 22.47 | 77.53 |
| Rs. 80 to Rs. 40 |  |  | $\cdots$ | 23 | 91 | 114 | 20.18 | 79.82 |
| $\mathrm{Rrs.}_{\text {R. }} 40$ to Rs. 50 |  | - | . | 7 | 48 | 50 | 14.00 | 88.00 |
| Rs. 50 to Rs. 60 | $\cdots$ | . | . | 6 | 11 | 11 | 17.65 | 8235 100.00 |
| Rs. 60 to Rs. 70 | . | $\cdots$ | " | 1 | 11 | 12 | 8.83 | 91.67 |
| All incomes |  |  |  | 67 | 271 | 888 | 18.88 | $80 \cdot 18$ |

Nots.-(a) A natural family includes persons who, generally speaking, have a right to be fed. housed and clothed by the head of the family.
(b) A joint household fs any group of relatives living together as one fousehold.

## Appendix III-(b).

Frequency distribution of Natural Families and Joint Households by Income groups.
(Families of workers in Railway Workshops.)


Nots-(a) A natural farmily includes persons who, generalls speaking, have a right to be fod housed and clothed by the head of the family.
(b) A joint household in any group of relatives living together as ono household.

## Appendix III-(c). <br> Frequency distribution of Natural Families and Joint Households by Income groups.

 (Families of workers in Printing Presses.)| Inoome groups. |  |  |  | Number of natural famillies. | Number of jolnt households. | Total families. | Percentage of natural families to total. | Percentage of households to total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Below Rs. 20 |  | $\cdots$ | - | 2 | 9 | 11 | 18.18 | 81.82 |
| Rs. 20 to Rs. 30 |  | . | . | 23 | 28 | 51 | 45.10 | 54.90 |
|  |  | . | . | 15 | 23 | 38 | 30.47 | 60.53 |
| Rs. 40 to Rs. 50 |  | - | . | 8 | 21 | 30 | $\mathbf{8 0} 00$ | 70.00 |
| Rs. 50 to Rs. 60 |  | .. | - | 1 | 6 | 7 | 14.29 | 85.71 |
| Rs. 60 to Rs. 70 |  | - | $\cdots$ | $\cdots$ | 1 | 1 |  | 100.00 |
| Over Ris. 70 | $\ldots$ | - | - | - | 5 | 5 |  | 100.00 |
|  | All | omes | - | 50 | 98 | 148 | 84.97 | 65.08 |

Note.-(a) A natural family includes persong who, generally speaking, have a right to be fed, housed and clothed by the head of the family.
(b) A joint household is any group of relatives living together as one household.

APPENDIX III-(d).
Frequenoy distribution of Natural Families and Joint Households by Income groups.
(Familits of workers in Engineering Works.)

| Income groups. |  | Number of natural famllies. | Number of foInt households. | Total families. | Percentage of natural familles to total. | Percentage of households to total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Below ms. 20 .. | - | 6 | 15 | 21 | 28.57 | 71.43 |
| Res. 20 to Res. 30 .. .. | . | 10 | 23 | 33 | 80.30 | 69.70 |
| Rs. 30 to Rs, 40 .. | . | 9 | 25 | 34 | 26.47 | 73-53 |
| Rs. 40 to Rs. 50 .. .. | . | 1 | 8 | 9 | 11.11 | 88.89 |
| Rg. 50 to Re. $60 .$. | . . | 1 | 7 | 8 | 12.50 | 87.50 |
| Rs. 60 to R. ${ }_{\text {R }} 70$. | . | 2 | 1 | 3 | 66.67 | - 83.33 |
| Over Bs. 70 . | - | -* | 4 | 4 |  | 100.00 |
| All incomes | $\cdots$ | 29 | 88. | 112 | 25.89 | 74.11 |

Note- (a) A natural family includes persons who, generally speaking, have la right to bo fod, housed and clothed by the head of the family.
(b) A joint household is any group of relatives living together as one household.

## APPRNDIX III-(e). <br> Frequency distribution of Natural Families and Joint

 Households by Income groups.(Families of workers in Oil-Installations.)

| Income groups. |  |  |  | Number of natural familles.$4$ | Number of joint households.$17$ | Total. families. <br> 21 | Percentage of natural familles to total.$19.05$ | Percentage of households to total.$80.95$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Below Rs. 20 |  | - | . |  |  |  |  |  |
| Bs. 20 to Rs 30 |  | . | $\ldots$ | 15 | 37 | 52 | 28.85 | 71.15 |
| Rs. 30 to Rs. 40 |  | - |  | 4 | 11 | 15 | 26.67 | 73.33 |
| Rs. 40 to Ins. 50 |  | - | - | 2 | 10 | 12 | 16.67 | 83.33 |
| Rs. 50 to Res. 60 |  | - | . | . | 4 | 4 | - | 100.00 |
| Es. 60 to Rg. 70 |  | . | . | . | 8 | 3 | - | 100.00 |
| Over Rg. 70 | -• | $\cdots$ | $\cdots$ | -• | $\cdots$ | . | . | . |
|  | All | Omes | $\cdots$ | 85 | 82 | 107 | 2886 | 7664 |

Note.-(a) A natural family fncludes persons who, generally speaking, have a right to be fed, housed and clothed by the head of the family.
(b) A joint household is any group of relatives Iiving together as one household.

## Appendix IV (a). <br> Distribution of literacy amongst the Heads of Families by income groups.

(Families of workers in Cotton mills.)

| Income groupa. |  | Literates. | Inliterates. | Total. | Percentage of |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Literates to total. | Illiterates to total. |
| Below Rs. 20 | . | 14 | 14 | 28 | 50.00 | 50.00 |
| Rg. 20 to Rg. 30 | . | 55 | 34 | 89 | 61.80 | 38.20 |
| Rs. 30 to Rs. 40 | . | 68 | 46 | 114 | $59 \cdot 65$ | $40 \cdot 35$ |
| Rs. 40 to Re. 50 | . | 37 | 13 | 50 | 74.00 | 26.00 |
| Rs. 50 to Rs. 60 | . | 28 | 6 | 34 | 82.35 | 17.65 |
| Rs. 60 to Rs. 70 | . | 8 | 3 | 11 | 72.73 | $27 \cdot 27$ |
| Over Rs. 70 |  | 10 | 2 | 12 | $83 \cdot 33$ | 16.67 |
| All incomes | - | 220 | 118 | 888 | 65.09 | 84.91 |

APPENDIX IV (b).
Distribution of literacy amongst the Heads of Families by income groups. (Families of workers in Railway workshops.)

| Income groups. | Literates. |  | Illiterates. | Total. | Percentage of |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Literates to total. |  | militerates to total. |
| Bolow Rs, 20 |  | 1 |  | 3 | 4 | 25.00 | 75.00 |
| Bolow Rs. 20.30 | . | 22 | 17 | 39 | 56.41 | $43 \cdot 59$ |
| Rs. 20 to Rs. 30 | $\cdots$ | 44 | 22 | 66 | $66 \cdot 67$ | 33.33 |
| Rs. 30 to Rs. 40 | . | 50 | 14 | 64 | $78 \cdot 13$ | 21.87 |
| Rs. 40 to Rs. 60 |  | 33 | 7 | 40 | 82.50 | $17 \cdot 50$ |
| Rs. 50 to Rs. 60 |  | 6 | 3 | - 9 | 66.67 | 33.33 |
| Rs. 60 to Rs. 70 |  | 6 | 4 | 10 | 60.00 | $40 \cdot 00$ |
| All incomen |  | 162 | 70 | 232 | 69.83 | $30 \cdot 17$ |


| APPENDIX IV (c). |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Distribution of literaoy amongst the Heads of Families by income groups. |  |  |  |  |  |  |
| (Families of worLers in Printing Presses.) |  |  |  |  |  |  |
| Income groups. |  | Interates. | Interates. | Total. | Percentage of |  |
|  |  | Ltterates to total. |  |  | - Iliterates to total. |
| Below Rs. 20 | -• |  | 11 | 0 | 11 | 100.00 88.24 | - 11.76 |
| Rs. 20 to Rs. 30 | . | 45 | 6 | 51 | $88 \cdot 24$ | $11 \cdot 76$ 7.89 |
| Rs. 30 to Rs. 40 .. | . . | 35 | 3 | 38 | $92 \cdot 11$ 98.67 | 7.89 3.33 |
| Rs. 40 to Rs. 50 . | . . | 29 | 1 | 30 | $96 \cdot 67$ 85.71 | 3.33 14.29 |
| Rs. 50 to Rs. 60 .. | . | 6 | 1 | 7 | $85 \cdot 71$ 100.00 | 14.29 |
| Rs. 60 to Rs. 70 .. | . | 1 | I | 1 | 100.00 80.00 | 20.00 |
| Over Rs. 70 . | -• | 4 | 1 | 6 | 80.00 | 20.00 |
| All incomes | * | 131 | 12 | J 43 | 91.61 | $8 \cdot 39$ |

## Appendix IV (d).

## Distribution of literacy amongst the Heads of Families by

 income groups.(Families of workers in Engineering works).

| Income groups. | Literates. |  | Ilitcrates. | Total. | Percentage of |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Literates to total. |  | Illterntes to total. |
| Below Rs. 20 | . | 10 |  | 11 | 21 | 47.62 | 52.38 |
| Rs. 20 to Rs. 30 | . | 20 | 13 | 33 | $60 \cdot 60$ | $39 \cdot 40$ |
| Rs. 30 to Rs. 40 | . | 23 | 11 | 34 | 67.65 | $32 \cdot 35$ |
| Rs. 40 to Rs. 50 | . | 8 | 1 | 9 | 88.89 | 11.11 |
| Rs. 50 to Rs. 60 |  | 7 | 1 | 8 | 87.50 | 12.50 |
| Rs. 60 to Rs. 70 | . | 3 | .. | 3 | $100 \cdot 00$ | . |
| Over Rs. 70 | . | 4 | . | 4 | $100 \cdot 00$ | . |
| All incomes | $\cdots$ | 75 | 37 | 112 | 68.96 | 33.04 |

APPENDIX IV (e).
Distribution of literacy amongst the Heads of Families by income groups.
(Families of workers in Oil-installations.)

| Income groaps. |  | Literates. | Illiterates. | Total. | Percentage of |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Literates to total. | Illiterates to total. |
| Below Rrs. 20 |  | 15 | 6 | 21 | 71.43 | 28.57 |
| Rs. 20 to Rs. 30 | . | 30(a) | 22 | - 52 | 57.69 | $42 \cdot 31$ |
| Rs. 30 to Rs. 40 |  | 13(b) | 2 | 15 | 86.67 | $13 \cdot 33$ |
| Rs. 40 to Rs. 50 |  | $11(b)$ | 1 | 12 | 91.67 | $8 \cdot 33$ |
| Rs. 50 to Rs. 60 . | . | 4(a) | . | 4 | $100 \cdot 00$ | . . |
| Rs. 60 to Rs. 70 | . | 3(b) | . | 3 | 100.00 | 3. |
| Over Rs. 70 | . | . . | . | . . | .. | . |
| All incomes | $\cdots$ | 76 | 31 | 107 | 71.03 | 28.87 |

(a) Includes 2 heads of families who know only to sign.
(b) Includes one head of family who knows only to sign.

## Appandix V (a).

## Analysis of family composition by income groups.

| (Families of workers in Cotton mills.) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Income group. |  | Ave <br> 䧺 | nom | of pe | Ons per | mily. |  |  |  |
| Below Rs. 20 | 28 | 1.29 | 1.46 | 0.46 | 0.50 | 3.71 | 3-11 | . | 1.25 |
| Rs. 20 to Rs. 30 .. | 89 | 1.50 | 1.74 | 1.12 | 0.87 | 5-29 | 4.29 | 0.52 | 1.19 |
| Rs. 30 to Re. 40 .. | 114 | 1.87 | 2.03 | 1.24 | 1.17 | 6.81 | 5-17 | 0.28 | 1.59 |
| Rs. 40 to Rs. 60 .. | 50 | 2.04 | 1.94 | 1.88 | 1-36 | 6.72 | $5 \cdot 45$ | 0.14 | 1.88 |
| Rs. 50 to Rs. 60. | 84 | $2 \cdot 35$ | 1.85 | 1.88 | 1.44 | $7 \cdot 52$ | 0.12 | $\cdots$ | 2.15 |
| Rs. 60 to Rs. $70 .$. | 11 | 2.91 | 3.36 | 1.82 | 1.46 | 9.55 | 7.86 | 0.09 | 2.45 |
| Over Rs. 70 | 12 | 2.75 | 3.00 | 1.83 | 1.00 | 8.58 | $7 \cdot 18$ | 0.17 | 2.50 |
| All incomes | 938 | 1.88 | 1.95 | 1.28 | 1.08 | 6.19 | $5 \cdot 08$ | 0.26 | 1.62 |

Appendix V (b).
Analysis of family composition by income groups.

> (Families of workers in Ruilway workshops.)


## APPENDIX $\nabla$（c）．

Analysis of family composition by income groups．
（Families of workers in Printing presses．）


Appendix V （d）．
Analysis of family composition by income groups．
（Families of workers in Engineering works．）

|  |  |  | nu | 1 | ns per | g． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 范 | 品 鬲 | $\begin{aligned} & \text { 安 } \\ & \text { 呙 } \end{aligned}$ | 穼 | $\begin{aligned} & \text { 宝 } \\ & \text { H } \end{aligned}$ |  |  |  |
| Below Rs． 20 | 21 | 1.20 | 1.57 | 0.62 | 0.38 | 3.78 | 8.15 |  | 1.24 |
| Re． 20 to Rs． $30 .$. | 33 | 1.24 | 1.91 | 0.78 | 0.85 | 4.76 | 3.88 | 0.06 | 1.21 |
| Re． 30 to Rs． 40 ．． | 34 | 1.76 | 2.09 | 1.00 | 0.97 | 5.82 | 4.84 | 0.15 | 1.32 |
| Re． 40 to Re． 50 | 9 | 1．56 | 2.11 | 1.07 | 0.38 | $5 \cdot 67$ | 4.56 | 0.44 | 1．2： |
| Re． 50 to Ra 80 ．． | 8 | 2.88 | 2.13 | 1.50 | 0.62 | 7.18 | $6 \cdot 11$ |  | 2.00 |
| Re． 60 to Res， $70 .$. | 8 | $2 \cdot 33$ | $1 \cdot 33$ | 2.38 | 0.67 | 6.66 | 5.25 | $\cdots$ | 2.00 |
| Over Br． 70 | 4 | 2.25 | 1.75 | 0.25 | 0.75 | 5.00 | 4.30 | 0.50 | 2.00 |
| Allincomes | 112 | 1－62 | 1.81 | 0.94 | 0.73 | 5．20 | 4.80 | 0.12 | 1.86 |

## 69

Appendix V (e).
Analysis of family composition by income groups.
(Families of workers in Oil Installations).


## Appendix VI (a).

Distribution of persons covered by the enquiry by age and sex distinguishing earners from non-earners.
(Families of workers in Cotton mills).

| Age groups. |  |  | Males. |  |  | Females. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Earners. | Non. earners. | Earners. | Nonearners. | Earners. | Nonearners |
| Below 6 | - | . | $\cdots$ | $\cdots$ | 172 | - | 153 | - | 325 |
| 6 to 10 | - | $\cdots$ | $\cdots$ | - | 132 | - | 111 | - | 243 |
| 10 to 14 | . | - | - | 14 | 87 | 1 | 95 | 15 | 182 |
| 14 to 20 | $\cdots$ | - | - | 72 | 44 | - | 147 | 72 | 191 |
| 20 to 25 | $\cdots$ | - | - | 86 | 29 | 6 | 93 | 92 | 122 |
| 25 to 30 | . | . | . | 72 | 18 | 5 | 71 | 77 | 89 |
| 30 to 35 | . | - | . | 61 | 1 | 6 | 50 | 67 | 51 |
| 35 to 40 | $\cdots$ | . | -• | 67 | 3 | 7 | 63 | 74 | 66 |
| 40 to 45 | . | -• | . | 51 | 2 | 7 | 48 | 58 | 50 |
| 45 to 50 | - | -• | -• | 43 | 6 | 7 | 40 | 50 | 48 |
| 50 to 55 | - | - | - | 21 | 10 | 5 | 44 | 26 | 54 |
| Over 55 | - | - | - | 14 | 60 | 1 | 69 | 15 | 129 |
| All incomes | . | - | - | 501 | 564 | 45 | 984 | 646 | 1,548 |

## Appindex VI (b).

Distribution of persons covered by the enquiry by age and sex distinguishing earners from non-earners.

## (Families of workers in Railway workshops.)

| Age groups. |  |  | $\underbrace{\text { Males. }}$ |  | Females. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Earners. | $\begin{aligned} & \text { Non- } \\ & \text { earners. } \end{aligned}$ | Earners. | $\begin{aligned} & \text { Non- } \\ & \text { carners. } \end{aligned}$ | Earners. | $\begin{aligned} & \text { Non. } \\ & \text { earners. } \end{aligned}$ |
| Below 6 | . | . | - | 113 | . | 101 | - | 214 |
| 6 to 10 |  | . | - | 81 | - | 86 | . | 167 |
| 10 to 14 | . | - | 3 | 76 | - | 86 | 3 | 162 |
| 14 to 20 | . | - | 23 | 50 | - | 65 | 23 | 115 |
| 20 to 25 | - | - | 24 | 13 | $\cdots$ | 72 | 24 | 85 |
| 25 to 30 | . | . | 42 | 4 | 1 | 81 | 43 | 85 |
| 30 to 35 | .. | . | 50 | - | 2 | 67 | 52 | 57 |
| 35 to 40 | -• | - | 62 | - | 5 | 40 | 67 | 40 |
| 40 to 45 | - | . | 60 | $\cdots$ | 1 | 26 | 61 | 28 |
| 45. to 50 | . | - | 21 | 2 | 2 | 20 | 23 | 22 |
| 50 to 55 | . | . . | 13 | 5 | 4 | 45 | 17 | 50 |
| Over 55 | $\cdots$ | - | 6 | 35 | $\cdots$ | 79 | 6 | 114 |
| Allincomes |  | - | 304 | 379 | 15 | 758 | 319 | 1,137 |

## Appendix VI (c).

Distribution of persons covered by the enquiry by age and sex distinguishing earners from non-earners.
(Families of workers in Printing Presses.)

| Age zroups. |  |  | Males. |  | Females. |  | Totai. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Earners. | Non- earnerg. | Earners. | Nonearners. | Earners. | Non earners. |
| Below 6 | $\cdots$ | - | $\cdots$ | 52 | - | 53 | . | 105 |
| 6 to 10 | . | - | 1 | 42 | - | 45 | 1 | 87 |
| 10 to 14 | . | . | 2 | 37 | - | 24 | 2 | 61 |
| 14 to 20 | - | . | 10 | 26 | - | 38 | 10 | 64 |
| - 20 to 25 | - | - | 23 | 14 | - | 34 | 23 | 48 |
| 25 to 30 | . | - | 36 | 5 | 3 | 39 | 39 | 44 |
| 30 to 35 | - | . | 24 | 2 | . | 30 | 24 | 32 |
| . 35 to 40 | . | . | 34 | - | 1 | 23 | 35 | 23 |
| . 40 to 45 | $\cdots$ | . | 22 | . | 1 | 15 | 23 | 15 |
| - 45 to 50 | - | - | 19 | - | 1 | 14 | 20 | 14 |
| 50 to 55 | - | - | 18 | 3 | - | 13 | 16 | 16 |
| Over 55 | - | -• | 12 | 9 | - | 40 | 12 | 49 |
| All incomes |  | - | 199 | 190 | 6 | 368 | 205 | 658 |

Appendix VI (d).
Distribution of persons covered by the enquiry by age and sex distinguishing earners from non-earners.


## Appendix VI (e).

Distribution of persons covered by the enquiry by age end sex distinguishing earners from non-earners.


| Below 6 | .. | - | . | 61 | .. |  | 52 | - | 113 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 to 10 | . | . . | . | 22 | - |  | 31 | - | 53 |
| 10 to 14 | . | . . | . | 15 | . |  | 19 | . | 34 |
| 14 to 20 | . | . | 14 | 16 | . |  | 43 | 14 | 59 |
| 20 to 25 | . . | . | 19 | 2 | . |  | 46 | 19 | 48 |
| 25 to 30 |  | . | 20 | 1 | 2 |  | 22 | 22 | 23 |
| 30 to 35 | . | . . | 25 | 1 | 2 |  | 7 | 27 | 8 |
| 35 to 40 |  | .. | 30 | 3 | 1 |  | 14 | 31 | 17 |
| 40 to 45 |  |  | 15 | 1 | 1 |  | 14 | 16 | 15 |
| 45 to 50 |  |  | 8 | 4 | - |  | 15 | 8 | 19 |
| 50 to 55 | . |  | 5 | 1 | . |  | 6 | 5 | 7 |
| Over 55 |  | . | 6 | 12 | $\cdots$ |  | 34 | 6 | 46 |
| All incomes |  | . | 142 | 139 |  | 6 | 303 | 148 | 442 |

## Appeindix VII (a).

Analysis of imontly income per family by source.
(Familics of workers in Cotton Mılls.)


Appendix VII (b).
Analysis of monthly income per family by source.
(Families of workers in Railway workshops.)
Family with a monthly income of



## Appendix VII (c).

Analysis of monthly income per family by source.
(Families of workers in Printing Presses.)


## Appendix VII (d).

Analysis of monthly income per family by source.

## (Families of workers in engineering works.)



## 1. Income.

(a) Income from employment.


## (b) Income from

| Land .. .. | . | 3 | 1 | 0.58 | 00 | 6 | 0 | 7 | 5 | 02 | 1 | .. |  | .. |  | . |  | 0 | 4 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| House | .. | 13 | 6 | $3 \cdot 70$ | .. |  | 0 | 7 | 9 | 18 | 4 | . |  | 2 | 00 | 6 |  | 81 |  | 0 |
| Gifts and Presents | . | .. |  | $\cdots$ | $\cdots$ |  | $\cdot$ |  |  | . |  | . |  | . |  | .. |  | . |  |  |
| Support from relatives and friends. |  | 3 | 0 | '0.57 | 0.4 | 7 - | $\cdots$ |  | - | 07 | 1 | . |  | $\cdots$ |  | . |  |  |  |  |
| Others .. .. | .. | 00 | 7 | 0.11 | . |  | 0 | 11 |  | .. |  | . |  | . |  | .. |  | . |  |  |
| Total inoome | -• | 3215 | 3 | 100.00 | 17 | 3 | 25 | 6 | 6 | 3411 | 2 |  | 4 |  | 8.0 |  |  | 76 | 1 |  |

## Appendix VII (e).

Analysis of monthly inoome per family by souree.
(Families of workers in oil installations.)


## Appendix VIII (a).

Analysis of average expenditure per family by income groups.
(Families of workers in ootton mills.)

II. Expenditure in rela-

(a) Including expenditure on liquor, tobacco etc.
(b) Including expenditure on utensils, etc
(c) Includes expenditure amounting to Re. 0-15-3 or 53.82 per cent of the total expenditure on clothing on account of clothing of femaleg. (d) Includes an expenditure amounting to Re, $0-2-7$ or $4 \cdot 85$ per cent of the total expenditure on housing on account of utenglis, eto.

## Appendix VIII (b).

Analysis of average expenditure per family by income groups.
(Families of workers in railway workshope.)

(a) Including expenditure on liquor, tobacco, cto.
(b) Including expendituro on utedile, etc.
(c) Includes expenditure amounting to Re. 0-15-4 or $54 \cdot 12$ per cent of the total expenditure on clothing on account of clothing of femal
(d) Includes an expenditure amounting to R.e. 0-2-0 or 2.58 por cent of the total expenditure on housing on account of utensils, etc.

## Appendix VIII (c).

Analysis of average expenditure per family by income groups.
(Families of workers in printing presses.)

(a) Inciuding expenditure on liquor, tobacco, etc.
(b) Including expenditure on utensils, etc.
(c) Includes expenditure amounting to Re. 0-11-8 or 50.56 per cent of the total expenditure on clothing on account of clothing of females.
(d) Includes an expenditure amounting to Re. 0-1-4 or 1-20 per cent of the total expenditure on housing on account of utensils, etc.

## Appendix VIII (d).

Analysis of average expenditure per family by income groups.
(Families of workers in engineering works.)

I. Expenditure-

RS. A. P. PER CENT, RS. A. P. RS. A. P. RS. A. P. RS. A. P. RG. A. P. RS. A. P. RS. A. P.

(a) Including expenditure on I!quor, tobaceo, ete.
(b) Including expenditure on utensils, etc.
(c) Includes expenditure amounting to Re, 0-11-0 or 51.07 per cent of the total expenditure on clothing on account of clothing of femalea.
(d) Includes an expenditure amounting to Re, 0-1-1 or $1 \cdot 36$ per cent of the total expenditure on housing on account of utensils, etc.

## Appendix VIII (e).

## Analysis of average expenditure per family by income groups.

(Families of workers in oil installations.)


## Appendix IX (a).

Analysis of monthly food expenditure per family by income groups.
(Families of workers in cotton mills.)

Food group.
(1)
I. Cereals and pulses-


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.




## Apprindix IX (b).

Analysis of monthly food expenditure per family by income groups.
(Families of workera in Railway Workshops.)



## Appendix IX (c).

Analysis of monthly food expenditure per family by income groups.
(Families of workers in printing presses-)

(1)
(2) (3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)



## APPENDIX IX (d).

Analysis of monthly food expendilure per family by income groups.
(Families of workers in Engineering works.)

Food group.
(1)

All familles. $\qquad$
 Per family. $\begin{gathered}\text { Per equiva- expenditure } \\ \text { lent adult } \\ \text { on food. }\end{gathered}$
mal
(3)
(4)
(5)
(6)
(7)
(8)
(0)
(10)
(11)



## Appendix IX (e).

Analysis of monthly food expenditure per family by income groups.
(Families of workers in Oil installations).



## Appendix $X$.

Statement showing the nutritive value of the diet of workers in organized industries.


Food group.

All families (641 families).

Statement showing the nutritive value of the diet of workers in organized industries-cont.


## .. Statement showing the nutritive value of the diet of workers in organized industries-cont.



Statement showing the nutritive value of the diet of workers in organized industries-cont.
Families with income from Re. 30 to 40 per month ( 198 families).

Statement showing the nutritive value of the diet of workers in organized industries-cont.


Statement showing the nutritive value of the diet of workers in organized industriss-cont.

| Tood group. |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rice-Measures |  | - |  | $60 \cdot 332$ | 200.906 | 3,214-496 | 17.423 | 32.06 | 3.63 | 454.91 | 1,986.22 |  |
| Other grains-Measures |  | . |  | $2 \cdot 623$ | 8.054 | 128.864 | 0.698 | 1.94 | 0.32 | $16 \cdot 30$ | 76.08 |  |
| Dhall-Measures |  | . | $\ldots$ | $2 \cdot 920$ | $8 \cdot 264$ | $132 \cdot 224$ | 0.717 | $4 \cdot 66$ | 0.71 | $11 \cdot 62$ | 71.70 |  |
| Potatoes-Viss .. |  | . |  | $1 \cdot 087$ | 3-354 | $53 \cdot 664$ | 0.291 | $0 \cdot 20$ | $0 \cdot 01$ | $2 \cdot 37$ | $10 \cdot 48$ |  |
| Onions-Viss .. | . - | . | - | 1.007 | $3 \cdot 107$ | $49 \cdot 712$ | 0.269 | $0 \cdot 10$ | 0.01 | 0.82 | $3 \cdot 77$ |  |
| Coconut-Viss .- |  |  |  | 0.875 | $2 \cdot 700$ | $43 \cdot 200$ | $0 \cdot 234$ | 0.38 | $3 \cdot 35$ | 1.85 | $39 \cdot 08$ | 0 |
| Brinjal-Viss . |  |  | . | $2 \cdot 250$ | 6.943 | $111 \cdot 088$ | 0.602 | $0 \cdot 20$ | 0.05 | 0.87 | $4 \cdot 82$ |  |
| Beans (fresh grown bea | s) | Viss | - | 1-250 | 3.857 | 61.712 | $0 \cdot 334$ | $0 \cdot 89$ | 0.04 | $0 \cdot 45$ | $2 \cdot 67$ |  |
| Ladies finger-Viss |  | . | - | 0.500 | 1.543 | 24.688 | $0 \cdot 134$ | 0.08 | 0.04 | $0 \cdot 23$ | 1.61 |  |
| Elophant yam-Viss | . . | . | $\cdots$ | 1.500 | $4 \cdot 629$ | 74.064 | 0.401 | $0 \cdot 20$ | $0 \cdot 02$ | 2.53 | 11.23 |  |
| Pumpkin-Viss | . | . | . | 1.500 | $4 \cdot 629$ | $74 \cdot 064$ | $0 \cdot 401$ | 0.11 | 0.01 | 0.59 | $2 \cdot 81$ |  |
| Radish-Viss . . | . | . | . . | $2 \cdot 000$ | $6 \cdot 171$ | 98.736 | 0.535 | 0.15 | 0.02 | 0.51 | $2 \cdot 68$ |  |
| Drumstick-Viss | . | . . | - | $0 \cdot 750$ | $2 \cdot 314$ | 37-024 | 0.201 | $0 \cdot 38$ | $0 \cdot 10$ | $0 \cdot 77$ | $5 \cdot 48$ |  |
| Green leafy vegetables |  | . | . | $2 \cdot 000$ | $6 \cdot 171$ | 98.736 | $0 \cdot 535$ | $0 \cdot 35$ | $0 \cdot 04$ | 0.64 | $4 \cdot 28$ |  |
| Tamarind-Vise | $\cdots$ | . | $\cdots$ | 1.568 | $4 \cdot 838$ | 77-408 | $0 \cdot 420$ | $0 \cdot 16$ | . . | $3 \cdot 73$ | $15 \cdot 54$ |  |
| Sugar-Viss . | . | . | - | $0 \cdot 699$ | $2 \cdot 157$ | $34 \cdot 512$ | $0 \cdot 187$ | $\cdots$ | $\ldots$ | $5 \cdot 29$ | $21 \cdot 13$ |  |
| Jaggery-Viss . | . | . | . | 1.444 | $4 \cdot 456$ | $71 \cdot 296$ | $0 \cdot 386$ | 0.03 | 0 | $9 \cdot 65$ | $38 \cdot 60$ |  |
| Meat-Viss . | . | . | - | $1 \cdot 650$ | $5 \cdot 091$ | 81.456 | $0 \cdot 441$ | $2 \cdot 63$ | 0.87 | . . | $18 \cdot 52$ |  |
| Fish-Viss .. | . | . . | . . | 1.775 | $5 \cdot 477$ | 87.632 | $0 \cdot 475$ | 2.45 | $0 \cdot 10$ |  | $10 \cdot 45$ |  |
| Milk-Measures | . | . | - | $4 \cdot 179$ | 16.716 | $267 \cdot 456$ | $1 \cdot 450$ | 1.36 | 1.48 | 1.97 | $26 \cdot 10$ |  |
| Ghee-Viss . | . | . | . | 0.089 | $0 \cdot 275$ | $4 \cdot 400$ | $0 \cdot 024$ | . . | 0.55 | . . | 4.99 |  |
| Oils-Viss | . | . |  | $2 \cdot 058$ | $6 \cdot 350$ | $101 \cdot 600$ | $0 \cdot 551$ |  | $15 \cdot 43$ |  | $138 \cdot 85$ |  |
| ${ }_{\sim}{ }^{\prime}$ 'Total |  |  | -• | $\cdots$ | $\cdots$ | -• | . | $48 \cdot 33$ | 2373 | , | 2.49 ${ }^{\prime} \cdot 09$ |  |

Statement showing the nutritive value of the diet of workers in organized industries-cont.


Statement showing the nutritive value of the diet of workers in organized industries-cont.


Apprndix XI (a).
Details of expenditure on the Miscellaneous items.
(Families of workers in Cotton mills.)

(1)
(2)
(3)
(4)

RS. A. P. RS. A. P.


## APPENDIX XI (b). Details of expenditure on the Miscellaneous items. <br> (Families of workers in Railway workshops.)

| Item. | $\overbrace{\text { Average monthly }}^{\text {expenditure for }}$ |  | Percentage of budgets on whitch |
| :---: | :---: | :---: | :---: |
|  | All families. | Families spending. | the figures In column (3) are based. |
| (1) | (2) | (8) | (4) |

(4)


| APPENDIX XI (c). |  |  |  |
| :---: | :---: | :---: | :---: |
| Details of expenditure on the Miscellaneous items. (Families of workers in Printing presses.) |  |  |  |
| Item. | Average monthly oxpenditure for |  | Percentage of budgets on which |
|  | All families. | Famblies spending. | $\begin{gathered} \text { in column ( } \\ \text { are based. } \end{gathered}$ |
| (1) | (2) | (3) | (4) |

RS. A. P. RS. A. P.

| Education |  |  |  | 0 | 5 |  | 2 | 2 | 1 | 5 | $15 \cdot 38$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dhobi or washing soap |  |  |  | 0 | 11 |  | 8 | 0 | 11 | 8 | $100 \cdot 00$ |
| Barber |  |  |  | 0 | 8 |  | 1 | 0 | 8 | 2 | $98 \cdot 30$ |
| Travelling to and from place of work |  |  |  | 0 | 1 |  | 4 | 2 | 0 | 0 | $4 \cdot 20$ |
| Medical fees and medici |  |  |  | 0 | 1 |  | 4 | 0 | 7 | 8 | $17 \cdot 48$ |
| Religious observances, feasts and festıvals. |  |  |  | 0 | 9 | 1 | 10 | 0 | 9 | 11 | $99 \cdot 30$ |
| Amusements |  |  |  | 0 | 0 |  | 11 | 0 | 10 | 6 | $8 \cdot 39$ |
| Payments to provident funds, trade union subscription, etc. . . |  |  |  | 0 | 8 |  | 5 | 1 | 8 | 8 | 34-27 |
| Repayment of debts | . | . |  | 3 | 9 |  | 1 | 5 | 0 | 0 | 71.33 |
| Remittance to dependants living elsewhere. |  |  |  | 0 | 2 |  | 6 | 2 | 7 | 7 | 6.29 |
| Total |  |  | -• |  | 10 |  | 4 |  |  |  | . |

## Appendix XI (d).

Details of expenditure on the Miscellaneous items.
(Families of workers in Engineering works.)


# Appendix XI (e). Details of expenditure on the Miscellaneous items. <br> (Families of workers in Oil installations.) 

|  | $\underbrace{$ Average monthly  <br>  expenditure for } |  |  | Percentago of budgets on which |
| :---: | :---: | :---: | :---: | :---: |
| Items. | $\overparen{\text { All }}$ | familics. | Familles spending. | the fanures in colimen (3) are based. |
| (1) |  | (2) | (3) | (4) |

RS. A. P. Rs. A. P.

| Education | . | $\ldots$ | $\ldots$ | $\ldots$ | . | 0 | 3 | 2 |  | 0 | 9 | 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Appbndix XII (a).
Statement showing frequency distribution of rents paid by families according to income groups.

|  |  |  | diles | workers | n cotto | mills.) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Fama | es with | monthl | neom |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 8 |
| Konthly rent actually paid by the family. |  |  |  |  |  |  | $\circ$ <br> 8 <br> 0 <br> 0 <br> 8 <br> M |  |  |  |
| Nil |  | 1 | 11 | 9 | 4 | 4 |  |  | 29 | 8.58 |
| Below Rs. 2 |  | 6 | 27 | 34 | 10 | 4 | 7 | 4 | 91 | 26.82 |
| Re, 2 and below Re. 3 | . | 6 | 11 | 12 | 4 | 1 | 1 |  | 85 | 10.36 |
| Rs. 3 and below Rs. 4 |  | 11 | 15 | 24 | 4 | 3 | . | . | 57 | 16.86 |
| Re. 4 and below Re. 5 |  | 2 | 19 | 18 | 13 | 0 | 2 | - | 60 | 17.75 |
| Rs. 5 and below Rs. 6 | . | 2 | 4 | 11 | 6 | 8 | - | 1 | 32 | 9.47 |
| Re. 6 and below Re. 7 | $\cdots$ | . | . | 2 | 0 | 2 | $\because$ | $\cdots$ | 11 | 3.26 |
| Rs. 7 and below Res. 8 |  | . | 2 | 2 | $\cdots$ | 1 | . | $\cdots$ | 6 | 1.77 |
| Rs. 8 and below Re. 9 |  | .. | . | 1 | 1 | 1 | 2 |  | 5 | 1.48 |
| Rig. 9 and below Re. 10 | - | . | .. | $\cdot$ | $\cdots$ | 1 | 1 |  | 2 | 0.50 |
| Rs. 10 and below Res. 11 |  | . | . | 1 | 2 | .. | 1 | 1 | 5 | 1.48 |
| Re. 11 and below Ret. 12 |  | .. |  | .. | .. | .. | . |  |  | .. |
| Rs. 12 and over | . | . $\cdot$ | . | . $\cdot$ | . | .. | . | 5 | 6 | 1.48 |
| Total | .. | 28 | 89 | 114 | 60 | 34 | 11 | 12 | 338 | 100.00 |
| Percentage to total | . | 8.28 | 28.38 | 33.73 | 14.79 | 10.06 | 8.26 | 8.55 | 100.00 | . |

Appendix XII (b).
Statement showing frequency distribution of rents paid by families according to income groups.
(Families of workers in Railway workshops).


Appendix XII (c).
Statement showing frequency distribution of rents paid by families according to income groups.
(Families of workers in Printing Presses).
Families with a monthly income of

Monthly rent actually paid by the family.


## Appendix XII（d）．

Statement showing frequency distribution of rents paid by familits according to income groups．
（Families of workers in Engineering works）．
Familles with a monthly income of

| Families with a monthly incomo of |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Monthly rent actually paid by the familly． |  |  |  | ¢ <br> 8 <br> 8 <br> 8 <br> 0 <br> ¢ <br> ¢ |  | 888888 | $\begin{aligned} & \text { ㅇ } \\ & \text { B } \\ & \text { B } \\ & \text { \& } \end{aligned}$ |  | ずす | 9 |
|  |  |  |  |  |  |  |  |  |  |
|  |  | 5． |  |  |  |  |  |  |  |
|  |  | Ėg |  |  |  |  |  |  |  |
|  |  | － |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Nil | ．． |  | 1 | － | － | ．． | － | $\cdots$ | ． | 1 | 0.89 |
| Below Rs． 2 |  |  | 2 | 2 | 3 | － | － | 1 | － | 8 | 7.14 |
| Rs． 2 and below Rs． 3 | ． |  | 4 | 6 | 1 | ． | － | ． | ．． | 11 | 9.82 |
| Rs． 3 and below Rs． 4 | ．． |  | 10 | 7 | 3 | ． | － | 1 | 1 | 22 | 19.64 |
| Res． 4 and below Re． 5 | $\cdots$ |  | 4 | 11 | 4 | ．． | ． | － | ． | 19 | 18.97 |
| Rs． 5 and below Rs． 6 | ． | ．． | 4 | 8 | 2 | 1 | ．． | 1 | 16 | 14.29 |
| Rs． 6 and below Re． 7 |  | ． | 3 | 0 | 1 | 2 | － | ．． | 15 | 18.30 |
| Rs． 7 and below Re． 8 |  | ． | ．． | 2 | 3 | 1 | － | － | 6 | $5 \cdot 36$ |
| Rs． 8 and below Rs． 9 |  | － | － | 1 | 2 | ． | － | 1 | 4 | 3．67 |
| R6． 9 and below Re． 10 | ．． | ． | ．． | ． | ． | －． | ． | $\cdots$ | － | －． |
| Rs． 10 and below Rs． 11 |  | ． | － | 2 | 1 | 2 | － | 1 | 6 | $5 \cdot 86$ |
| Rs． 11 and below Re． 12 | ．． | ． | ．． | 1 | ．． | 1 | 1 | ． | 3 | 2.68 |
| Rs． 12 and over | ． | ． |  | ． | ． | 1 | ． | ． | 1 | 0.89 |
| Total | ．． | 21 | 33 | 34 | 9 | 8 | 3 | 4 | 112 | 100．00 |
| Percentage to total | ．． | 18.75 | 29.46 | $30 \cdot 38$ | 8．04 | 7.14 | 2.68 | 3.57 | $\overline{100.00}$ |  |

Appendix XII（e）．
Statement showing frequency distribution of rents paid by families according to income groups．
（Familles of workers in Oll installations．）


# Appendix XIII (a). <br> Analysis of indebtedness of families by income groups. 




Appendix XIII (b).
Analysis of indebtedness of families by income groups.


RS. A. P. RS. A. P. RS. A. P.


## APPENDIX XIII（c）．

Analysis of indebtedness of families by income groups．
（Families of workers in Printing Presses．）
Rat lo of

## Appendix XIII（d）． <br> Analysis of indebtedness of families by income groups．

（Families of workers in Engineering works．）

Income groups．
（1）

（2）

＇zqop ni confined
（5）

菷
（6）

Ratio of indebted－
ness to
monthly monthly
ancomefor $\rightarrow$ nomen
总䔍 All families．
（8）（ 9$)$
3)

RS．A．P．Rs．$A, P$ R．RS．$A$ ．$P$ ．
$\begin{array}{lllllllllll}53 & 12 & 7 & 35 & 13 & 9 & 17 & 1 & 8 & 8.15 & 2.10\end{array}$
$\begin{array}{lllllllllll}107 & 10 & 3 & 81 & 8 & 9 & 25 & 6 & 6 & 4.24 & 9.21\end{array}$
$\begin{array}{lllllllllll}147 & 8 & 0 & 112 & 12 & 10 & 34 & 11 & 2 & 4.25 & 3.25\end{array}$
$\begin{array}{lllllllllll}134 & 6 & 0 & 119 & 7 & 1 & 41 & 7 & 4 & 3.24 & 2.88\end{array}$
$\begin{array}{lllllllllll}368 & 5 & 4 & 276 & 4 & 0 & 56 & 8 & 0 & 0.52 & 4.89\end{array}$
$\begin{array}{lllllllllll}150 & 0 & 0 & 50 & 0 & 0 & 61 & 8 & 0 & 2.44 & 0.81\end{array}$
$\begin{array}{llllllllllll}50.00 & 2,180 & 0 & 0 & 1,090 & 0 & 0 & 78 & 1 & 0 & 28.68 & 14.83\end{array}$
$\begin{array}{llllllllllll}73.21 & 188 & 13 & 3 & 133 & 2 & 7 & 32 & 15 & 3 & 5.58 & 4.04\end{array}$

## APPENDIX XIII (e). <br> Analysis of indebtedness of families by income groups.



Statement showing the distribution of families by caste.
(Familles of Beedi workers.)

|  |  | Hindu. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Income groupg, | Brahman. | NonBrahman. | AdiDravida. | Muhammadan. | Chrls. <br> tian. | AngloIndian. | Total. |
| Below Rs. 20 | - | 27 | 5 | 176 | 2 | $\cdots$ | 210 |
| Rs. 20 to Rs. 30 | $\cdots$ | 7 | 1 | 55 | .. | . | 63 |
| Rs. 30 to Rs. ${ }^{40}$ | . | 4 | . $\cdot$ | 13 | . | - | 17 |
| Rs. 40 to Rs. 50 | . | 2 | . | 6 | - | . | 8 |
| Rs. 50 to Rs. 60 | . | 1 | . | 4 | - | - | 5 |
| Rs. 60 to Rs. 70 | . | 1 | . | 3 | . | . | 4 |
| Over Ris. $70 .$. | . | 1 | $\cdots$ | 2 | . | - | 3 |
| All incomes | . | 43 | 6 | 259 | 2 |  | 310 |
| Percentage to total. | $\cdots$ | $13 \cdot 87$ | 1.94 | 88.55 | 0.64 | $\cdots$ | 100.00 |

Appendix XIV (b).
Statement showing the distribution of families by caste.
(Familles of Tailors.)


| Below Rs. 20 | $\cdots$ | $\cdots$ | 15 | - | 52 | $\cdots$ | $\cdots$ | 67 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rs. 20 to R. 30 | $\cdots$ | $\cdots$ | 28 | $\ldots$ | 101 | . | . | 127 |
| Rs. 80 to Rs, 40 | $\cdots$ | $\cdots$ | 17 | . | 44 | $\cdots$ | - | 61 |
| Rg. 40 to Rs. 50 | " | . | 11 | . | 16 | 1 | . | 28 |
| Rs, 50 to Rs. 60 | . | . | .. | . | 2 | . | - | 2 |
| Rs. 60 to Rs. 70 | . | - | $\cdots 2$ | $\because$ | 1 | $\cdots$ | $\cdots$ | 3 |
| Qver Rs. 70 .. | . | . | 2 | . | 1 | . | -• | 3 |
| 'All incomes .. | - | . | 71 | . | 218 | 1 | . | 291 |
| Percentage to tota |  | - | 24.40 | . | 75-26 | 0.34 |  | 100.00 |

## Appindix XIV (c).

Statement showing the distribution of families by caste.
(Familles of Harbour coolics and hand cartmen.)

| Income groups. |  | Hindu. |  |  | Muhammadan. | Christian. | AngloIndian. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Brahman. | NonBrahman | AdiDravida |  |  |  |  |
| Below Rs. 20 | .. | .. | 79 | 25 | . | - | . | 104 |
| Rs. 20 to Rs. 30 | .. | . | 97 | 33 | - | 1 | - | 181 |
| His. 30 to Res. 40 | $\cdots$ | . | 23 | 7 | . | . | - | 30 |
| Rs. 40 to Rs. 50 | . | .. | 11 | 4 | - | .. | . | 15 |
| Rs. 50 to Rs. 60 | . | - | 3 | . | . | - | . | צ |
| Rs. 60 to Rs. 70 | . | - | - | . | . | . | $\cdots$ | - |
| Over Rs. 70. . | - | - | - | . $\cdot$ | . | . | . | - |
| All incomes .. | -• | - | 213 | 69 | . | 1 | .. | 283 |
| Percentage to total. |  | .. | 75-27 | 24.38 | .. | 0.35 | .. | 100.00 |

## Appendix XV (a).

Frequency distribution of natural families and joint households by income groups.
(Families of Beedi workers.)

| Income groupa. |  |  |  | Number of natural familles. | Number of joint hoviehotis | Total | Percentage of natural | Percentag of house- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Below Rs. 20 | .. | . | - | 72 | 138 | 210 | 84.29 | 65.71 |
| Rs. 20 to Rs .30 |  | . | . | 4 | 59 | 63 | 0.35 | 99.65 |
| Rs, 30 to $\mathrm{R}_{8 .} \mathbf{4 0}$ |  | - | . | 2 | 15 | 17 | 11.76 | 88.24 |
| Rs. 40 to Rs. 50 |  | - | . | 1 | 7 | 8 | 12.50 | 87.50 |
| Re. 50 to Re. 60 |  | - | - | - | 5 | 5 | - | 100.00 |
| Re. 60 to Rs. 70 |  | - | .. | 1 | 3 | 4 | 25.00 | 76.00 |
| Over Re. 70 | - | - | . | . | 3 | 3 | . | 100.00 |
| All incomes | $\cdots$ | . | . | 80 | 230 | 310 | 25.81 | 74.10 |

NOTE-(a) A natural family includes pergons who, generally speaking, have a right to be fod. housed and clothed by the head of the family.
(b) A joint household ts any group of relatives Ifving together as one household.

Appendix XV (b).
Frequency distribution of natural families and joint households by income groups.
(Familles of Tailors.)

| Income groups. |  |  |  | Number of natural families.$22$ | Number of joint households. | Total families. <br> 67 | Percentago of natural families to total.$32 \cdot 84$ | Percentage of households to total.$67 \cdot 16$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Below Re. 20 | . | . | - |  |  |  |  |  |
| Rs. 20 to Re. 30 | .. | - | . | 34 | 93 | 127 | 26.77 | 73.23 |
| Rs. 30 to Re. 40 | .. | - | . | 11 | 50 | 61 | 18.08 | 81.97 |
| Ms. 40 to Re. 50 |  | . | . | 3 | 25 | 28 | 10.71 | 89.29 |
| Hs. 50 to Re. 60 | .. | - | .. | . | 2 | 2 | - | 100.00 |
| Re. 60 to Rs. 70 |  | . | . | . | 3 | 3 | .. | 100.00 |
| Over Res. 70 | . | . | -• | . | 3 | 3 | . | 100.00 |
| All incomes | -. | . | - | 70 | 221 | 291 | 24.08 | 75.94 |

Note.-(a) A natural family includes persons who, generally speaking, have a right to be fed, housed and clothed by the head of the family.
(b) A joint household is any group of relatives living together as one houschold.

Apprendix XV (c).
Frequency distribution of natural families and joint households by income groups.
(Families of Harbour coolies and hand cartmen.)

| Income groups. |  |  | Number of natural familics. | Number of joint households. | Total families. | Percentage of natural families | Percentage of households to |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Below Rg, 20 .. | - | - | 79 | 25 | 104 | 75.08 | 24.04 |
| Rs. 20 to Rs. 80 | - | - | 71 | 60 | 131 | 54.20 | \$5.80 |
| Rs. 30 to Fls. 40 | $\cdots$ | $\cdots$ | 7 | 23 | 30 | 23.33 | 76.67 |
| Rs. 40 to Rs. 50 | . | $\cdots$ | 1 | 14 | 15 | $6 \cdot 67$ | 03.33 |
| Es. 60 to Rs. 60 | . | -* | - | 3 | 3 | * | 100.00 |
| Rs. 60 to Rs. 70 | $\cdots$ | -* | -• | -* | . | -• | -• |
| Over Rs. 70 .. | - | $\cdots$ | . | $\cdots$ | . | $\cdots$ | . |
| All incomes | $\cdots$ | $\cdots$ | 158 | 125 | 283 | 55.83 | 44.17, |

[^1]| APPENDIX XVI (a). |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Distribution of literacy amongst the heads of families by income groups. |  |  |  |  |  |  |  |
| Income groups. |  | (Families of Beedi workers.) |  |  |  | Perocatinge of |  |
|  |  | Literates. |  | Illiterates. | Total. | Literates to total. | Illiterates to total. |
| Below Rs. 20 |  | .. (a) | 33 | 177 | 210 | 15.71 | 84.29 |
| Res. 20 to Rs. 30 |  | .. | 12 | 51 | 03 | 19.05 | 80.95 |
| Es. 80 to Rs. 40 |  | . | 5 | 12 | 17 | 29.41 | 70.59 |
| Rs. 40 to Re. 50 |  | - | 2 | 6 | 8 | 25.00 | 75.00 |
| Rs. 50 to Rs. 60 |  | .. | 4 | 1 | 5 | 80.00 | 20.00 |
| Rs. 60 to Re. 70 |  | - | 3 | 1 | 4 | 75.00 | 25.00 |
| Over Rs. 70 |  | - | 3 |  | 8 | 100.00 | .. |
| A'lincomes | - | $\cdots$ | 62 | 248 | 310 | 20.00 | 80.00 |

(a) Includes one head of a family who knows only to gign.

Appendix XVI (b).
Distribution of literacy amongst the heads of families by income groups.

| (Familles of Tallors.) |  |  |  |  |  |  | Percentage of |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Income groups. |  |  |  | Literates. | Illiteratcs. | Total. | Ifterntes | Illiteratcs |
| Below Rs. 20 | - | - | $\cdots$ | 15 | 52 | 67 | 22.39 | 77.61 |
| Es. 20 to Rs. 30 | - | - | - | 36 | 91 | 127 | 28.85 | 71.65 |
| Rs. 30 to Rs. 40 |  | - | $\cdots$ | 17 | 44 | 61 | 27.87 | 72.18 |
| Rs. 40 to Rs. 50 | - | - | - | 10 | 18 | 28 | 35.71 | 64.29 |
| Bs. 50 to Re. 60 | - | - | - | 1 | 1 | 2 | 50.00 | 50.00 |
| Bs. 60 to Rs. 70 | . | . | - | 1 | 2 | 8 | 83.33 | 68.67 |
| Over Brs. 70 | - | - | - | 2 | 1 | 3 | 66-67 | 33.33 |
| Allincomes | - | - | - | 82 | 209 | 291 | 28.18 | 71.88 |
| - |  |  |  |  |  |  |  | - .- |

Appendix XVI (c).
Distribution of literacy amongst the heads of families by income groups.
(Families of Harbour coolles and hand cartmen.)

(a) Includes one head of a family who knows only to gign.

Appendix XVII（a）．
Analysis of family composition by income groups．
（Families of Beedi workers．）
Average number of persons
per familly．

Appendix XVII（b）．
Analysis of family composition by income groups．

| Income group． | Number of．familles． | Average number of persons per family． |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 范 | $\begin{aligned} & \text { 想 } \\ & 0 \end{aligned}$ | $\begin{aligned} & \dot{\text { ì }} \\ & \text { M } \end{aligned}$ | 花 | $\begin{aligned} & \text { Ti } \\ & \text { Hib } \end{aligned}$ |  |  |  |
| Below Rg． 20 | 67 | 1.18 | $1 \cdot 46$ | 0.46 | 0.69 | 3．79 | 3．10 |  | 1.15 |
| Re． 20 to Rs． 30 | 127 | 1.40 | 1.74 | 0.89 | 0.91 | 4.94 | 4.02 | $\cdots$ | 1.49 |
| Rs． 30 to Rs． 40 | 61 | 1.80 | 2.00 | $1 \cdot 18$ | 0.89 | 5.87 | 4.82 | 0.02 | 1.89 |
| Re． 40 to Rs． 60 | 28 | $2 \cdot 46$ | $2 \cdot 96$ | 0.97 | 1.30 | 7.18 | 5.90 | ．． | 2.03 |
| Re． 50 to Rs． 60 | 2 | 2.00 | 2.00 | 2.50 | ．． | 0.50 | 8.13 | ．． | 2.50 |
| Rs． 60 to Rs． 70 | 8 | $2 \cdot 67$ | 2.00 | 0.68 | 2.00 | 7.38 | 5.84 |  | 2.67 |
| Over Rs． 70 | 3 | 8.00 | 267 | 1.67 | 0.68 | 8.00 | 6.82 | ． | 3．80 |
| All incomes | 291 | 1.57 | 1.80 | 0.88 | 0.01 | 6.16 | 4.22 | － | 1.58 |

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## Appendix XVII (c).

Analysis of family composition by income groups.
(Families of Harbour coolies and Handcartmen.)

| Income group. |  | Average number of pertong per family. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | r- |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  | $\dot{\underset{B}{E}}$ | $\begin{aligned} & \text { 品 } \\ & \text { O } \end{aligned}$ | 商 | $\frac{\dot{\pi}}{\frac{1}{6}}$ | - |  |  |  |
| Below Rs, 20 | 104 | 1.07 | 1.02 | 0.52 | 0.48 | 3.00 | 254 | 0.26 | 1.22 |
| Rs. 20 to Rs. 30 | 131 | 1.26 | 1.99 | 0.75 | 0.79 | $4 \cdot 19$ | $3 \cdot 45$ | 0.15 | 1.49 |
| Rs. 30 to Re. 40 . | 30 | 2.33 | 1.43 | 0.87 | 0.63 | 4.08 | 4.41 | 0.13 | 2.27 |
| Rs. 40 to Rs. 50. | 15 | 2.40 | $2 \cdot 20$ | 0.27 | 1.47 | 6.34 | 5.39 | . | 247 |
| Rs. 50 to Rs. 60 . | 3 | $2 \cdot 33$ | 2.38 | 0.38 | 1.00 | 5-99 | 5.27 | . | 3.00 |
| Rs. 60 to Rs. 70 . | . | - | . | .. | .. | - | - | - |  |
| Over Rs. 70 | . | . | . | - | - | - | . | - |  |
| All incomes | 283 | 1.37 | 1.31 | 0.63 | 0.89 | 4.00 | 3.34 | 0.18 | $1 \cdot 6$ |

## Apprndix XVIII (a).

Distribution of persons covered by the enquiry by age and sex distinguishing earners from non-earners.
(Families of Beedi workers.)

| Age groups. |  |  | Males. |  | Females. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Earners. | Non- | Earners. | Non. | Eamors. | Non- |
| Below 6 | - | - | $\cdots$ | 66 | - | 63 | - | 129 |
| 6 to 10 | . |  | 17 | 40 | .. ${ }^{-}$ | 52 | 17 | 92 |
| 10 to 14 | - |  | 29 | 32 | . | 71 | 29 | 103 |
| 14 to 20 | - | . | 114 | 16 | 1 | 94 | 115 | 110 |
| 20 to 25 | . | .. | 98 | 5 | 1 | 60 | 99 | 65 |
| 25 to 30 | .. | . | 76 | 5 | - | 36 | 76 | 41 |
| 30 to 35 | - | - | 39 | 1 | 2 | 30 | 41 | 31 |
| 35 to 40 | - | . | 31 | 1 | 2 | 33 | 33 | 34 |
| 40 to 45 | - | . | 24 | 2 | 1 | 64 | 25 | 66 |
| 45 to 50 | . | . | 18 | 4 | 2 | 40 | 20 | 44 |
| 50 to 55 | . | . | 23 | 13 | .. | 45 | 23 | 58 |
| Over 55 | - | - | 13 | 28 | 1 | 43 | 14 | 71 |
| All incomes | . | . | 482 | 213 | 10 | 631 | 492 | 484 |

## Appendix XVIII (b).

Distribution of perse ns covered by the enquiry by age and sex distinguishing earners from non-earners.

## (Families of Tailors.)



## APpendix XVIII (c).

Distribution of persons covered by the enquiry by age and sex distinguishing earners from non-earners.
(Families of Harbour coolies and Handcartmen.)


## Appendix XIX (a).

Analysis of monthly income per family by source.
(Families of Beedi workers.)


## APPENDIX XIX (b).

Analysis of monthly income per family by source.
(Families of tailors.)

(b) Income from other sources.


## APpmndix XIX (c).

## Analysis of monthly income per family by source

(Families of Harbour coolies and handcart men.)


## Appendix XX (a).

Analysis of average expenditure per family by income groups.
(Families of Beedi workers.)


## APPENDIX-XX (b).

Analysis of average expenditure per family by income groups.
(Families of Tailors.)

(a) Including expenditure on Ilquos, tobacep, etc,
(b) Including expenditure on atensils, oto.
(c) Inclades expenditure amounting to $\mathrm{AB} .13-0$ or $51 \cdot 16$ por cent of tho total expenditure on clothing on account of clothing of females.
(d) Includes an expenditure amounting to As. 1-7 or 2.08 per cent of the total expenditure on houalng on account of utensile, etc.

## Appendix XX (c).

Analysis of average expenditure per family by income groups.
(Families of Harbour coolies and hand cartmen.)

(a) Including expenditure on liquor, tobacco, etc.
(b) Including expenditure on utensils, etc.
(c) Includes expenditure amounting to Re. $0-5-9$ or 50.37 per cent of the totai expenditure on clothing on account of clothing of females.
(d) Includes an expenditure amounting to Re, 0-0-6 or 1.49 per cent of the total expenditure on housing on account of utensila, ete.

## Appendry XXI (a).

Analysis of monthly food expenditure per family by income groups.
(Families of Beedi workers.)

E ood groap.
(1)

$\begin{array}{lcccccccc}\text { (4) (6) } & \text { (6) } & \text { (7) } & \text { (8) } & \text { (9) } & \text { (10) } & \text { (11) } \\ \text { R CENTT. } & \text { RS. A. P. } & \text { RS. A. P. } & \text { HS. A. P. } & \text { RS. A. P. } & \text { RS. A. P. } & \text { RB. A. P. } & \text { Rs. A. P. }\end{array}$
RS. A. P. RS. A. P. PER CENT. RS. A. P. RS. A. P. RS. A. P. RS. A. P. RG. A. P. RB. A. P. RS. A. P.
I. Cereals and Pulses-
$\begin{array}{lll}\text { Rice } \\ \text { Other grains } & \text {.. }\end{array}$ $\begin{array}{lllllllllll}\text { Other grains } & \ldots & \ldots & & . & 5 & 14 & 6 & 1 & 9 & 8\end{array}$
Dhall $\cdot$.. .. ..

$$
\text { Total } \quad \cdots \quad \begin{array}{ccccccc}
\cdots & \cdots & 0 & 3 & 7 & 0 & 1 \\
\hline & & 0 & 1 & 10 & 8
\end{array}
$$

II. Vegetables-



Appendix XXI (b).
Analysis of monthly food expenditure per family by income groups.
(Families of Tailors.)

Food group.
(1)
$\overbrace{\text { Monthly expenditure. Percontage }}^{\text {All families. }}$

$$
\overbrace{\text { Below Rs. } 20 \text { Rs. } 20 \text { to } 30 . \text { Rs. } 80 \text { to } 40 \text {. Rs. } 40 \text { to } 50 . \text { Re. } 60 \text { to } 60 . \text { Rs. } 60 \text { to 70. Over }}^{\text {Average monthly expenditure por famlly for familles with a monthly Income of }}
$$

(5)
(6)
(7)
(8)

- (9)
(10)
(11)

RG, A. P. RS. A. P. FER OENT, RE. A. P. RS. A. P. RS. A. P. RS. A. P. RG. A. P. RG. A. P. RS. A. P.
I. Cereals and Pulses-

| Rice |  |  |  | 512 | 1 | 1 |  |  | 37,31 |  | 4 |  | 11 | 5 | 6 | 8 |  |  | 0 | 8 | 0 | 0 | 8 | 4 | 0 | 8 | 5 | 4 | 9 | 10 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Other grains |  | $\cdots$ | , | 00 | 2 |  |  |  | $0 \cdot 07$ |  |  | , |  | 0 | 0 | 3 | 0 | 0 | 3 |  | - |  |  |  |  |  |  |  |  |  |  |
| Dhall | -• | $\cdots$ | . | 03 | 4 | 0 | 0 | 9 | $1 \cdot 35$ |  | 0 | 2 | 3 | 0 | 3 | 2 | 0 | 4 | 0 | 0 | 4 | 9 | 0 | 5 | 3 | 0 | 4 | 8 | 0 | 8 | 8 |
|  |  | Total | - | 515 | 7 | 1 | 6 | 7 | $38 \cdot 73$ |  | 4 | 6 | 2 | 5 | 0 | 1 |  | 15 | 3 | 8 | 4 | 9 | 8 | 9 | 3 | 8 | 10 | 0 | 10 | 3 | 4 |


III. Meat and Fish-


| V. Ghee and OilsGhee Oils | $\cdots$ | $\ldots$ | $\begin{array}{lll}0 & 4 & 2 \\ 0 & 7 & 3\end{array}$ | 0 | $\begin{array}{ll}1 & 0 \\ 1 & 9\end{array}$ | 1.69 2.94 | 0 | $\begin{array}{ll}0 & 8 \\ 5 & 5\end{array}$ | $\begin{array}{lll}0 & 2 & 5 \\ 0 & 6 & 11\end{array}$ | $\begin{array}{ccc}0 & 5 & 10 \\ 0 & 8 & 2\end{array}$ | $\begin{array}{rrrr}0 & 9 & 5 \\ 0 & 10 & 0\end{array}$ | 1111 |  | 1 | $\begin{array}{rrr}14 & 0 \\ 4 & 10\end{array}$ | $\begin{array}{ll}1 & 11 \\ 1 & 3\end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | . | 0115 | 0 |  | 4.63 | 0 | 61 | $\begin{array}{llll}0 & 9 & 4\end{array}$ | 0140 | 135 | 20 |  | 2 | 210 | 214 |  |
| \# VI. Condiments- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chillies .. | - | $\cdots$ | 0311 | 0 | 011 | 1.59 | 0 | 28 | $\begin{array}{lll}0 & 3 & 7\end{array}$ | $\begin{array}{lll}0 & 4 & 7\end{array}$ | $\begin{array}{lll}0 & 6 & 0\end{array}$ | 08 | 0 | 0 | 64 | 09 | 0 |
| Tamarind | .. | . | 044 | 0 | 10 | 1.76 | 0 | 210 | 0311 | 0 O 50 | 0780 | 010 | 0 | 0 | 78 | 010 | 0 |
| Other condiments | . | . | $\begin{array}{lll}0 & 4 & 7\end{array}$ | 0 |  | 1.86 | 0 | 310 | 046 | 055 | $\begin{array}{llll}0 & 6 & 9\end{array}$ | 07 | 9 | 0 | 78 |  | 0 |
|  | Total | . | 01210 | 0 | 30 | $5 \cdot 21$ | 0 | 94 | 0120 | 0150 | 139 | 19 | 9 | 1 | 58 | 111 | 0 |
| VII. Salt .. | - | . | $\begin{array}{llll}0 & 3 & 2\end{array}$ | 0 | 09 | 1.28 | 0 | 25 | 030 | $\begin{array}{llll}0 & 3 & 7\end{array}$ | 0 0 411 | 04 | 6 | 0 | 40 | 05 | 3 |
| VIII. Sugars- |  |  | 021 | 0 | 06 | $0 \cdot 84$ | 0 | 05 | 0 | 028 | 060 | . |  | 0 | 60 |  | 0 |
| Jaggery .. | . | . | 0 |  | . | 0.07 |  | . | 0 0 01 | $\begin{array}{llll}0 & 0 & 3\end{array}$ | .. | . |  |  | . |  | 4 |
|  | Total | .. | $0 \quad 23$ | 0 | 06 | 0.91 | 0 | 05 | 0110 | 0211 | 060 | . |  | 0 | 60 | 07 | 4 |
| IX. Coffee and Tea- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Coffee . | . | . | $\begin{array}{llll}0 & 0 & 3\end{array}$ | 0 |  | 0.10 |  | 11 | $\begin{array}{lll}0 & 0 & 2\end{array}$ | $\begin{array}{llll}0 & 0 & 6\end{array}$ | $\begin{array}{lll}0 & 0 & 9\end{array}$ |  |  |  |  |  | 8 |
| Tea | $\cdots$ | . | 0142 | 0 |  | $5 \cdot 74$ | 0 | 1111 | 0110 | 1311 | 120 | 16 | 0 | 2 | 20 | 17 | 4 |
|  | Total | . | 0145 | 0 |  | 5.84 |  | 1111 | 0112 | 145 | 129 | 16 | 0 | 2 | 20 |  | 0 |
| X. Liquor .. | . | - | 012 | 0 | 03 | $0 \cdot 47$ | 0 | 11 | $0 \quad 0 \quad 2$ | 0114 | 035 | . |  |  | . | 110 | 8 |
| XI. TobaccoFor smoking |  |  | 084 | 0 | 20 | $3 \cdot 37$ | 0 | 65 | 080 | 092 | 01011 | 010 | 0 | 1 | 38 | 014 | 8 |
| For chewing .. | . | $\cdots$ | .. |  | . | . |  | . |  | .. |  |  |  |  |  |  |  |
|  | Total | . | 0884 | 0 | 20 | $3 \cdot 37$ | 0 | 65 | 080 |  | 01011 | 010 | 0 | 1 | 38 | 014 | 8 |
| XII. Other foods including refreshments, pansupari, etc. . |  |  | 296 | 0 | 910 | 16.81 | 1 | 60 | 266 | 3008 | 441 | 43 | 6 | 61510 |  | $713 \quad 2$ |  |
| Total expenditure on | food | - | $15 \quad 610$ |  | 104 | $100 \cdot 00$ | 10 | 24 | 13153 | 18811 | 23810 | 2215 | 6 | 30 | 95 | 362 | 8 |

## Appendix XXI (c).

Analysis of monthiy food expenditure per fomily by income groups.
(Families of Harbour Coolies and hand oartmen.)
All familles.
Food group.
(1)
$\qquad$ Average monthly oxpenditure per family for familes with a monthly income of
Below Rs, 20 to 80. Rs. 30 to 40. Rs. 40 to 60 . Hs. 50 to 00 . Rs. 60 to 70. Over Rs. $70^{\circ}$ Re. 20.
(5)
(4)
(6)
(7)
(8)
(9)
(10)
(11)



# APpendix XXII (a) <br> Details of expenditure on the Miscellaneous items. <br> (Families of Beedi workers.) 



## Apprndix XXII (c)

Details of expenditure on the Miscellaneous items.
(Famlies of Harbour coolies and hand cartmen).

| Items. | Average monthly expenditure for |  | Pereentage of budgets on which |
| :---: | :---: | :---: | :---: |
|  | All families. | Families spending. | the figures in column (3) are based. |
| (1) | (2) | (3) | (4) |



## APPENDIX XXIII (a)

Statement showing frequency distribution of rents paid by families according to income groups.

| Monthly rent actually paid by the family. | (Families of Beedi workers). |  |  |  |  |  |  | Total. $\begin{gathered}\text { Per- } \\ \text { centage } \\ \text { to } \\ \text { total. }\end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Famllies with a monthly income of |  |  |  |  |  |  |  |  |
|  | Below <br> Res. 20. |  | $\begin{aligned} & \text { Rs. } 30 \\ & \text { to } \\ & \text { to. } 40 . \end{aligned}$ | $\begin{gathered} \text { Rss. } 40^{\text {to }} \\ \text { Rs. } 50 . \end{gathered}$ | $\begin{aligned} & \text { Rs. } 50 \\ & \text { R. } 50 \\ & \text { Rs. } 60 . \end{aligned}$ | $\begin{gathered} \mathrm{Rs}_{8} 60 \\ \text { Ret. } \\ \text { Re. } 70 . \end{gathered}$ | Over <br> Rs. 70. |  |  |
| Nu | 27 | 2 | 2 | 2 | - | - | 1 | 34 | 10.97 |
| Below Rs. 2 | 55 | 7 | - | . | - | . | . | 62 | 20.00 |
| Rs, 2 and below Rs. 3 | 34 | 10 | 2 | 1 | . | - | . | 58 | 18.07 |
| Rs. 3 and below Rs. 4 | 39 | 18 | 4 | 1 | - | . | . | 57 | 18.39 |
| Re. 4 and below Rs. 5 | 37 | 5 | 1 | 1 | - | . | - | 44 | 14.19 |
| Re. 5 and below Rs. 6 | 13 | 6 | 4 | 1 | 2 | 1 | . | 27 | 8.71 |
| Re. 6 and below Rs. 7 | 3 | 6 | 1 | 1 | . | 1 | - | 12 | 8.87 |
| Rs. 7 and below Rs. 8 | 1 | 3 | 1 | $\cdots$ | 1 | 1 | - | 7 | 2.28 |
| Re. 8 and below Rs. 9 | 1 | . | 1 | 1 | . | . | . | 3 | 0.97 |
| Rs. 9 and below Rs. 10 | . | 1 | $\cdots$ | . | . | - | . | 1 | 0.32 |
| Rs. 10 and below Rs. 11 | - | 1 | 1 | - | . | . | . | 2 | 064 |
| Re. 11 and below Rs. 12 | - | . | . | - | - | . | . | $\cdots$ |  |
| Rs. 12 and over .. | . | . | . | $\cdots$ | 2 | 1 | 2 | 5 | 1.01 |
| Total | 210 | 63 | 17 | 8 | 5 | 4 | 3 | 310 | 100.00 |
| Percentage to total | 67.74 | 20.32 | $5 \cdot 49$ | 258 | 1.61 | 1.29 | 0.97 | 100.00 | .. |

## ApPEndix XXIII (b)

Statement showing frequency distribution of rents paid by families according to income groups.
(Families of Tailors.)

| Monthiy rent actually psid by the family. |  | Tamllies with a monthly income of |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Below <br> Rs. 20. | $\begin{aligned} & \text { Rs. } 20 \\ & \text { to } \\ & \text { Rs. } 30 . \end{aligned}$ | $\begin{aligned} & \text { Ro. } 30 \\ & \text { to } \\ & \text { Rs. } 40 . \end{aligned}$ | $\begin{aligned} & \text { Re. }_{\text {ta }} 40 \\ & \text { Rs. } 50 . \end{aligned}$ | $\begin{aligned} & \text { Re. } 60 \\ & \text { to } \\ & \text { Rs. } 60 . \end{aligned}$ | $\begin{aligned} & \text { Rs. } 60 \\ & \text { to } \\ & \text { Rs. } 70 . \end{aligned}$ | Over <br> Rs. 70. | Total. | $\begin{gathered} \text { Per- } \\ \text { centage } \\ \text { to } \\ \text { total. } \end{gathered}$ |
| Nil | .. | 3 | 2 | 1 | 1 | - | - | . | 7 | 2.41 |
| Below Rs. 2 | - | 9 | 2 | $\cdots$ | *- | - | $\cdots$ | - | 11 | 3.78 |
| Rs. 2 and below Rs. 3 | . | 20 | 11 | 2 | $\cdots$ | -* | -• | - | 33 | 11.34 |
| Rs. 3 and below Rs. 4 | - | 16 | 26 | 5 | 2 | - | - | - | 49 | 16.84 |
| Rg. 4 and below Res. 5 | $\cdots$ | 12 | 35 | 7 | 2 | $\cdots$ | - | - | 56 | 10.25 |
| Rs. 5 and below Rs. 6 | - | 0 | 26 | 17 | 4 | $\cdots$ | - | - | 58 | 18.21 |
| Rrs. 6 and below Rs. 7 | . | 1 | 15 | 6 | 5 | $\cdots$ | - | 1 | 28 | 9.62 |
| Rs. 7 and below Rs. 8 | - | . | 6 | 8 | 6 | * | * | - | 20 | 6.87 |
| B6. 8 and below Rs. 9 | . | - | 3 | 8 | 2 | - | 1 | - | 14 | 4.81 |
| Re. 9 and below Ms. 10 | - | - | $\cdots$ | 2 | ** | - | 1 | - | 3 | 1.03 |
| Rs. 10 and below Rs. 11 | . | - | 1 | 5 | 4 | - | $\cdots$ | 1 | 11 | 3.78 |
| Rs. 11 and below Rs. 12 | . | - | - | $\cdots$ | 1 | - | $\cdots$ | - | 1 | 0.34 |
| Is. 12 and over | $\cdots$ | . | . | . | 1 | 2 | 1 | 1 | 5 | 1.72 |
| Total | $\cdots$ | 67 | 127 | 61 | 28 | 2 | 3 | 3 | 291 | 100.00 |
| Percentage to total | $\cdots$ | 23.08 | 48.64 | 20.98 | $8 \cdot 68$ | $0 \cdot 60$ | 1.03 | 1.08 | 100.08 | ** |

## Appendix XXIII (c)

Statement showing frequency distribution of ronts paid by families according to income groups.
(Families of Harbour coolies and hand cartmen.)
Families with a monthly incomo of

| Monthly rent actually <br> - paid by the famuly. |  | Famulies with a monthly incomo of |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Below Rs. 20. | $\begin{aligned} & \text { Rs. } 20 \\ & \text { Ros, }{ }^{20} \end{aligned}$ |  | $\begin{gathered} \text { Rs. }_{\text {to }} 40 \\ \text { Ro. } 50 . \end{gathered}$ | $\begin{aligned} & \text { Rs. } 50 \\ & \text { to }{ }^{\text {to }} \mathbf{6 0} . \end{aligned}$ | $\begin{gathered} \text { Rs. } 60 \\ \text { iot } \\ \text { H. } 70 . \end{gathered}$ | Over <br> Rs. 70. | Total. |  |
| NH | - | 20 | 21 | 2 | 1 | .. | . | . | 44 | 15.64 |
| Below Rs. 2 | . | 57 | 31 | 2 | 2 | $\cdots$ | . | - | 92 | 32.51 |
| Re. 2 and below Rs. 3 | . | 24 | 36 | 13 | 6 | 1 | .. | . | 80 | 28.27 |
| Hs. 3 and below Res. 4 |  | 3 | 18 | 7 | 1 | 1 | $\cdots$ | $\cdots$ | 30 | 10.60 |
| Re. 4 and below Rs. 5 | $\cdots$ | . | 21 | 3 | $\cdots$ | . | .. | . | 24 | $8 \cdot 48$ |
| Rs. 5 and below Rs. 6 | . | . | 4 | 3 | 1 | . | $\cdots$ | . | 8 | 2.88 |
| Rs. 6 and below Rs. 7 |  | . | . | . | 2 | $\cdots$ | .. | - | 2 | 0.71 |
| Re. 7 and below Re. 8 | . | - | . | . | .. | . | . | - | . | - |
| Rs. 8 and below Rs. 9 | . | .. | .. | . | 2 | 1 | . | - | 3 | 1.08 |
| Rs. 9 and below R8. 10 | .. | $\cdots$ | . | . | -• | . | - | $\cdots$ | -• | . |
| Rs. 10 and below Rs. 11 |  | $\cdots$ | . | . | . | - | . | - | - | . |
| Rs. 11 and below Re. 12 |  | - | - | - | -• | $\cdots$ | - | - | $\cdots$ | $\cdots$ |
| Rs. 12 and over |  | . | .. | $\cdots$ | . | . | . | . | . | . |
| Total | . | 104 | 131 | 30 | 15 | 3 | .. | . | 283 | 100.00 |
| Percentage to total | . | 36.75 | 4629 | 10.60 | 5.30 | 1.06 | .. | . | 100.00 | .. |

## APPENDIX XXIV (a)

Analysis of indebtedness of families by income groups-


[^2]
## Appandix XXIV (b)

Analysis of indebtedness of families by income groups.

(a) Of the two famliles in dobt, ono has incurred a debt of Rg. 3,500 for the purchase of a house.

## APPENDIX XXIV (c)

Analysis of indebtedness of families by income groups.


| Below Rs. 20 | 104 | 60 | \$7.69 | 400 |  | 281 | $\theta$ | 17 | 5 | 9 | 2.81 | 1.33 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rs. 20 and below Rs. 30. | 131 | 64 | 48.85 | 0215 | 4 | 3012 | 1 | 22 | 8 | 8 | 2.79 | -2.86 |
| Rs. 80 and below Fis. 40. | 30 | 6 | 20.00 | 350 | 0 | 70 | 0 |  | 4 | 3 | 1.02 | 0.20 |
| Rs. 40 and below Rs. 50. | 15 | 7 | 46.67 | $420{ }^{(a)}$ | 0 | $198{ }^{(a)} 0$ | 0 | 43 | 0 | 10 | 9.76 | $4 \cdot 55$ |
| Re, 50 and below Rs, 60. | 8 | 2 | 66.67 | 1000 | 0 | 6610 | 8 | 62 | 10 | 8 | 1.90 | 1.27 |
| Rs, 60 and below Rs. 70. | N11 | Nil | N11 | Nil |  | Nil |  | N | 11 |  | Nil | Nil |
| Bs. 70 and over | Nil | Nil | Nil | Nil |  | Nil |  | N | 11 |  | Nil | Nill |
| All incomes | 283 | 139 | 49.12 | 706 | 1 | 349 | 1 | 23 | 4 | 7 | 3.02 | 1.48 |

[^3]
[^0]:    * The Problem of Nutrition Volume II Report on the Physiological Basis of Nutrition, 1936.

[^1]:    Nots.-(a) A natural family includes persons who, generally speaking, have a right to be fed housed and clothed by the head of the family.
    (b) A joint household is any group of relatives living together as one housohold.

[^2]:    (a) Of the tro families in debt, one hag inourred a debt of $\mathrm{H}_{6}, 2,500$ for the purchase of a house.

[^3]:    \& (a) Of the seven familles in debt, three families have inourred debts aggregating to Ra. 2,200 for the purchase of lands and housea.

