

SOME PROBLEMS OF FIELD OPERATIONS IN LABOUR ENQUIRIES

By A. N. BOSE

Statistical Laboratory, Calcutta.

With the growing need for adequate and accurate Labour Statistics, the problems faced by field workers should receive closer scientific attention. The field technique should be improved to increase the reliability of data and lessen the cost per unit.

1. The Bombay Labour Office decided to replace a tenement where an occupier family refused to give information by the immediately preceding or the immediately following one. This procedure is objectionable in scientific sampling. Dropping of a selected unit for difficulties in survey very often means a serious gap in representative sampling. In population studies samples have been found to give incongruous results, not because of faulty selection but because enumerators did not revisit all units where proper persons had not been at home when they had called.¹

Obviously the larger the family the greater the likelihood of someone being home when the enumerator calls. The sample thus gets definitely biased against the inclusion of small families. And it is equally likely that small and big families differ in consuming habits. Again, if an incompleter or refused unit has got to be replaced, it is better to have another random unit than select an arbitrary one. To attain unbiased results it is proper to stick to accepted methods as far as possible and not to leave any scope for 'personal choice' to investigators.²

2. In family budget enquiries, workers living single are generally omitted. There seems to be however no strong argument in favour of such a procedure. In Beugal where immigrant labour from other provinces exceeds local labour and where, as in the Jute Mills, workers are employed on contract basis without any fixity of tenure, labour families are comparatively fewer in proportion to the total body of labourers.

If workers living single are decided to be included the difficulty comes in of fitting them into the same scheme with families. People living without families most often run a joint mess or dine out in hotels. In such cases neither the individual nor the mess or hotel can be treated as the proper unit. If the individual is the unit, then consumption and expenditure by each individual on each particular item of Food group, Fuel and Light group etc., are not available. If the mess is the unit, items such as clothings, toilet etc., of individual expenditure are left out. Such data serve no useful purpose in the preparation of cost of living index numbers. It appears that a different technique has to be evolved for getting the standard of living of boarders in hotels and messes.

3. The method of selecting random samples in such sociological enquiries has not yet been standardised and awaits perfection. There is the simple procedure of compiling a serially arranged consolidated list of all workers from the Muster Rolls of the mills in a locality, picking up samples by means of random numbers, then tracing every individual unit from the address given in Muster Rolls. This method does not provide for non-regulated factories which keep no Muster Rolls. The tracing out of the sampled tenement from the address given in the Muster Rolls, which is very often inadequate or wrong, is also troublesome. Above all, there is the risk of such methods

¹ Kiser—Pitfalls in Sampling for Population Study. *Jour. Am. Stat. Assn.*, Vol. XXIX.

² As a result of such choice being left to the investigator, it was found in an enquiry of the Indian Tea Market Expansion Board in the city of Secunderabad that the survey estimate far exceeded the total ingress of tea given in the Railway returns on retail imports.

of selection falsifying the "population" out of which the samples are selected. When more than one member of a family are working, they all appear in the Muster Rolls and in the list compiled from them. Such families are then represented more than once in the 'population' and have correspondingly greater chance of coming into the sample.

Samples may also be picked up according to a geographical order or by marking the houses or by plotting random points on a map. Where Municipal or Settlement maps are available, drawn on a sufficiently enlarged scale defining each holding and tenement, the last course is obviously the easiest and the least expensive. Picking up every n house also does not give a truly random sample; and sometimes, as it was found in the Madras Family Budget Enquiry, houses are so scattered that no geographical arrangements are possible. In such cases houses may be marked with serial numbers and samples selected thereafter with random numbers. But this procedure raises the overhead charges considerably and proves financially prohibitive except in case of small and dense areas.

4. The study of time and cost function leads to the determination of how much work of primary tabulation may profitably be shifted to field recorders. An example may be cited. In family budget enquiries weights and indices are prepared on the basis of the total expended income on each item. It is the general practice that field investigators enter these in terms of rupees, annas and pies which tabulators would later reduce to rupees. From experiments in the Statistical Laboratory, Calcutta, it has been seen that investigators may enter the converted figure with the help of a small conversion table supplied to them, and thus save 20 per cent of time without loss in accuracy.

5. In India there is a great dearth of statistical material on workers' conditions of living. Legislation in other countries requires employers to keep figures of remuneration, attendance, living conditions etc. which may be available to investigators. In India, under the Factories Act, Mines Act and Wages Act, certain types of statistical information have to be maintained and published but these cover only those undertakings which use power-driven machinery and employ not less than 20 persons. The Native States do not come within the scope and operation of these Acts. The figures giving average attendance do not represent the actual number of workers employed in factories during a year, for, owing to irregularities of attendance, high labour turnover and the constant migration of workers from towns to villages and vice versa, the daily attendance figure is much below the total labour force. There are no published figures for employees at the Docks, in Bus and transport services, and in the Postal, Telegraph and Public Works except for the decennial census. With more responsibility vested on employers' in this respect, governments and other public and scientific bodies can relieve themselves of the heavy expenses of gathering information which may be maintained by employers at less inconvenience and expense.

6. In Labour Enquiries we tackle human beings, not fields and plots. Poverty, illiteracy and age-long conservatism have made our workers suspicious, and the information which may be gathered from them is often inadequate and incorrect. The problem of human psychology and the technique of approach are therefore of considerable importance in the science of field operations. The employment of women investigators in the Bombay Labour Office has been a case in point. In a Calcutta Diet Survey conducted by the Statistical Laboratory the experiment was tried but did not give expected results. For increasing the accuracy of primary data and efficiency in collection it is essential that enquiring agencies make the psychological study of the object an integral part of their field activities so that standardised scientific techniques may develop out of them later on.

* A Statistics Act requiring employers to keep such figures was in legislative oven in the Centre, but has been postponed since the outbreak of war.