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THE RELATION BETWEEN FOOD CONSUMPTION SURVEYS AND OTHER ENQUIRIES

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INTRODUCTION

The Freedom from Hunger Campaign of the FAO is a project of major importance arising from the urgent need to improve the quantity and quality of food supplies in so many parts of the world. Africa is one of the regions where hunger problems, particularly those arising from unbalanced diets, are a severe limitation on economic and social progress.

2. In formulating programmes for the development of food production and distribution, adequate statistical information is necessary and this is not easy to obtain in under-developed countries where the greater part of the activity in these fields takes place at the household level. The principal requirement is to measure patterns of food consumption. Food consumption surveys are one of the principal means of obtaining this data and they are expensive projects if carried out on a large enough scale to be of real value. The possibility of conducting them in conjunction with other household surveys is therefore a question of considerable importance under circumstances where statistical resources are limited.

3. This paper summarizes some of the comments which have already been made upon the relationship between food consumption and other surveys and goes on to examine the question in a little more detail in the light of the objectives and technical characteristics of the surveys. The discussion has been limited to the relationship with household surveys designed for the over-all investigation of economic structure and activities because it is with these that the possibility of combination appears to be strongest.

4. The principal point stressed is that survey results must be in such a form that they not only provide an account of the situation at the time of the survey, but can also assist in making projections of future changes under given conditions. In achieving this a good structural analysis is the principal requirement, for which it may be necessary to accept some loss of accuracy in over-all estimates of aggregates. It is envisaged that the surveys considered would be carried out over reasonably wide areas and, if possible, on a national basis. Sample sizes would be in the region of 1,000 -3,000 households.

THE EXISTING OUTLOOK

FAO Draft Programme

5. In referring to the relationship between food consumption surveys and other enquiries, the FAO Draft Programme for Food Consumption Surveys, July 1961, points out that, in general, these surveys have a very specialized character and that it is difficult to obtain information on food consumption in sufficient detail by means of large multi-subject surveys.
6. Nevertheless, the programme points out that, because large scale food consumption surveys are major undertakings, it may be more economical to attempt to combine them with other enquiries, particularly in countries where communications are difficult. It also states that such a combination may be desirable because information on other aspects of the level of living may provide a means of examining the consistency of food consumption data, as well as a broader analysis of the economic situation of the households investigated.
7. In any case, the FAO programme recommends that, even when food consumption surveys are not combined with other enquiries, they should be co-ordinated with a view to examining the relationship between the various results. It further points out that food consumption surveys can conveniently be arranged to follow other operations, such as population and agricultural censuses, which provide frames and other basic data needed for their organization.
8. The FAO programme does not attempt to indicate any final conclusion on the extent to which food consumption surveys can be carried out in conjunction with other household enquiries, because this would be to a large extent dependent on the circumstances in individual countries. It is clear that there is some preference for the direct measurement of the food actually consumed by household, i.e., the dietary type of survey and, where such enquiries are carried out on a large scale, it is obviously better that they should be separate operations. On the other hand, when practical considerations impose limitations on the method of recording, it may be inferred that there is less objection to combination with other enquiries and that there may be considerable advantages in doing so.

FAO Manual

9. The FAO Manual on Household Food Consumption Surveys gives much the same comments as those in the FAO Programme, but is based on experience of dietary surveys in Latin America and envisages these enquiries as the principal means of collecting data. It is notable that, in the text, the terms 'food consumption surveys' and 'dietary surveys' are used on an interchangeable basis. However, the manual makes it clear that a considerable amount of socio-economic information is required for the interpretation of dietary data and describes at some length the methods by which it can be recorded. It should be noted in passing that the book is an excellent general guide to the practical aspects of planning field survey operations under difficult conditions.

Near-East Technical Meeting

10. The Near-East Technical Meeting on Food Consumption Surveys at Beirut in June 1962 also considered the question of relationship, but confined itself to agreeing that there may be certain advantages in combination with other enquiries. It suggested that data on quantities of food purchased or consumed could be obtained during household expenditure surveys at little extra cost. The advantage of this type of arrangement was that governments might be more willing to finance food consumption surveys if they were combined with enquiries relating to other topics of interest, such as cost-of-living.

FAO paper on Household Surveys

11. The FAO paper (E/CN.14/CAS/2 - ENQ/WP.2), prepared for the ECA Working Group of Consultants on Household Surveys at Addis Ababa in December 1961, takes the examination somewhat further and reaches a rather negative conclusion on the question of combination. It refers to the previous mentioned advantages of economy and simultaneous investigation of various components of the level of living, but then points out some objections which can arise.

12. If the combination takes the form of a multi-purpose survey, arrangements and questionnaires may be complicated, resulting in poor quality of information. The survey design may not be satisfactory for all the topics covered and different requirements in respect of recording may not be easy to reconcile.

13. Other points mentioned are the importance of seasonal variations in food consumption, which require particular attention to be paid to sampling over time and the tendency towards non-response in food consumption surveys, which calls for special care in approaching households.

14. The FAO paper concludes that, even when combined with general household surveys, food consumption surveys are practically a separate operation. Nevertheless, it is made clear that the paper is referring to the dietary type of survey and not to the simpler and more limited enquiries which often have to be used in practice.

15. It should be noted that the FAO paper pays particular attention to the general question of multi-purpose surveys, as did the meeting at which the paper was presented and it is relevant to note the conclusions here. The paper argues that the only justification for such surveys is at a very early stage of statistical development, when it may be necessary to obtain crude information on as many subjects as possible during the course of a single investigation. The meeting agreed that it was inadvisable to maintain multi-purpose surveys as a permanent tool of investigation, but that programmes of co-ordinated surveys should be the eventual aim. In these programmes it is possible to use sample designs, sizes, etc. which are appropriate to each subject investigated, while all operations remain fully co-ordinated. The same consideration must apply to any combination of food consumption and other surveys whenever the subjects investigated require different arrangements for a satisfactory level of efficiency.

Comments

16. From the various contributions referred to above, it would appear that the possibility of combining food consumption surveys with other enquiries is not strong. However, it should be noted that there are different methods of conducting food consumption surveys and this may not have been taken sufficiently into account. Only in the case of the FAO paper on household surveys is it made clear that a particular type of enquiry is envisaged, i.e., a detailed direct recording of consumption and this is regarded more as a future aim rather than a method which it is practicable to apply on a large scale immediately. Some further light can, perhaps, be thrown on the subject of relationships by making a more careful examination of objectives and technical characteristics.

SURVEY OBJECTIVES AND CHARACTERISTICS

General

17. The objectives of food consumption surveys are to assist in the formulation of policy for food production and distribution, which also includes specific topics such as nutritional education and to provide a means of estimating the effects of given policies. The principal requirements are information on patterns of consumption, plus additional data on the state of nutrition and health of the population. The more general types of household surveys have much the same objectives with respect to a broader economic field. They must, in addition, embrace all transactions concerning food as these constitute the major part of economic activity in under-developed countries. From a policy point of view it would, therefore, seem most undesirable to consider food consumption surveys as operations which are separate from all other enquiries. Even if recording is carried out on a separate basis, it is essential that all enquiries should form part of a single work programme if their results are to be effective. The examination of technical characteristics which follows suggests that, under given conditions, the methodological relationship is sufficiently strong for the collection of data on food consumption to be linked directly with that of more general economic information at the household level.

Household income

18. Probably the most important factor to be considered is household income, to which several references are made in the FAO programme. It is stated in section IB that forecasts of the effect of changing economic and social conditions are essential to economic and social development planning and that a basic tool often used for such forecasts is elasticity of demand derived from food consumption survey data.

19. Again, when discussing the breakdown of data in section IC, it is indicated that income should be included among the socio-economic classifications. All this suggests that income is considered an important factor in food consumption surveys and that a structural analysis is the aim as well as the estimation of aggregates for the various food items consumed.

20. However,, there is a slight difficulty in section IIC, where it is suggested that replacement of sample households during the surveys is dependent to a large extent on the degree of co-operation. The practical aspect of this problem is appreciated and, in urban areas with a high proportion of wage earners, the frequent replacement of households may not unduly affect the accuracy of the income records. However, in rural areas where most families obtain their income in numerous small amounts from the sale of crops and other household enterprises, it is usually necessary to follow them over long periods if a good assessment of individual household incomes is to be obtained.

21. It is strongly recommended that considerable emphasis should be placed on income as a factor in household food consumption surveys. This is consistent with the recommendations of the FAO programme, although it does imply that long periods of recording for individual households may sometimes be necessary. It is also consistent with current ideas on general household surveys, which are based on the belief that a structural analysis providing a good basis for projections should not be neglected in favour of more accurate estimates of aggregates.

22. Income is notoriously difficult to record accurately and, for satisfactory results, an adequate means of checking is essential. The most effective method is to examine the over-all balance on individual family budgets, which implies that budgets must be recorded in their complete form. In the case of food consumption surveys this requirement is not quite so alarming as it might appear because the food consumption data constitutes the greater part of the budget detail and other transactions can, if necessary, be recorded under fairly broad headings. These considerations point to the recommendation that, if a proper income classification of food consumption data is required, it is highly desirable that information on food transactions should be collected in conjunction with complete data on household budgets. There is the further point that such a procedure also has the advantage of providing a very good check on the accuracy of the food records.

23. The household income referred to in the preceding paragraphs should include the value of subsistence consumption and, for most surveys, classifications of data would be needed by both gross and net earned income. It should

be noted that income is the most important factor affecting all economic activity at the household level and that, in this respect, there is a strong link between food consumption surveys and other enquiries.

Seasonal variations

24. The FAO programme attaches considerable importance to the measurement of seasonal changes in food consumption. This problem presents no difficulty in cases where households have to be followed for long periods for income recording. Even when households are replaced at frequent intervals during the course of a continuous survey, a good estimate of seasonal changes is usually obtained and the consistency of the results can be checked by comparison between the successive groups of households included in the sample. It is only when recording is limited to isolated short periods during the course of a year that sampling over time becomes a factor requiring careful attention and the best recording periods for food consumption might possibly be different from those for other types of information. In general, however, these considerations apply equally to food consumption and economic household surveys.

Recording methods

25. The FAO programme distinguishes three methods of recording food consumption data: interviewing, food accounts and actual measurement of food. No stress is placed on the first of these and it will not be discussed here as it seems unlikely that it could be applied with any accuracy under African conditions. By the food account method a record is kept of the quantity and value of all food items purchased or otherwise obtained during the survey period, while account is taken also of the food already in the home at the beginning and end of the survey. The third method, actual measurement of food, is concerned with quantities consumed.

26. It will be noted that the food accounts method involves much the same kind of recording as that used in a normal household budget survey and the latter also has the advantage of showing more complete detail on the production of household farms, sales, etc. Daily visits at which enumerators complete the records on the spot are usually satisfactory for obtaining

reasonably complete information by this method. ^{1/} Stocks can also be recorded without difficulty, although these are less important if the recording period for each household is long.

27. It is only in the case of actual measurement of food consumed that visits might be needed two or three times a day and the procedure is very expensive. This is the method that would be used in a dietary survey and it is usual to find that such enquiries cover only limited population groups or areas. Direct records of food consumption are a little unusual in general household surveys, but they are being maintained in one enquiry now in progress, in addition to the normal records of items purchased or otherwise obtained.

28. Because of the expense of the dietary survey method it is probably better that it should be used in conjunction with food accounts records. It has already been shown that the latter can be combined with general household surveys without difficulty and, on this basis, a wide coverage can be achieved. If the dietary survey is carried out for a sub-sample of households included in the main enquiry, ^{2/} the arrangement is reasonably economical, while the dietary results are directly related to and serve to amplify those obtained from the remainder of the survey.

29. Of the factors so far considered, recording is the only one where any difference has been noted between food consumption and more general household surveys and this difference arises only when a direct recording of consumption is required. It is suggested that most countries embarking on large scale enquiries will wish to adopt the food account method as the basic tool of investigation for economy reasons and, if this is so, there is no lack of

^{1/} It should be noted that, in large scale surveys, it is usual to effect an economy in this procedure by maintaining continuous records of receipts, payments, production, etc. under fairly broad headings by means of weekly or even fortnightly visits. Daily records are then confined to a sub-sample which is changed at frequent intervals and serves to check the bias in the records from the main sample as well as to amplify the data.

^{2/} This would probably need to be a smaller sub-sample than that referred to in footnote ^{1/} to paragraph 26.

correspondence between the requirements for food consumption and other surveys. Even dietary records are not ruled out if the method of combination described above is adopted.

Non-response

30. It has been said that non-response is a particularly important problem in the case of food consumption surveys, resulting in the need for very good enumerators and a specially adapted method of approach to households. This would certainly be true in the case of enquiries involving frequent measurement of the food consumed, but it is difficult to believe that the position would be any different from that of a general household survey if the food account method is adopted. It has already been shown that, in the latter case, the methods of recording are the same and that the general household survey does, in fact, cover a much wider range of information. If dietary records are maintained for a sub-sample of households, as suggested in paragraph 28, the possibilities of supervision are greatly improved and the additional care needed in using this method can be given.

Coverage

31. Coverage refers to both geographical area and population groups. The FAO programme recommends that food consumption surveys should, if possible, be carried out on a national scale, but that, in any case, they should cover reasonably wide areas. It also indicates the need for distinguishing between the principal socio-economic groups, eg., urban/rural, farming/non-farming. Exactly the same considerations apply to household surveys of a general economic nature, so again it would seem that there is little valid reason for not combining the two types of enquiry.

Organization of field work

32. Difficulties in transport and other communications in African countries usually make it desirable for the location of individual enumerators to be changed as little as possible during the course of a survey. Under these circumstances it sometimes happens that the basic recording for a particular enquiry does not keep them fully occupied and it is then possible to collect additional data provided the sample design is satisfactory for this purpose.

This is suggested as a further factor in favour of combining food consumption and other surveys.

CONCLUSIONS

33. In the preceding paragraphs an attempt has been made to examine some of the principal ways in which food consumption surveys might differ from more general household enquiries. Probably the two most important factors are household income and recording method. There appears to be little difficulty in reconciling survey requirements in respect of other factors.

34. It has been shown that, where a structural investigation is required, which is usually the case when planning and projections are involved, results for individual households must be classified by annual income, which, of course, does not preclude investigation in terms of other socio-economic characteristics. Food consumption surveys and general economic household enquiries are equally affected by this requirement and, if income is to be accorded the importance suggested, it should, for the sake of accuracy, be recorded within the context of the complete household budget.

35. Under these circumstances it is possible to consider food consumption surveys in much the same light as general household surveys of an economic nature and design requirements are the same, provided there is similarity in recording methods.

36. Recording for both types of enquiry can be the same if the food accounts method is used in respect of food data. In a combination of this sort actual measurement of food consumed can also be incorporated provided the records are limited to a sub-sample of the households in the main part of the survey and this arrangement has the advantage of ensuring that a direct relationship is maintained between the detailed dietary data and the more general information on food consumption and economic activities.

37. From the above it is concluded that there is every possibility of combining food consumption and general household surveys in the form of single projects and that failure to do this would result in a waste of resources. It should be noted that the combination suggested does not, in any sense, result in a multi-purpose survey and does not suffer from the

disadvantages of this type of arrangement. It simply involves a recording of family budgets, together with details of food quantities and such other supporting information as may be necessary. All the factors are closely related and require simultaneous investigation.

38. The discussion in this paper has been limited to the relationship between food consumption surveys and surveys designed for the over-all investigation of other economic characteristics and activities of households because these are the two types of enquiry which can be conveniently combined. There are, of course, many other investigations concerned with households and other units and, even though it may not be possible to establish any direct methodological relationship in these cases, it should be borne in mind that full use of results for policy-making purposes can be made only if enquiries of all types are co-ordinated through a general programme of work.
