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NATIONAL INCOME ACCOUNTING IN COUNTRIES AT A VERY EARLY STAGE
OF ECONOMIC DEVELOPMENT

(Memorandum prepared by the Secretary-General)

I. Introduction

1. In response to the wishes of the Statistical Commission the Secretary-General has kept in mind the needs of the under-developed countries in its programme of work in the national accounting field. In addition to following developments closely in these countries, the Secretariat has, on various occasions, been able to give practical assistance through the medium of the Technical Assistance Programme, by participation in regional conferences, by correspondence and consultation with officials, etc. Furthermore, underlying concepts and estimating methods have been under review for some time in order to uncover and clear up theoretical and practical problems peculiar to these countries.

2. More recently the Secretary-General has been directing its attention to a group of countries at a very early stage in their development - e.g. many of the countries of Africa - in which national income studies are still in their infancy. While of course no clear dividing line can be drawn between these countries and other under-developed countries, it seems useful to attempt to make such a distinction in view of the rather unique problems to which the economic and social arrangements typical of these countries give rise in national income work. Even more than in most under-developed countries, farming, hunting and grazing predominate here. Social arrangements for carrying on these activities vary considerably, and frequently include various communal forms of agriculture

(as practised by tribes, village clans, and so on), nomadic forms (as in Libya, where whole communities move about in search of rainfall), etc. Over large areas food may be grown or cattle raised not for sale but mainly to satisfy directly the needs of members of the family or tribe, even if any surplus will as a rule be sold or bartered to obtain essential items not locally produced. Communications, especially in inland communities, are apt to be primitive or almost non-existent, even by comparison with many of the under-developed countries of Asia and Latin America. The state of communications leaves whole communities effectively isolated, keeping down trade and the movement of persons. In certain countries where these conditions obtain widely there exist nevertheless more modern forms of economic organization too, such as estate or plantation agriculture (as in Liberia) and large-scale mining enterprises (as in Northern Rhodesia) producing for world markets. In some of these countries different population groups with radically disparate economic standards exist side by side.

3. While it is difficult to generalize about the class of countries which concerns us here, even this brief description of certain leading characteristics suffices to suggest the nature of the more important problems arising in the compilation of the national income accounts: e.g. problems having to do with the large volume of subsistence output, the absence of a definite network of market interrelationships making for a national price system, and the existence of more or less self-sufficient tribal societies or other simple communities alongside highly organized economic sectors. Some of these matters were discussed recently by a Working Group on National Income at the October 1957 meetings of the Inter-African Statistical Conference held at Lourenço Marques, Mozambique in which the United Nations participated. It is expected that further study will be devoted to the subject by this Working Group or other bodies, and that the further co-operation of the Statistical Office of the United Nations will be invited.

4. The object of this paper is to examine in a preliminary way some of the main obstacles to the development of national income statistics in simple economies, to explore the extent to which opinion has crystallized in regard to some of the leading problems, and to assess the applicability of the relevant recommendations of the United Nations under the conditions prevailing in these countries. Unlike the situation in the more advanced countries where theoretical concepts have in

general been sufficiently refined for practical purposes and the main problems are of a statistical nature, the theoretical problems here still hold the centre of the stage. This is not to say that the purely statistical problems are of secondary importance, but only that broader agreement on theoretical issues must precede or at least take place in step with the solution of the practical statistical problems involved in the compilation of national income statistics.

II. The problem of subsistence production

5. The most important of the theoretical issues arise out of the dominant role of subsistence production, and include the crucial questions as to how much of the untraded output is to be taken into account and the basis for valuing it. As regards the extent to which subsistence output is to be included in national income there exists a broad range of possibilities. It is possible, for example, to confine national income more or less to the total of marketed output or the money incomes arising therefrom, a procedure which amounts roughly to a decision to exclude from consideration the native subsistence sector (how roughly would depend on the importance of production for the market in the "subsistence sector" and of production for own consumption in the part of the economy dominated by money transactions). At the other end of the scale, a money value could be placed on all goods and services, whether or not traded, provided they were deemed to be economic in some defined sense.

6. In between these extreme positions various possibilities could be considered. The recommendation of the United Nations in regard to subsistence production requires that all primary production whether exchanged or not be included in national income, while the untraded part of non-primary production should be included only where such production is performed by producers within their own trades.^{1/} Primary production is defined as comprising agriculture, forestry, hunting, fishing, mining and quarrying; non-primary production refers to the transformation and distribution of tangible commodities as well as the rendering

^{1/} See A System of National Accounts and Supporting Tables, Studies in Methods, Series F, No. 2, United Nations, 1953, p. 5.

of services. This principle aims at allowing as broad a picture of production and income to be built up as is consistent with the statistical information generally available. Since in the simpler types of communities the welfare aspect of national income is of particular interest, a strong case can be made out for having such a comprehensive measure of production.^{2/}

7. Actually, it would seem that the statistical resources required for ensuring relatively comprehensive coverage need not be appreciably greater than where the coverage is more limited if the possibility of collecting information through surveys is borne in mind. Indeed, surveys would seem to be the most economical and efficient way of obtaining useful data on economic (and social) facets of life. Such surveys would also facilitate the testing of concepts (e.g., do the conventional notions of "family", "producer", etc. make sense in the more "primitive" societies?) and the modification of these concepts so that they can usefully be applied. At the same time, the successful execution of surveys in circumstances where part of the population is nomadic or semi-nomadic, where communications are rudimentary, where respondents are wont to be evasive, where illiteracy is high, and so on is a matter calling for sound judgement, an imaginative approach and a good deal of experimentation. These problems are, however, at least equally formidable as regards the taking of a census, while the important advantages of flexibility and economy inherent in the survey approach are foregone.

8. It is nevertheless necessary to recognize that in certain countries (Kenya, for example) there is a well-defined barrier between tribal life and the market economy. While in the more advanced countries farm families may consume their own produce, practically all their members also participate in the market economy, and the self-produced consumption goods are not different in kind from what are sold. Conditions are quite different in the tribal communities, governed by tradition. The whole outlook and scale of values is different from

^{2/} See, e.g., Phyllis Deane, Colonial Social Accounting, page 224. "Within the villages the production of goods for personal and family consumption is the main object of economic activity. Production of goods for exchange is the part-time activity of a small proportion of the population and for the remainder the sale of an occasional small surplus is their contribution to the traded goods and services."

that of persons in the market economy; and, while in their lifetime the majority of male members of tribes may have some contact with the market economy, at any given time the number of tribal members who sell their labour or their produce for money is very small. Cattle, which in the market economy are reared for the production of beef and dairy produce, and are therefore a means towards an end, are, in themselves, usually a final product in tribal communities. It is quite evident from considerations of this kind that the inclusion of tribal production with production for the market in a single total poses problems which are not confined to statistical difficulties of ascertainment. It may even legitimately be argued that for certain studies, e.g. relating to inflation, it may be preferable to confine the accounts to the money economy.

9. Examination of the practices followed in most countries, including the majority of under-developed countries, suggests that these countries conform fairly closely to the United Nations recommendation in their treatment of subsistence output. As regards the countries at a still earlier stage of economic development it would, however, appear that application of this principle would be more difficult. For, to the extent that a large amount of multi-purpose production takes place within wide family units or self-sufficient, economically integrated villages, the significance of the International Standard Industrial Classification (or of national industrial classifications) becomes more limited; and, as a result, the proposed rule for the treatment of untraded non-primary output breaks down where such multi-purpose production units are concerned. In a report prepared by the United Kingdom Colonial Office for the Inter-African Statistical Conference to which reference was made above, this problem of the classification of mixed production units as either within primary or non-primary production for purposes of applying the United Nations recommendations is briefly explored, and the suggestion is made that primary trades might be interpreted in this particular context to cover the provision of food, fuel, clothing and shelter. To place such an interpretation on primary production would of course really amount to the framing of a new criterion governing the treatment of subsistence production. A rather different possibility worth examining would be to define national income as including the whole of the production of tangible commodities. Such a rule would lead substantially to the same result without the need to adapt existing industry classifications to the

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special conditions prevailing. The services of owner-occupied dwellings could still be included (at least to the extent that dwellings were sufficiently durable to warrant an annual value being placed on their services) by analogy with imputations already universally made. The rule would also permit the inclusion of durable farm and community improvements, which would be an advantage where such construction was of sufficient importance to warrant attention. Again, sample surveys could furnish the required data for estimates, provided information on the hours of work spent on such improvements was collected. The labour involved could be valued at prevailing local wage rates if such a basis of valuation seemed suitable.

III. Valuation problems and the price system

10. Aside from the question of the extent to which production for own use is to be covered, the problem of valuation has to be faced, a problem which is connected in turn with the basically non-monetary character of this type of economy. The absence of integrated markets connecting different regions (largely due to difficulties of communication) and making for the equalization of product prices and factor costs creates difficulties in valuing output, particularly the untraded output. To the extent that regional price differentials are not large and appropriate price statistics for the various regions and different seasons of the year are available, no serious problem arises. But while this may be the case for major or cash crops, prices of minor crops in which only a small amount of local trading takes place may be subject to rather large variations. The practice in such cases is usually to value the traded output in so far as possible at actual local prices and to value the subsistence output by reference to the traded output, i.e. at prices ruling in the village or local market; where only prices at a more remote spot are available some deduction for transport charges is often made to avoid imputing a value for non-existent transport costs. As regards those items which are rarely sold for cash but which may be bartered against other commodities for which a price can be established, the rates of exchange can of course serve for extending the price system to cover the bartered items.

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11. The objection is sometimes made that the use of local prices for products in which trade is negligible affords a tenuous basis for valuing output. It is difficult to see what the practical alternatives are, however, to using the existing price system, notwithstanding the drawbacks to the calculation of meaningful national aggregates. Indeed, the more general criticism that the compilation of national value aggregates can only be of limited significance in a situation in which the unit of national currency does not serve as a nation-wide standard of value is unanswerable. Depending on the scope of the non-market economy in each country, qualifications of a more or less serious kind must necessarily attach to the results. It may even be argued that the qualifications on this score are sufficiently grave in some instances to prevent the compilation of useful national income statistics pending the development of the economy.

12. The valuation of capital improvements on farms, within villages, etc. also presents great difficulties. Valuation of these assets by reference to identical work carried out on a commercial basis is not usually feasible. The procedure that has been advocated by the United Nations, namely, that the assets be valued at actual costs, is one possible solution. Where, however, such work is commonly undertaken by unpaid labour and the local materials at hand are used, it is clear that a negligible value will be obtained. If the construction of this kind is important it may be felt that a "fuller" measure of the value of the construction is needed. The solution may then be to place a value on the unpaid labour using wage rates in the vicinity as a basis (such a valuation basis is consistent with the use of local prices to evaluate the output of subsistence food production). The ingredients of such an estimate would therefore be the number of hours spent on making capital improvements, local wage rates, and the value of materials used (which may well be nil), data which could be collected as part of a sample survey.^{3/} Needless to say, the estimated value of such own-account construction will always be rough, and where an estimate is attempted it would be well to show the value of such construction separately.

^{3/} The problem of own-account rural construction is also discussed in another document before the Commission. See E/CN.3/227, section VI.

While a number of under-developed countries, including one or two African countries, have in the past prepared estimates along these lines, as a rule little or no account is taken of rural improvements in the countries with which the paper is concerned.^{4/}

IV. Estimation in real terms

13. The Secretary-General is pleased to note that in a number of countries of the type under consideration an attempt has been made to deal with national income in terms of constant prices.^{5/} In view of the widespread deficiencies of the price statistics which are involved in measuring current values, there are indeed good reasons for believing that output can be measured more accurately in real terms than at current prices. Furthermore, considering the magnitude of the price changes in many cases and the interest in using statistics of national income as a rough guide to changes in living standards, constant price series can provide a most important adjunct to the statistics in current value terms.

14. To the extent that national income in current prices is calculated by applying prices to output (as is commonly done in estimating major parts of national product by industry composition and of national expenditure), the materials for constant price estimates are already available. In addition to price deflation of current values, therefore, the possibility of combining physical output data using base year prices as weights merits careful study. The advantages of such an approach in these countries would be several. In the first place, price indexes referring simply to consumers' prices are inadequate for deflating the whole of national income (although appropriate for reducing private consumption expenditure to constant price terms); further, the fact that

^{4/} Thus, official estimates prepared for Southern Rhodesia have included in national income the value of own-account construction "valued at the price an African might pay another African for work done". See The National Income and Social Accounts of Southern Rhodesia, 1946-51, Salisbury, May 1952.

^{5/} E.g., the national income studies for the Rhodesias show deflated indexes of national income or expenditure (using the consumers' price index as deflator), while the Kenya and Uganda studies include the official cost of living index of the principal cities to enable readers to gauge the extent of price movements.

such indexes often refer only to prices in one or a small number of big cities limits rather drastically their significance as deflators of national aggregates. Secondly, the existence of output statistics for key economic activities such as agriculture and mining provides a reasonably sound basis for measuring variations in output directly. Thirdly, the fact that producers' durable equipment (as well as certain consumers' goods) are mainly imported means that foreign trade statistics may be relied upon to measure real changes in the investment in machinery and equipment (and in the expenditure on certain categories of consumers' goods). In short, considering the difficulties inherent (a) in valuing production in current money terms, (b) in establishing suitable price deflators, it is likely that better-grounded real income estimates can be established by the use of quantum series relating to output, imports, etc. While prices still enter into the calculations, their role in this connexion is limited to providing a weighting pattern and the likelihood of obtaining useful results is accordingly improved. Further, one need have regard to the difficult problem of subsistence output price interrelationships only at intervals of years.^{6/}

V. The design of a suitable national accounting framework

15. The question of whether a system of national accounts should be employed in these countries as a basis for systematic work in the national income field is an important one. The alternative to the use of such a system of accounts is the preparation of separate tables focussing attention mainly on total national income or product and certain main components or aspects (varying usually according to the methods of estimation employed), but with little emphasis on the interrelations of economic transactions. It is today an accepted fact that the co-ordinated picture of the economy provided by a system of accounts forms a more convenient and useful basis for economic reasoning. To the extent, then, that use is made of national income statistics, the presentation of the

^{6/} The subject of price and quantity indexes in national income accounting in general is dealt with separately in Commission documents, E/CN.3/L.46 and E/CN.3/231.

statistics in an integrated accounting framework would have advantages.^{7/} The pertinent issues are, therefore, whether most of the countries which concern us here are in a position to prepare estimates along these lines and, if so, what general form the accounts should take.

16. It is recognized by the Secretary-General that the standard system of national accounts which it has put forward can only be regarded by many countries as a goal towards which to work rather than as a structure which can at once be taken over in every detail. The fact, however, that the United Nations system of accounts can readily be simplified without impairing the basic definitions and concepts on which the system rests implies that countries may begin with a simple model of the accounts, a model which can in time be elaborated along the lines of the fuller system.^{8/}

17. A simple system of this kind was drawn up by the Statistical Office for the consideration of Asian countries attending the Third Regional Conference of Statisticians (ECAFE) in March 1954 and met with general approval.^{9/} The Secretary-General is of the opinion that a system along these lines might advantageously be considered by countries still at a very early stage of development, although it is not suggested that the precise form of the accounts as developed necessarily be followed. Thus, the useful distinctions presently made in most African studies between money and subsistence income (or expenditure) and between African and European incomes could readily be carried over into the accounts. Indeed, to the extent that changes in these proportions are in themselves valuable clues to the level and trend of development such subdivisions of items in the accounts would add positive content. Certain items in the

^{7/} The evolution of the national income statistics of the Rhodesias in this direction from modest beginnings as a result of actual needs and uses is described in the communication of the United Kingdom Colonial Office submitted to the Inter-African Statistical Conference to which reference has been made.

^{8/} This also holds true for the supporting tables, since these can be filled out as far as the available data will allow.

^{9/} This simpler system is described in document E/CN.11/STAT/Conf.3/2.

accounts which may be of negligible importance - e.g. consumers' debt interest - may readily be suppressed without impairing the usefulness of the accounts in any way. Certain other items which may be nearly impossible to estimate may have to be ignored or represented only by a "notional" figure or a partial estimate (e.g. the change in stocks). The customary classification of taxes as between direct and indirect taxes may require to be changed to a criterion more applicable to fiscal practices in these countries, e.g. as regards the export duties and land taxes which are often such important sources of government revenue. It has been argued that export duties imposed on a basic commodity by a country controlling only a small share of the world market and which are thus borne almost fully by the domestic producers are in effect a direct tax on their incomes. The position may also be taken that an agricultural land tax not proportional to the quantity of output produced on the land is more akin to a direct tax on farmers' incomes than an indirect tax.^{10/} As regards the international remittances of migrants recruited to work in mines, on the land, etc., practical problems of considerable importance may arise in some countries which may have to be resolved in relation to all the factors involved. On a somewhat different level, it may be desirable to regroup sets of transactions in certain accounts: for example, the left side of the National Income Account might be reorganized or simplified so that the income flows conform more closely to actual institutional arrangements. Further thought and experimentation are thus in order before a suitably modified simple system of accounts can be developed.

^{10/} These questions are briefly examined in paras. 60-61 and 88 of "Report to the Commission (Eleventh Session) of the Third Regional Conference of Statisticians, ECAFE", doc. E/CN.11/390.

VI. Conclusion

18. In view of the growing interest in the preparation of national income statistics in countries which are still at a very early stage in their development, the Statistical Commission may wish to recommend that the Secretary-General undertake the development of methods for the compilation of national accounts in these countries having in mind their need for such data for planning economic and social improvements. Since work in the national income field which they already have under way or are planning to undertake may well be facilitated by the clarification of problems of special importance, by the development and testing of a simple framework of accounts appropriate to their stage of development and other measures, these questions should be systematically explored, both in relation with the economic studies which the Secretary-General may arrange to undertake and, on a more technical level, by further study carried out in close consultation with the countries concerned. These proposals are particularly applicable to the countries of Africa where the standards to be adopted should be fully consonant with statistical resources and actual needs.
