THE UNITED NATIONS SYSTEM OF NATIONAL ACCOUNTS IN THE MIDDLE EAST

BY R. S. PORTER[1]

Ministry of Overseas Development, London

After an introduction setting out the general state of work on the national accounts in the Middle East the author considers the principal uses of national accounts statistics in less developed countries. The first group of uses discussed is in connexion with the measurement of growth and the making of international comparisons. The author is of the opinion that in many cases the primary statistical series are so weak that the fact they they are combined together into a series called national income or gross domestic product lends to them a significance which they do not really possess. The real problem is to improve the quality of the primary series.

A second use of national accounts statistics is in connexion with fiscal and budgetary policy. In the statistically advanced countries this is one of the most important uses but in the less developed countries budgetary policy has not yet reached a level of sophistication which would call for the use of national accounts data. Moreover, the time factor involved in assembling accurate national accounts estimates militates against their effective use for short term forecasting.

The author considers that the most important use for national accounts statistics is to provide a framework for development planning. The United Nations system is not altogether appropriate for this purpose. It grew up primarily as a system for recording income flows but in development planning one is concerned equally with commodity flows with a great deal of attention being focussed upon intermediate products. The proposals of the working group of African Statisticians for an adaptation of the S.N.A. to African countries represents a most important advance in this respect.

In the final section of the paper the author advocates a broader definition of capital formation to include developmental expenditure which is not properly defined as fixed capital formation. Education expenditure is cited as an example. It is suggested that in the national accounts it would be desirable to operate with gross concepts. However, the growth of the capital stock is obviously important in less developed countries and it is suggested that statistical techniques be devised to measure it directly wherever possible. Finally, attention is drawn to the ambiguities and weaknesses in the concept of residence as used at present in the S.N.A.

1. The opinions expressed in this paper are the sole responsibility of the author and do not necessarily reflect either those of the Ministry of Overseas Development or those of the various statistical Departments with whom he has worked in the course of his career in the Middle East.

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Introduction

This paper is concerned with some of the problems involved in the development of national accounts statistics in Middle East countries with which the author has had first hand experience, Jordan, Syria, Iraq, Lebanon and Cyprus. It is hoped, however, that the conclusions may be of some general interest. In all of these countries attempts have been made to calculate the National Income or Gross Domestic Product on a regular basis. Estimates of the Industrial Origin of the Gross Domestic Product or the Net National Product exist for all the countries mentioned above, either as a result of the work of statistical offices, or through the efforts of private individuals with a greater or less degree of co-operation from the authorities. In Iraq the first systematic attempts at calculating the national income were made by Dr. K. G. Fenelon who produced a series based on expenditure estimates covering the years 1950–56.[2] He was followed by Dr. Khaireddin Hassib who has produced a series based on the value added approach covering the years 1950–1963 at current and constant prices.[3] In the Lebanon the pioneer work was carried out by a group of workers at the American University of Beirut under the direction of Dr. A. Y. Badre.[4] Here again the value added approach was adopted yielding a national income series covering the years 1948–50 which has been extended on the basis of incomplete statistics to later years.[5] In Cyprus estimates of the gross domestic product by industrial origin, expenditure on gross domestic product, and a number of tables relating to capital formation are published in the Annual Economic Reports produced by the Department of Statistics and Research.[6] For the 1964 Report the series were extensively revised back to 1958. In Syria the Directorate General of Statistics in the Ministry of Planning produces annual estimates of the industrial origin of the net national product at constant (1956) prices which are published in the Annual Statistical Yearbooks. These estimates are based on a detailed study of the Syrian economy carried out in 1956 which are kept up to date using various statistical indicators derived from the published statistical series.

In none of these cases would it be proper to speak of a system of national accounts. All that one has, for the most part, is one-half of the domestic product account. The resulting series can be regarded, therefore, as production indicators of varying degrees of reliability. Only in the case of Jordan has a systematic attempt been made to develop a system of national accounts following more or less closely the United Nations pattern. It has now been possible to compile all the principal tables of the S.N.A. save for that relating to the National Income on a comparable basis for the years 1959–64. The form of the accounts and

2. K. G. Fenelon. *Iraq, National Income and Expenditure 1950–56.* Baghdad, 1958.
3. Khaireddin Hassib. *National Income of Iraq.* R.I.I.A. 1964. Address given to Economics Seminar of American University of Beirut, 1964.
4. A. Y. Badre. *National Income of Lebanon*, Middle East Economic Papers, American University of Beirut, 1956.
5. République Libanaise, Ministère du Plan, Besoins et Possibilités de Développement du Liban, Beirut, 1964, p. 79.
6. Republic of Cyprus, Department of Statistics and Research, *Economic Report*, 1963. Nicosia. 1964.

supporting tables is not identical with the SNA but the departures, mainly in the various capital accounts, are of minor importance.[7]

The major obstacle to the development of national accounts statistics is lack of primary statistical data. To the extent that work on the national accounts provides an incentive to statistical departments to improve and extend their primary statistical series, it is well justified irrespective of the uses to which the accounts themselves are put. This has happened in Jordan where the range of basic production statistics has been considerably enlarged and reliability improved. All too often, however, the need to produce national income statistics is felt to be pressing in spite of the fact that the primary series are either incomplete or unreliable. Instead of concentrating on improving and enlarging the primary series, which is a costly and time consuming operation, statisticians attempt to fill the gaps in the data with heroic assumptions, producing series which do little more than reflect those assumptions.

The development of a system of national accounts involves far more than the development of primary statistical series, though this is, of course, the essential basis for all national accounting work. A great deal of computation is needed to organize and adapt the material. For example, the building up of the expenditure side of the gross domestic product account is most fruitfully tackled through commodity flow techniques which involve extensive and intricate computations including a detailed analysis of the foreign trade statistics. This necessarily involves the expenditure of a great number of relatively skilled man-hours which most statistical departments in the region can ill afford. It is also the case that the estimation of certain elements in the national accounts, such as the consumption of fixed capital or the imputed rents of owner-occupied dwellings, involves the collection of primary statistical data and extensive computations which would not necessarily have a high degree of priority in a programme for developing basic statistics.

In these circumstances it is reasonable to ask whether the labour involved in developing an elaborate system of national accounts is justified in terms of the uses which will be made of it. Might it not be better to use the resources to devote more effort to improving the primary statistical series and presenting them in a fashion which will enable them to be of direct use to policy makers? The first question to be considered, therefore, is the use which is made of national accounts statistics for it is only when we have a clear idea of the requirements of policy makers that we can begin to consider the most useful form of the national accounts.

THE USES OF NATIONAL ACCOUNTS STATISTICS IN LESS DEVELOPED COUNTRIES

The Measurement of Growth and International Comparisons

In the Middle East, as in many other parts of the less developed world, the normal approach to national accounts statistics is through the industrial origin

7. *The Jordan National Accounts 1959–63.* Statistics Department, Amman, 1965.

of the gross domestic product. It is normally not practicable to arrive at the national income through the techniques of aggregating incomes because data on incomes are among the most difficult to collect in less developed countries. Similarly, direct estimates of private consumption expenditure are difficult and perhaps impossible to make accurately. It is doubtful, for example, whether this problem can be effectively tackled through household expenditure studies even though one country in the Middle East is undertaking a most elaborate and costly series of enquiries with this end in view. Thus one is left with the traditional "value added" approach and in most cases work on the national accounts stops at this point.

Historical series showing the movements of the various industrial sectors entering into the gross domestic product are undoubtedly valuable in showing changes in the structure of the economy, and they also provide what might be described as general production indexes. The use which is generally made of series of this character is to compute the growth of per capita incomes and to make international comparisons both with respect to absolute levels and rates of growth. Some use is sometimes made of the series for development planning. For example, in one Middle East country far reaching recommendations with respect to economic policy have largely been based on an analysis of the contribution of the various industrial sectors to the national income in spite of the fact that the basic data are, to say the least, somewhat unreliable.

There is a danger, however, that the combination of the various production series into an aggregate called either the national income or the gross domestic product will lend them an authority which is not really justified in terms of the quality of the primary series. There is a certain "mystique" about the term "national income" which captures the imagination of politicians and administrators and the estimates are often used in a fashion which is completely unjustifiable. In many cases all the industrial sectors are not estimated independently. This is understandable for the estimation of value added in trade and transport is an extremely difficult undertaking on an annual basis, involving extensive sample surveys among a class of respondents who are notoriously suspicious of all government agencies and who are thus prone to supply inaccurate or incomplete information. A usual technique, therefore, is to establish a base year figure on the basis of censuses or similar large scale enquiries and then to assume that the movements are proportionate to the movements of other series which are easier to compile. In such cases the use of the statistics for analytical purposes is immediately reduced for one is making assumptions concerning the constancy of trade margins and transport costs which may be legitimate for short periods but which may be very far from correct over periods of five years or more. Thus the production index derived from the gross domestic product or the national income may well be a less reliable indicator of changes in the economy than the components which enter into it.

The situation becomes far worse when *per capita* series are computed. Vital statistics in the Middle East are notoriously inaccurate and provide highly unreliable information concerning the rate of population growth, even in countries which have regular censuses. In these circumstances statistics purporting to

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show the rate of growth in *per capita* incomes can have very little meaning. International comparisons are similarly beset with pitfalls and have very little practical value save as propaganda exercises.

An obvious answer to these problems would be to improve the quality of the primary statistics. If the compilation of national income series was really a stimulus in this direction this activity would merit the attention which it now receives. All too often, however, the compilation of national income series leads to a diversion of manpower into what are essentially "desk exercises" to the detriment of efforts to improve the basic series. It requires a very strong minded Director of Statistics to refuse to produce national income series until he has succeeded in obtaining the funds needed to improve the quality of the primary series, and the United Nations and other agencies would be doing a great service to the cause of statistics if they laid greater emphasis on the preparation of reliable and timely production statistics as an essential prelude to the compilation of national accounts. Indeed if the uses of the national accounts statistics were confined to the ones discussed here a good case could be made for not proceeding with the national accounts at all. This would be wrong conclusion, however, for the statistics, imperfect as they are, have uses other than those described above and it is those which we must now consider.

Fiscal and Budgetary Policy

In statistically developed countries national accounts data are extensively used in the formulation of annual budgetary and fiscal policies. In essence this involves forecasting the way in which the principal aggregates can be expected to change in the course of the financial year in the absences of changes in tax rates and government expenditures. An assessment also has to be made of the probable effects of changes in taxation, government expenditure or credit policy upon the principal aggregates.

In the Middle East countries covered by this paper it is difficult to conceive that national accounts data will be used for this purpose in the foreseeable future. Budgetary policy is relatively unsophisticated in the sense that it is not generally regarded as a means of controlling the level of economic activity. The aim is normally a balanced budget and the internal borrowing powers of governments are often strictly limited by legislation. This is probably one of the reasons why there has been a remarkable absence of inflation in the area.

Even if governments did wish to use national accounts data in the formulation of short term budgetary policies there are severe practical limitations to the possibilities in this direction. If the accounts are to be of any use they must be sufficiently accurate so that the changes which one might hope to effect through budgetary policy are greater than the margin of error of the estimates and the forecasts. Even in statistically developed countries this is often not the case but given the primitive nature of much of the statistical data it is most unlikely that this would be so in less developed countries. The problem is made all the more difficult by virtue of the fact that it takes a considerable time to produce reliable estimates. In Jordan, for example, where a serious effort is made to produce

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reliable national accounts, it takes at present some eighteen months to compile and publish the estimates for any year. This is an unacceptably long delay arising to some extent from the problems involved in getting the system established. However, if the accounts are to be of use to those responsible for preparing the annual budgets they must be available not more than four to six weeks after the end of the calendar year. This is an impossibly difficult task when much of the primary data has to be assembled through extensive field enquiries. It could, no doubt, be solved by employing a very large staff of field and clerical workers and the extensive use of sampling techniques. But it could well be difficult to keep the staff employed for the rest of the year and the use of small samples must necessarily reduce the accuracy of the results.

An essential element in the use of the national accounts for short term budgetary purposes is the possibility of making reasonably reliable forecasts of the way the economy will develop in the absence of changes of policy. In the Middle East countries with which we are concerned this is very difficult indeed. A considerable proportion of the gross domestic product is derived from rain-fed agriculture the production of which varies enormously from year to year following fluctuations both in the total amount of rain in the growing season and its distribution both geographically and through time. Reliable crop forecasts cannot be made much before the end of April and this is much too late for those who have to prepare the budget. Indeed, for this reason alone it might be desirable to start the fiscal year in July rather than April.

It would thus be unreasonable to expect any extensive use to be made of national accounts statistics for short term budgetary planning until the techniques of collecting and analysing the primary statistics have improved sufficiently to enable reliable estimates of the principal aggregates to be made much more rapidly than is possible at present. Whether or not the considerable expenditure of money and skilled manpower required to achieve this is justified will depend upon the view which is taken of the applicability of highly sophisticated principles of public finance to the conditions of less developed countries.

Development Planning

Practically all less developed countries have now adopted some form of development planning. Development plans range from documents which are not much more than lists of investment projects with little attempt to relate one to another, to highly sophisticated attempts at economic forecasting which may or may not be related to reality. The nature of development planning is often misunderstood and the misuse of the techniques involved is responsible for much misery and suffering in less developed countries. Essentially it is an exercise in exploring the implications of alternative assumptions with regard to capital formation and its distribution both between industrial sectors and through time. If it is to be realistic it must be subjected to analytic and statistical discipline. One must be able to estimate within reasonable limits the resources which can be devoted to capital formation without subjecting the economy to intoler-

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able strains or acute balance of payments crises. One must be able to assess with a reasonable degree of accuracy the effects of capital formation on the various sectors of the economy. Of fundamental importance is a method of showing clearly the relationship between domestic production and imports both of intermediate and final products. Unless this can be done it is difficult if not impossible to estimate the effects of the development of manufacturing industry upon the balance of payments.

Sound development planning therefore involves the use of a statistical framework within which the effects of various assumptions can be explored. The framework must make it possible to display in a readily comprehensible form the basic relationships in the economy as they have been developing over the recent past. Only on the basis of a sound and reliable statistical picture of the economy developed in this way is it possible to make useful forecasts and projections which are essential elements of the planning process. It would be tempting to suppose that the United Nations System of National Accounts could provide such a statistical framework for this would be the major justification for encouraging statistical offices in less developed countries to undertake this type of work.

If we accept the view that the main reason for encouraging less developed countries to compile national accounts is for their use in development planning we have to ask ourselves whether the SNA is in fact an appropriate framework for this purpose. Clearly, the accounts in their present form do serve as a starting point for the type of analysis which is needed for development planning. Above all they provide a convenient framework for exploring the implications for budgetary and fiscal policy of varying rates of capital formation. Once one has a reasonably reliable base it is not difficult to see what is implied by an increase in the rate of capital formation in terms of savings, including budget surpluses, and the balance of payments, and it is the failure to carry out this type of exercise in realistic terms which is responsible for many of the disappointing results which have so far been obtained in the field of development planning. Yet, while the SNA provides a valuable starting point for the construction of a statistical framework useful for development planning it suffers from a number of defects. Certain specific problems will be considered in a later section of the paper; here we will confine ourselves to broader issues.

The SNA is an accounting system concerned principally with income flows. It shows how incomes are generated through the production process, how they are distributed among various types of producers and various institutions and how they are disposed of in the form of consumption and investment. All this is extremely valuable for an understanding of the economy but from the point of view of development planning it is not sufficient. In development planning one is concerned equally with commodity flows. This is of particular importance in assessing the effects of capital formation in the various industrial sectors and also in showing the relationships between domestic production and imports. In the SNA intermediate products are necessarily excluded from consideration while for development planning purposes it is upon intermediate products that a great deal of attention must be focussed. Indeed one could well define the stages of development of a country in terms of the proportion of its own

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intermediate goods which it supplies; i.e. in terms of the proportion of empty cells in an input-output matrix.

If this view is accepted then the proposals for the adaptation of the SNA to African countries made by the Conference of African Statisticians in 1963[8] are of fundamental importance for they do provide a link between the basic frame-work of the SNA which is concerned with income flows and the commodity flows which must also be brought into the system if it is to serve all the purposes of the development planners. The proposals themselves represent an important advance in the field of national accounts statistics but they are only the first step. Much needs to be done to refine and simplify the system so as to make it workable in the primitive statistical conditions which exist in the less developed countries. The system as it stands is somewhat cumbersome and it is possible to amalgamate the three basic tables into one as Dudley Seers demonstrated at the Corfu Conference of this Association.[9] A further refinement to this approach is provided in the report of the United Nations Economic Survey Mission to Zambia.[10]

The commodity approach to the national accounts appears at first sight to be complicated, but in reality it merely makes explicit much of the work which lies behind any attempt to produce the conventional form of the accounts by methods other than pure guesswork. Similar techniques to those proposed by the Economic Commission for Africa have been applied in Jordan with a consider-able degree of success and have led to a great improvement in the quality of the estimates. However, the work is necessarily time consuming and it is reasonable to ask whether it is really necessary to undertake it annually. Given the fact that the main use of the data will be in the field of development planning would it not be sufficient to make elaborate calculations for a series of years, sufficient to provide a reliable base for projections and forecasts, and then to make annual estimates on the basis of such indicators as are readily available?

There are a number of reasons why this would not be desirable. First of all one needs the data not only as a basis for projections and forecasts but for measurement of the performance of the economy. One must be able to assess the effects of the development programme and this can best be done through the regular compilation of national accounts data. If the data are to be useful in this respect they must be accurate. Accurate estimates cannot be made on the basis of incomplete data and series built up from such data usually do little more than reflect the assumptions on which they are based.

There are also eminently practical reasons for wishing to make reliable and complete estimates year by year. One way of building up reliable statistical series is to organise the work of a statistical department in such a way that the process of gathering, tabulating and arranging the material becomes a

8. Report of the Working Group of African Statisticians on the Adaptation of the United Nations System of National Accounts to African countries. E.C.A. Addis Ababa. 1963.
9. Dudley Seers: "An Accounting System for Projections in a Specialised Exporter of Primary Products." *Income and Wealth*, Series XI, 1965.
10. E.C.A., Addis Ababa, 1964.

matter of routine. This necessitates the assignment of adequate staff to national accounts work so that the data can be assembled accurately and speedily. If a system is adopted in which a major exercise is carried out every three or four years, the estimates for the intervening years being based on incomplete data, there will be a need to augment the staff in the years when the major exercise is being undertaken. It may be much more difficult to secure the necessary budgetary allocations for work in this way than it would be for a gradual increase in the cadre which would be needed to undertake the work year by year.

A final reason for wishing to make reliable and complete estimates year by year is that only in this way will it be possible to secure the necessary respect for the data. So long as laymen, and most administrators in charge of statistical offices or responsible for budgetary allocations for statistics fall in this class, believe that national accounts can be compiled in a satisfactory fashion merely by manipulating incomplete and unreliable data, it will be impossible to achieve the degree of accuracy which must be achieved if the compilation of national accounts estimates is to have any value. The Economic Commission for Africa system of commodity flows makes explicit the work which should be done in any case to secure reliable estimates of the principal national accounting aggregates. It is only by encouraging statisticians to undertake the formidable labour involved in setting up the account of the origin and uses of resources which is the heart of the ECA system that it will be possible to establish national accounts work on a reasonably secure statistical base.

Conclusion

This brief review of the uses of national accounts data suggests that the principal use in less developed countries is as an aid to development planning. If this view is accepted then it would be desirable to develop the accounts in such a way as to bring in commodity as well as income flows. This would involve a movement in the direction of the proposals of the Conference of African Statisticians. There is also an urgent need to introduce more statistical discipline into national accounts work. In the early days estimates made in universities or statistical offices based on incomplete data and heroic assumptions were acceptable because nothing else was available. The resulting estimates, unreliable as they were, did at least provide illuminating information concerning the structure of the economies. This has certainly been true in the case of Lebanon, the economy of which would be utterly mysterious had it not been for the work of Dr. Badre and his associates. However, we have now progressed beyond this stage and what is needed is painstaking work to build up the statistical data needed to enable reliable estimates to be made. It is the great merit of the ECA system that it shows clearly what data is needed and the way it must be manipulated in order to provide meaningful results. Thus the contribution of the African statisticians is equally important in the field of methodology as it is in the underlying principles of national accounts work in less developed countries.

SPECIFIC ISSUES

Capital Formation

In view of the importance of the national accounts for development planning the definition of capital formation becomes of special significance. This, of course, raises fundamental problems in economics which it is not possible to pursue in detail in this paper. Nevertheless, there are good reasons for believing that the definition of capital formation in the SNA is far from satisfactory. In practical terms the definition really boils down to construction plus capital goods in the form of machinery, equipment or vehicles. However, in all countries there is a whole range of expenditure which cannot properly be defined as fixed capital formation in the narrow sense used in the SNA, but which it is misleading to describe as consumption expenditure. If the primary use of the accounts is in the formulation of short run fiscal and budgetary policies this is not a matter of great concern, but where the accounts are used for development planning the question obviously becomes much more important. The classic example, to which Adam Smith drew attention, is education, but there are many others including even expenditure on the development of an adequate statistical service. These categories of expenditure add to the productive power of the country; they cannot in any proper sense be regarded as consumption, yet they cannot properly be classified as fixed capital formation.

This is not merely an academic issue. In recent decades the theory of economic development has laid great emphasis on capital formation which has been singled out as being the key factor in promoting economic growth. Under the influence of these theories many countries devote a large proportion of their resources to capital formation in the narrow sense in which it is used in the SNA. In many countries of the Middle East, and particularly in the oil rich countries, it is customary to operate a capital budget and a current budget. Given the prestige of capital expenditure every effort is made to increase the size of the capital budget and by the same token heroic efforts are made to limit current expenditure. It may thus be relatively easy to raise funds to build a dam or a power plant but extremely difficult to secure adequate allocations in the current budget to pay the engineers and professional staff who will be called upon to operate and maintain them when they are completed. It is often relatively easy to find the money to build schools or hospitals but much more difficult to secure the allocations from the current budget to pay the teachers and doctors who will work in them. The situation becomes even more paradoxical in countries where the allocation of oil revenues between current and capital uses is arbitrarily fixed by legislation. It is usual to find unspent balances accumulating in the development budget for lack of capital projects while the current budget is starved for funds, making it impossible to pay civil servants adequate salaries. This in turn leads to a drain of talent from the civil service which further complicates the problems of development. Indeed, it could well be asserted that, in the Middle East at any rate, one of the major obstacles to economic growth lies in an undue emphasis on capital formation in the public sector at the expense of adequate expenditure on public administration.

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Clearly, this is not merely a problem of definition from a narrow statistical point of view. Nevertheless, one can only start the process of educating states-men and administrators if the definitions we use as economists make economic sense. It would thus be highly desirable if the definition of capital formation could be widened to include what might broadly be defined as development expenditure. This would include a number of categories of expenditure which are now classified as government or private consumption, for example expendi-ture on education, health services, agricultural extension services, agricultural and industrial research and the like. Government consumption expenditure would then cover purely administrative types of expenditure, such as expenditure on law and order and defence. In other words one might aim to make the definition of 'public administration and defence' as used in the Industrial Classification of the Gross Domestic Product, coincide much more closely with the aggregate 'Government consumption' which appears on the expenditure side of the account.

There will, no doubt, be considerable differences of opinion as to the items of expenditure which should be included under the heading of 'Develop-ment Expenditure'. One possible definition could be all categories of expendi-ture which could be expected to lead to an increase in the productive capacity of the country. Within this definition it might be desirable to retain fixed capital formation as a special case. The important thing is to recognise in the accounts that there is not a simple and clear cut distinction between consumption and capital formation but a whole range of different types of expenditures which add to the wealth of the nation in one way or another.

Consumption of Fixed Capital

Just as we need a better definition of capital formation so do we need a new approach to the problem of consumption of fixed capital. The guidance provided by the notes to the SNA and Methods of National Income Estimation is somewhat confusing. The basic concept that capital goods wear out as they are used and are subject to obsolescence is simple and familiar. If one follows this approach the problem is to work out the normal life of various categories of capital goods and to depreciate them over their lifetime. This is, in effect, the procedure recommended in the SNA for less developed countries. However, the entry in the accounts is entitled 'Provisions for the consumption of fixed capital' which is something quite different. This can be regarded as a form of saving of enterprises which is earmarked for the replacement of capital goods. If one followed this definition strictly one would merely record the provisions which enterprises make, if any, in their accounts for depreciation and aggregate them for the whole economy. There is clearly no reason why the provisions which enterprises make for depreciation should bear any close relationship to the actual rate at which capital goods wear out. They are much more influenced by tax allowances for depreciation. All this is familiar and it has led some to argue that little useful purpose is served by attempting to calculate depreciation. It is argued that the gross concepts are just as useful as the net concepts and,

that in the less developed countries particularly, the attempt to calculate depreciation merely introduces an arbitrary element in the accounts which make them less useful than they otherwise would be. This is broadly the approach adopted by the working group of African Statisticians.

This would appear to be an extreme position, however, for it is important to know the rate at which the capital stock is being increased and for many categories of capital goods the difference between gross and net capital formation may be highly significant. It is notorious, for example, that vehicles and tractors wear out very rapidly in less developed countries because the conditions under which they are required to operate are adverse and the maintenance facilities often poor. If account is not taken of write-offs and one simply used the gross figures one could get a highly misleading impression of capital formation in transport and in agriculture. One would also get a highly misleading picture of the profitability of the road transport industry.

The opposite is the case with capital goods which are highly durable and which can be expected to have a very long life, such as buildings and dams. In these cases it is probably satisfactory for all practical purposes to regard net and gross capital formation as being equivalent. If one accepts the fact that capital goods are of different types having different lives and subject to different degrees of wear and tear the way is open for a new approach to this problem. Given the statistical and conceptual difficulties involved it would probably be desirable to abandon attempts to calculate consumption of fixed capital for the economy as a whole by the conventional methods. Instead one would concentrate on classes of capital goods where the difference between gross and net capital formation may be expected to be significantly large. One would thus ignore assets having a very long life such as buildings, dams, etc., and devote attention to assets which have relatively short lives such as vehicles, tractors and certain classes of industrial machinery. It is in these categories that it is especially important to know whether net additions are being made to the capital stock.

If one adopted this approach it might be possible to develop completely new statistical techniques for measuring net additions to the capital stock. For example the annual census of commercial vehicles which results in some countries from the annual registration of vehicles for tax purposes might well provide a more reliable indicator of net capital formation in this part of the transport industry than could be obtained by using the traditional techniques of depreciating the stock annually in proportion to the expected life of the vehicles. A similar approach could probably be used for agricultural tractors. In the case of the simpler types of machinery used in manufacturing industry, such as textile machinery, it might be possible to collect statistics on a regular basis which would show additions to the physical capacity of the industry. An annual statement of the number of spindles in operation or the number of automatic looms should not present insuperable statistical difficulties and the year to year changes would provide a most useful measure of net capital formation.

Clearly, the measurement of net capital formation in the sense of physical

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additions to the capital stock in various industries would not fit readily into the framework of the national accounts. For this reason it might be desirable to compute the national accounts throughout on a gross basis and to introduce the net capital formation estimates for specific industries in the form of supplementary tables. If this procedure was generally adopted it would remove an arbitrary element from the national accounts estimates of many countries and materially increase their usefulness.

Factor Income From Abroad

In many Middle East countries a difficult problem arises from the treatment of remittances from nationals working abroad. For example many Jordanians, Syrians and Lebanese work in Kuwait and other oil states, and send back to their families comparatively large sums of money. Apart from the inherent difficulty of measuring these flows with any accuracy there is the problem of the correct treatment in the accounts. The problem revolves around whether such people should be treated as residents or non-residents. If they are treated as non-residents the normal I.M.F. rules apply and the remittances can be treated either as transfer payments or as an inflow of capital. In this event they would appear neither in the national nor in the domestic product. If, on the other hand, they are treated as residents the flow appears in the national product, it being included under the heading of factor income from abroad. This issue is important in the Middle East because the flows are relatively large. In the Lebanon, for example more Lebanese live abroad than live in Lebanon and emigrants' remittances are a significant item in the balance of payments. In Jordan remittances of this character amount to some £8 million a year at the very least and this again is an important element in the balance of payments, financing perhaps 20% of imports.

One needs very badly, therefore, a clear definition of residence, Unfortunately little clear guidance is given either in the SNA or in the Balance of Payments Manual. For example the Balance of Payments Manual states: "The extent to which other citizens living abroad are treated as residents (travellers) or foreigners (emigrants) depends on a number of factors, such as the permanence of their stay abroad and the extent to which they shift their general 'centre of interest'. The same principle of 'centre of interest' determines whether a citizen of a foreign country staying in the compiling country should be considered as a resident of the latter."[11] If one took this definition literally one could legitimately regard the Lebanese worker in Kuwait as having shifted his 'centre of interest' to Kuwait in the sense that this is where he derives his livelihood and spends most of his time. His remittances to the Lebanon would then be treated either as transfer payments or as capital movements. However, this would do violence to the economic facts. There are some countries which are exporters of people and the resulting income flows can be regarded in some sense as a return to the investment which has been made in their education or

11. I.M.F. Balance of Payments Manual, Third Edition, Washington, D.C., 1961, page 3, para. 9.

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training. It would thus be much more correct to treat the flows as factor income from abroad, the procedure which is now being followed in the Jordan national accounts.

The problem is not as simple as this, however, for there are really two classes of emigrants. Those who have settled abroad permanently as is the case with many of the Lebanese who are scattered over West Africa, Latin America and the United States, to name but a few countries in which Lebanese are found in relatively large numbers; and those who have gone abroad to do specific jobs and who ultimately intend to return to their home country. Workers in the oil countries can normally be expected to fall into the latter category. Theoretically, therefore, one should treat remittances from the first group as transfer payments or capital movements and those in the second as factor income from abroad. This is, however, extremely difficult from a statistical point of view. The measurement of the total flow of remittances is, in itself, a formidable undertaking and it would complicate the issue enormously if one had to divide the flow between that emanating from emigrants in the true sense and that which comes from temporary residents abroad.

It is probable that no entirely satisfactory answer to this problem can be obtained which is also workable from a statistical point of view. This does cast some doubt, therefore, on the validity of the concept of the national product as at present defined. It would appear unsatisfactory that an income flow could be included or excluded from the national product on the basis of what is essentially an arbitrary definition of residence which is extremely difficult to apply in practice because it involves the intentions of individuals which are normally impossible to ascertain. What is important for the economy is not how the flow arises but its permanence. If this view is accepted then there could well be a case for moving away from the conventional definition of the national product in the direction of the concept of national disposable income which is, after all, the aggregate which really matters from the point of view of allocation of resources.

Après avoir exposé, en introduction, l'état général des travaux de comptabilité nationale au Moyen-Orient, l'auteur examine les principales utilisations des statistiques de comptabilité nationale dans les pays les moins développés. Le premier groupe d'applications ainsi étudié se rapporte à la mesure de la croissance et à l'établissement de comparaisons internationales. L'auteur estime qu'en de nombreux cas les séries statistiques de base sont si mauvaises que le fait de les combiner pour en tirer une série dénommée revenu national ou produit intérieur brut leur confère une signification qu'en réalité elles ne possèdent pas. Améliorer la qualité des séries de base, tel est le véritable problème.

Une seconde utilisation des statistiques des comptes nationaux a trait à la politique fiscale ou budgétaire. Dans les pays très avancés en matière de statistiques, ceci constitue l'une des plus importantes applications ; mais dans les

pays sous-développés la politique budgétaire n'a pas encore atteint un stade d'élaboration suffisamment poussé pour rendre nécessaire l'utilisation des données des comptes nationaux. En outre, le temps qu'implique l'établissement d'évaluations précises des comptes nationaux s'oppose à leur emploi pour des prévisions à court terme.

L'auteur estime qu'en fournissant un cadre de travail à la planification du développement, les statistiques des comptes nationaux trouvent leur application la plus importante. Le système des Nations-Unies n'est pas tout à fait adapté à ce but. Ce système a été initialement élaboré pour enregistrer les flux de revenu, mais quand il s'agit de plans de développement il faut également tenir compte des flux de biens en étudiant tout spécialement les produits intermédiaires. Les propositions du groupe de travail des statisticiens africains selon lesquelles le système de comptes nationaux des Nations Unies doit être adapté aux pays africains constituent à cet égard un important progrès.

Dans la dernière partie de son article, l'auteur insiste sur la nécessité d'une définition plus large de la formation de capital de manière à y inclure les dépenses de développement qui ne sont pas adéquatement définies comme étant une formation de capital fixe. Il prend l'exemple des dépenses d'enseignement. Il indique également qu'en comptabilité nationale il serait souhaitable de manier des agrégats bruts. Néanmoins, la croissance du capital social présente évidemment de l'importance dans les pays en voie de développement et l'auteur propose que des techniques statistiques soient créées pour mesurer directement cette croissance chaque fois que possible. Pour finir, le caractère ambigu et les faiblesses de la notion de résidence employée actuellement dans le système de comptes nationaux des Nations Unies sont soulignés.